Administration Guide

The ExtraView Administrator's Guide is designed to give users of the ExtraView web-based business issue tracking sy
knowledge and proficiency needed to accomplish two general goals:

1. Customize ExtraView to conform to their company's workflow processes, business rules, and inter-organization with all the appropriate data fields and security privileges that are required.
2. Give Administrators the ability to successfully administer ExtraView on an ongoing basis in order to efficiently inquiries, concerns, and requests.

In writing this guide, we anticipate that the reader is at least somewhat familiar with many of the standard issue trackin management functions found in ExtraView. Accordingly, this guide will assume this familiarity, and will focus on des administrative functions of ExtraView.

Downloadable PDF

This Administration Guide is downloadable as a single PDF by clicking here. You will need the Adobe Acrobat Reade

Key Concepts

ExtraView is Web-based issue-tracking and workflow software that is designed to meet the following objectives:

- Easy to install, configure and administer, minimizing your organization's setup and ongoing cost of ownership
- Provide functionality that is easily extensible over time
- Able to support your business processes and your workflow, with straightforward configuration
- Capable of implementing multiple tracking systems, all within a single database, with each tracking system ope independently, or inter-related with the other tracking applications (multiple tenants)
- Scalable to support large numbers of users and issues
- Easily configured to reflect your company's terminology, and data hierarchies, and able to provide extensive va that describes your organization, products, and services
- Provide varied and extensive reporting and charting
- Easily integrate with other enterprise software systems
- Be extensible by adding additional code into the environment, **without changing the base product**

To understand the key concepts in ExtraView, it is recommended that you read through the pages referenced below.

Installation & Configuration

This process is best executed with advanced planning. The purpose of this guide is to give you complete details on the portion of the initial setup as well as ongoing support for your installation. Please consult the ExtraView Installation C specific platform for full details on the installation of the servers and ExtraView application. ExtraView Corporation's support personnel can help with recommendations for suitable platforms. You can view the server requirements by cli

New Installations Downloaded Directly from the ExtraView Website

If you are using the standard ExtraView product, downloaded directly from our website installation is very simple and components required for a fully functioning system, including a database. Just follow the download instructions.

ExtraView Installed with your own Server and Database

- Create a user account with administrative privileges for your own use
- Set up a small number of global behavior settings. These will be the foundation to the successful running of Ext environment
- Configure any special connectivity needs to remote databases, such as LDAP or Active Directory for remote di and / or SSO for single sign on authorization
- Define and create the user defined fields in your system, that will complement the inbuilt fields
- Define the relationships between record types and fields, such as how different record types are related and whe relationships exist between list values
- Define and implement the various user roles, or categories of users who will access the system
- Design and lay out screens to support the fields you create
- Create a structure of permissions that support access to each screen for each user role that was defined
- Set up the workflow that will control the processes in your company. For complex workflows this may involve programming of customized "user exit" routines, written in the Java or JavaScript languages
- Design standard reports that will be "public" for your users
- Add user accounts to the system
- Test the completed system

Defining Your Process

ExtraView allows the System Administrator to define a process that conforms to the way the company works. It does fixed methodology on the company. The administrator can, without programming, set up rules appropriate to the com

Each issue you submit can be moved between any number of status values that you define, with each status being visi user role that is permitted to work on the individual status. For example, an *Open* issue may only be changed by the E who may only mark it *Fixed* or *Issue* not found after working on it. This same Engineering group may not *Close* the is state that only a different role such as Quality Control may access.

A user role is created for all people who should follow the same rules. Typically, these would fall along the lines of cu staff, engineering, quality assurance, managers, administrators, etc., but complete flexibility exists to define what user and how many you create.

In addition, you can program a significant amount of logic into each **Add** or **Edit** screen form within ExtraView. For e set some fields to only display dependent on the contents of a specific field, or you can specify sub-layouts within the conditional upon the value of a specific field.

Should you have a workflow process that cannot be accommodated within ExtraView's standard functionality, the pro extended with additional code written in the Java language and inserted into a "user exit" routine using ExtraView's U ExtraView was designed to make it easy to alter or add functionality within the source code, but without needing to m code of the base product. In this way, your investment is protected when you update or upgrade ExtraView.

Customizable User Interface

ExtraView can be modified in a number of ways in order to tailor its look and feel to any company's needs.

The following changes can be made simply, either by you or by ExtraView Corporation's Professional Services team:

- Alter screen colors and fonts
- Add your company logo
- Edit all text labels to reflect your own terminology
- Rename menu items
- Create / modify navigation buttons in any style / color
- Create / modify menubar buttons in any style / color

that provide for color-blindness.

For more information, please see the following pages:

- Section 508 - Disability Support
- VPAT for ExtraView

Users

Users are specific people who have an authorized sign on capability to ExtraView. Each user has an individual accoun system administrator can modify personal behavior settings within the account.

The administrator has additional privileges to manage user accounts. For example, they can create new accounts, disal accounts and can add and remove users from user roles and privacy groups.

User accounts may be created by a self-registration process. However, if a user self registers, they are only given basic system administrator grants them additional rights.

There are two special accounts within the system, named *admin* and *system*. The *admin* account has the following cha

- It should not be used to create or manage any issues
- Issues cannot be assigned to the *admin* user
- The *admin* user is not counted within the number of available licenses
- The *admin* user does not view the sign on message area, allowing them to bypass any potentially bad HTML tha into this area by an administrator
- The *admin* user has additional privileges in the data dictionary, where they may enter and update the SQL stater used by ExtraView to extract and update information in the database
- The *admin* user bypasses all status change rules.

The *system* account is reserved for use by ExtraView personnel, in the event that any customer of the product has lock their system, and require ExtraView personnel need to restore access. If you accept the risk, and understand that Extra may not be able to access your system quickly, you can ask ExtraView support to give you ownership of this account.

Users may be defined and maintained in an external directory, such as an LDAP directory or a Microsoft Active Direc policies for synchronizing the external directory and ExtraView's internal directory may be adopted.

Users may sign on more than once and they will still occupy a single license within ExtraView. However, there is a lir unique user in that they may only sign in and have up to five active sessions. For each five active sessions, one license

User Roles and Security

Individual users belong to one or more user roles and share the same characteristics and permissions. For example, on have read and write access to a particular field, while another role may only be able to view the same field. Another us even be able to see the field.

All fields, menus and screens have security permission keys to protect the object. For example, a security key exists fo security module itself. Another security key exists for the *product* menu item on the Administration screen. Another e security key exists to control access to the *description* field. All of the fields that are visible can be turned on or off ba privileges. There are literally hundreds of security keys within ExtraView, and each time you create a new user-define security keys are automatically created to allow you to protect the newly created object. These two keys allow you to c the field when adding a new item to the database and to control access to the field when either updating or reporting.

The Grant Security Privileges section controls all these accessibility features in your version of ExtraView. In a matrix

ExtraView is termed a multi-tenanted database.

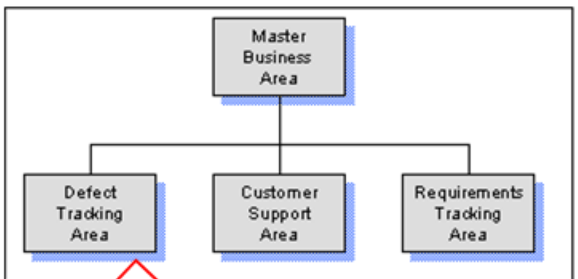
For example, the Business Areas can correspond to issue tracking processes such as defect tracking, requirements plar issues, adverse event tracking, change management and/or safety issues. The administrator may create as many Busin required. Within each Business Area, multiple Projects can also be defined. These Projects have the same characterist Areas. Projects will typically be used to provide alternative processes or screens or workflow within a defined Busine

The administrator can limit a user's access to the issue-tracking database to individual Business Areas, and to individu

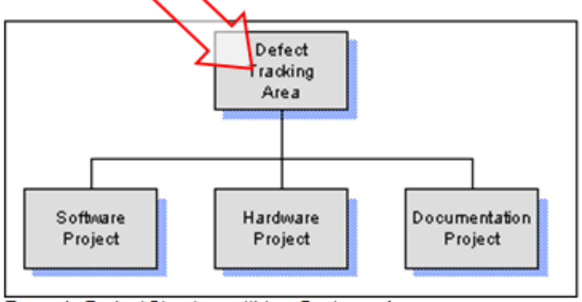
Different screen layouts and default reports with different fields can be designed for each Business Area and each Proj different workflow and business rules, thus ensuring the optimization of ExtraView for each part of the organization.

Using common fields, management information can still be consolidated across Business Areas or the entire organizat

The fundamental principle that governs the use of Business Areas and Projects is inheritance. The top-level Business ExtraView is termed the Global Area. The Global Area has a single Project, named the Master Project. Layouts and se permissions always exist for the Global Area and its Master Project. Beneath the Global Area, further Business Areas be defined, where inherited values apply. Each of these child Business Areas has a Default Project, and may have any individual Projects. At any level, alternative layouts, fields and security permissions for fields can be defined, over-rid values.



Example Business Area Structure



Example Project Structure within a Business Area

All ExtraView's inbuilt fields are global in scope. Fields you define yourself as an administrator may be global in thei defined for a single Business Area, or defined for a single Project within a single Business Area.

Many of the options in this guide are dependent upon Business Area and Project. However, for clarity, reference is onl this guide, when it is important to explain a significant fact. Simply, the Business Area and Project will appear on adm screens such as security permissions and layouts, when they are required, and will not be present if the Business Area capability is turned off.

Another key attribute of Business Areas is that you may create relationships between items (or issues) stored in differe Areas. This is an extremely powerful feature that allows you to define multiple record structures that can interoperate These relationships can extend many levels in a hierarchical structure. A simple example may be that you store "custo the Global Business Area, and use that to store your data. Although this will work, it will make future changes difficul decide to introduce additional tracking systems.

The Enterprise version of ExtraView allows an unlimited number of Business Areas and Projects to be created. Other constraints on the numbers that may be created.

Business Areas and Projects can be turned on and off with the behavior settings named ENABLE_AREAS and ENAE These are found on the Environment Settings menu within Administration. **It is recommended that you never alter t settings for these behavior settings.**

Queries

Queries may be formed and executed on any issue data stored within ExtraView.

Queries are composed using either standard or advanced filters. The results are presented using either a Quicklist or a The results may be output to the user's browser, to Microsoft Word, Microsoft Excel, Adobe PDF or to text.

The standard filters require the composition of a layout of the type SEARCH_QUICK. This should contain the most fi fields for queries. Users can select any number of filters on this layout to compose a query. When multiple filters are s engine places an "AND" conjunction between the filters. The user can select expanded query filters, in which case, mu be selected within each field. This is an "OR" operation with the values of the filter field.

Advanced filters require the selection of the filters to be used in the query, one-by-one. However, the user can select fr range of fields to which they have read permission. The user may also set a conjunction between each filter, using "AN "UNION", "INTERSECT" or "MINUS". Advanced filters take more time to set up, but offer significantly more capab includes the introduction of parentheses into compound queries.

Once prepared, filters sets may be stored and recalled.

Within the administration section of ExtraView the most important aspect that affects querying is to correctly set the fi Dictionary fields, as explained in the Data Dictionary section of this guide:

- Allow selection on reports
- Total field on reports
- Filter criteria
- Is sortable

Reports

Reports are composed of two basic elements, a set of query filters, and a definition of the data to be output. There is a report types, as explained in the End User Guide. The results may be output to the user's browser, to Microsoft Word, Adobe PDF or to text.

Each report has filters, which are composed using either standard or advanced filters. The standard filters require the c layout of the type SEARCH_QUICK. This should contain the most frequently used fields for queries. Users can select filters on this layout to compose a query. When multiple filters are selected, the query engine places an "AND" conjun filters. The user can select expanded query filters, in which case, multiple values can be selected within each field. Th operation with the values of the filter field.

Advanced filters require the selection of the filters to be used in the query, one-by-one. However, the user can select fr range of fields to which they have read permission. The user may also set a conjunction between each filter, using "AN "UNION", "INTERSECT" or "MINUS". Advanced filters take more time to set up, but offer significantly more capab includes the introduction of parentheses into compound queries.

- Is sortable

If you are using relationships within your installation, reporting hierarchies may be created, allowing parent / child / g reporting.

Fixed Names & Screen Titles

These terms are used widely throughout the administration guide.

Fixed names are defined as terms that are used within the ExtraView database to refer to a field or object. Once create object do not change and they are a fixed reference. Each name will have a corresponding screen title. If you have turn localization feature of ExtraView, there may be more than one title for any named object, i.e. there may be one title fo language. Screen titles for any fixed name may be changed by the administrator.

The screen title is defined as the reference to an object by which it is referred to throughout the user interface to the er ExtraView. Thus, every title within ExtraView may be altered, but the underlying name that it refers to will not alter.

In this way, the title (or label) that refers to each field and object can be changed at will by the administrator, but the u remains without change. For example, the field with the name of **ID** may have its title changed from *Defect #*, to *Trac* From the moment of this change, all screens, reports and other screens that refer to **ID** will use the new title.

Changes made in this way to metadata by administrators are logged by ExtraView, giving an audit trail of who made v when they made it.

Fixed names used for any object type are unique within ExtraView Names can only consist of the characters A to Z, 0 first character of a fixed name must be alphabetic and the name can be up to 30 characters in length. Names cannot co from non-English alphabets. Further restrictions are that you may not have two underscore characters together in a nar character may not be an underscore.

Screen titles are not required to be unique for an object type across an ExtraView installation. However, consideration to using non-unique titles. In some installations, this makes perfect sense, in others it may not. Titles can consist of mo “special” characters such as ‘!’, ‘"’, ‘#’, ‘$’, ‘%’, ‘&’, ‘'’, ‘(‘, ‘)’ ‘@’, ‘~’, ‘:’, ‘;’ and ‘`’ may not work in all places. Fo should use alphabetic characters only in titles. However, titles can be localized and may contain characters from any a including double-byte character set alphabets.

With a small number of exceptions, you may not insert HTML into a screen title. This is to preserve security where a u ability to alter a title and uses this ability to inject HTML that consists of a script into a screen. Such scripts may not b therefore the ability to introduce HTML of any type into a title is restricted.

Note that if you take advantage of this feature, then any output through the API or CLI will contain and display the en within the screen title.

Data Dictionary

The Data Dictionary is the central place where all field definitions are stored and maintained. All User Defined Fields defined in the Data Dictionary. In addition, this core component of ExtraView controls many of the attributes of each where it is used, its display type, display title, whether the field is selectable on reports, its default value, default attrib text. Global attributes may be defined for a field. These optional attributes determine properties of the field which can wherever the field is used. For example, you might provide a SIZE global attribute to a text field. Wherever this field will then adopt this SIZE, although the size might be overridden on an individual form.

Correct settings in the Data Dictionary are essential to a smooth running system. Although it is possible to alter every ExtraView, it is recommended that you only make changes when you thoroughly understand what the consequences w

Layouts work in conjunction with security permissions for each field. Therefore, simply placing a field on a screen do automatically give all users the ability to read or write to the field. You can alter the permissions to each field within tl or you may use the **Grant Security Privileges** option to define which fields are visible and updateable to each group (security privilege for the field overrides the fact that a field may be placed on a screen or report.

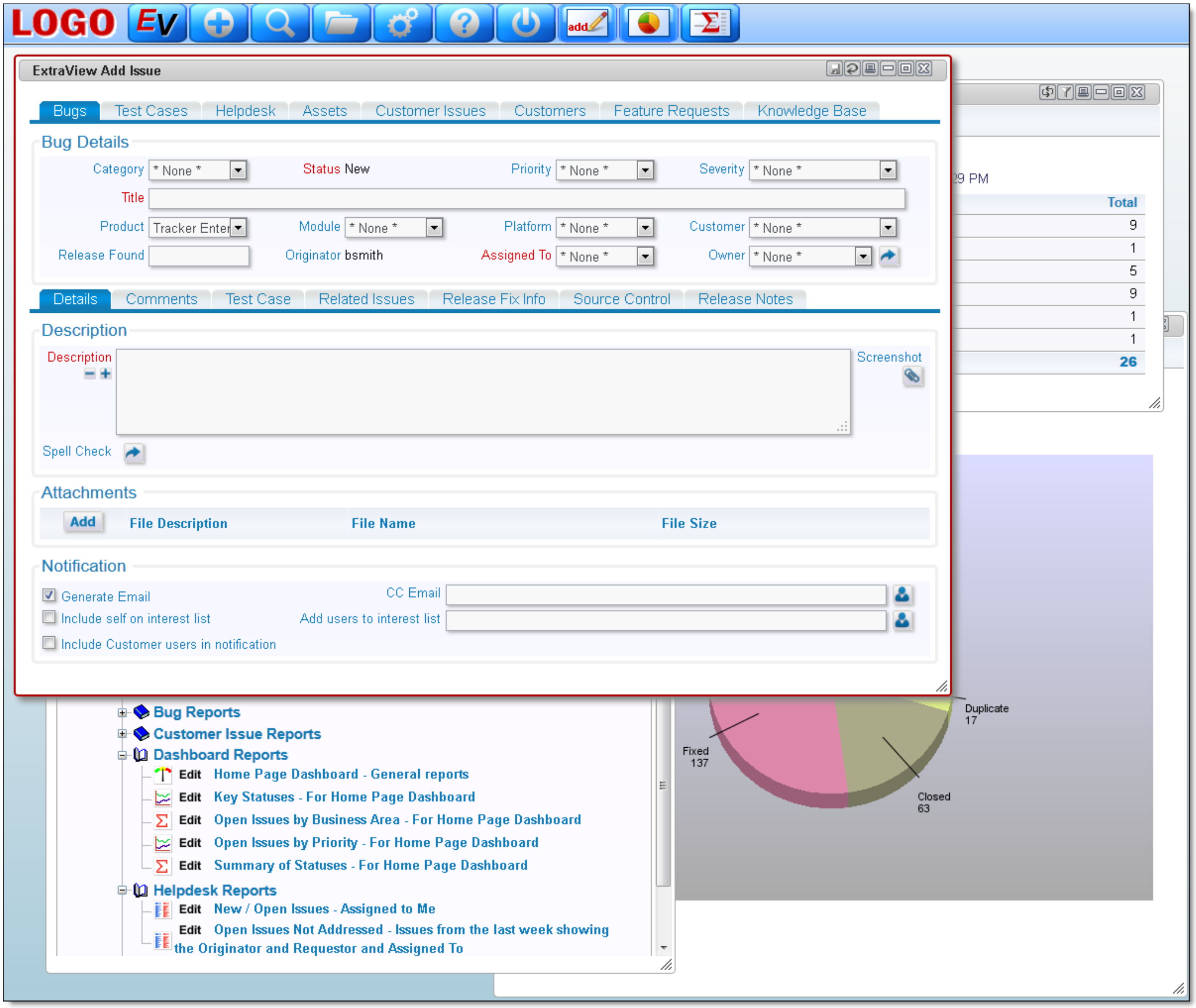
One layout may be embedded within another layout. In addition to this, you may specify alternate layouts that appear, the value of a specific field. For example, you may have a category list field that has the values of *Software*, *Hardwar Documentation*. Depending on which value is chosen, a sub-layout can be displayed that contains the fields pertinent t information needed about each of these categories. These sub-layouts or embedded layouts may only be embedded wi *Edit Issue* layout. There is no need for them on other layouts.

Fields within each layout may have one or more attributes defined. These layout cell attributes affect the display of th in which it is processed. For example, an attribute may provide the field with an alternate title, just for the one layout, may define that the field is only visible if another field is of a specific value.

There are two special type of layouts which may only be embedded within other layouts. These allow the definition o **Layouts** and **Repeating Row Layouts**.

Workspaces

Workspaces provide a single browser window within which you can run all of ExtraView's end-user functions. Within window, a separate panel will be opened for each function. For example, you might open an *add* screen, an *edit* screer reports, all at the same time. Each panel has a title bar that contains buttons to control the functions within the window buttons to minimize, maximize, and close the panel.



A typical workspace

A user may have any number of workspaces, and each may contain different panels. The user may save the state of th
these will be restored when they reopen each workspace. The workspace is provided as an alternative user interface to
user interface. With permission, the user may start their ExtraView session in the traditional interface, or within the w
interface. The user may also switch between the interfaces. At this time, the ExtraView Administration functions will
a workspace window and will always use a separate browser window.

Email Notification

Whenever issues are inserted or updated, email notification may be triggered to send information to users connected w
These notifications are typically used to inform users such as the originator, the assigned to and the person who last u

Interest lists allow users to subscribe to issues where they have a particular connection. These are a powerful feature o

If a notification that is being sent exceeds the size specified in the behavior setting named EMAIL_MAX_SIZE_MB, images, attachments and embedded documents will be removed, to ensure the notification can be sent without causing user should sign onto ExtraView and view the embedded objects there if they were removed.

Programming Interfaces

RESTful Application Programming Interface

This web-orientated API to ExtraView allows the user to extend ExtraView's functionality. The key features of the RE (Representational State Transfer) interface are:

- A set of URL functions utilizing the HTTP protocol that access ExtraView to perform user functions such as ad issues. This eliminates the need for expensive software such as Oracle SQLNet on each client computer
- A set of URL functions that allow limited administration of ExtraView. For example, you can add users and alte
- A full Command Line Interface (CLI) implemented on top of the API, that allows users to access functions such updating, deleting and searching from a command line. This is typically used from a UNIX, Linux or Windows shell

Web Services Application Programming Interface

This Simple Object Access Protocol (SOAP) interface provides a complete set of API functions, similar to the WOA i utilizing the more standardized methods of a SOAP interface.

The interface may be accessed through both Java and .Net. A full set of examples is provided with an interface implem Visual Studio.

Command Line Interface (CLI)

The CLI is implemented using the ExtraView API. It comprises a set of Perl scripts that perform many functions such

- Adding or updating issues in a batch or interactive mode from a telnet session
- Performing limited administrative functions
- The CLI functions can be further scripted by an ExtraView user, to create their own functions, running in intera mode.

Please see the following guides for further information:

- Application Programming Interface Guide
- Web Services Interface Guide
- Command Line Interface Guide

Client Browser Support

Supported Desktop Browsers

ExtraView for this release is certified to support the following browsers.

- Microsoft Edge (all versions)
- Mozilla Firefox is supported using version 25 and greater
- Apple Safari (on Macintosh only) is supported, using version 10.1 or greater
- Google Chrome is supported, using version 30 or greater.

The resolution of desktop monitors or screens on which users should use ExtraView should be a minimum of 1280 x 1
While ExtraView will work at lower resolutions than this, users may have to scroll up, down and sideways more than
The administrator can make decisions in the design phase that will affect this. For example, the settings in the style sh
the small, medium and large font sizes can be tailored, as can the number of columns and rows that appear on screen l
users are utilizing the Workspace feature, the recommendation is to use screens with as high a resolution as possible, t
number of viewable panels. The recommendation is that administrators should design their layouts to fit within a resol
1024 pixels.

Cookies in the Browser

Most browsers have cookies turned on as a default setting and this is what ExtraView expects. If cookies are not turne
will warn the user, and will not function until they are turned on. ExtraView primarily uses session cookies, and no co
information is stored within the client browser after the ExtraView session is complete.

The only exception to this is when the administrator enables the behavior setting ALLOW_CHANGE_LOCALE_AT_
this case, a cookie retains the preferred locale setting for the user who signs on for a 30 day period. No other informat
within the user's computer.

JavaScript in the Browser

JavaScript must be turned on within the client browser.

The Browser Back Button

Users should never use the browser's back button within ExtraView. They should only navigate by the buttons that are
ExtraView's menus. The reason is that ExtraView must maintain integrity of its information at all times. For example,
button on ExtraView's *Add Issue screen* to add a new record, then pressed the back button and pressed the add button
have two records inserted. Similar problems occur if the user attempts to go back to a record he has edited, or to go ba
that was refreshed from the server during adding or editing an issue.

The Browser Refresh Button

Similar to the Back button, the Refresh button within your browser should not be used. At the times that a Refresh is a
ExtraView will offer a Refresh button in its menu bar.

Bookmarks and URLs within your Browser

Many, but not all, pages displayed by ExtraView within your browser may be bookmarked, and shared with other user
are created by using the normal conventions appropriate to your browser. This is slightly different for each supported
simply follow the appropriate steps from your browser manufacturer. For most commonly accessed screens you can c
the address bar of your browser, and paste the URL into emails or documents and share these with other users. Note t
permissions are obeyed when you share a URL. If the receiving user does not have permission to a given feature, or t
they will not be able to use these features or view the fields, no matter the permissions of the sending user. When a us
into the address bar of their browser, they are required to sign on if they are not already authenticated. The most comi
you may want to share are:

- The Sign On page
- Your Home Page - but note a receiving user will observe their personal Home Page when they use the URL that
- *Add* screens within any Business Area and Project
- The *Edit* screen of any issue
- The address of any report that can be run - note that there are shortcuts for any report available from the Report
  you right-click with your mouse on any report title, there is an option to copy the URL for that report to your lo
  Note that you cannot bookmark or share the address of a report being edited, or the output observed when the re

problem with languages based on the Roman alphabetic, but is an essential ingredient of correctly configuring a syster double-byte languages such as Japanese and Chinese. There is a behavior setting (see the following section) named H' that defines the character encoding for input from all browsers, for all users of the ExtraView instance. By default this a character set that is universal and supports all languages. The recommendation is to have all users set their local brov to UTF-8. If this is to be changed, then it must be changed on the server and in every client browser.

Note: It is strongly recommended that HTTP_CHARSET is set to a value of UTF-8, and that all users only set their br set to UTF-8, so that characters will be displayed correctly and consistently.

Administrative Functions

Administrative functions are split into the following groups:

- **Operational Tasks** - These are the day-to-day tasks such as administering users and setting up escalation tasks
- **Site Configuration** - This is where the majority of operations that configure your site are managed
- **Initial Setup** - These are typically the features that need to be set up in a new installation
- **Import/Export** - This is where you export and import data to and from ExtraView
- **Advanced** - These are advanced features that only need to be accessed on an occasional basis.

There is some crossover in the groups of functions. For example, the administrator will need to occasionally access a S Configuration feature for a day-to-day operation.

Mobile Device Configuration

Click here for end user documentation

ExtraView supports mobile platforms. Mobile clients can be downloaded from the Apple App Store, or from Google on the device you are running. Given that layouts designed for desktop usage may well be too wide and too tall to be significant amount of scrolling on a mobile device, ExtraView provides the capability to create layouts for different di follows:

- **Desktop** - these layouts are the default and will always be presented to a user if no Tablet or Phone layout exists there are always a set of default Desktop layouts in a system, this means that a layout will always be presented t even if it has not been optimized for use
- **Tablet** - these layouts will be presented to a user when they have been configured, and ExtraView detects it is ru tablet-sized device. These layouts may have fewer rows and fewer columns than a Desktop layout, depending c fields need to be placed on the layout. The end user can override the Tablet display target selection and elect to Desktop or Phone layouts, if they desire, within the sign on information for the connection
- **Phone** - these layouts will be presented to a user when they have been configured, and ExtraView detects it is ru phone-sized device. Typically these layouts will have fewer rows and only one or two columns. The end user c Phone display target selection and elect to use either the Desktop or Tablet layouts, if they desire, within the sig for the connection.

Mobile configurations may also be implemented to be more restrictive than the desktop configuration, for example to end user to add a specific issue and no more, often without the need for the user to sign on with a valid User ID and pa section further down this page, entitled **Configuring Limited Access**.

Implementation Considerations

You can globally turn mobile access on and off with the behavior setting named ALLOW_MOBILE_CLIENTS

Given the smaller screen sizes of Tablet and Phone devices, you will almost certainly want to configure different layou page buttons to move between the different parts of a layout. These are most useful on Phone layouts. See here on using pagination

- Many reports will be overly large to display on mobile devices, particularly on mobile phones. For each report enabled for mobile working, you can choose within the individual report editor screens to allow or disallow the run that report on a mobile device. While you may allow the end user to decide for themselves which personal should be able to view, consider the Shared reports and whether they are suitable for mobile viewing. You migl reports just for mobile working. You can also use the **Administrative Report Management** utility to review a reports to decide which you want to make available to mobile users. If you are familiar with the shared reports, way to turn on reports for mobile working, compared to individually reviewing the reports
- It is worthwhile introducing specific navigation bars for mobile working. These can direct users to the specific important for their use. In addition, you might introduce a report menu, with access to a limited number of repo designed for mobile working, and not allow access to reporting in general
- Do not use the inbuilt ADMIN user account to test the mobile interface. This account should only be used on d
- There are some limitations with mobile clients, principally because of design limitations of the devices. For exa devices do not allow access to their file system to be able to upload documents. See here, for a full list of limita
- Although there are some limitations, there are also opportunities to introduce new features into your workflow v devices. For example, you can directly access the camera and photo albums within mobile devices. You can al capture a user's signature on the screen and upload this directly into an image display type field. The opportunit these items present new features that cannot be met from a desktop computer
- Users may have the equivalent of a desktop home page report. This can be set on the Personal Options screen v app, or can be set in the Report Options section of a user's account within a browser on a desktop or laptop com

Configuring Limited Access

A typical use case for limiting user access within the mobile client is to allow users to simply report issues, as opposed to all of ExtraView's functionality. The following configuration options allow for up to five screens within the mobile configured, with optional access to the sign on screen, to reports and to other functions:

Behavior Settings

MOBILE_DIRECT_ACCESS_1 to MOBILE_DIRECT_ACCESS_5	These are 5 separate behavior settings that allow for the optional place separate buttons on the Sign On screen of the mobile client. If not con button appears. If configured, the entry should be of the form: *Button Title:URL* The *Button Title* will appear on the Sign On screen and the *URL* must l within ExtraView to which the user is directed when the button is press assumed that a User ID and password are parameters within the URL. URL will also have an AREA, a PROJECT and ROLE defined and be *add* screen within ExtraView.
HIDE_MOBILE_SIGNON_SCREEN	This setting may have the value of YES, NO or SIGNON_BUTTON. When the value is NO, the User ID and Password fields are always vis When the setting is YES, the input fields for the User ID and Passwor viewable and the client is reliant on one or more of the behavior setting MOBILE_DIRECT_ACCESS_1 through MOBILE_DIRECT_ACCES direct access to screens within ExtraView. When the value is SIGNON_BUTTON, there is a button with the title when this is clicked, the User ID and Password fields become visible.

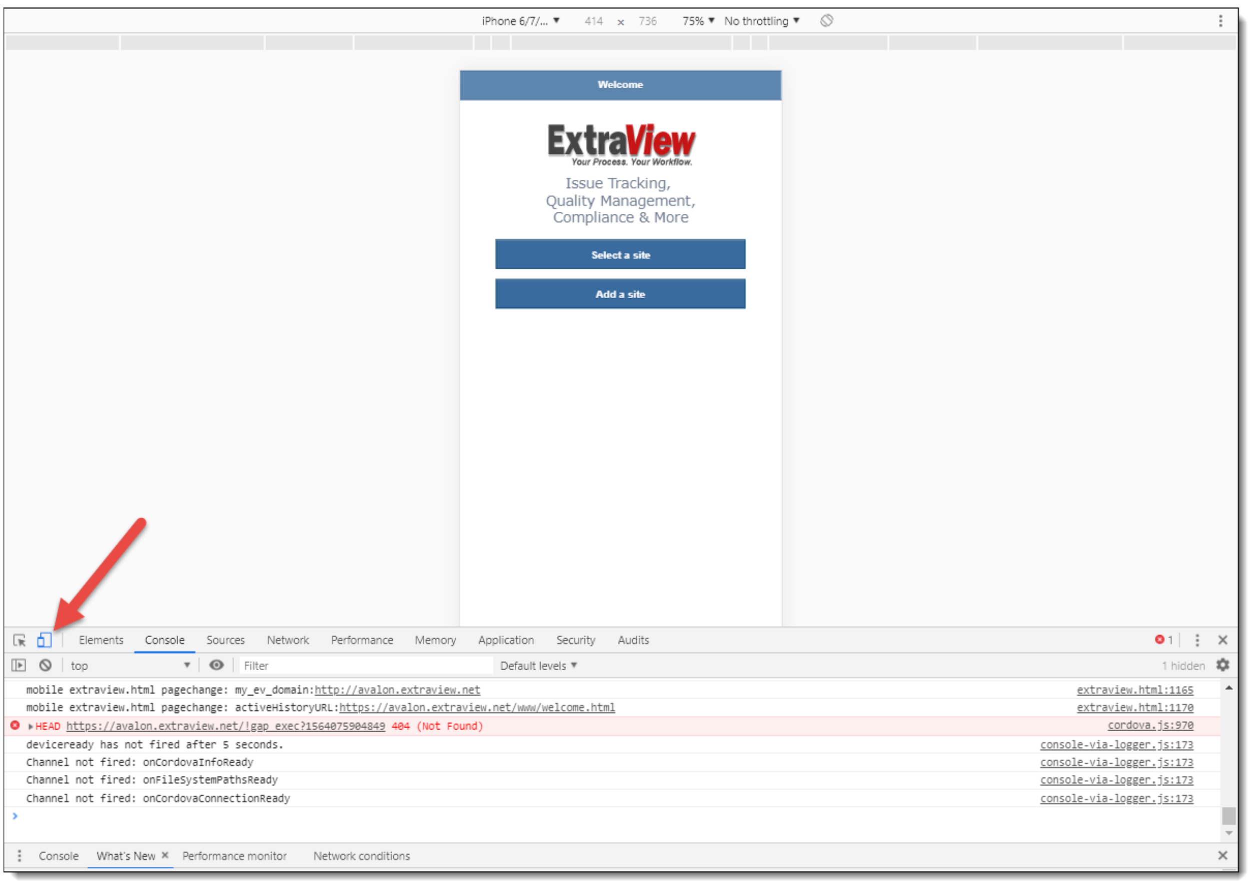
	MOBILE_DIRECT_ACCESS_1 to MOBILE_DIRECT_ACC
PR_ADD_PROBLEM.CONFIRM_ALLOW_EDIT	This security permission key will remove the **Edit** button fron confirmation screen displayed to the user following the succes an issue through an *add* screen.

[Click here for end user documentation]

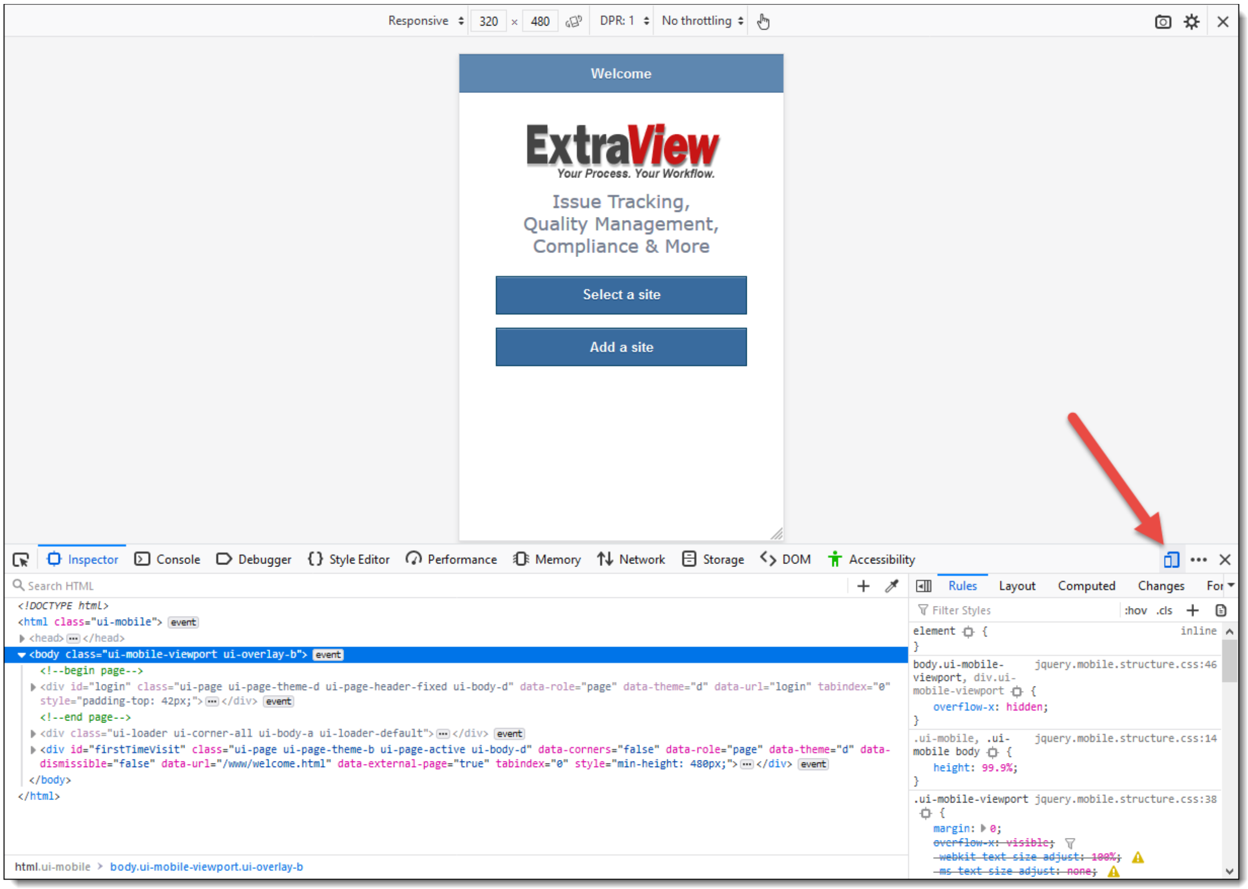
Desktop Emulation of Mobile Devices

It can be useful to emulate a mobile device from a desktop browser. This is mainly used to debug problems you migh the mobile client. To accomplish this, recognize that you are going to use your desktop browser as the mobile client a then remotely access the ExtraView installation. To achieve this, the mobile client software must first be installed on can be accessed by the browser. This needs a different implementation than is provided with the Apple iOS and the A distribution versions. Contact ExtraView support should you need this and they will provide access to this software o

Both Mozilla Firefox and Google Chrome browsers support emulation, so you should use one of these. In both cases, button to enter the browser debug mode. Click the emulation button to start an emulation session:



Emulation Button in Chrome



Emulation Button in Firefox

Once you have established an emulation connection to the mobile client, the browser will act the same as if you were ‹
device. Each of the mobile emulators has capabilities to allow you to set mobile device type as well as features such a
screen by 90°.

Section 508 - Disability Support

In 1998, the US Congress amended the Rehabilitation Act of 1973 to require US Federal agencies to make their electr
information technology (EIT) accessible to people with disabilities. The law (29 U.S.C. § 794 (d)) applies to all US Fe
when they develop, procure, maintain, or use electronic and information technology. Under Section 508, agencies mus
employees and members of the public access to information that is comparable to access available to others. The appr
36 CFAR Part 1194.22.

ExtraView provides extensive support to build Section 508 compliant applications. ExtraView's inbuilt functionality a
provides this support, but it is the responsibility of the administrator to ensure that they configure their application spe
support Section 508.

As guidance, this page states the current regulations in 36 CFAR Part 1194.22 and provides guidance on how ExtraVi
support Section 508.

(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

ExtraView is not designed to support multimedia presentations, hence this requirement is not applicable.

(c) Web pages shall be designed so that all information conveyed with color is also available without color, for exan or markup.

All colors are configurable by the administrator, and it is thus their responsibility to set appropriate colors and styles tl unambiguous. For example, administrators may configure required field entries to contain markup characters as well behavior setting can ensure that all required fields may be displayed as follows:

- Without Section 508 compliance - `Required Field Name`
- With Section 508 compliance - `*Required Field Name*`

The specific markup used is completely configurable by the administrator.

(d) Documents shall be organized so they are readable without requiring an associated style sheet.

Documents stored within ExtraView can be configured so that they do not require any style sheets. For example, adm configure standard Text Area fields to store documents, as opposed to configuring HTML Area fields which may cont information.

(e) Redundant text links shall be provided for each active region of a server-side image map.

There are no server-side generated image maps within the ExtraView application, hence this requirement is not applic

(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be available geometric shape.

There are no server-side generated image maps within the ExtraView application, hence this requirement is not applic

(g) Row and column headers shall be identified for data tables.

The ExtraView application adheres to this requirement when generating all data tables, such as those found in reports. requirement is adhered to when outputting data to the user's internet browser, but the user may also output data to spre Adobe PDF documents that do not adhere to this requirement.

(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical level column headers.

There is no built-in feature that requires data tables with more than one logical level, although it is possible for the adı configure such elements. ExtraView Corporation's recommendation is that the administrator of a Section 508 site sho tables with more than a single logical level.

(i) Frames shall be titled with text that facilitates frame identification and navigation.

ExtraView uses one or at most two frames on every screen. These may be configured with identification text. When t frames on a screen, the first frame is always the navigation and is always placed at the top of the screen, and the secon data, reducing any confusion for a disabled user.

(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower thar

This is never an issue with the ExtraView application as it fundamentally presents alpha-numeric information and stat

(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be up the primary page changes.

(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpr the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).

This is not applicable within the ExtraView product.

(n) When electronic forms are designed to be completed on-line, the form shall allow people using assistive technol information, field elements, and functionality required for completion and submission of the form, including all di cues.

All forms, whether inbuilt into ExtraView, or configured by an administrator are specifically generated by the server t requirement. All fields have titles and input elements that support Section 508 requirements providing the administrat practices when configuring the screens.

(o) A method shall be provided that permits users to skip repetitive navigation links.

The only place where repetitive navigation links are used are within forms that input and update records. By default t and bottom of the form. However, a single behavior setting allows the administrator to turn off the bottom navigation creating a compliant form.

(p) When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is re

The only place where a timed response is required is an optional administrator defined timeout for inactive users. The input is controlled by the administrator who can ensure timeouts never occur for any user.

Voluntary Product Accessibility Template (VPAT)

In January 2009, the Information Technology Industry Council (ITI) asked for the development of a specification that ITI's Voluntary Product Accessibility Template (VPAT). This VPAT has been embraced by the U.S. General Services A a way to simplify government market research on IT products with accessible features.

The VPAT for ExtraView may be seen here.

Behavior Settings

Behavior settings control basic functionality within ExtraView and allow your installation to be tailored quickly for yo your company's requirements with the platform.

The behavior settings are grouped into different categories that can be selected within the **Behavior Settings** administ

Behavior Setting Categories

- API
- Authentication
- Company Information
- Display
- Email
- Environment
- Reporting / Querying
- Security and Session
- User
- Workflow

Commonly used behavior settings

		LIMITED_USER_ROLE, but no user role is set in their a user self-registers, an email is sent to an administrator, as following settings with Email Settings on the Email Notifi administration menu. The user created will be in the busin project defined by those of the ADMIN user account.
User	USERNAME_DISPLAY	You have the ability to display usernames by First, Last or your company's methodology. First – will produce names like David Smith Last – will produce names like Smith, David ID – will produce names like dsmith You may also customize your own display pattern. You u $$FIRST_NAME$$, $$LAST_NAME$$ and $$USER_II any text characters to compose your own display. For exa $$USER_ID$$ \| $$LAST_NAME$$, $$FIRST_NAME$$ will produce dsmith | Smith, David
Display	ABBREVIATED_HISTORY	A value of YES will show changed fields only in history r not use the History layout to display the audit trail. A valu use the History layout to display the audit trail. The displa YES are more concise than NO, but there is not a fixed la spot the changes
Display	SUPPORT_LINK	If you have an HTML page that you would like your users they need support, you can put the link plus a message her
Workflow	ENFORCE_STATE_CHANGE_RULES	Gives you the opportunity to turn Status Change Rules on
Email	EMAIL_ADMINISTRATOR_NAME	This is the email address or alias for the ExtraView admin that are automatically generated by ExtraView are origina name. Examples are emails sent upon the self registration unauthorized access attempt
Email	EMAIL_ADMINISTRATOR_USER_ID	This is the email address to which emails originating with are sent. This is usually the administrator's email address the administrator
Email	EMAIL_FROM_USER_ID	Emails sent from ExtraView will show this as the sender's example, use support@myco.com
Email	EMAIL_SUBJECT_TEMPLATE	This allows you to use fields within the record and place t subject line of the email that is generated. The field that y include is enclosed between $$ and $$. For example, the i $$SHORT_DESCR$$. The value of: ExtraView Notification [$$ID$$]: $$STATUS$$ - $$SHO will produce an email subject line like: ExtraView Notification [12345]: Open – Report of a failu
Company	COMPANY_NAME	The name of your company

The visibility of individual fields or items within your installation may not be quite what you need. Firstly, if you are r the ADMIN user supplied with all ExtraView installations overrides the security permission settings, therefore if an it using the ADMIN user, it is certain that a permission is not set the way you require. Secondly if you cannot see a field you create a field and do not see it where you expect, check the field has been placed on the appropriate layouts as we that the field has the correct permissions. Other sections of this guide explain all these items, but this is a short list of t that frequently need to be checked and altered on a new installation:

Security permission key	Purpose
AREA.nn	nn is the internal ID of the business areas, and if you do not see a business area you e these keys
CF_AREA	Visibility of business areas. This includes the ability to add or edit the list of business administration
CF_PROJECT	Visibility of projects This includes the ability to add or edit the list of projects in adm
CF_PERSONAL_OPTIONS	Gives the ability to edit your personal options
STATUS.xxxxxx	xxxxxx is name of each status value in your installation. If you do not see a status val the add or edit screens, it is likely you did not give the correct permission to its securi key

Internationalization / Localization

ExtraView has been designed to work in a global setting. The following attributes should be understood when looking working over multiple countries and languages:

- **Locales** - Locales identify specific languages and geographic regions. Within ExtraView you create an entry fo locales you require. A locale is defined as a combination of the Language and the Region. For example, here a definitions:

Language	Language Code	Region	Region Code
English	*en*	Great Britain	*GB*
English	*en*	United States	*US*
Japanese	*ja*	Japan	*JP*
French	*fr*	Fance	*FR*
French	*fr*	Canada	*CA*

  For each locale you create, ExtraView will maintain a set of information for the messages to display, the numeri when displaying data, date formats and sort orders. The two-letter language codes are defined within an ISO sta 3166-1). The two-letter region codes extend the language code to indicate the geographic region. One languag regions. For example, there are aproximately 20 Spanish speaking countries or regions.

  Each user belongs to a single locale, set within their Account Administration screen. For example, you may hav Great Britain and Germany. Each user will see date formats in their own locale, with no resulting confusion bec differing and conflicting date formats in use over the world. If Extraview has been localized for a specific locale sets that locale will see the localized messages for that locale. In this way different users in different countries c ExtraView within their own language. Note that the language translations must be provided for each region. If language translation for any message or title, ExtraView will display the value in the DEFAULT_LANGUAGE,

- **Language Translation** - Each installation has a default language, defined in the behavior setting DEFAULT_L Usually, this is *en* for English. For each locale that is defined, the administrator can define an alternative to eacl system message and to each and every metadata list value entered when configuring the system. If a user is wor locale, and no translation has been created for a specific message, ExtraView will display the message using the DEFAULT_LANGUAGE.

the European Central time zone will see the issue expressed in their time zone. There is support for two types of fields with a display type of *date* will always be corrected as just mentioned. There are also *day* fields where no made for time. This can be used for events such as a birth date where you never want to correct for time zone
- **Automatic translation of data** - It is possible to configure different text area fields where a field in one langua field may automatically be translated to a different language in a different field. This uses Google's web service the translation

As far as possible, ExtraView relies on foundation technology such as the database and the Java language to provide n features. For further information on this topic, please consider visiting these reference sources:

- Internationalization: Understanding Locale in the Java Platform
- Language localisation - Wikipedia
- Globalization support in Oracle Database

ExtraView Licensing Schemes

ExtraView is a licensed product. Several types of licensing schemes are available, according to your purchase of the li ExtraView Corporation. The license details of the ExtraView installation can be viewed in the section named **Compar Settings** in the **System Controls** section of **Administration**.

Named User Licensing Scheme

Named users are identified as single-person entities that each has a unique User ID within ExtraView. You may create than the number of licenses you have purchased, but the maximum number of active users cannot exceed the number You may disable any account or accounts to remain in compliance with the license. Note that users who only occupy t in the behavior setting named LIMITED_USER_ROLE are not counted in the licensing scheme, and they will always ExtraView.

Concurrent User Licensing Scheme

You may create any number of user ID's with the concurrent licensing scheme, but not all users may be able to sign on and work within ExtraVi is because the software restricts the number of users who can sign on at any time to the number of concurrent licenses purchased. If users in attempt to sign on, they will receive a message asking them to contact the ExtraView administrator. As administrator, you can control the length remains active, if a user becomes idle, through a behavior setting. After the expiry time, if a user remains idle, their session is expired allowing occupy the license.

If a user configured with a concurrent license signs on from a single computer, with more than one browser, they occupy a single concurrent lic browser connections. For example, they may sign on with both Mozilla Firefox and Google Chrome browsers and only occupy a single license on again with Microsoft Edge, they will occupy a second license. If the same user ID is used from different computers, a concurrent license is c computer.

With EVMail usage, whereby an ExtraView issue is either inserted or updated from an incoming email, the sender's address of the incoming en the sender's ExtraView account has a concurrent license, or the sender is not a user within ExtraView, a concurrent license is consumed when processed and an issue is inserted or updated. The expiry time of this license is fixed at 30 minutes. If there are insufficient concurrent license time EVMail attempts to insert or update an issue, an email is sent to the system administrator and an email is sent to the sender of the incomi them that their email could not be processed.

Mixed or Hybrid Licensing Scheme

When a mixed license is purchased, there will be a maximum number for named users and a maximum number for co When any new user is created, they are automatically given the ability to use a concurrent license. The administrator r user account maintenance screen to move any user (up to the number of named licenses purchased) from a concurrent become a named user license. Note that users who only occupy the role identified in the behavior setting named LIMITED_USER_ROLE are not counted in the licensing scheme, and they will always have access to ExtraView. Th not be given a named user license, but should occupy a concurrent license. This is the default behavior.

End-User Licenses without Cost

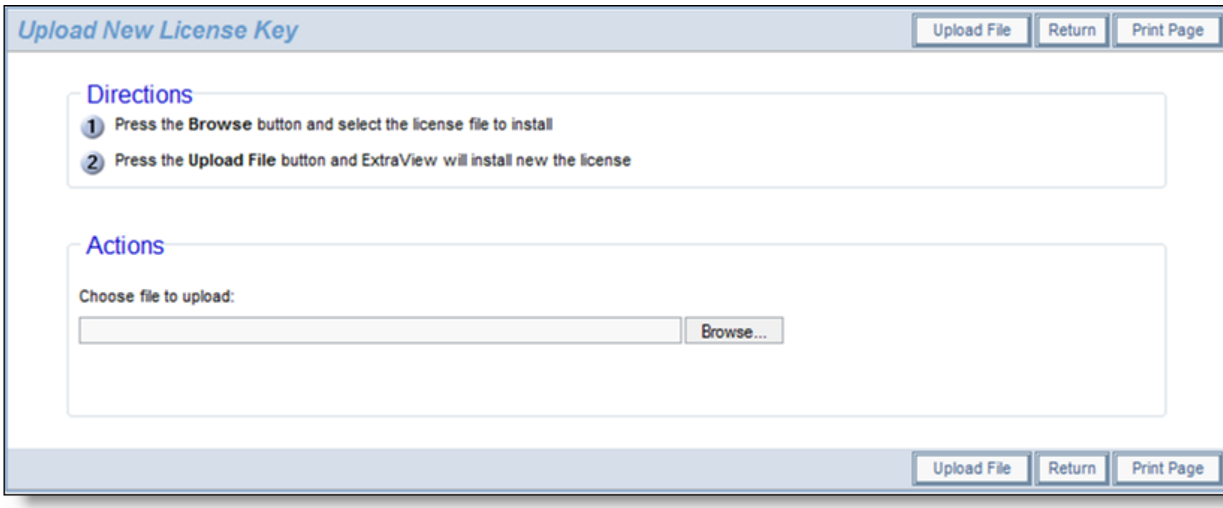
properties.

Initial Setup

This is the recommended sequence of operations to set up an ExtraView installation, immediately following its installa

Upload your License Key

When you first install ExtraView, or you purchase additional ExtraView licenses or make other changes to your Extra' import the new license with the utility titled **Upload New License Activation Key**. If you were sent your license activ email, save the attachment that contains the license key to your computer, remembering the location where you are sav installing the product for the first time, the following screen comes up automatically, after you accept the end-user lice you are updating your license file for any other reason, navigate to **Admin**, **Initial Setup**, **Upload License Activation** screen.



Importing a new license key

Simply use the **Browse** button, navigate to where you saved the the license activation key file provided by ExtraView **Upload File**. You will see a confirmation screen indicating the parameters of the activation key you uploaded. Your ne takes immediate effect.

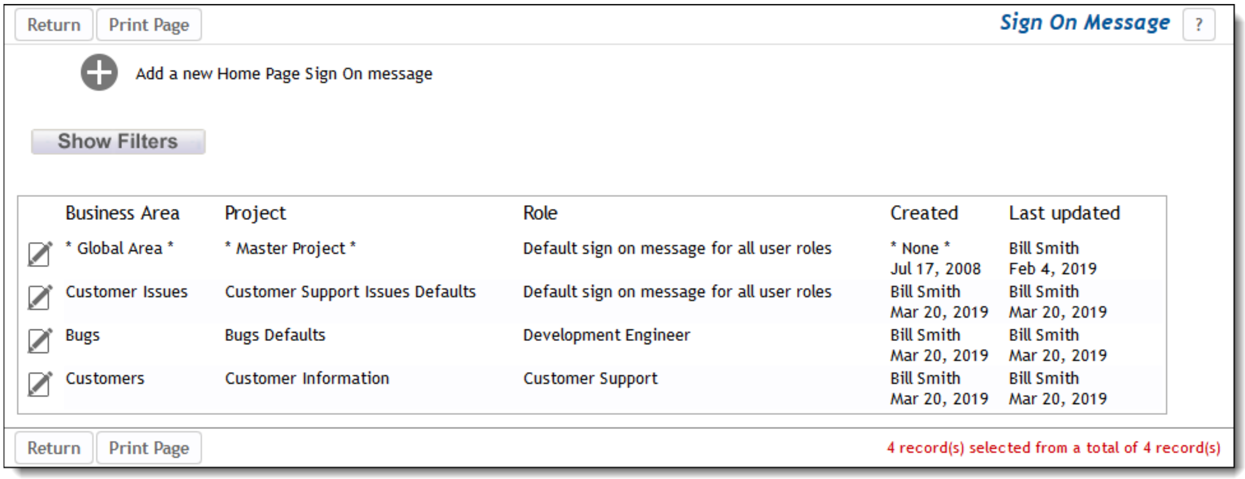
Alter the Sign On Message

Many organizations use the Sign on Message screen as a bulletin board for system-wide messaging to the members of The Sign On message may be global, or may be customized for any combination of the Business Area, Project and the On messages are displayed according to the following inheritance rules:

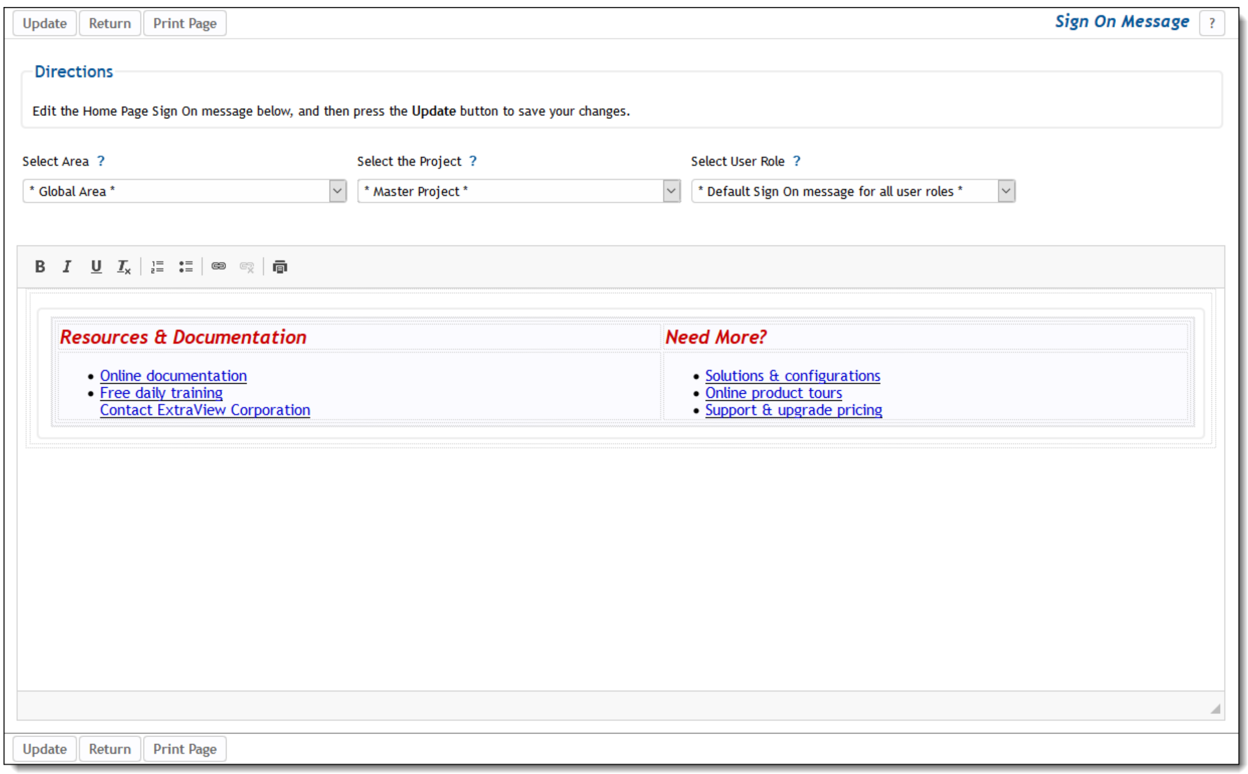
- When a user signs on, their current Business Area, current Project and current user role are utilized to define the message that is displayed
- If an entry for this is not present, the Sign On message for the user's current Business Area, the default Project and their current user ro
- If an entry for this is not present, the Sign On message for the Global Business Area, its default Project and the current user role is disp
- If an entry for this is not present, the Sign On message for the current Business Area, the current Project and for all us displayed

From the Administration screen, under the **Initial Setup Menu**, click on **Sign On Message**.

The following screen appears:

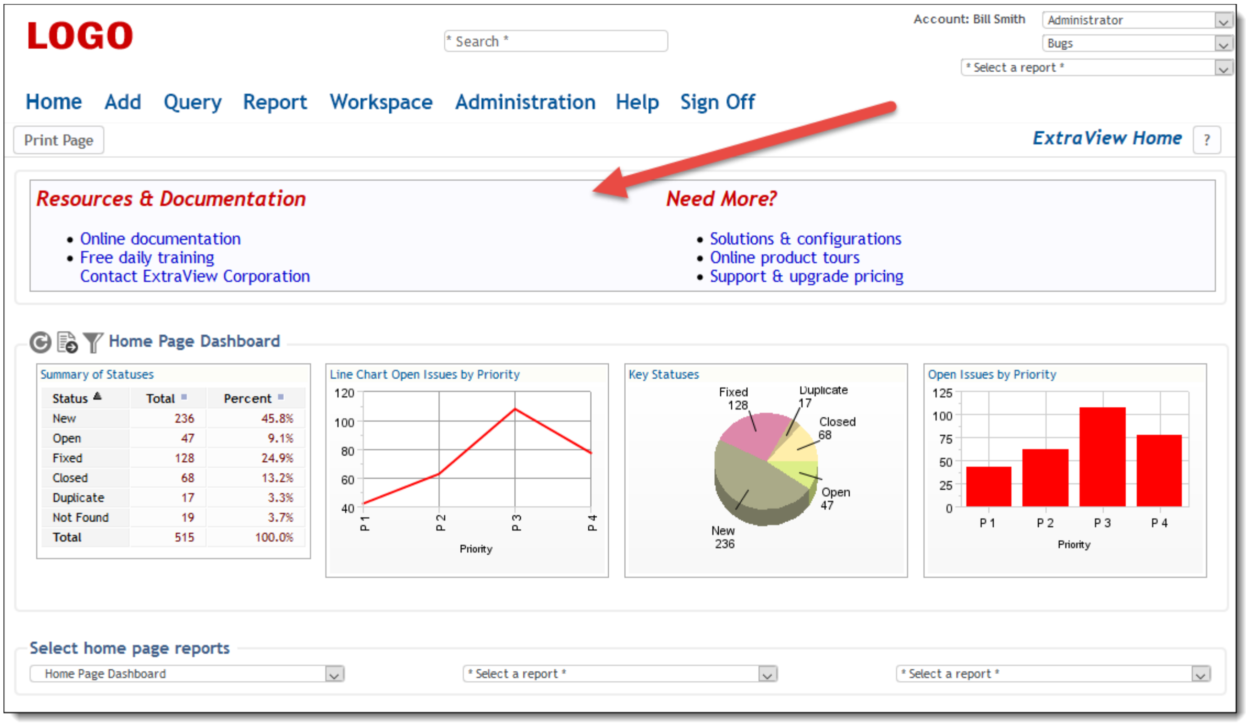


A typical Sign On message editor screen look like:



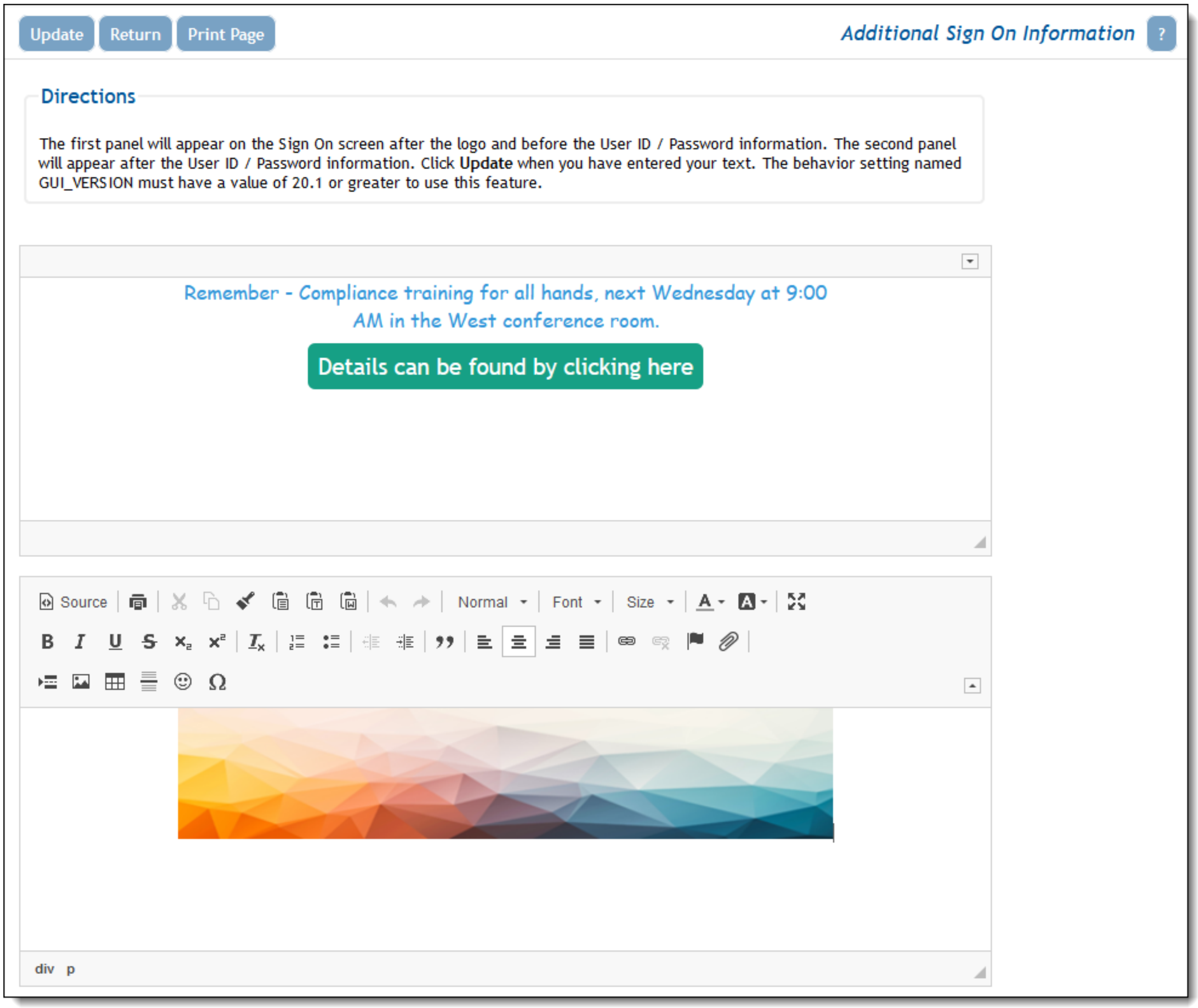
Within the sign on message, it is recommended that you use CSS styles as opposed to HTML tags to style the of the m displayed. This will ensure that styles you want for your characters will take effect. Some HTML styling of the text m because of the precedence of styles used in the overall document.

As an example, you should use Here is some text as opposed to <font size='7'>H

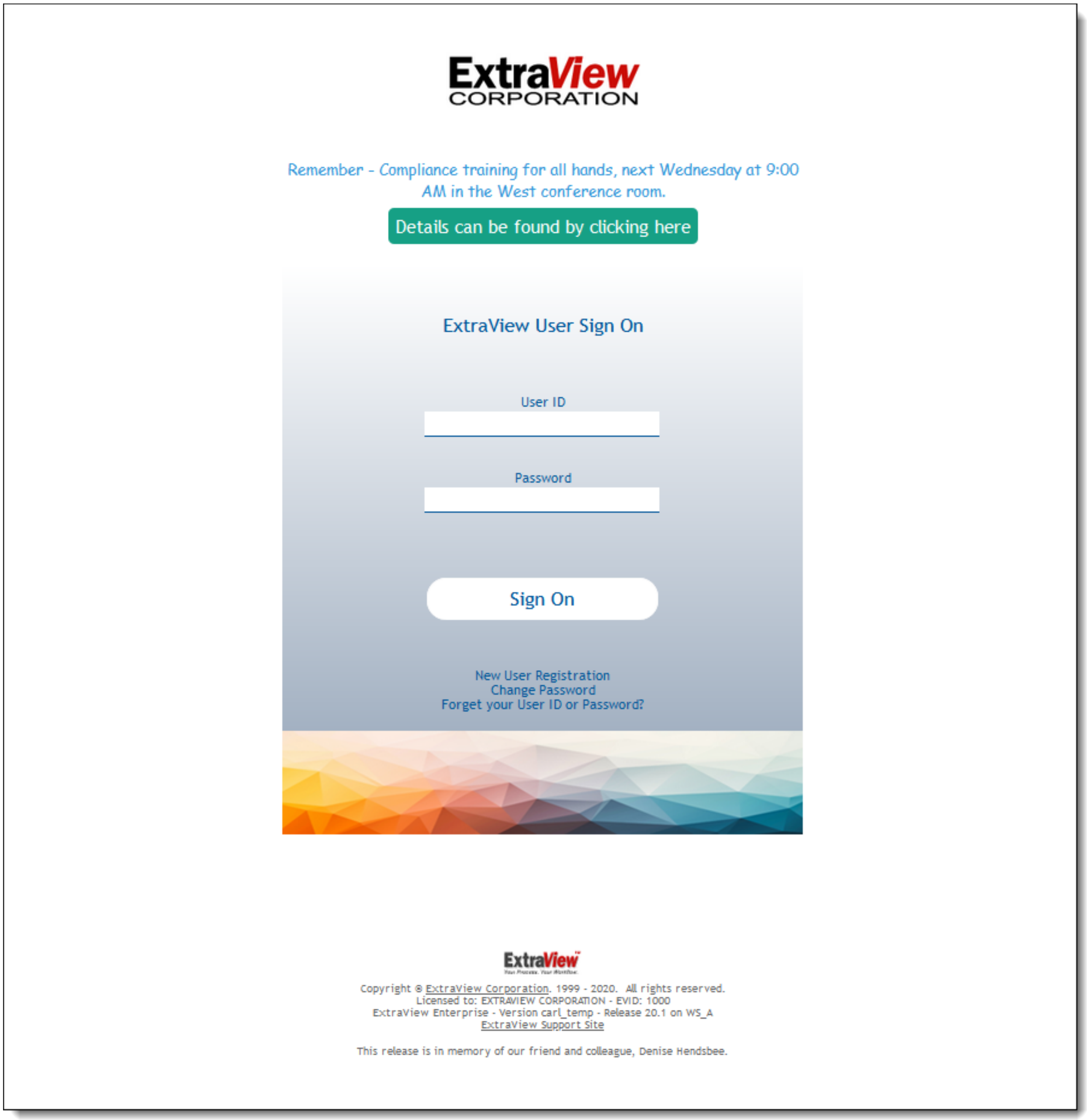


Additional Sign On Screen Info

This utility allows you to define one or two additional panels on your user's sign on screens. These optional segments screen can be filled with any valid HTML, but they should be somewhat concise and not occupy too much real estate access the utility, navigate to **Admin --> Initial Setup --> Additional Sign On Information**. Once you have entered will see a screen similar to this:



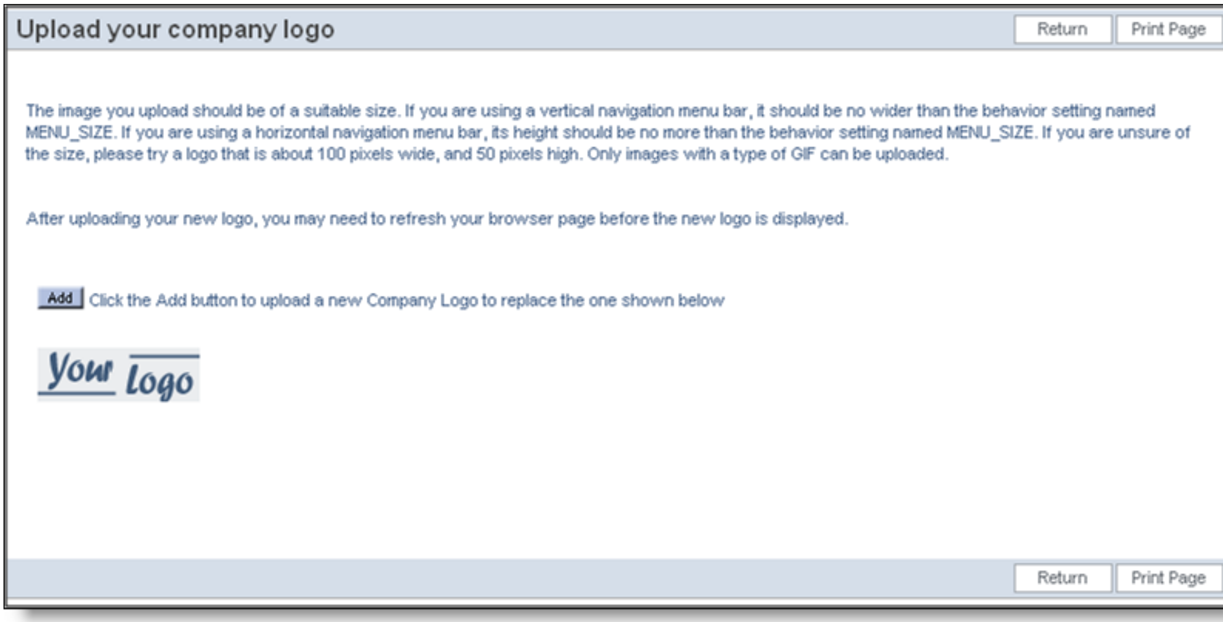
When a user navigates to the sign on screen, it will look something similar to this:



Of course, the HTML content you create may contain images, links and other valid HTML objects. To assist your cor content you supply for each panel is contained in a **div** tag. The width of the sign on panel with the User ID and passv pixels. There is no vertical spacing defined before or after the sign on panel. You should provide your own spacing.

Upload your Company Logo

The company logo that appears in the top left hand corner of the navigation bar can be replaced with your own image. named **Upload Your Company Logo** within the Initial Setup Menu admin screen. You will see the following:



Uploading your company logo

When you click the **Add** button, a dialog box appears, allowing you to choose a file from your local computer to uplo

If you upload a logo that is too large for the available space on the navigation bar, ExtraView will resize the logo so th space. If your navigation bar is set to the horizontal direction, then the logo is reduced in size so that its height is equa MENU_SIZE.

If your navigation bar is set to the vertical direction, the logo is reduced in size so that its width is equal to the MENU application server and your web server are on different physical servers, you will need to have a mount point within th server to ensure that the logo you upload is served up from the application server, not the web server.

Only files of type gif may be uploaded.

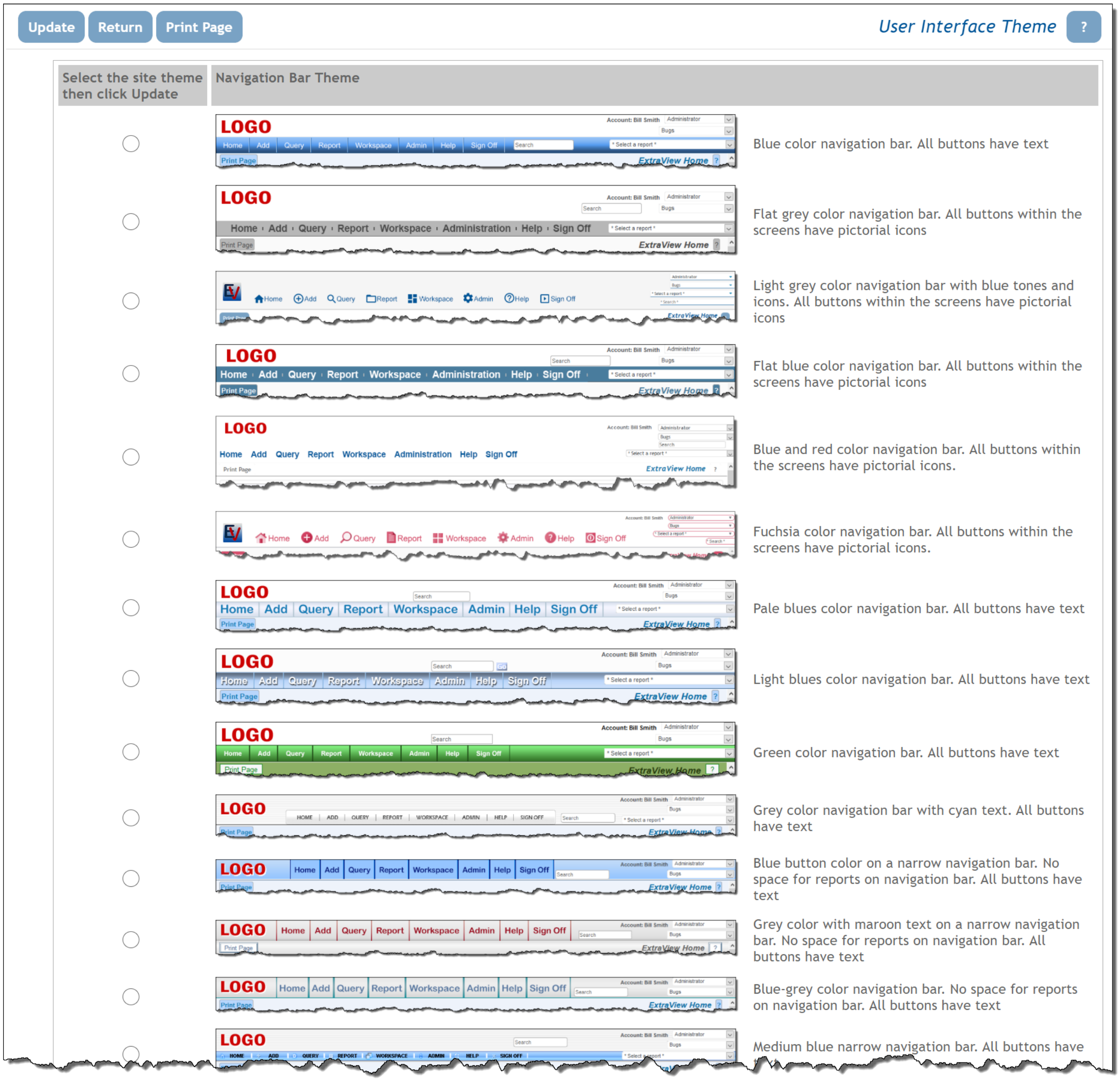
Note: The new company logo image may not appear immediately on your page, especially if the new one you uploade size to the previous one. The reason for this is that the browser caches the image, and does not always detect that it sh fresh copy. Please click on the Home button on the navigation bar to see the new logo in situ.

The same logo is placed on the sign on screen. There may be some occasions when, for aesthetic reasons, you want to logo on the sign on screen. This is possible, utilizing two behavior settings, under the Display Settings menu. You will behavior settings there:

SIGN_ON_SCREEN_LOGO	This is the path to the logo used for the sign on screen logo. By default, thi ../images/CompanyLogo.gif. This is the location of the company logo that this utility. You can point to any other valid location with an absolute or rel must place this logo on the file system of the server yourself. This allows y logo image on your sign on screen.
SIGN_ON_SCREEN_LOGO_STYLE	This setting is typically used to place the logo in SIGN_ON_SCREEN_LO location on the sign on screen. The default is to use a style of position: abs left:10px;top:10px which places the logo 10 pixels from the top left-hand c screen.

Choose a User Interface Theme

This administrative function provides a means to set the overall theme of the screens displayed to users. Select **User I Themes** from the **Administration --> Initial Setup** menu and you will see this screen:



Selecting a user interface theme

- Select the user interface theme which you prefer
- Click the **Update** button on the menubar of the screen
- You will be prompted to sign off and sign on again to view the theme you selected
- You can repeat this step as often as needed to try out the various themes

Configure Changes to the User Interface

You may leave this step until later, but this entry provides details on some of the customizations you might want to ma

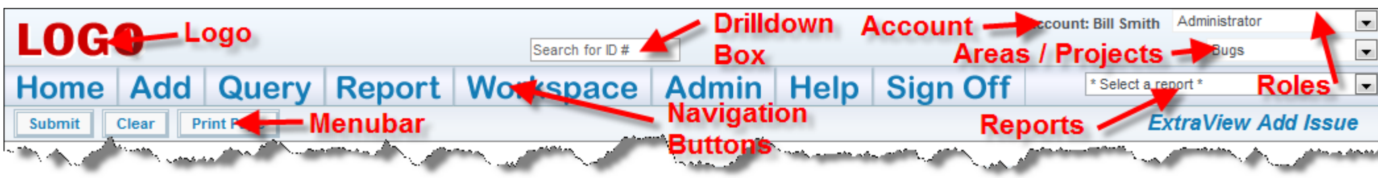
The ExtraView user interface is composed of the following components. Each of these may be configured to your ow

- **The Navigation Bar.** This appears horizontally at the top of the screen or vertically down the left-hand edge of typically contains the main navigation buttons and a drilldown box to search for issues
- **The Menu Bar.** This appears at the top of each screen (beneath the Navigation Bar if it is set for a horizontal ap there is a horizontal navigation bar, then it appears beneath the navigation bar, else it appears at the top of the sc
- You can make more detailed and more subtle changes to the user interface via a variety of methods discussed in sections.

Navigation Bar

The navigation bar is a set of horizontal buttons and links that appear at the top of the browser window. The navigatio presented may be different, according to a number of criteria:

- Buttons may be made visible / invisible by using security permission keys for user roles
- The button styles are determined by the user interface theme
- Different navigation bars may be set up for different roles within the system. With this feature, different navigat the system may also have different button styles for the different roles



The components of the navigation bar are:

- Your company logo. The company logo image (CompanyLogo.gif) should be sized to fit correctly within your s interface theme
- Navigation buttons. The **Home**, **Help**, and **Sign Off** buttons are always present. The **Add**, **Query**, **Report**, **Wo** **Admin** buttons are present if the user's current role has permission to see and use these buttons
- The user’s name with a link to their personal account information
- A reports list from which the user may execute reports to which they have permission
- A list from which the user can alter their current role
- A list from which the user can alter their current business area and / or project
- A drilldown box into which a user can enter one or more ID's and drilldown into these issues
- A contextual menubar beneath the main navigation buttons. The buttons that appear on the menubar are depend you are visiting. The menubar also has the name of the screen. The position of the buttons and the screen name with the behavior setting named MENU_BUTTON_POSITION.

To aid the configuration of the navigation bar, there are several behavior settings in the Display category, as follows:

Behavior setting	Purpose
NAV_BAR_DRILLDOWN_BOX_STYLE	The CSS style to be applied to the table containing the drilldown box o bar. This is only used when the MENU_DIRECTION is set to HORIZ(horizontal style navigation bars and is used to alter the position of the (for different styles of navigation bar. Most frequently, you can position box in an absolute position on the navigation bar, but you can also use

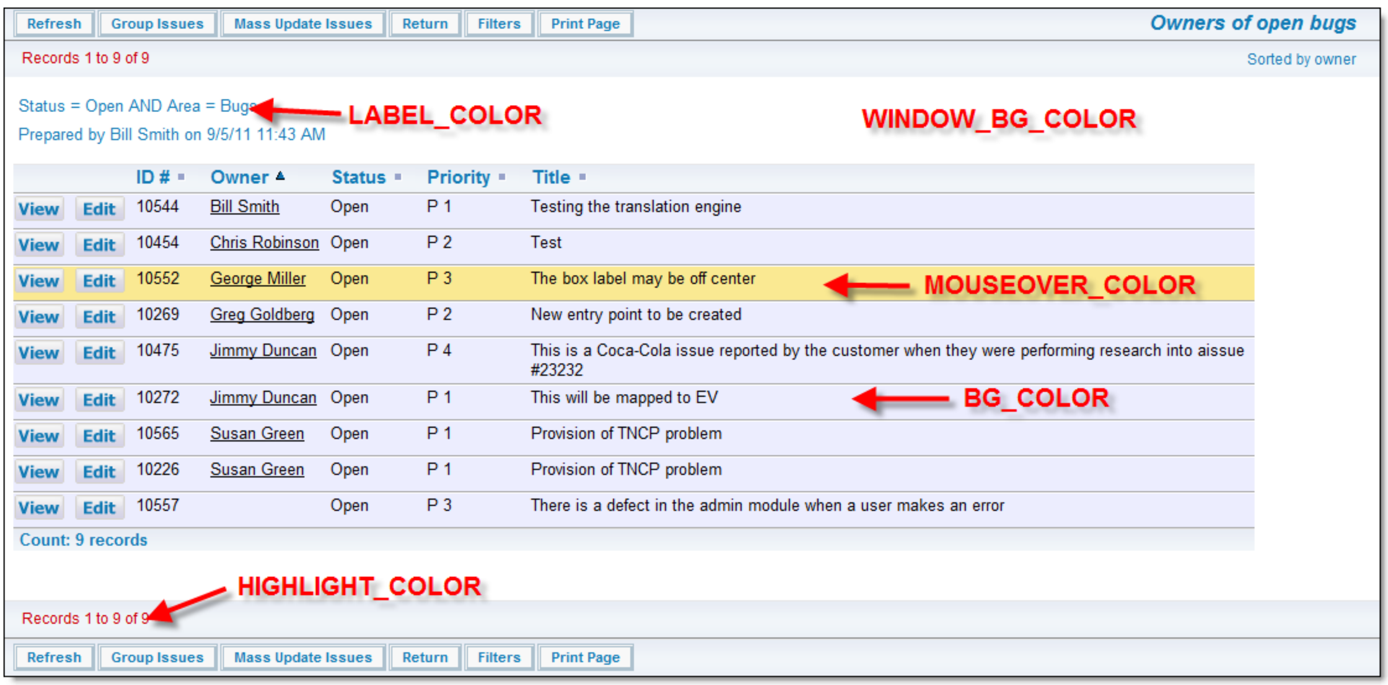
MENU_TEXT_COLOR	This allows you to select the color of text on the navigation bar, to ensu color to the background

The following security permission keys control the ability for a user role to edit / alter their access to the options in the

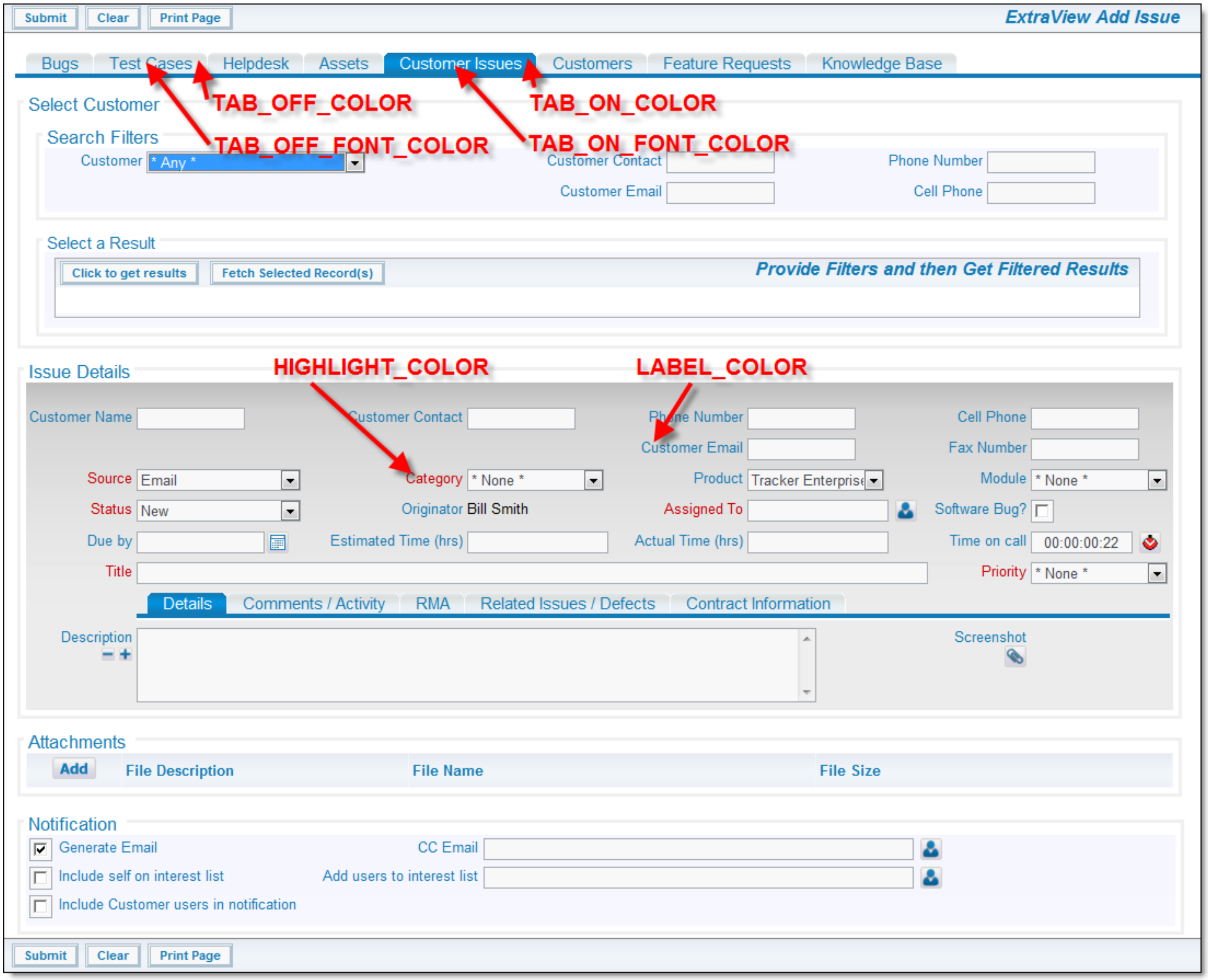
Menu Bar Entry	Control
Account	The CF_PERSONAL_OPTIONS controls access to the user's account details and options. If the u only read access to this key, then the user name will appear in the title bar, but they are not able tc the personal options screen. Write permission is needed in order to be able to drill down into the p screen
Reports	The SR_MENUBAR_REPORTS security permission key controls the presence of this entry on th worth noting that if you have an installation where each user has access to many hundreds of repo noticeable performance issue in generating this reports menu, each time the user hits a button that new screen. In this environment, the recommendation is to turn this permission key off, and have reports via the Query button on the navigation bar. This one additional mouse click may save ther seconds each time they move to a new screen.
Role	If the user has only a single role defined, this title bar entry will not appear. If the user may adopt roles, this entry appears and the user can drill down to a screen to alter their current role
Area and Project	The security permission keys named CF_AREA and CF_PROJECT control access to whether the alter their current business area and project

Background and Text Colors

The following screen shots give the names of many of the behavior settings that can be altered within the Display cate settings.



Color Names



Color Names

Images

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to use this feature without contacting ExtraView support.

Navigation and action buttons within ExtraView are created and stored as png files. They reside in two *images* directo defined by the paths in the IMG_HOME and the IMG_NAV_BAR_HOME behavior settings. The IMG_NAV_BAR_I contains all the images required by the standard interface navigation bar. There is a sub-directory of this directory, nar which contains a set of images with the same name, but used for the Workspace interface. The remaining images are s IMG_HOME. Any image can be replaced with an alternative or you may create a new directory and place a complete within the new directory. You then define the path to the new directory in the IMG_HOME and / or the IMG_NAV_B behavior settings. Care should be taken not to provide images that are too large, and cause your browser to display the unsatisfactory results. The following table shows the standard images that can be altered by the user, and their suggest

Navigation Bar Images in the IMG_NAV_BAR_HOME Directory

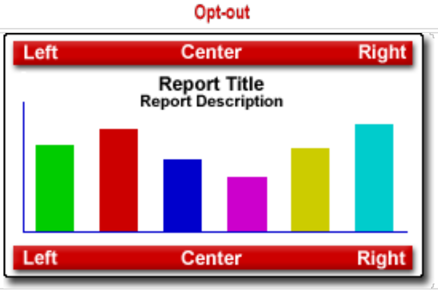
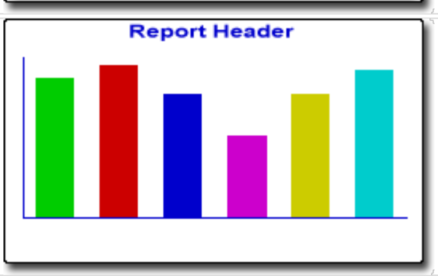
Note again that under this directory is a directory named **workspace**, which is where the navigation bar buttons for th reside. Navigation bar buttons within the workspace are recommended to have a size of 60 pixels wide, by 40 pixels h

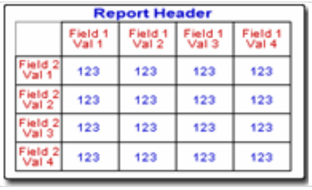
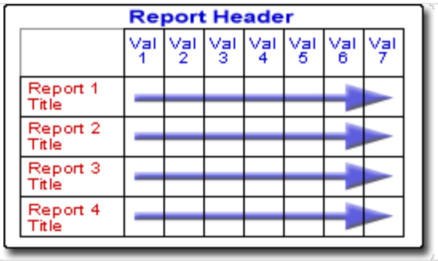
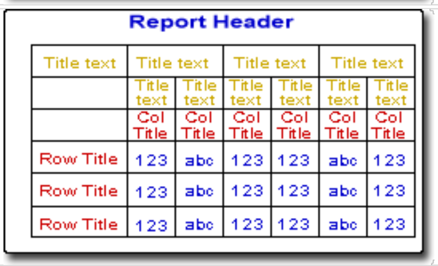
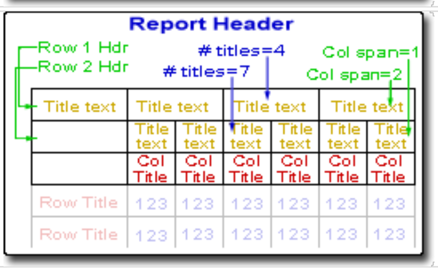
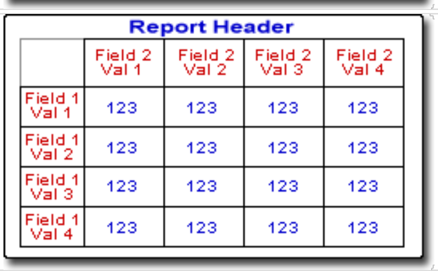
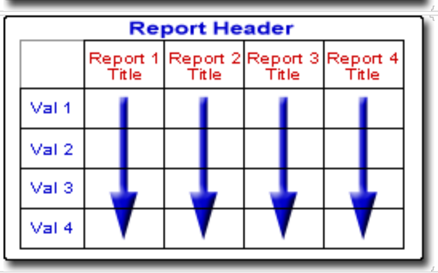
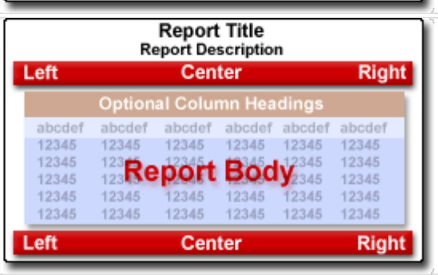
Sample Image	Filename	Size	Purpose
	bHomeOff.png	V=100x25 H=80 x 30	The off state for the homepage button
	bHomeOn.png	V=100x25 H=80 x 30	The on state for the homepage button
	bSystemConfigOff.png	V=100x25 H=80 x 30	The off state for the administration button
	bSystemConfigOn.png	V=100x25 H=80 x 30	The on state for the administration button
	bAddProblemOff.png	V=100x25 H=80 x 30	The off state for the add issue button
	bAddProblemOn.png	V=100x25 H=80 x 30	The on state for the add issue button
	bSearchOff.png	V=100x25 H=80 x 30	The off state for the search/report button
	bSearchOn.png	V=100x25 H=80 x 30	The on state for the search/report button
	bHelpOff.png	V=100x25 H=80 x 30	The off state for the help button
	bHelpOn.png	V=100x25 H=80 x 30	The on state for the help button
	bLogoffOff.png	V=100x25 H=80 x 30	The off state of the sign off button
	BannerBackground.png	V=any reasonable size x 85 H=130 x any reasonable size	Image background for the main menu
ExtraView Your Process. Your Workflow.	ExtraViewLogo.gif	V=any reasonable size x 37 H=100 x any reasonable size	The ExtraView logo that appears on the navigation bai
	GoButton.png	V=any reasonable size x 37 H=100 x any reasonable size	Optional button displayed by the drilldown box on the

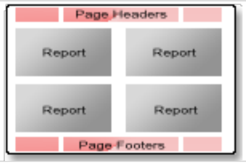
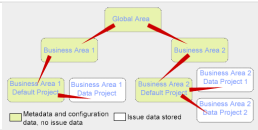
Other Images in the IMG_HOME Directory

Sample Image	Filename	Size	Purpose
	AddButton.png	40 x 20	This is a general use adc throughout
	DescButton.png	40 x 20	Used to access the meta attachments

Hide Filters	HideFilters.png	137 x 20	Used within administrat
Hist	HistoryButton.png	40 x 20	Used to access History f
Insert	InsertButton.png	40 x 20	The insert button on the screen
List	ListButton.png	40 x 20	This is a general purpos
Map	MapButton.png	40 x 20	Used in the import funct
QEdit	QuickEditButton.png	40 x 20	Used to access the Quicl
Remove	RemoveButton.png	60 x 20	Used to remove issues fi groups
Save	SaveButton.png	40 x 20	General purpose
Set GUI	SetGUITheme.png	60 x 20	Used to set the theme wi administration
Show Categories	ShowCategories.png	137 x 20	Used within administrat
Show Filters	ShowFilters.png	137 x 20	Used within administrat
Updt	UpdateButton.png	40 x 20	Update button in metada
Upload	UploadButton.png	60 x 20	Used to upload files
View	ViewButton.png	40 x 20	The button used to view report
	NextButton.png	18 x 18	The button used to selec of a report
	PreviousButton.png	18 x 18	The button used to selec page of a report
	Calendar.png	19 x 18	Button used to access th
	ColorPicker.png	19 x 18	Used to indicate the colc
	LinkButton.png	19 x 18	The button used to provi links to other functions
	PermissionsButton.png	19 x 18	Provides access to secur
	QmarkButton.png	19 x 18	Button used to access a j users
	timerOff.png	19 x 18	Used for the timer field
	timerOn.png	19 x 18	Used for the timer field
	Style.png	19 x 18	Access to the style of an
	AgingIcon.gif	19 x 18	Icon used to signify a re report
	ChartIcon.gif	15 x 15	Icon used to signify a re
	ContainerIcon.gif	15 x 15	Icon used to signify a re container report
	ExternalReportIcon.gif	15 x 15	Icon used to signify a re external report
	MatrixIcon.gif	15 x 15	Icon used to signify a re report
	PageLayoutIcon.gif	15 x 15	Icon used to signify a re
	ReportIcon.gif	15 x 15	Icon used to signify a re columnar report
	StatisticsReportIcon.gif	15 x 15	Icon used to signify a re statistics report
	SummaryIcon.gif	15 x 15	Icon used to signify a re summary report

	MatrixIconBig.gif	19 x 19	Icon used to signify a re report
	PageLayoutIconBig.gif	19 x 19	Icon used to signify a re
	ReportIconBig.gif	19 x 19	Icon used to signify a re columnar report
	StatisticsReportIconBig.gif	19 x 19	Icon used to signify a re statistics report
	SummaryIconBig.gif	19 x 19	Icon used to signify a re summary report
	GrowButton.png	10 x 10	Button used to enlarge a editing
	ShrinkButton.png	10 x 10	Button used to reduce th area when editing
	smallbullet.gif	10 x 10	General purpose small b
	ArrowSelectOff.png	12 x 12	Icon used to signify repo can be sorted
	ArrowSelectOn.png	12 x 12	Icon used to show the co used as the descending s report
1	B0.gif...B9.png	20 x 20	Ten Separate gifs with tl 9, used in many places
	Arrow.gif	11 x 9	Used on the menubar to with sub-menus
	promote.gif	15 x 15	Used in reports to indica heading that may be pro
	SelectorOff.gif	15 x 15	Used as the off indicator selector
	SelectorOn.gif	15 x 15	Used as the on indicator selector
	SortAscend.gif	15 x 15	Used to indicate ascendi
	SortDescend.gif	15 x 15	Used to indicate descend
Add	TreeAddButton.gif	40 x 15	Tree button to add elem
Edit	TreeEditButton.png	40 x 15	Tree button to edit elem
Delete	TreeDeleteButton.png	40 x 15	Tree button to delete ele
View	TreeViewButton.png	40 x 15	Tree button to view elen
Opt-in	TreeOptInButton.png	40 x 15	Tree button to opt-in
Opt-out	TreeOptOutButton.png	40 x 15	Tree button to opt-out
	ChartLayout.gif	270 x 160	Part of PDF preparation
			

	GroupColDGPic.gif	270 x 160	Part of PDF preparation
	GroupColPic.gif	270 x 160	Part of PDF preparation
	GroupColReportPic.gif	270 x 160	Part of PDF preparation
	GroupHeadersPic.gif	270 x 160	Part of PDF preparation
	GroupRowDGBPic.gif	270 x 160	Part of PDF preparation
	GroupRowPic.gif	270 x 160	Part of PDF preparation
			

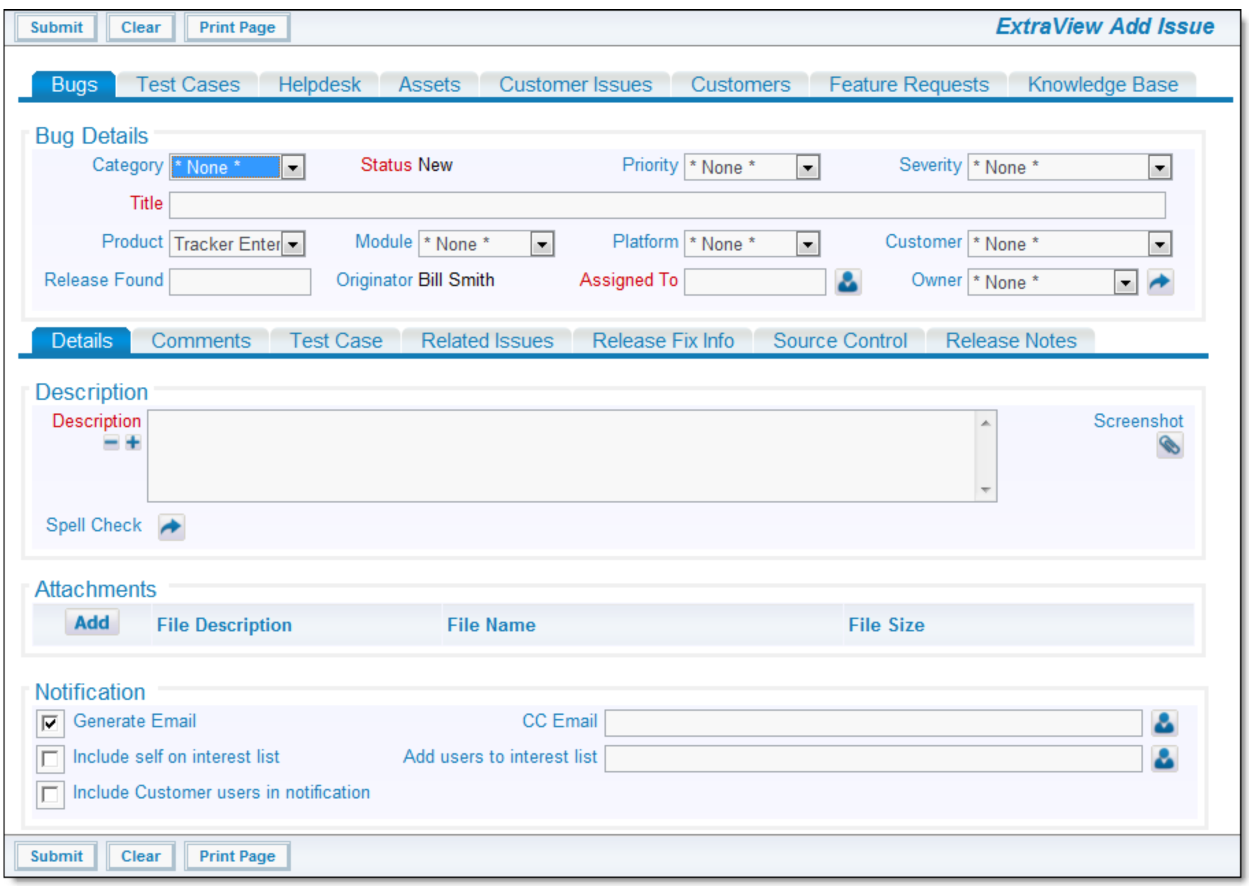
	ReportContainer.gif	150 x 100	Depicts containter repor
	AreaProjectFlow.gif	500 x 250	Exemplifies the Area / P
	TransitionArrow.gif	30 x 20	Used as part of the Statu diagram
	TransitionArrow.gif	20 x 20	Used as part of the Statu diagram

Main Screen Image Sets

To select any of these, alter the behavior setting named IMG_HOME in the Environment Settings menu beneath the A Advanced tab, and set the behavior settings to those shown. Consider using the themes to select a color set, as all setti you.

Pale Blue Theme

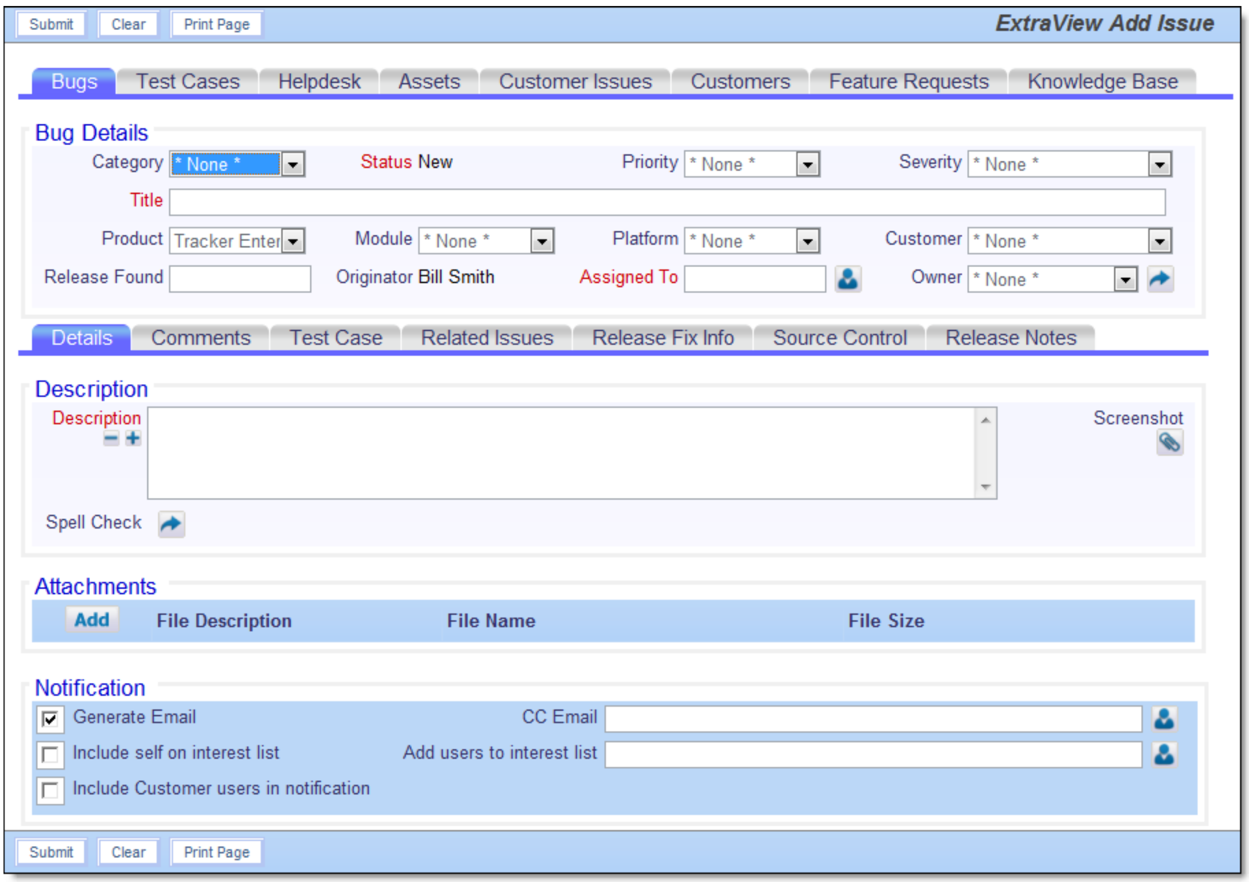
These images offer theme of pale blue colors with light blue buttons.



BG_ALT_COLOR	#F7F7FB
BG_COLOR	#F0F1FC
BORDER_COLOR	#1292EA
LABEL_COLOR	#333366
MOUSEOVER_COLOR	#FAE992
REPORT_HEADER_FOOTER_COLOR	#ADBFD0
REPORT_SUMMARY_TOTAL_COLOR	#ADBFD0
SCREEN_HEADER_FOOTER_BG_COLOR	#D5DEE9
TAB_FONT_OFF_COLOR	#333366
TAB_FONT_ON_COLOR	#FFFFFF
TAB_OFF_COLOR	ADBFD0
TAB_ON_COLOR	3F5A7A
WINDOW_BG_COLOR	#FFFFFF

Dark Blue Theme

These images offer theme of rich blue colors with dark blue buttons.

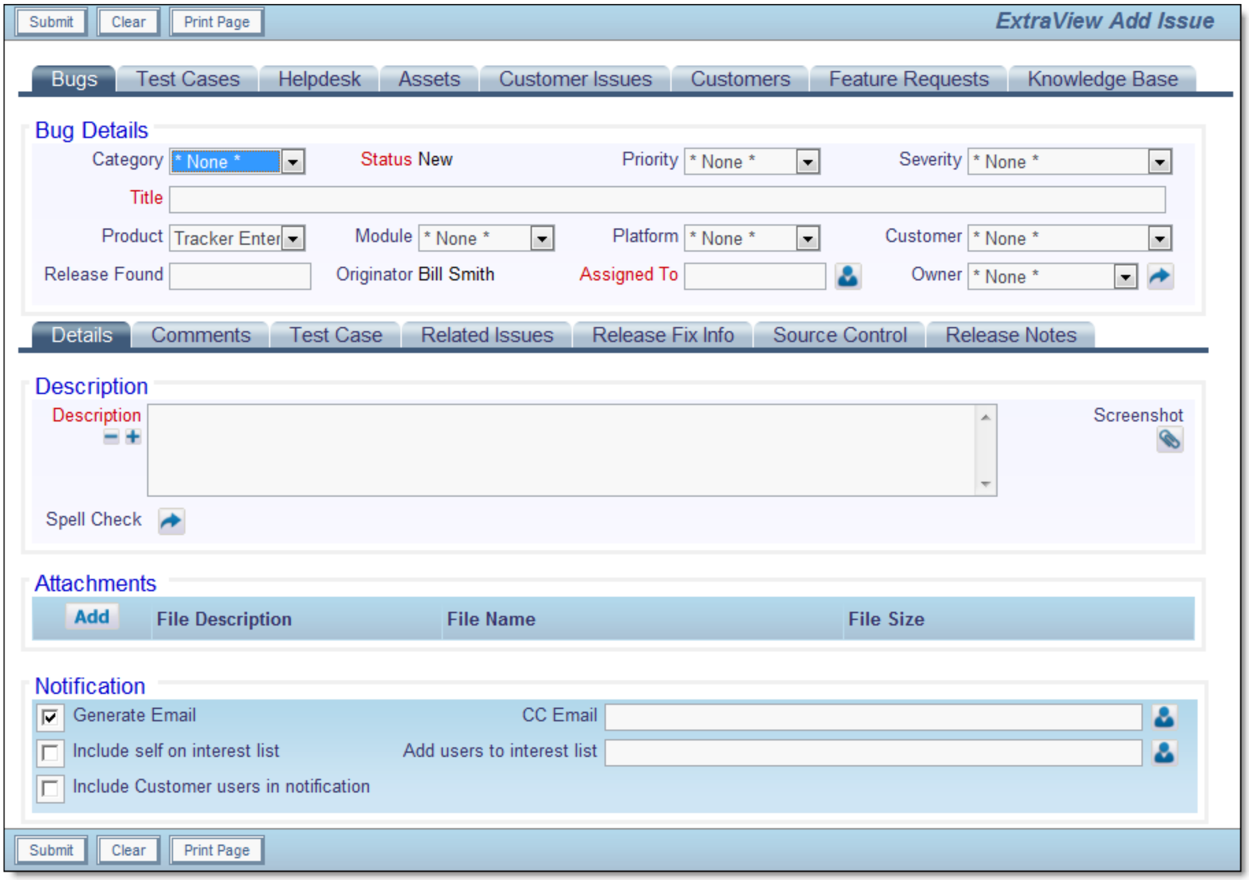


Setting	Value
IMG_HOME	../images/images_dark_blue/
BG_ALT_COLOR	#EBF1F9

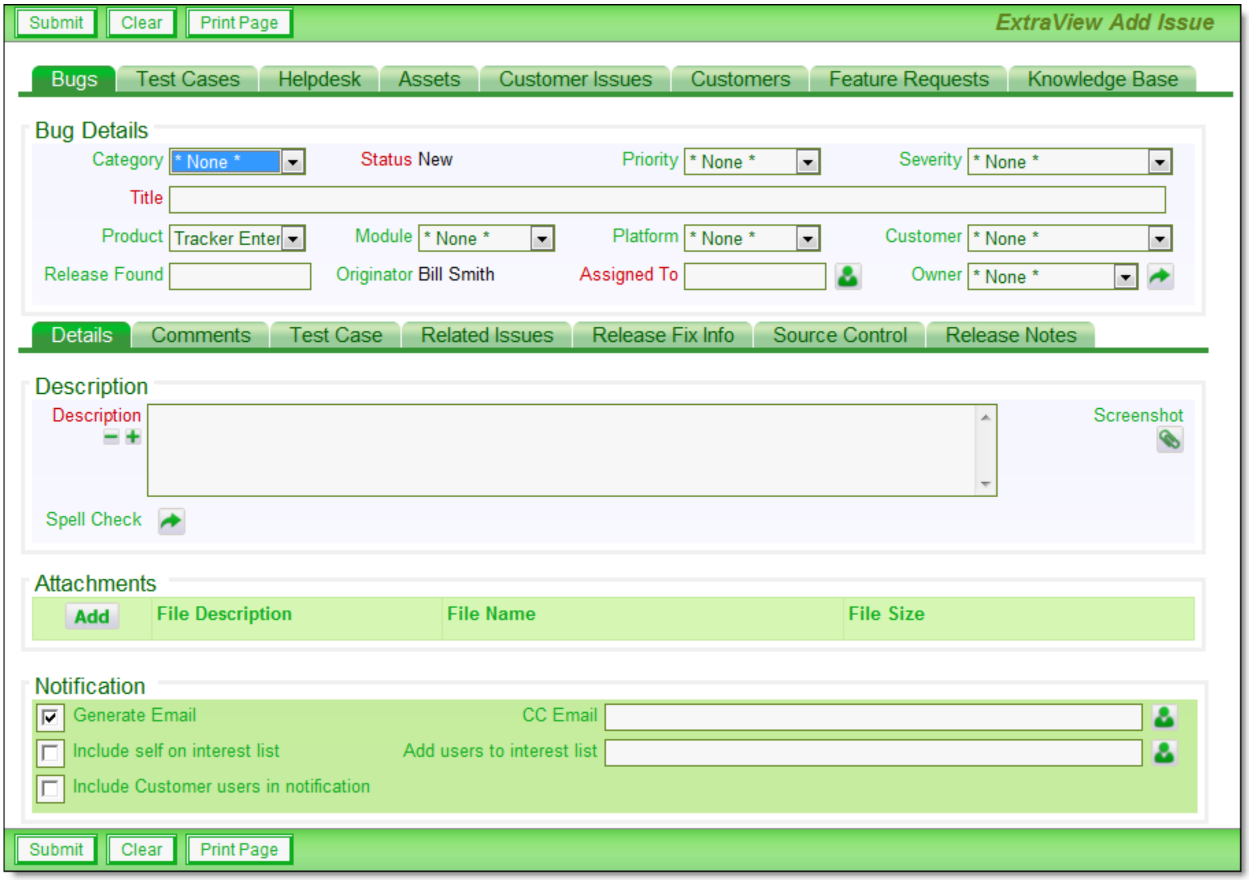
TAB_FONT_ON_COLOR	#FFFFFF
TAB_OFF_COLOR	E0EDF9
TAB_ON_COLOR	3F5A7A
WINDOW_BG_COLOR	#FFFFFF

Light Blue Theme

These colors are a mix of light blues, with contrasting highlights.



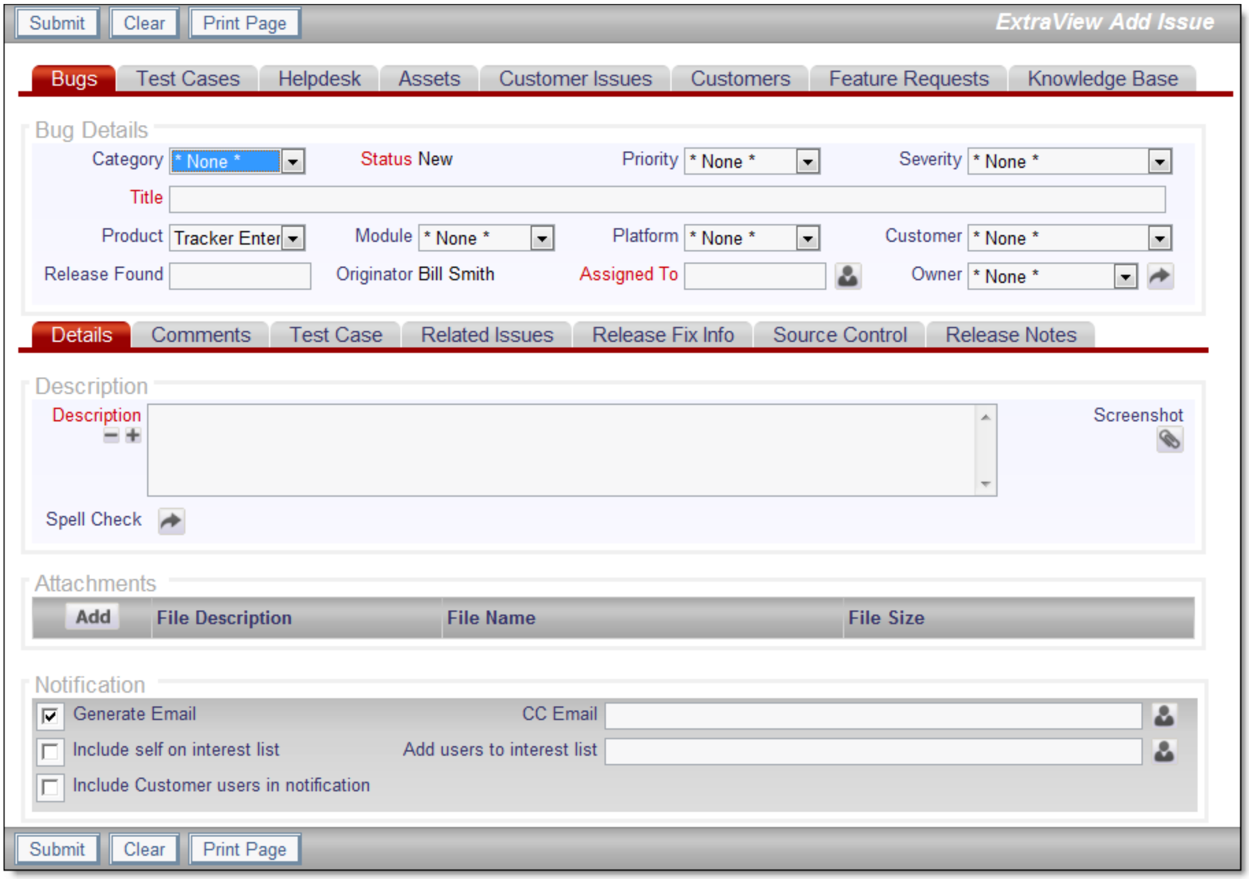
Setting	Value
IMG_HOME	../images/images_light_blue/
BG_ALT_COLOR	#D5E3EB
BG_COLOR	#F5F5FF
BORDER_COLOR	#1292EA
LABEL_COLOR	#405E87
MOUSEOVER_COLOR	#E0E8F3
REPORT_HEADER_FOOTER_COLOR	#ADBFD0
REPORT_SUMMARY_TOTAL_COLOR	#ADBFD0
SCREEN_HEADER_FOOTER_BG_COLOR	#D5DEE9
TAB_FONT_OFF_COLOR	#FFFFFF
TAB_FONT_ON_COLOR	#FFFFFF



Setting	Value
IMG_HOME	../images/images_green/
BG_ALT_COLOR	#E8F7E7
BG_COLOR	#FEFFFE
BORDER_COLOR	#1292EA
LABEL_COLOR	#389538
MOUSEOVER_COLOR	#D4F0B4
REPORT_HEADER_FOOTER_COLOR	#98DB98
REPORT_SUMMARY_TOTAL_COLOR	#98DB98
SCREEN_HEADER_FOOTER_BG_COLOR	#DDE8A0
TAB_FONT_OFF_COLOR	#FFFFFF
TAB_FONT_ON_COLOR	#FFFFFF
TAB_OFF_COLOR	99CC99
TAB_ON_COLOR	389538
WINDOW_BG_COLOR	#FFFFFF

Grey Theme

This theme provides a mixture of grey tones complemented by dark red highlights.



Setting	Value
IMG_HOME	../images/images_grey/
BG_ALT_COLOR	#FAFAFA
BG_COLOR	#F6F6F6
BORDER_COLOR	#1292EA
LABEL_COLOR	#444444
MOUSEOVER_COLOR	#E7DBDD
REPORT_HEADER_FOOTER_COLOR	#BABABA
REPORT_SUMMARY_TOTAL_COLOR	#BABABA
SCREEN_HEADER_FOOTER_BG_COLOR	#DDDDDD
TAB_FONT_OFF_COLOR	#000000
TAB_FONT_ON_COLOR	#FFFFFF
TAB_OFF_COLOR	CCCCCC
TAB_ON_COLOR	990000
WINDOW_BG_COLOR	#FFFFFF

Sign On Screen

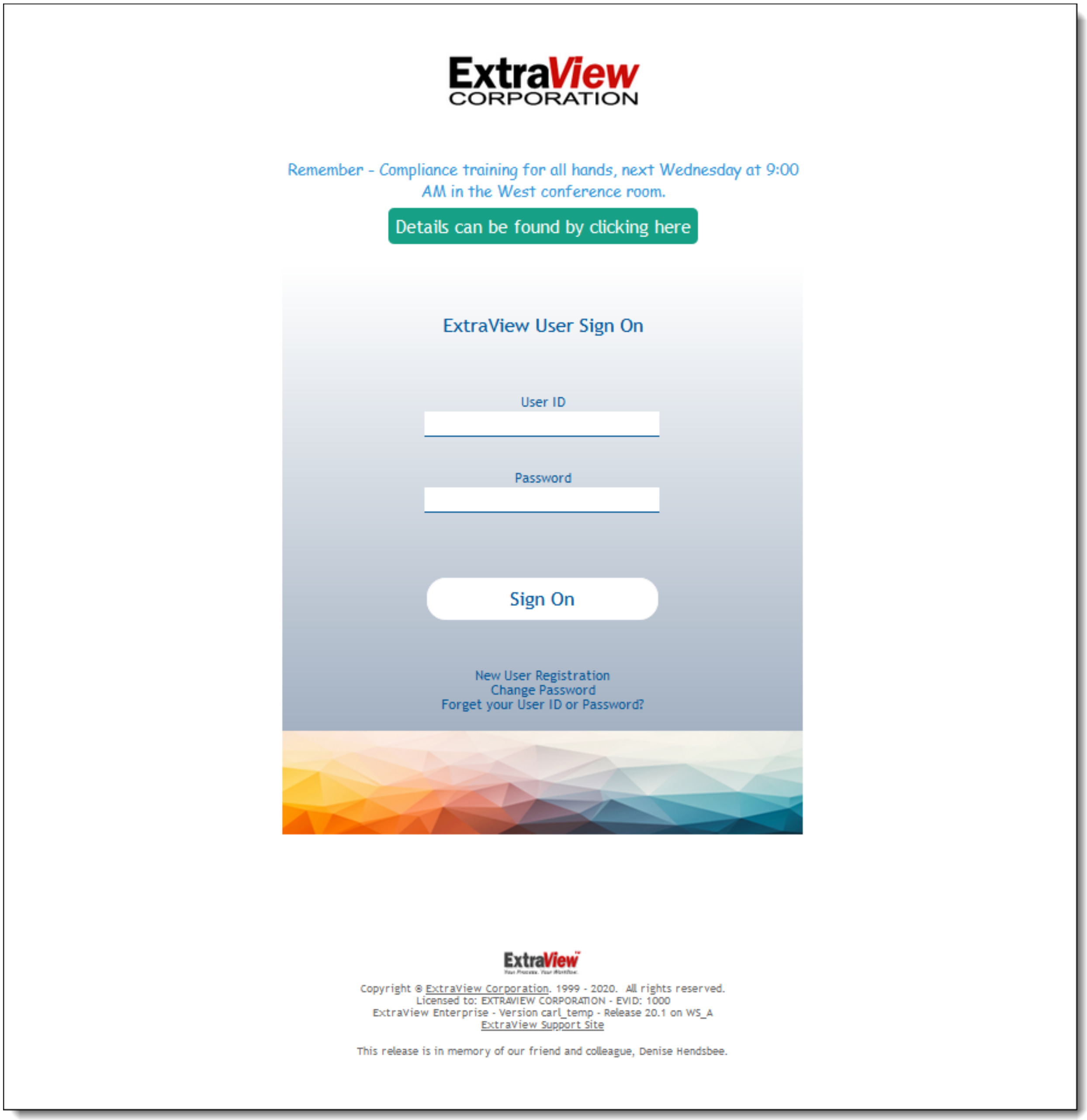
With color variations based on the user interface theme that is selected, The Sign On screen will appear similar to this

There are several options that can be turned on and off beneath the Sign On button. These are switched with the follo settings:

Behavior Setting	Purpose
ALLOW_CHANGE_LOCALE_AT_SIGNON	If this setting is set to YES, then there is an additional prompt on th screen, where users may elect to alter their language setting as they only has meaning in a multi-locale system and where users are regu which language they use
ALLOW_PASSWORD_CHG_AT_SIGNON	This setting controls the visibility of the Change Password link on t screen. If the value is YES, the link is shown, if the value is NO, th shown. Also note this link is inoperable if the setting named LDAP_USER_LOOKUP is equal to YES.
CONTACT_ADMINISTRATOR	When this setting is YES, a prompt appears on the sign on page, wi message of "Contact Site Administrator?". When this link is presse user defined in the setting named EMAIL_ADMINISTRATOR_US started, allowing the user to send a message. When the setting is NO does not appear. This feature may not work correctly with Asian ch European accented characters with all email clients. The mailto pro pass-through of non-ASCII characters in the subject and body using standard, which is not implemented correctly in many email clients

USER_SELF_REGISTRATION	You can allow your users to self-register, or you can be the registrar set to YES, a prompt appears on the Sign On screen, allowing a use a page where they can register themselves as a user in ExtraView. V registers in this way, they will only be given the privileges of the us in the behavior setting named LIMITED_USER_ROLE, but no use their account. When a user self-registers, an email is sent to an adm defined by the following settings with Email Settings on the Email administration menu. The user created will be in the business area a defined by the behavior settings named SELF_REG_DEFAULT_A SELF_REG_DEFAULT_PROJECT. Note that for users to be able t that the GUEST user role must have read and write permission to u most important of these is USER.USER_LAST_NAME. The user's and PROJECT is assigned from the behaviour settings named SELF_REG_DEFAULT_AREA and SELF_REG_DEFAULT_PRO should ensure that these behavior settings have valid entries when y allow users to self-register. The EMAIL_NOTIFICATION setting r YES as well, in order for user self-registration to be active.
PASSWORD_FORGOTTEN	When this is set to YES, then a prompt "Forgotten Password?" appe on screen and users will be able to reset their password without inte the administrator

There is also a mechanism to add your own information into the Sign On screen, above and below the panel with the U password. These are added with the utility found at **Admin --> Initial Setup --> Additional Sign On Information**. suitable information using the HTML editors on that screen. This could provide a Sign On screen similar to this:



Backwards Compatibility with Versions prior to 20.1

For customers who want to retain their Sign On screen format when upgrading from versions prior to version 20.1, the setting named GUI_VERSION. Simply delete the value in that setting and the Sign On screen will revert to the prior

Consider this example sign on screen:

It is composed of the following areas:

These areas are configurable in the following way:

Sign On Logo Area

This is a single image whose location is defined by the behavior setting named SIGN_ON_SCREEN_LOGO. The def image named CompanyLogo.gif, but you can set this to any valid image file. You can apply a CSS style to the image v setting named SIGN_ON_SCREEN_LOGO_STYLE. Typically you can use this style to provide an absolute position

Sign On Area

This area is generated internally by ExtraView and its presentation may not be altered. However, it's background color display theme chosen

Display Area 1

350 pixels wide by 300 pixels high. The behavior setting named DISPLAY_SIGNON_PROD_INFO must be set to a
turn this feature on

Cascading Style Sheets

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to
use this feature without contacting ExtraView support.

Each user can select between one of three font sizes as a personal option. These are named small, medium and large.
selects one of these, ExtraView loads a corresponding cascading style sheet (CSS). The style sheets installed by Extra
your web server environment, defaulting to the directory named IMG_HOME/stylesheets. This contains a number of
sizes and other style parameters.

If you want to create your own version of the style sheets, it is typical that you want to do this in conjunction with cre
image set for all buttons. It is recommended that you retain the same structure of the existing image sets and styleshee
new directory and subdirectory within locales/en_US/images and copy an existing image set into this directory. You u
IMG_HOME behavior setting to point to this new directory, and then make all your changes within there. In this way
of ExtraView will not write over your files, although you may need to extend these files if new entries, images or styl
part of the upgrade. Note that if you are using or creating localized versions of the image sets, you will need also to pl
stylesheets in other locale directories. Your stylesheets/ directory must contain the following files:

File	Purpose
small.css	The main stylesheet when the user selects the *small* text personal option
medium.css	The main stylesheet when the user selects the *medium text personal option*
large.css	The main stylesheet when the user selects the *large text personal option*
dnd.css	The style used to control the presentation of drag and drop objects
menustyle.css	The style of the menu used at the top of most screens
popupwindow.css	This style us used for window popups that are generated from within the browser, as oppos generated from the server
popupwindowsafari.css	This is similar to popupwindow.css, but is only used for the Apple Safari browser
tooltip.css	The style of popul tooltips that apper on many screens

Typically you will not alter any of the existing styles. If you do so, then whatever changes you apply will need to be re
you update your site.

Also, you must be careful in altering the existing styles as some of these are used for accurate positioning or sizing of
ExtraView screens. As a rule of thumb, you can alter colors safely, but you should be careful about altering all other st

The recommended strategy for altering styles is to add additional entries in the file `stylesheets/user_stylesheets /user_Stylesheet.css`. You can override any of the built in styles or add your own styles within this file.

Consult a good HTML or Cascading Style Sheet manual for full details of options available to set up alternate styles.

Configure Quickfind

It is recommended that you set up and configure Quickfind, a mechanism that greatly increases the speed of text searc
ExtraView database. This utility defines exactly what text will be indexed, and where the indexes will be stored. The
indexing mechanism is based upon the Apache Foundation Lucene technology.

The installation instructions are found here.

User Account Maintenance

This section of the Administration Guide discusses users, how they are defined and how they are maintained. It also e: roles are formed and used. Security is a strong point within ExtraView and there is an explanation of how this may be many ways to enhance your ExtraView installation.

Another key concept surrounding users is privacy and how issues may use a feature known as Privacy Groups.

ADMIN User Account Properties

This section deals with all aspects of user administration. Within this section, you will learn how users are created and

The ADMIN User Account

This account exists in all ExtraView installations and is provided at no cost. This user has special properties and shoul circumstances, be used to create and update issues. This is because it bypasses virtually all of the security permissions controls within the system. Because of this, you should take extra care with the password for this user. It is provided p reasons:

- This is the user account you use when ExtraView is first installed, allowing you to enter and create your own us
- If you ever get into a situation where you accidentally lock yourself out of ExtraView, for example by turning o then this account will still be active.
- On occasions ExtraView Corporation support personnel may direct you to use this account to help identify a pro
- If you are utilizing the behavior setting named USER_SELF_REGISTRATION, then users who self register wil default business area and project specified in the behavior settings named SELF_REG_DEFAULT_AREA and SELF_REG_DEFAULT_PROJECT.

Accessing User Accounts Without the Needing to Know a User's Password

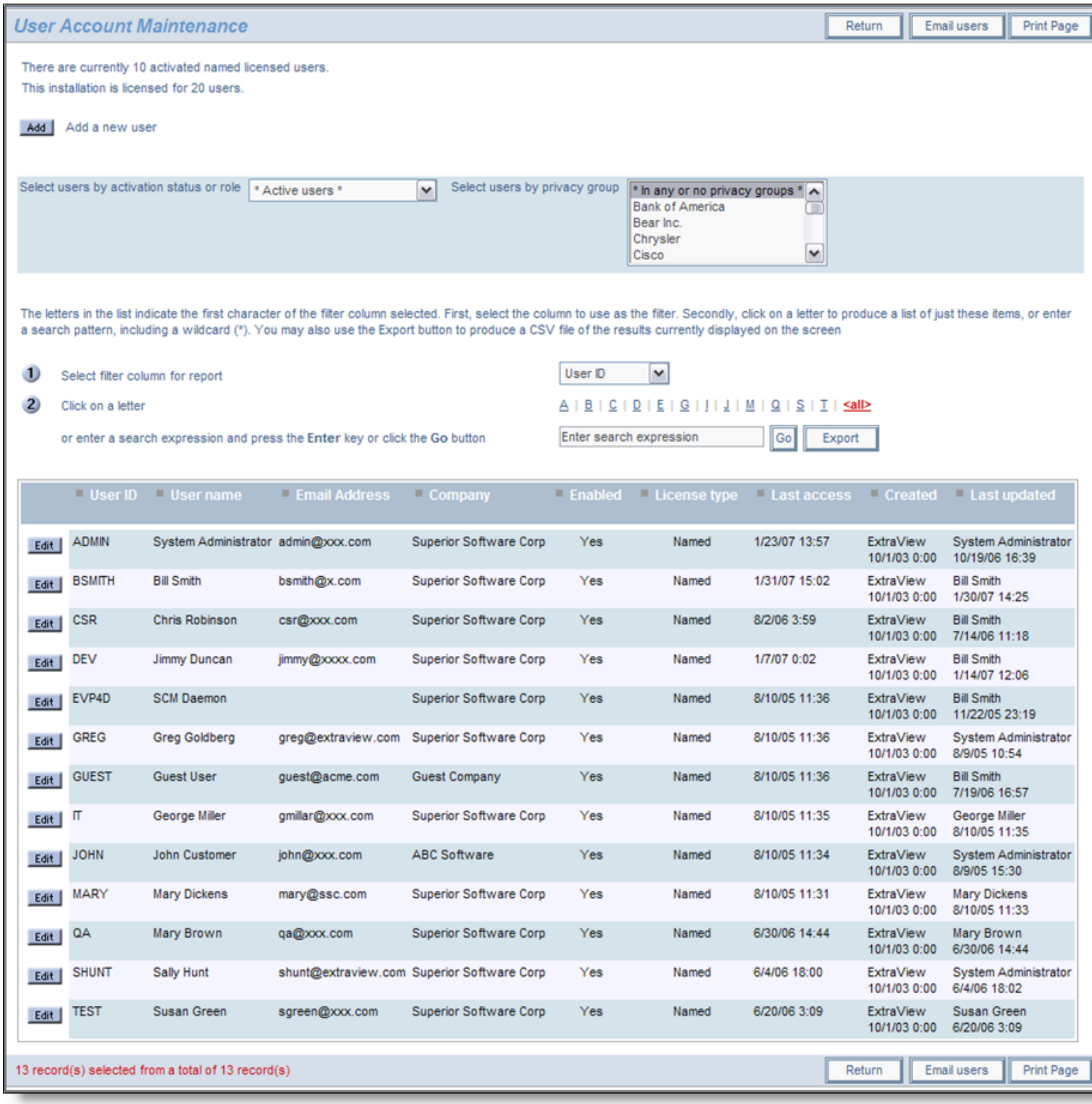
The ADMIN user has one other property. It allows the administrator to sign in as a different user, without knowing tha password. This can be very useful for problem solving, or to help a user set up a feature such as their Home Page or a achieve this, the ADMIN user signs on with the following convention:

ADMIN|OTHER_USER_ID

where they substitute the other user’s ID for OTHER_USER_ID. They must, of course, enter the ADMIN user passwo

Adding Users

Once the required user roles have been created, an administrator may add new users to any of the roles that are active and to which they themselves have permission. Note that users may be assigned privileges for more than one role at a Administration menu, under the **Users** tab, click the **User Account Maintenance** link. A screen similar to the followi appears:

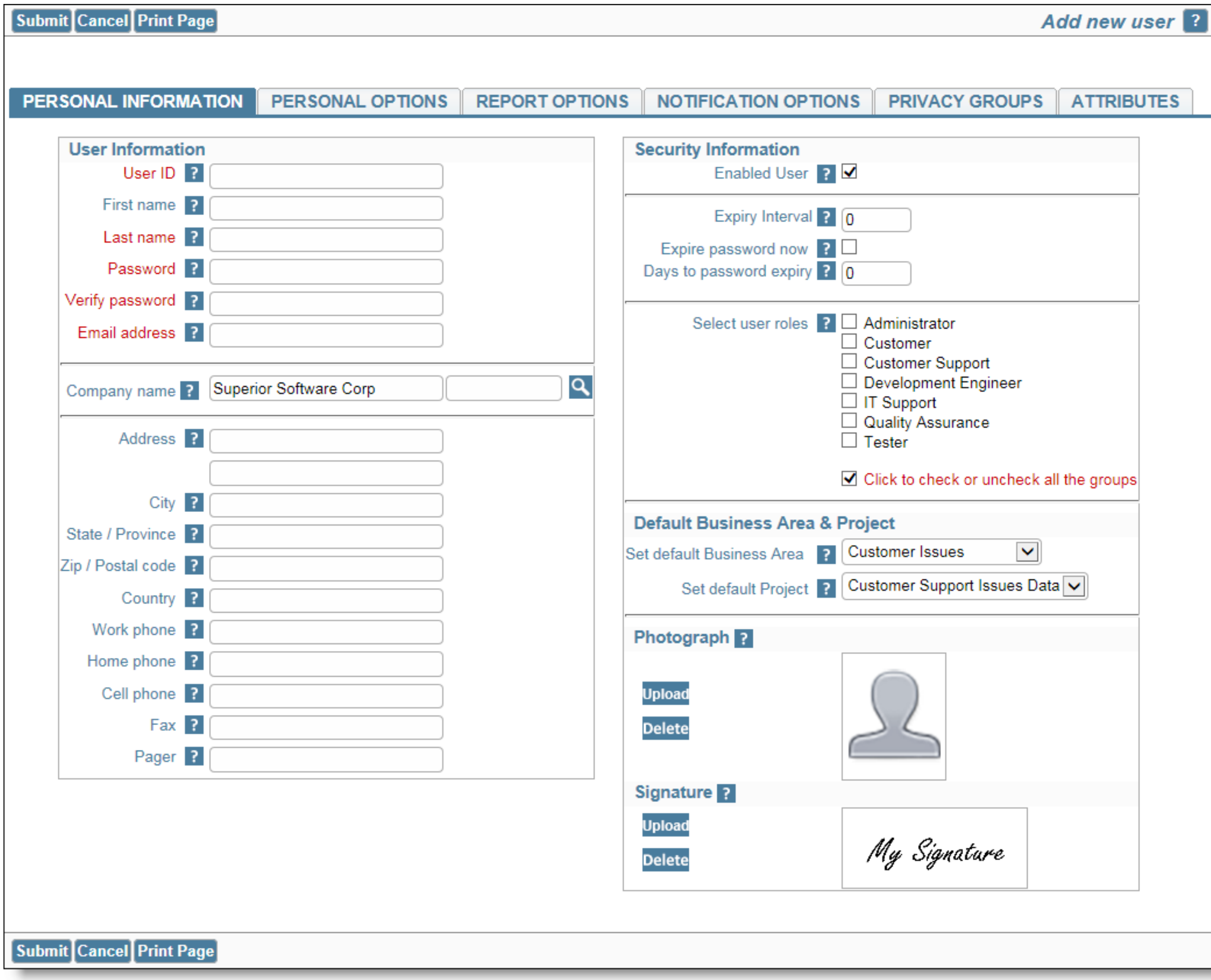


User Accounts screen

Note the search capabilities of the screen. Not only can you choose to search by active and inactive users, but you can by any of the columns of information in the list, such as by **User name**, or **Company**. Use the filter column for the re the select list, then either click on a letter that represents the first character of each entry in the list, or enter an express input box with the entry **Enter search expression**. You can then press the **Go** button to execute the search and retriev match the filter and search expression.

Note that if there are a large numbers of users who would be returned to the screen with the filter you set, only the firs be displayed, and there is an opportunity to page through the results.

If you press the **Export** button after executing the search, then all records that are displayed on the screen will be expo (Comma Separated Value) file. You can use this file outside of ExtraView for any purpose. The export file will contai



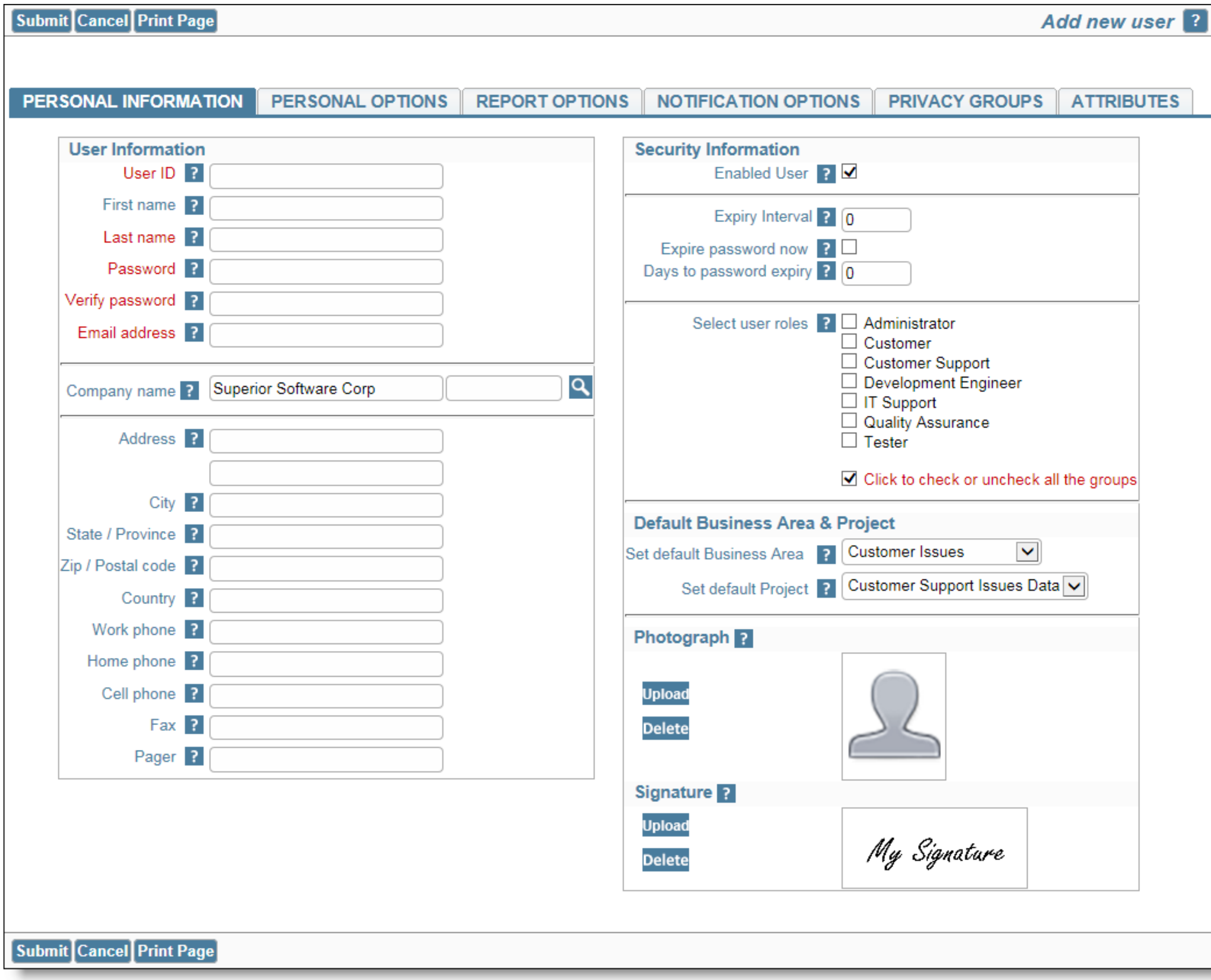
Add New User screen

The tabs across the top of the screen are for the following purposes:

Tab	Purpose
Personal Information	The key demographic details of the user. All the essential fields to set up and maintain a user are
Personal Options	The user's personal options that they will also be able to control by themselves
Report Options	The reporting options for the user, including their Home Page reports
Notification Options	The user's email notification options
Privacy Groups	This tab only appears if the behavior setting named ENABLE_PRIVACY_GROUPS is set to YE where you control each user's access to privacy groups

Personal Information

This is where you assign the user a unique User ID (which they will use when logging in to the system), their passwor



Basic Information screen

User Information

User Information Fields	Purpose
User ID	The name that the new user will use to login to the system (required). User names the following l and characters: A – Z 0 – 9 - _ . @ The user ID must be unique. User ID's may be up to 128 char
Alternative User ID	This field is turned off with the security permission keys named USER.LOGIN_ID and USER.LOGIN_ID_ON_ADD. When you enter the User ID for a new user, the alternative User II with the same value. This may be changed. Alternative User ID's are available to allow the chang sign on ID. User ID's are attached to many items of data within ExtraView and are used as foreigi in the database. It would be complex to change all of these if you required to change the User ID such as a name change for a user. The Alternative User ID allows the administrator to change the credentials for a user, yet maintain underlying data integrity within the database
First Name	First name. On the **Change a user's details** screen, you can control access to this field with the s permission key named USER.USER_FIRST_NAME
Last Name	User's last name (always required). Note that if you attempt to add a user where the combination

	interval information associated with passwords, such as the password expiration interval and the r until the password expiry. Write access is needed to alter these fields. . If the administrator does n permission to USER.USER_SECURITY_PASSWORD, they are prohibited from creating new us
Verify Password	Retype the User's password. The same security permission key as for the Password field is applic
Primary Email Address	The email address to which automatic email notification will be sent. This is required if the behav named EMAIL_NOTIFICATION is set to YES. Note that if you attempt to add a user where the e already exists, then you will receive a warning, but you will be able to go ahead with the update i this is correct. The security permission key named USER.USER_EMAIL_ADDRESS controls ac field, but only when editing a user. The user's email address is always writable when you are crea When you are updating a user, this field may be given read or read/write permission, or no permis case it will be invisible.
Job Title	The user's job title. Permission to access this field is controlled with the security permission key r USER.USER_JOB_TITLE.
Company Name	For internal users, this should reflect the same value as COMPANY_NAME in installation setup, you are using the Privacy Group feature of the product as this match is used to determine whether may not see specific issues. As this field is instrumental in setting up privacy groups accuracy in s here is important. If you have several or many users in different companies that all access your Ex installation, you should consider using the COMPANY_NAME_LIST_UDF setting to provide a l names, to complement the manual entry of each company name and potentially spelling these diff different users. The control for this is a behavior setting named COMPANY_NAME_LIST_UDF. then the Company Name for each user is entered and updated manually. When a new user is creat given a default value of the value of the COMPANY_NAME behavior setting. If you place the na Defined Field (UDF) with a display type of List into the COMPANY_NAME_LIST_UDF behavi the Company Name becomes a choice of entering a new value or selecting from the list of these v eliminating the possibility of misspellings and simplifying the population of the field. The UDF f UDF in all respects, and you may share its use on add and edit screens as well as use it on reports internal company name configured in the COMPANY_NAME behavior setting, does not appear i never added to the list. When a user self registers to access ExtraView, this field is set to a value o address, ensuring uniqueness and that the user cannot become a member of a Privacy group, there which he is not authorized to view. When updating the user's account, this field can be controlled USER.COMPANY_NAME field.
Address	This is two-line field that is always present on the user account screen
City	The city of the user. This is always present
State / Province	The state or province of the user's address. This is always present
Zip / Postal Code	The zip or postal code of the user's address. This is always present
Country	The country of the user's address. This is always present
Work phone	The user's work phone. This is always present.
Home phone	The user's home phone. This is always present.
Cell phone	The user's cell phone number. This is always present.
Fax	The user's fax number. This is always present.
Pager	The user's pager number. This is always present.
User field 1 - User field 10	This series of ten fields are turned off by default, using the security permission keys named USER.USER_DEFINED_1 through USER.USER_DEFINED_10. You may enable the security p and alter the titles of these fields with their entries in the inbuilt field section of the data dictionar these fields for any purpose.

Security Information

Security Information	Purpose

Expiry Interval	This is a number that defines how many days should elapse between the user being prompted to chai password.If the value is zero, the behavior setting named PASSWORD_EXPIRE_TIME_DAYS is u: the interval.
Expire Password Now	If the administrator checks this option, then the user's password is expired immediately. On the next the user attempts to sign on, they are forced to alter their password. Note that this option does not ap server is controlling user authentication.
Days to password expiry	The label to this field also shows the number of days left, before the password expires. You can set tl number of days to choose a new expiry date. If you set this number to -1, the current password may l and the user must provide a new password on the next occasion they sign on. If the behavior setting PASSWORD_EXPIRE_TIME_DAYS is set to zero, then user's passwords are not expired automatic
Select User Roles	Functional teams where members have the same set of privileges. Simply click on one or more roles the user to be able to adopt. If the user is not granted any role, then they will assume the role nomina behavior setting named DEFAULT_USER_ROLE. If they are granted more than one role, then the u select list in the navigation bar, and they can assume any of their valid roles by making a selection fr

Default Area & Project

Default Area / Project Fields	Purpose
Set Default Area	This is where you set the default Business Area for the user. This is the Business Area th when they sign on
Set Default Project	This is where you set the default Project for the user. This is the Project they will point tc on

Photograph

User's photographs can be uploaded. Valid image file types are GIF, JPG and PNG. Images can be cropped and they resized to be correct for inclusion on screens and reports. Once a user's photograph is uploaded and saved, you may u user fields within *add* or *edit* screen of an issue and on reports.

You may also refer to the user's photograph within Business Rules, for example to assign the photograph to a UDF fie field name USER_PHOTO on a sreen, you can populate it within rules as follows:

```
<== load ==>
USER_PHOTO = USER.{image};
```

Signature

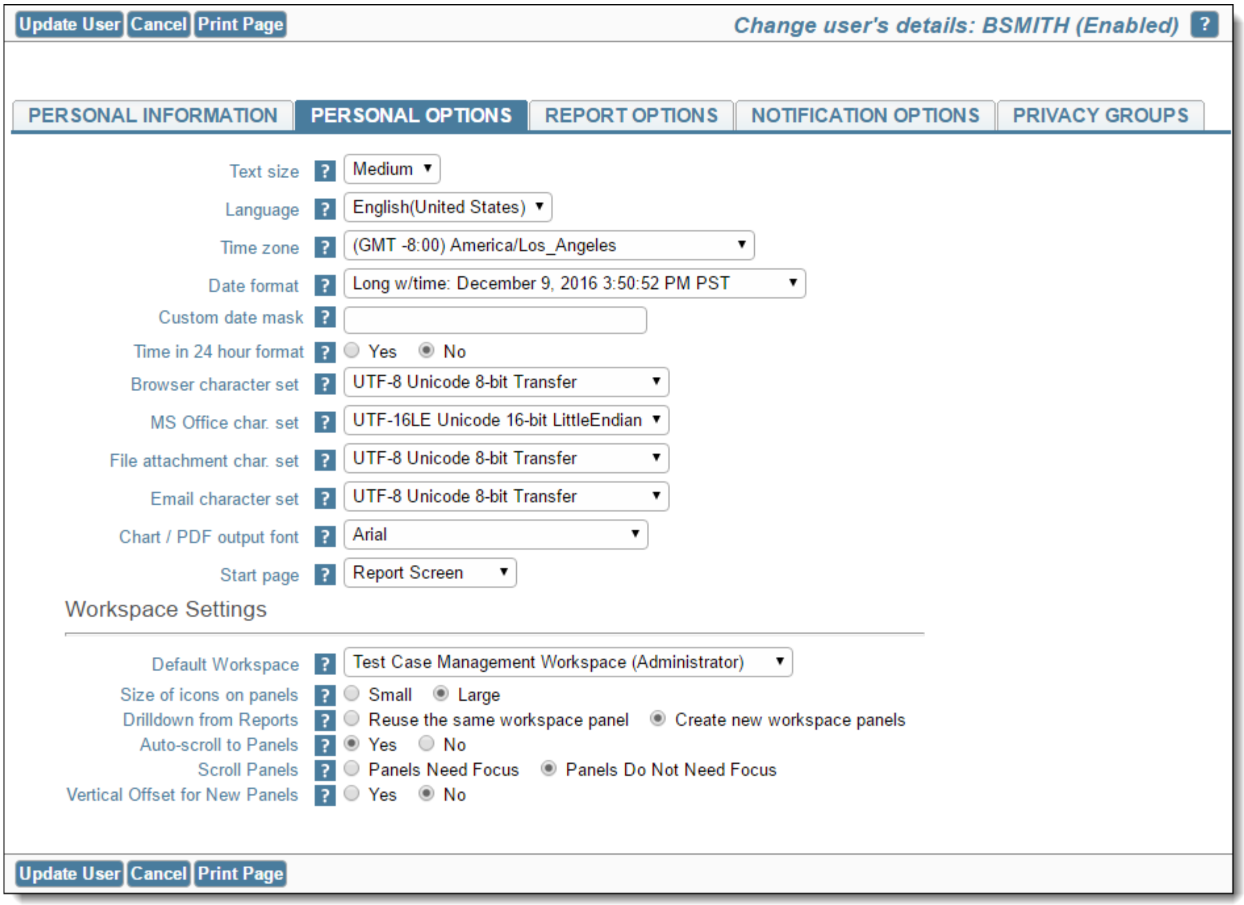
If you wish to store users' signatures, they can be uploaded. Valid image file types are GIF, JPG and PNG. Signatures 750 pixels wide by 300 pixels in height. Once a user's signature is uploaded and saved, you may use it within workflc print the user's signature on outgoing correspondence. Assume the correspondence to be printed is held within an HT the *edit* screen of your issues. Placing the signature within the correspondence is a two-step process. First, create and the *edit* screen which will receive the signature. This field is populated with rules, such as:

```
<== load ==>
USER_SIGNATURE = USER.{signature};
```

Within the HTML Area field, include a token for the signature field. In this case, the token would be `$$USER_SIGNATU`

When the HTML Area field is used as the content for an email (probably using a rule that sends the HTML Area field token is replaced with the image of the user's signature.

Signatures are typically scanned into your computer, and then uploaded into ExtraView. It's important to upload a sig size. There is no point scanning an entire sheet of paper with the signature somewhere in the middle, as the white spa



Personal Options screen

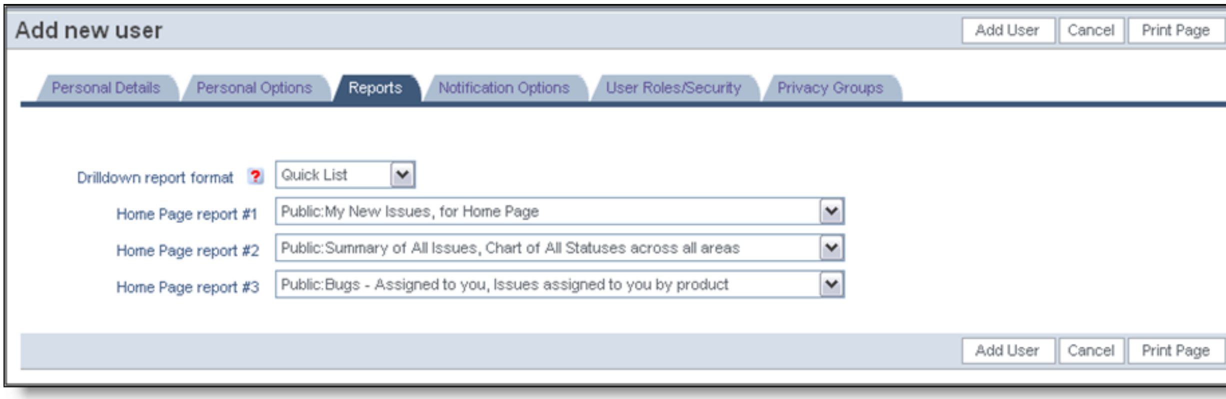
Personal Option Fields	Purpose
Text size	Choose Small, Medium or Large from the list, according to the size of the font to be use display.
Language	Choose from the list of available languages for the installation. The user's user interface will then use all localized messages available for the installation.
Time Zone	Time zone selection applies for the user system-wide
Date Format	Date format selection applies for the new user. All places where the date is visible to the this format. Alternatively a custom date mask can be set, and a date format designed to t required
Custom Date Format	The date mask allows the setting of a date format, should the inbuilt formats not be suffi needs. See Appendix A for a detailed explanation of custom date formats.
Time in 24 Hour Format	Should be Yes or No
Chart / PDF output font	The font saved in the user's profile must be a valid chart font for the locale in which the configured. If it is not valid, then the behavior setting for DEFAULT_CHART_FONT is default chart font is not valid, then the first valid font from the list of available fonts on t server is used. If ExtraView cannot find the font or a font without the correct character s is likely that both charts and reports sent to PDF output will not display correctly. This is an issue with Asian users who require double-byte character sets.
Start page	The user may select a start page. This is the page to which a user is directed, when they

Drilldown from Reports	This provides an option for the user when they are using workspaces. The user may eith drillwown from queries and reports to a single Quicklist panel within the workspace, or different workspace for each drilldown operation. This option only appears if the user ha access workspaces
Browser Character Set	This only appears to administrative users. Choose the character set for the user's display is set to **UTF-8 Unicode 8-bit Transfer**. It is unlikely that this should ever be set to any than **UTF-8 Unicode 8-bit Transfer**.
MS Office Char. Set	This only appears to administrative users and to individual users when their language is base locale of English. Choose the character set for exporting information from ExtraVie Office products. The default is **UTF-16LE Unicode 16-bit LittleEndian**. This setting w language versions (and certainly all English language versions) of Microsoft Office proc has difficult reading some characters on reports exported to Microsoft Excel or other Of they should find out which character set their Microsoft product is set to use, and make t list the same.
File Attachment Char. Set	This only appears to administrative users and to individual users when their language is base locale of English. This is the default character set for attachments that the user will they are managing issues. The initial value of this default is provided in the behavior set DEFAULT_ATTACHMENT_CHARSET.
Email character set	This only appears to administrative users and to individual users when their language is base locale of English. This is the default character set that is used for sending email to t default for this is UTF-8. The default can be changed with the behavior setting named EMAIL_CHARSET
Workspace Settings	If you have been granted permission to utilize workspaces, then you may set some optio personal preferences. • **Default Workspace** - you can set the default workspace to be loaded when you fi workspace feature • **Size of icons on panels** -Choose small or large icons in the panel menubars • **Drilldown for Reports** - you can select whether your personal preference is to mi number of Quicklist panels opened when you drill down from reports. You may pı number to a minimum, or to create a new panel with each new drilldown • **Auto-scroll to Panels** - you may choose what action that ExtraView takes when y panel within a workspace. The default is that the panel obtains the focus and you v However, you can choose to have ExtraView auto-scroll as much of the panel as it from the top left-hand corner of the workspace that's visible. The first choice is be lot of dragging and dropping of issues between panels, as the panels will remain ir within your browser. The second choice is better if you work mainly in *add* or *edi* want to see as much of their contents as possible, when you click on a panel. In bc clicking on a panel's icon within the navigation bar, will auto-scroll the viewing ar workspace to make as much of the panel visible as is possible • **Scroll Panels** - setting this to **Panels Do Not Need Focus** allows you to scroll the canvas or any workspace panel or element within that panel when the mouse poin respective area. Panels do not get focus when this happens. The **Panels Need Foc** signifies that you can only use your mouse to scroll the panel and its elements, if t focus. You need to sign off and on again for this to take effect • **Vertical Offset for New Panels** - If this is set to **Yes** then new panels are opened down from the position where the previous panel was opened. If you set this to **N** panels are only opened to the right of the previous panel, and at the same vertical

Report Options

Home Page report #3	Choose the report that you want to appear third on the Home Page for the user. This optic when editing the user account.

Note that the ability to select and set the reports on a user's Home Page is controlled by a security permission key nam SR_SET_HOME_PAGE_REPORTS. If the user does not have read access to this permission key, then they may not c Home Page reports. However, this ability is usually retained by the administrator so it is possible for the administrator freeze the reports a user sees on their Home Page.

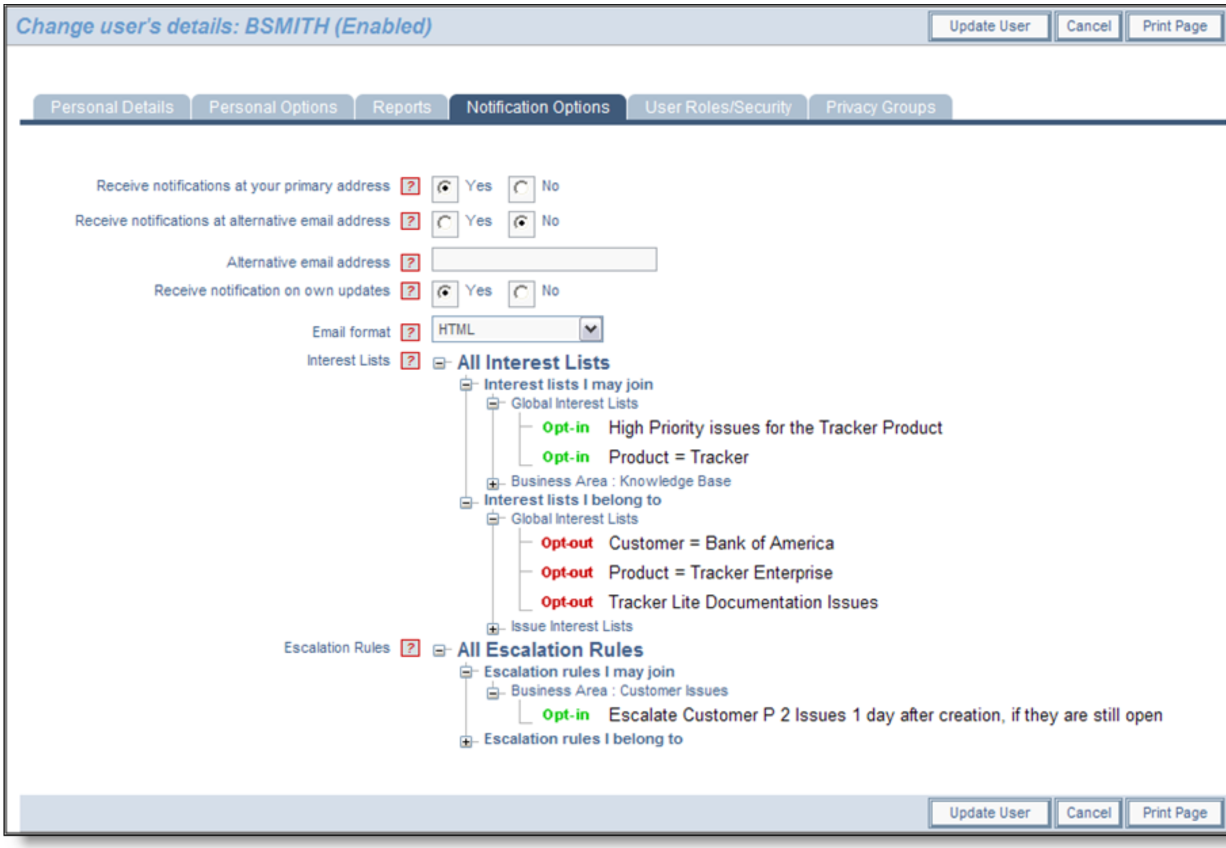


Report Options screen

Notification Options

These options control how various notifications are made to the user.

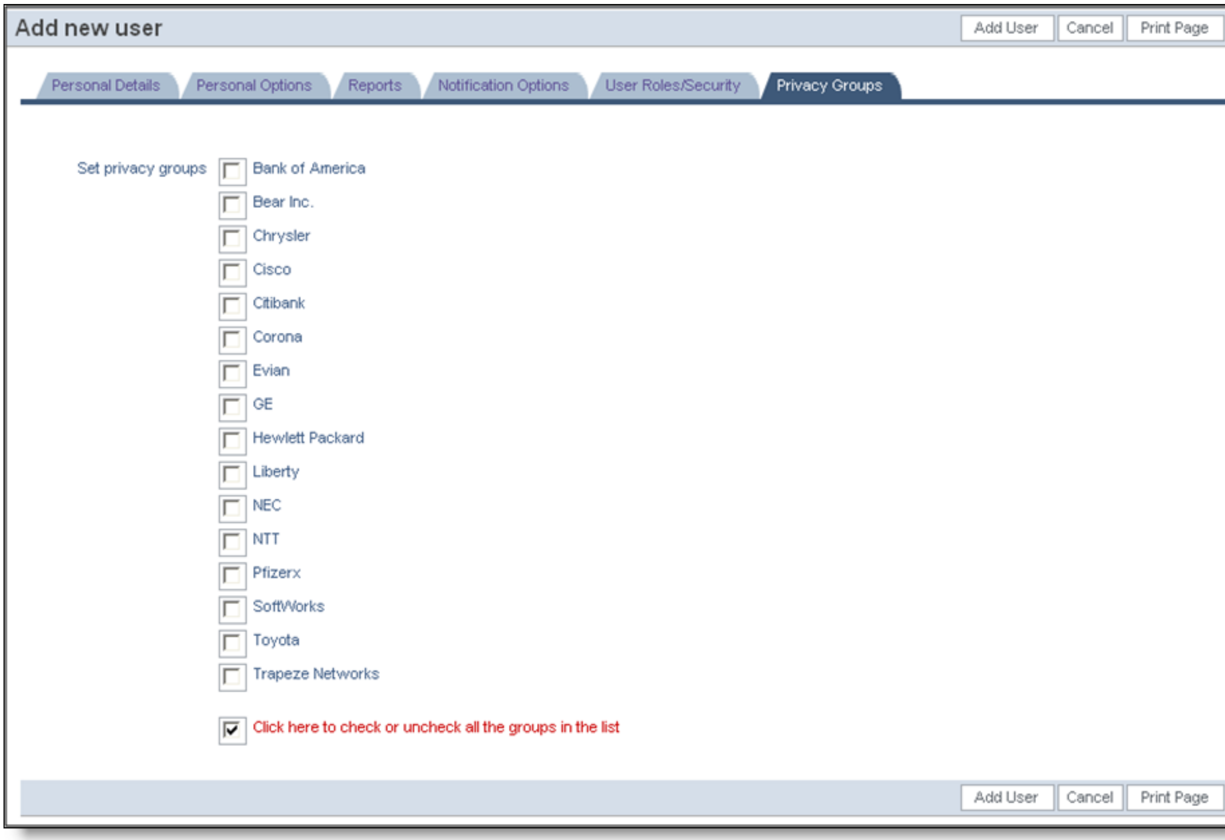
Notification Option Fields	Purpose
Receive notifications at your primary email address	If this is set to Yes, the user will receive email at his primary email address. The primary e set on the **Personal Details** tab
Receive notifications at alternative email address	If this is set to Yes, the user will receive email at his alternative email address. The alternat address is set on the next option. The user role must have read/write permissions to the sec key named USER.USER_EMAIL_ADDRESS in order to control this address
Alternative email address	This is the alternative email address, controlled by the previous prompt. The user role mus read/write permissions to the security permission key named USER.USER_EMAIL_ADD to control this address
Receive notification on own updates	Enabled will receive automatic email Disabled will not receive automatic email
Receive attachments on own updates	This allows a user account to be configured such that attachments to email notifications wi suppressed. The user will need to sign into their account to view attachments
Email format	HTML, Plain Text (brief), or Plain Text (full). The brief option provides just a few fields, e recognize the issue
Interest lists	Allows the opt-in or opt-out to interest lists. See the section in this guide on interest lists fo information. The key reason for interest list management on this screen is to allow users to out of interest lists to which they have permission
Escalation rules	Allows the opt-in or opt-out to escalation rules. See the section in this guide on escalation information. The key reason for escalation rule management on this screen is to allow user opt-out of escalation rules to which they have permission



Notification Options screen

Privacy Groups

Personal Option Fields	Purpose
Privacy Groups	Privacy Groups enable certain groups within ExtraView to view different specific sets of issues wi the issue PUBLIC (all users can see the issue) or PRIVATE (only internal users can see the issue)



Privacy Group screen

When you have completed the entries for the user on each of the above screens, click the **Add User** button.

Note: If users are assigned to more than one user role, they should be informed they should click the **User Role** link t available group designations.

Note: If a new user is created and not added to any User Role, ExtraView will automatically assign them to the role de behavior setting named LIMITED_USER_ROLE. This is typically the customer or guest user role.

Note: When you create a new user, the only Home Page Reports that are offered within the list boxes are Shared Repo

Note: If you attempt to create a new user and either the combination of the first and last name already exists, or the en already in use with another user, you will receive a warning and you are asked to confirm that you want to create the r

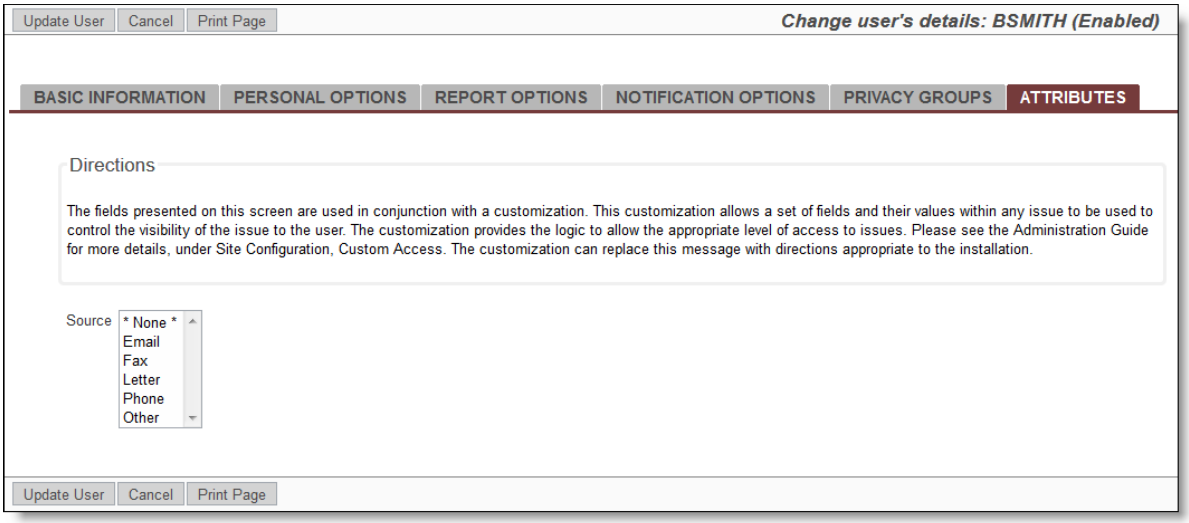
User Attributes

User attributes are used in two ways:

1. User Attributes are a configurable feature which is typically supported by custom code. How fields that are set attributes are used is totally dependent upon the custom code. A typical use case may be to control which issues and update, by using field values within the issue to identify the user's eligibility to view and update the issue. I not have the appropriate values that correspond with the user's attributes will be totally invisible to the user, bot and reporting
2. The field values that are set may be applied as filters on reports, using the value * **User's Profile Value** * that w

sequence for user attributes field to sort the fields on the user account administration screen. Note that you ma List, Popup List, Tab and Radio Button display types to use this feature

- Go to the user account administration screen and edit a user. Note there is a new tab on the display, with the def **ATTRIBUTES**. When you click on this tab, you will see a screen similar to this:



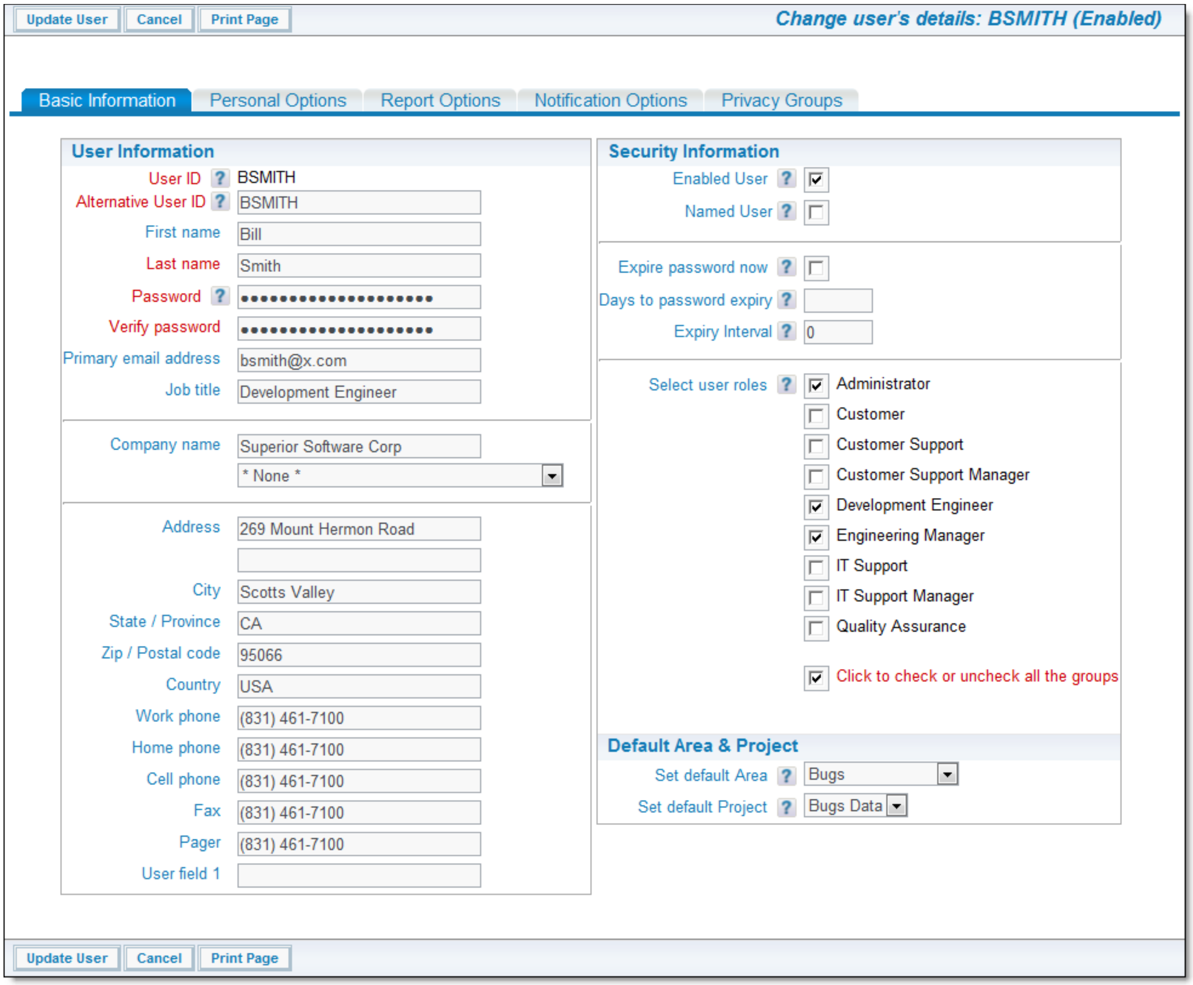
When complete, the administrator uses the fields on the screen to select the values that are used within the custc desired functionality

- Develop the custom code to support the fields, utilizing the following user custom exits. These are documented Custom Guide.
    - ucUAGetAttributesDescription
    - ucUAGenerateHTML
    - ucUAValidateForm
    - ucUATransactUser
    - ucUAPostUpdate
    - ucUAGetTabs

Updating User Accounts

On the User Account Maintenance screen use the filters to select the user account you wish to modify.

- Click the **Edit** button associated with the user account, and a screen similar to the following appears:



Change a User's Details screen

A full explanation of all the fields is available under the **Adding Users** section of this guide.

- Edit user information on any of the tabs as needed, and then click the **Update User** button.
- Note that when editing a user's account information, you can select which reports to add to their Home Page, by three reports from the lists towards the bottom of the screen. You can select from shared reports, or the user's pe

Note: To deactivate a user account, click the **Personal Information** tab and use the checkbox named **Enabled User** to reactivate an account. Once an account is deactivated, the user will no longer be able to login to the system, and their longer appear in Assigned To or Owner pick list options, etc. To reactivate a user account, select *All inactive users* **Users by activation status** or role pick list on the Edit User Accounts screen. Once you have drilled down on the desi account, use the **Enabled User** checkbox that appears on the **User Roles/Security** tab of the Change a User's Details deactivate a user, they are removed from all interest lists, escalation rules as well as being removed from being the mo any module field value. If you reactivate a user, you will need to review all their settings for accuracy as ExtraView m values such as the license type, when the account is restored.

When you manually deactivate a user account, a check is made to see whether the account is the owner of scheduled r delivered via email to other users, or are sent to the document repository. If the user account owns such reports, you a ability to select a different user who will become the owner of these schedules. You should select a user who has the a security permissions to own and run the report schedules. If you do not want to pass the schedule for the reports to an the administration utility **Manage Scheduled Reports** to remove the account owner from the schedule, or use the adn **Manage Reports** to delete the reports entirely.

as when a female changes their name upon marriage. When the alternative User ID differs from the User ID, either ma
on.

Note: If the behavior setting named ENFORCE_DETAILED_USER_INFO is set to “Yes”, then additional fields will
This is used when you want users that self-register on the system to provide a significant level of personal details.

Note: If you alter a user’s access to specific user roles, and remove their access to a user role, this will only take effect
they sign on. If they are signed on at the time you change their access, they will continue to have the access you are in

Note: Users are not physically deleted from ExtraView. The reason for this is that once most users have used ExtraVie
recorded as the Owner, Assigned To, or other such person against issues. To preserve data integrity, ExtraView require
for everyone, even though they may not continue to use and access the system.

Note: If you alter an interest list, an escalation rule entry or change the user’s language setting, there is an immediate u
account. Pressing **Cancel** does not reverse this change.

Unauthorized User Access Attempts

If a user attempts to sign on repeatedly, without success, ExtraView will disable their account as a security precaution.
this feature are within the administrative Site Configuration menu, on the **Security and Session Settings** menu.

Behavior Setting	Default Value	Description
MAX_SIGNON_ATTEMPTS	3	The maximum number of consecutive failed sign on attempts allowed user before their account is disabled. The number of failures is measur defined in SIGNON_PERIOD_MINUTES
SIGNON_PERIOD_MINUTES	5	Once a user fails to sign on because of an invalid password, they will l make a total of MAX_SIGNON_ATTEMPTS in this period

If a user’s account is disabled, the system administrator is notified by email. The system administrator is also notified
specific IP address attempts to sign on repeatedly and unsuccessfully from the same address according to the above se
is using the User ID of ADMIN and attempting to sign on, then the MAX_SIGNON_ATTEMPTS is internally set to t
value in the behavior setting. This is because it can be a significant maintenance problem if the ADMIN account is dis
be re-enabled. Thus ExtraView allows some extra sign on attempts before disabling the ADMIN account, but security
still ensure that there is not the ability to try to sign on repeatedly.

If the behavior setting named CUSTOM_AUTHENTICATION is set to YES, then the user’s account is not disabled if
repeated failed sign on attempts. The assumption is that the custom authentication method, such as the LDAP server, v
action of disabling the user’s account and it is superfluous to disable the account in two places.

The settings for notification are in the Email Settings menu within **Email Notification** and are:

Behavior Setting	Description
EMAIL_ADMINISTRATOR_NAME	This is the email address or alias for the ExtraView administrator. Emails automatically generated by ExtraView are originated with this name. Exa emails sent upon the self registration of a user, or an unauthorized access
EMAIL_ADMINISTRATOR_USER_ID	This is the email address to which emails originating within ExtraView ar usually the administrator's email address or an alias for the administrator

Hierarchies of Admin User Roles

- Within the **Administration** ==> **Site Configuration** menu, use the **Grant Security Privileges** function to mod administrative permissions for the new role or role you created. Use the general category named * **All administ keys** * to see all the keys that control access to the administrative functions
- Remember that you can restrict or grant access to the user roles for any administrator role

Company Name Security

There is a behavior setting named COMPANY_NAME. ExtraView recognizes this as the main company name. Given case, a new user added with a company name that is different from the value in the field associated with COMPANY_ be able to see PRIVATE issues submitted by users in your company. This is especially beneficial if you have customer system, and you only want them to have limited privileges to view their own issues. If you have enabled users or custo register their selves within ExtraView, they will able to sign on to ExtraView, and they will automatically be assigned entered as the LIMITED_USER_ROLE. The LIMITED_USER_ROLE is set in the Workflow Settings administration group normally has minimal user privileges. By being added to this role, the user will only be able to view PUBLIC re System Administrator re-assigns them to one or more User Roles.

Note: When you use the company name as security, and a user moves from one company to another, and you update tl the new company name, then all the users at that new company will have visibility of the issues that were entered by t original company. You can avoid this by giving the new user a new User ID at the new company, or being diligent to r their original issues are updated to no longer refer to that person.

Note: If you are signed on with the user ID of admin, the company name security is bypassed. The admin user will see

Note: There is a behavior setting named ENABLE_PRIVACY_GRP_OVERRIDE. If the value is set to YES, then inte see all issues regardless of the value of the PRIVACY field. Internal users are defined by the user's personal Company identical to the company name defined by the behavior setting named COMPANY_NAME. If the value is set to NO, u see issues when they are a member of the privacy group to which the issue is assigned.

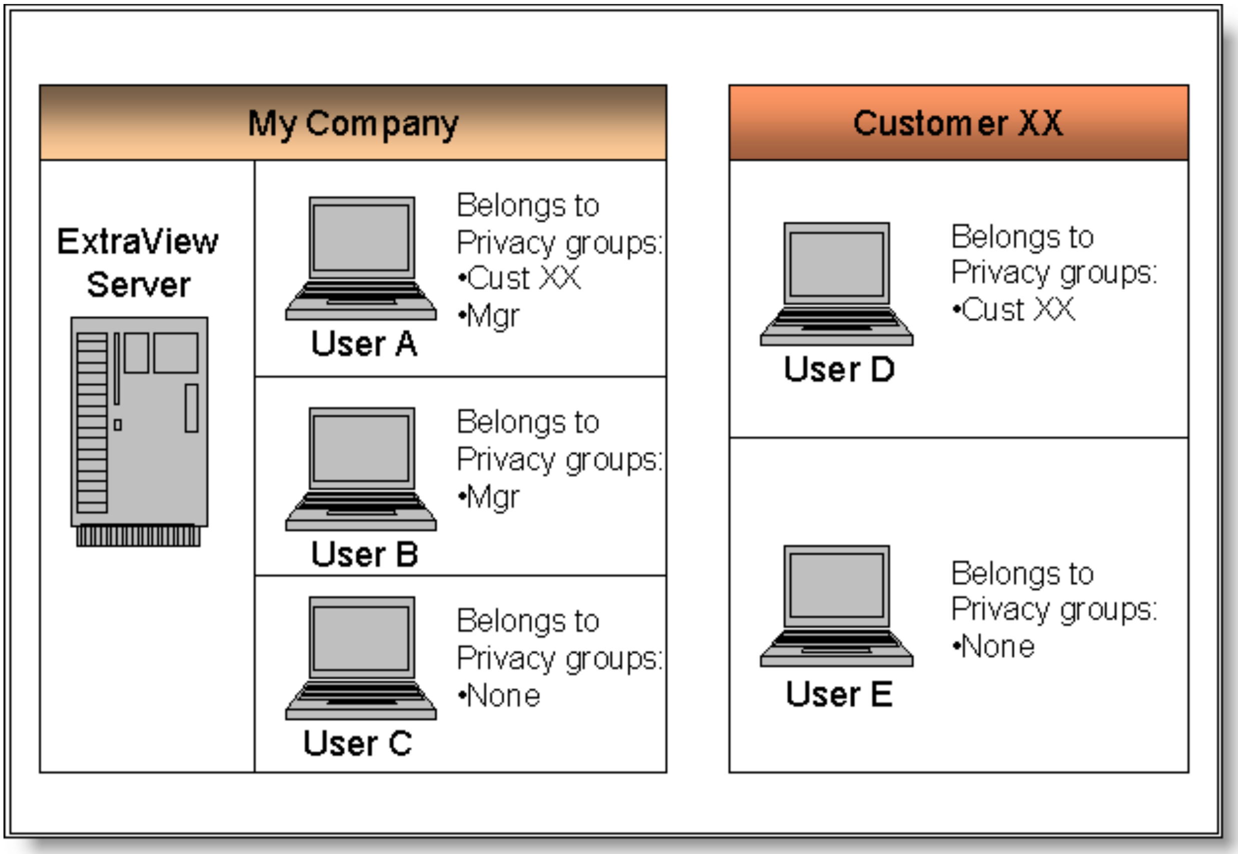
The Company Name and the Privacy of Issues

There is a behavior setting on the administration menu, System Controls tab under Company Information Settings that interaction between the privacy of issues and the different users within different companies that enter these issues. Thi ENABLE_COMPANY_NAME_ACCESS. When this setting is YES, different users who have the same company nar view all issues entered by any member of that company. This overrides the Privacy setting of PRIVATE. When the val ENABLE_COMPANY_NAME_ACCESS is NO, the Privacy setting overrides the behavior, and all issues will be hel PRIVATE as described in the section on Privacy. The most typical use of this setting is to allow you to give your custo ExtraView, and to allow any member of an individual customer to see all the issues entered by his / her colleagues.

Note: A user will always be able to view an issue that they originated, irrespective of their company name.

There is a behavior setting named COMPANY_OVERRIDE_FIELDS that contains a comma separated list of field na display type of User. These fields must exist in the data dictionary. These fields contain the users that the company nar feature works with. By default, company name security works with only the ORIGINATOR field. This setting extends these other fields. The use case for this is as follows: The COMPANY_NAME is set to *Host Company*. They are the h ExtraView site. An issue is submitted by a user in Company A. The *Company A* user can see the issue as they are the (issue. The issue is visible to all *Host Company* users, because the default company name security allows them to see a *Company* user is set as the Owner of the issue. They want to assign the issue to a user who is neither a *Host Company* a *Company A* user. They want, for example, to assign the issue to a user who is a member of a company named *Compa* to extend company name security in such a way that the *Company B* user is able to view the issue, originally created b user, because they are assigned to the issue. The *Company B* user will not see any other *Company A* originated issues, able to see any other *Host Company* issues, because they are not the ASSIGNED_TO person on other issues.

The Company Name and Privacy Groups



Privacy of issues

- The COMPANY_NAME behavior setting is *My Company*
- ENABLE_COMPANY_NAME_ACCESS is set to YES
- ENABLE_PRIVACY_GROUPS is enabled
- Privacy groups have been created, named *Cust XX* and *Mgr*

User A

- Employee of *My Company* (Company Name on their user screen is set to *My Company*)
- Member of privacy group *Cust XX*
- Member of privacy group *Mgr*

User B

- User B is an employee of *My Company*
- Member of privacy group *Mgr*

User C

- User C is an employee of *My Company*
- Not a member of privacy group *Mgr*

User D

issues. The ‘Y’ indicates that the user will be able to see the issue. Remember that security permission settings and a c be used to control who can see and who can update the privacy field.

	My Company			*Customer XX*	
Privacy Group User	User A	User B	User C	User D	User E
PUBLIC	Y	Y	Y	Y	Y
PRIVATE	Y	Y	Y	-	-
Cust XX	Y	-	-	Y	-
Mgr	Y	Y	-	-	-

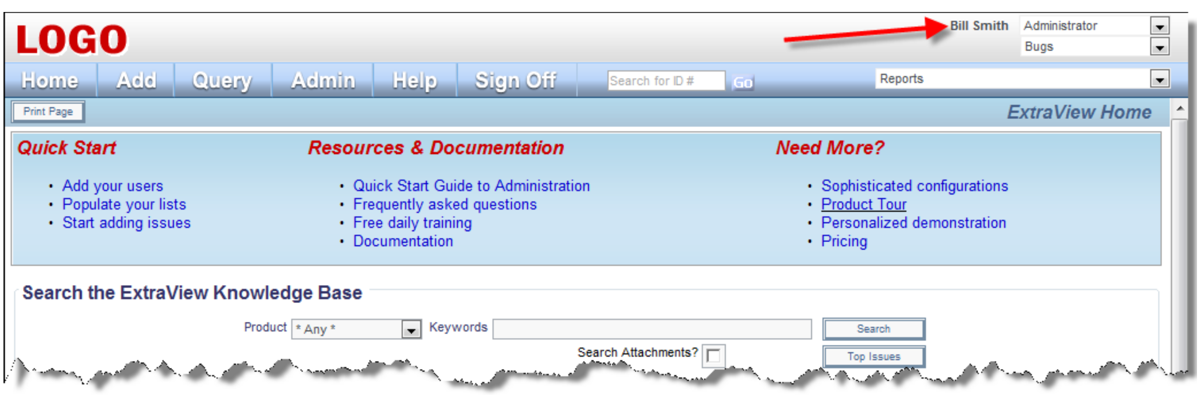
To complete the explanation, note that if it is User D or User E that originates the issue, and the issue remains PRIVAT in the above scenario will be able to access the issue (but not the users from any other companies). This is because ENABLE_COMPANY_NAME_ACCESS is set to YES.

Updating your Personal Account Details

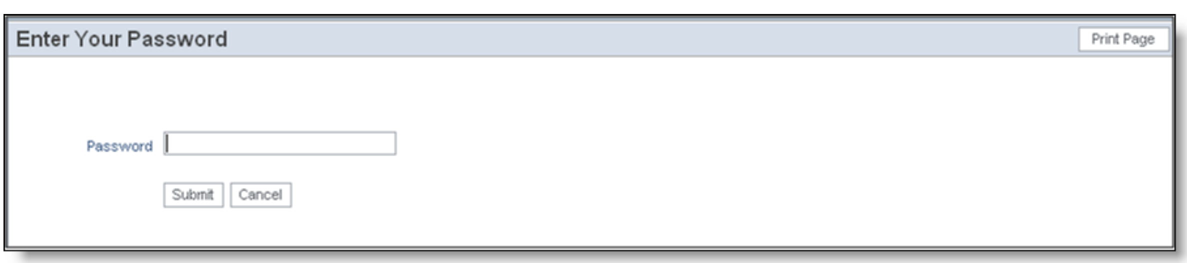
This utility allows users to update their account details to control various personal display options, such as how they w into the system, what their password is, user information that others will see, and notification via e-mail. The feature : the CF_PERSONAL_OPTIONS secureity permisson key.

To update your account details

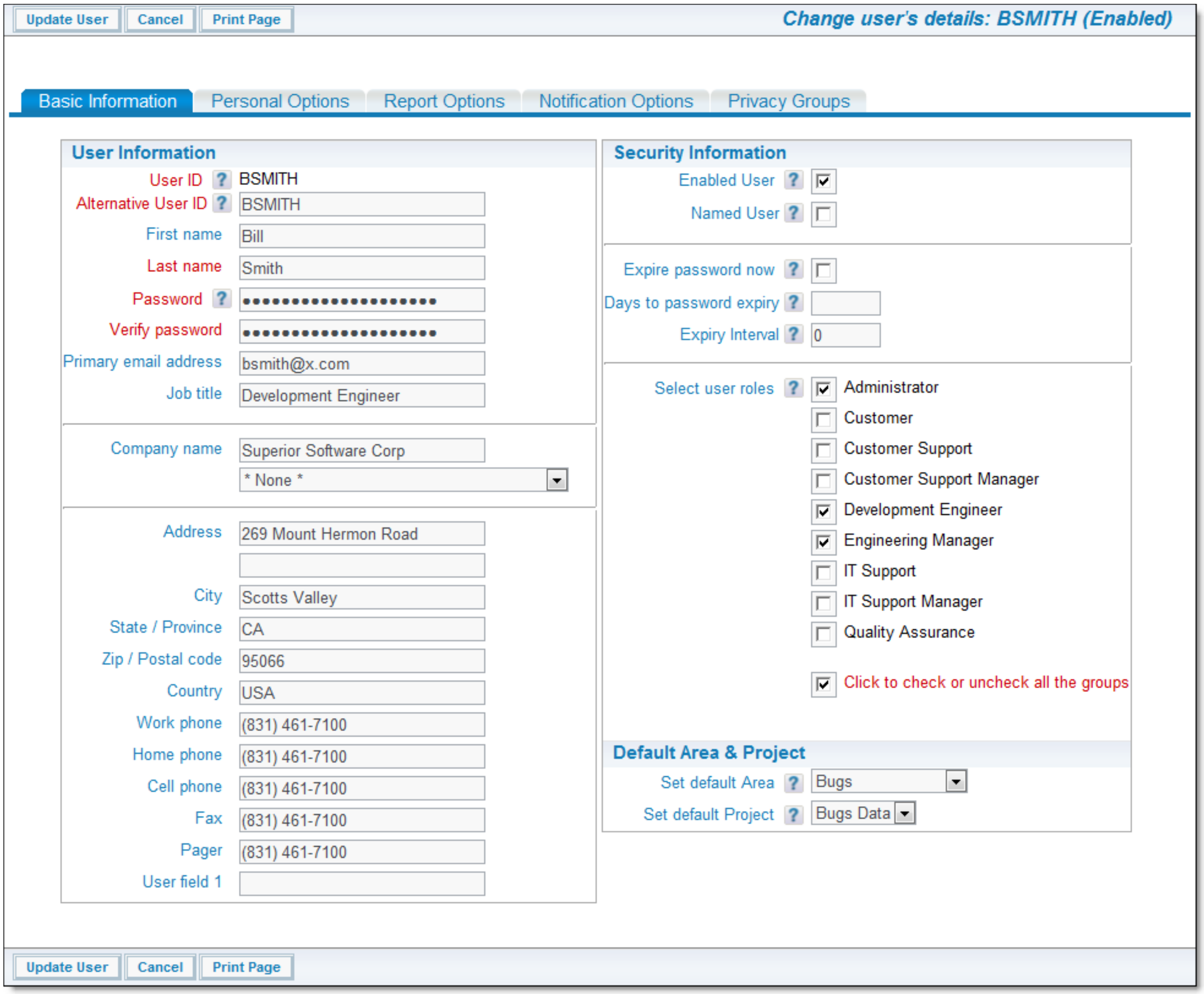
1. Click the link with your user name:



Accounts menu on Home Page
The following screen appears:



Personal Options Password screen



Change Personal Details screen

Customizing User Account Details

ExtraView offers the ability to customize user accounts through a number of pre-defined fields which can be used to a
each user's record. Outside of key fields which are mandatory within each user's record, each of the following fields h
permission key which can be used to hide or enable the field.

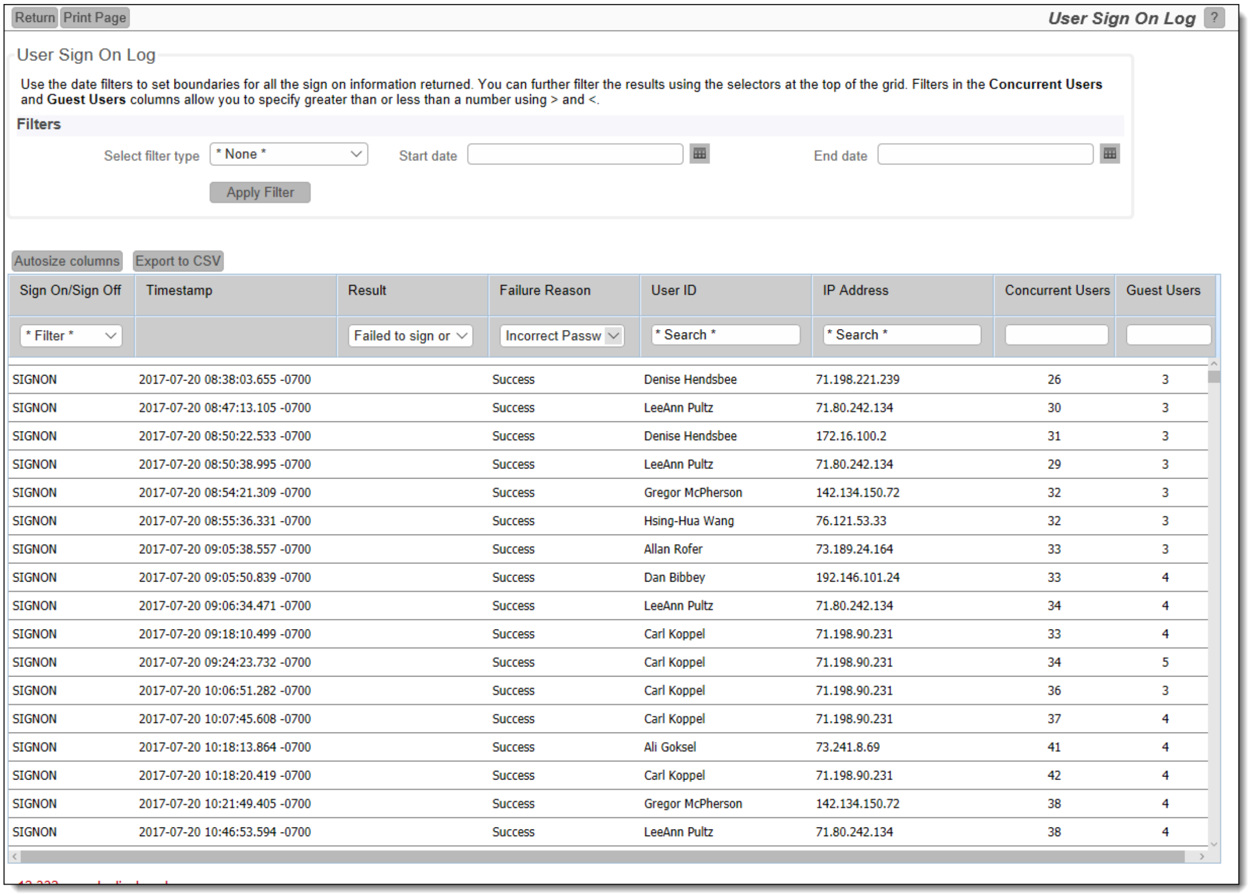
Each of the pre-defined keys is protected with a security permission key, so you can set up different access profiles to
fields for different user roles.

The fields that can be customized are shown below:

Field	Purpose
USER.ACCESS_UDF_DATA	This permission key controls overall access to the complete list o fields USER.USER_DEFINED_1 - USER.USER_DEFINED_10
USER.ADDRESS	The two fields that comprise the user's address

USER.LANGUAGE	The user's language
USER.LOGIN_ID	An alternative to the User ID that can be used to sign on to Extra' user account has been established, the USER_ID cannot be altere many places, such as recording who creates and who updates issu organizations, there might be a need to provide an alternative, for company takeover. Also, users may change their name, so this fac user to set up an alternative to their original USER ID
USER.LOGIN_ID_ON_ADD	This key controls whether the USER.LOGIN_ID is shown on the screen. This is not typically needed, but is available if necessary
USER.NOTIFICATION_ALTERNATIVE	The key that allows a user to choose their alternative email addre:
USER.NOTIFICATION_PRIMARY	The key that allows a user to choose their primary email address
USER.NOTIFY_ATTACHMENTS	Allows the user role to set the notification option to exclude attac notifications
USER.IMAGE	Allows the user role to upload their photograph
USER.PAGER	The pager number of the user
USER.SIGNATURE	Allows the user role to upload their signature
USER.START_PAGE	This permission controls the ability of the user to set their start pa entering ExtraView, to a commonly used page such as the Home] Issue screen or the Search / Report screen. This is set on their per preferences page
USER.TEXT_SIZE	Controls the text sizes that a user may select
USER.TIME_ZONE	The key to allow the changing of the user's time zone
USER.USER_DEFINED_1 - USER.USER_DEFINED_10	These are ten user defined fields for the user record. You can set t permission to any one of these to read and write, and alter the titl the data dictionary as needed. This provides the capability to hav defined text fields for your installation
USER.USER_EMAIL_ADDRESS	This is used to control read/write access to the email address of tl only has an affect on the update screen for the user. There is alwa to the field when creating a new user
USER.USER_ENABLE	Write access is needed to this field in order to be able to enable aı accounts
USER.USER_FIRST_NAME	When updating the details of a user, this permission key controls access to the field. If there is no read or write access when updatiı field is not visible. The field is always writable when creating a n
USER.USER_INTEREST_LIST	Giving read and write access to this key allows each end user to c out of interest lists to which they may belong
USER.USER_JOB_TITLE	The user's Job title
USER.USER_LAST_NAME	The user's last name
USER.USER_NAMED	This permission controls the ability for an account administrator t use an available NAMED user license when the system is in MIX default for newly created users is that they use a CONCURRENT not used if you have only NAMED or only CONCURRENT user installation
USER.USER_PASSWORD_MANAGEMENT	This controls the ability to expire users' passwords, and the time i information associated with passwords, such as the password exp and the number of days until the password expiry. Write access is these fields
USER.USER_SECURITY_PASSWORD	The user's password
USER.WORK_PHONE	The work phone number of the user

When the user clicks on the administrative **User Sign On** screen, the following report appears:



Sign On/Sign Off	Timestamp	Result	Failure Reason	User ID	IP Address	Concurrent Users	Guest Users
* Filter *		Failed to sign or	Incorrect Passw	* Search *	* Search *		
SIGNON	2017-07-20 08:38:03.655 -0700		Success	Denise Hendsbee	71.198.221.239	26	3
SIGNON	2017-07-20 08:47:13.105 -0700		Success	LeeAnn Pultz	71.80.242.134	30	3
SIGNON	2017-07-20 08:50:22.533 -0700		Success	Denise Hendsbee	172.16.100.2	31	3
SIGNON	2017-07-20 08:50:38.995 -0700		Success	LeeAnn Pultz	71.80.242.134	29	3
SIGNON	2017-07-20 08:54:21.309 -0700		Success	Gregor McPherson	142.134.150.72	32	3
SIGNON	2017-07-20 08:55:36.331 -0700		Success	Hsing-Hua Wang	76.121.53.33	32	3
SIGNON	2017-07-20 09:05:38.557 -0700		Success	Allan Rofer	73.189.24.164	33	3
SIGNON	2017-07-20 09:05:50.839 -0700		Success	Dan Bibbey	192.146.101.24	33	4
SIGNON	2017-07-20 09:06:34.471 -0700		Success	LeeAnn Pultz	71.80.242.134	34	4
SIGNON	2017-07-20 09:18:10.499 -0700		Success	Carl Koppel	71.198.90.231	33	4
SIGNON	2017-07-20 09:24:23.732 -0700		Success	Carl Koppel	71.198.90.231	34	5
SIGNON	2017-07-20 10:06:51.282 -0700		Success	Carl Koppel	71.198.90.231	36	3
SIGNON	2017-07-20 10:07:45.608 -0700		Success	Carl Koppel	71.198.90.231	37	4
SIGNON	2017-07-20 10:18:13.864 -0700		Success	Ali Goksel	73.241.8.69	41	4
SIGNON	2017-07-20 10:18:20.419 -0700		Success	Carl Koppel	71.198.90.231	42	4
SIGNON	2017-07-20 10:21:49.405 -0700		Success	Gregor McPherson	142.134.150.72	38	4
SIGNON	2017-07-20 10:46:53.594 -0700		Success	LeeAnn Pultz	71.80.242.134	38	4

The length of time for which entries are kept in the log is dependent upon the behavior setting named SYSTEM_LOG_EXPIRE_TIME_DAYS. Large logs may take some time to download for the report. If allowed to g constraints, the sign on log can grow to an enormous size, retaining information that may no longer have value. A beh named SYSTEM_LOG_EXPIRE_TIME_DAYS controls how long information is retained in the log. The default for days, but can be changed by the administrator. An internal system task within ExtraView deletes sign on log messages time each hour, to avoid a buildup of the task that would take a considerable amount of time.

Usage is straightforward. If you do not select any filters, the entire user sign on log will be produced. You may selec log using the date filters provided.

You can sort the report by any of the columns, by clicking on its title. An arrow shows the column currently used for if you click on the column that is currently selected, the report is resorted, but in descending rather than ascending ord

The **Concurrent Users** column shows how many users were connected at the moment that the sign on took place, allo monitor the number of users connected to ExtraView over time. This is an aid to capacity planning. Note that the repo display counts for users who occupy a named user license. These users are not subject to any limitation as to when th and off.

The definitions of the columns in this report are:

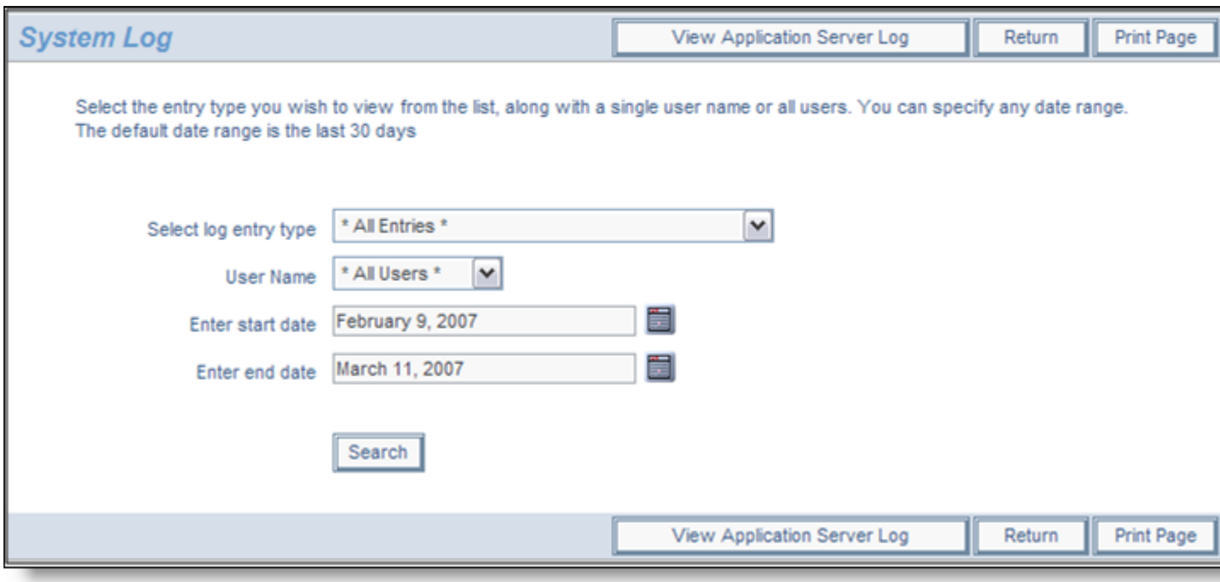
Column Name	Definition
Sign On/Sign	

Concurrent Users	Number of currently used concurrent licenses, not including the ADMIN or SYSTEM users if they This is calculated as follows: • For each distinct, concurrent non-GUEST user, count 1 license used • For each user that is logged in 6 times or more, count 1 additional license used for each five connections beyond the first sign on
Guest Users	The number of user who are occupying guest licenses, signified by the role set in the behavior sett DEFAULT_USER_ROLE

System Log

The system log allows the administrator to determine all significant metadata transactions, except for user sign on and and sign off activity can be observed in the ExtraView Sign On log. This feature also gives access to the application se When you access the system log, you are offered a choice of filters.

If you choose the defaults, you will display a listing that shows all entries for all users for the last month. You can filte type (sign on, sign off, unsuccessful attempts to sign on) or by a single user, or by any date range.



Choosing the filters for accessing the system log

A sample of the system log is shown below. You can sort the list by any of the columns, Log entry #, Date, User ID, T Sort the columns, by clicking on the header. An arrow shows the column currently used for the sort. Note that if you c column that is currently selected, the report is resorted, but in descending rather than ascending order.

System Log

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Log entry #	Date	User ID	Type	Log entry
174010	February 16, 2006	ADMIN	Update Existing SECURITY_USER	update security_user set ADDRESS_LINE1 = ?, ADDRESS_LINE2 = ?, ALPHA_TIMEZONE = ?, AREA_ID = ?, CELL_PHONE = ?, CHART_FONT = ?, CITY = ?, ('','','America/Los_Angeles','1','','SansSerif','','Toyo Corporation','','JP','SYSTEM','2006-02-16 09:41:39.0','MEDIUMDATE','QUICKLIST','','HTML','Y','','Taro','','','ja',
174015	February 16, 2006	ADMIN	Delete SECURITY_GROUP_USER	delete from security_group_user where security_user_id = ? ('TARON')
174020	February 16, 2006	ADMIN	Add SECURITY_GROUP_USER	Add to security_group_user, insert into security_group_user(security_user_id, security_group_id) values(?, ?) ('TARON','ADMIN')
174025	February 16, 2006	ADMIN	Add SECURITY_GROUP_USER	Add to security_group_user, insert into security_group_user(security_user_id, security_group_id) values(?, ?) ('TARON','ADMIN') ('TARON','GUEST')
174030	February 16, 2006	ADMIN	Update Existing SECURITY_USER	update security_user set ADDRESS_LINE1 = ?, ADDRESS_LINE2 = ?, ALPHA_TIMEZONE = ?, AREA_ID = ?, CELL_PHONE = ?, CHART_FONT = ?, CITY = ?, ('','','America/Los_Angeles','1','','SansSerif','','Toyo Corporation','','JP','SYSTEM','2006-02-16 09:41:39.0','MEDIUMDATE','QUICKLIST','','HTML','Y','','Taro','','','ja',
174035	February 16, 2006	ADMIN	Delete PRIVACY_GROUP_USER	delete from privacy_group_user where security_user_id = ? ('TARON')
174040	February 16, 2006	TARON	Update Existing DATA_DICTIONARY	update data_dictionary set allow_add_to_list = ?, child_key = ?, column_name = ?, default_format = ?, default_size = ?, default_value = ?, dependent_sql = ('N','','LAST_UPDATED_BY_USER','null','null','','','N','null','LABEL','N','Y','The last person who updated the attachment','','N','0','TARON','','','','','','','','','N','','','','','','','',
174045	February 16, 2006	TARON	Update Existing DATA_DICTIONARY	update data_dictionary set allow_add_to_list = ?, child_key = ?, column_name = ?, default_format = ?, default_size = ?, default_value = ?, dependent_sql = ('N','','LAST_DATE_UPDATED','null','null','','','N','null','LABEL','N','Y','The last date the attachment got updated','','N','0','TARON','','','','','','','','','N','','','','','','','','','N','N',
174050	February 16, 2006	TARON	Update Existing DATA_DICTIONARY	update data_dictionary set allow_add_to_list = ?, child_key = ?, column_name = ?, default_format = ?, default_size = ?, default_value = ?, dependent_sql = ('null','','','null','null','','null','N','null','LABEL','N','N','Where you edit an existing issue','index.html','N','0','TARON','null','null','null','null','null','null','null','','N','null','null',
174055	February 16, 2006	TARON	Update Existing DATA_DICTIONARY	update data_dictionary set allow_add_to_list = ?, child_key = ?, column_name = ?, default_format = ?, default_size = ?, default_value = ?, dependent_sql = ('N','','','null','null','','null','N','null','LABEL','N','N','Where you are able to run complex queries and reports','index.html','N','0','TARON','null','null','null','null','null','null',
174060	February 16, 2006	TARON	Update Existing DATA_DICTIONARY	update data_dictionary set allow_add_to_list = ?, child_key = ?, column_name = ?, default_format = ?, default_size = ?, default_value = ?, dependent_sql = ('N','','','null','null','','null','N','null','LABEL','N','N',' ','','N','0','TARON','null','null','null','null','null','null','null','','N','null','null','null','null','null','','','null','N','N','N','','ExtraView Cu
174065	February 16, 2006	TARON	Update Existing DATA_DICTIONARY	update data_dictionary set allow_add_to_list = ?, child_key = ?, column_name = ?, default_format = ?, default_size = ?, default_value = ?, dependent_sql = ('N','','','null','null','','null','N','null','LABEL','N','N','The summary of a newly entered issue','index.html','N','0','TARON','null','null','null','null','null','null','null','','N','null','nu
174070	February 16, 2006	TARON	Update Existing SECURITY_MENU	update SECURITY_MENU set SECURITY_MENU_ID = ?, SECURITY_MENU_TITLE = ?, SECURITY_MENU_GROUP = ?, ADMIN_TOP_LEVEL_MENU_ORDER = ?, ('3','Fields & Layouts','admin','3','4816','3')
174075	February 16, 2006	TARON	Update Existing SECURITY_MENU	update SECURITY_MENU set SECURITY_MENU_ID = ?, SECURITY_MENU_TITLE = ?, SECURITY_MENU_GROUP = ?, ADMIN_TOP_LEVEL_MENU_ORDER = ?, ('8','Display','admin','4','4821','8')
174080	February 16, 2006	TARON	Update Existing SECURITY_MENU	update SECURITY_MENU set SECURITY_MENU_ID = ?, SECURITY_MENU_TITLE = ?, SECURITY_MENU_GROUP = ?, ADMIN_TOP_LEVEL_MENU_ORDER = ?, ('6','Import/Export','admin','8','4819','6')

15 record(s) selected from a total of 15 record(s)

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ExtraView Sign On Log

The log entries show the actual SQL used to update the ExtraView database. Note that the SQL statement contains a s marks. Each question mark in turn is replaced at execution time with a value from the parameter list.

If allowed to grow with no constraints, the system log can grow over a period of time to an enormous size, retaining ir may no longer have value. A behavior setting named SYSTEM_LOG_EXPIRE_TIME_DAYS controls how long info retained in the log. The default for this time is 30 days, but can be changed by the administrator. An internal system ta ExtraView deletes system log messages older than this time each hour, to avoid a build up of the task that would take amount of time.

If you would like to view a copy of the application server log file, press the **View Application Server Log** button on screen. When you do this, a new window with the contents of the log file appears. This file may be very large, and it n time to download into this window. It may be more convenient for you to view this file with an editor directly on the f server. This button only appears on the System Log administration screen if you are granted the read permission to the permission key named CF_VIEW_APP_SERVER_LOG

Session Management

Sessions are managed for each user with a variety of behavior settings. The key settings are found in the **Security and** category of the behavior settings.

Sessions do not have a one to one correspondence with the number of users who are signed on. ExtraView creates mar each user, roughly in proportion to the number of tasks or reports a user executes at one time. Drilldowns from reports additional sessions and when users do not close windows or sign off when they have completed their tasks, the amoun information held in memory grows as ExtraView will not discard session information that a user may require again at future.

A table is used to store user sessions in the database when there is no more room in the application server memory (R them. If a user session is not active, i.e. the user has closed their browser window without logging off, or if their comp will be added to memory until ExtraView can move some sessions out of memory and to the database.

SPILL_SESSION_COUNT must be a larger number than NOSPILL_SESSION_COUNT. SPILL_SESSION_COUNT maximum number of sessions that will ever be placed into memory. If the number of sessions in memory reaches SPILL_SESSION_COUNT ExtraView stops creating new sessions until the number of sessions in memory is reduced sessions to the database.

For example set NOSPILL_SESSION_COUNT to 1000 and SPILL_SESSION_COUNT to 1100. With these settings, created in memory until there is a total of 1,000 sessions. When the 1,001st session is requested, one session in memo to database before the session can go into memory. This process can take some time and more requests for sessions ma this is occurring.

If there are 1,100 requests for sessions in memory received, no more sessions will be created, i.e. the system will not r writer process catches up and removes sessions from memory to get SPILL_SESSION_COUNT below the 1,100 thres 101 sessions need to be removed from memory in order to get the number of sessions below 1,000 in order for the sys completely.

How many sessions are in memory at a point in time? This number is written to the application server log with the co service. The number is the cc parameter. If this number is higher than NOSPILL_SESSION_COUNT then sessions ar into the database and it's worth considering whether you should set the NOSPILL_SESSION_COUNT and SPILL_SE to higher amounts.

Other factors can also influence how many sessions are in memory. Sessions are removed from memory and from the user's session has expired, so keeping the SESSION_EXPIRE_TIME_HOURS to a lower amount will reduce how lo are kept in memory, reducing the number of sessions taking up space.

One way to improve performance through session management is to increase the number of application server instanc clustered application server environment, each instance will hold NOSPILL_SESSION_COUNT number of sessions i application servers will hold 2,000 sessions, and 3 application servers will hold 3,000 sessions before any sessions are database. Load-balancing multiple application servers provides more memory to hold more sessions.

Conditions that sign off users automatically

The most common reason that ExtraView signs off users automatically is because they reach the timeout period you se to expire. For users with named licenses, this is the time period specified in the setting SESSION_NAME_EXPIRE_T For users with concurrent licenses, the time period is set with SESSION_EXPIRE_TIME_HOURS. If the user is idle submit a request or a form to the server from their browser) for more than this period, then ExtraView only allows the after signing on again.

When ExtraView signs a user off automatically, they are asked to re-enter their user ID and password to continue worl were signed off the system by ExtraView, the alert shows a **Session expired or removed** message, by Administrator f code.

Alert Code	Meaning
RC1	The referenced session no longer exists. The most likely reason is that the user was idle longer that the time system administrator and the user was automatically signed out of the system. This condition may also be c administrator restarting the server while you were in the middle of a task
RC2	The cookies returned by the browser don't match session cookies held on the server. There is a possibility t signed on with the same browser twice
RC3	The session expired in the foreground
RC4	The session was removed by administrator
RC5	Your IP address changed during the session and this is disallowed by the system administrator. Normally Ex performs a check for security purposes, to ensure that your IP address remains consistent. However, this che

from the session that the user first signed on to
- If a user signs on to ExtraView and during their work they generate new tabs and / or new pop up windows and "parent" window or tab, the child windows and tabs will lose track of the parent session, and therefore lose tracl expiry time.

Named End-User Session Management

The setting named SESSION_NAME_EXPIRE_HOURS controls the period of time for the expiry of a named user li definition, there is not a strict need from a licensing perspective for end users who occupy a named license to ever hav terminated automatically. However, every session requires resources on the server and these resources are finite. Apar who forgets to sign off after an extended period, there is also the occasional computer or browser crash that will leave After a period of time these events take a toll and performance can be reduced to other users. ExtraView's recommend is a 24 hour setting on named licenses. Provided the application server is configured correctly, this should clean up un without an undue burden on the server.

Concurrent End-User Session Management

Note: This feature is only activated when you have purchased concurrent or hybrid licenses of ExtraView, as opposed named user licenses. It is not necessary to have this capability with named user licenses.

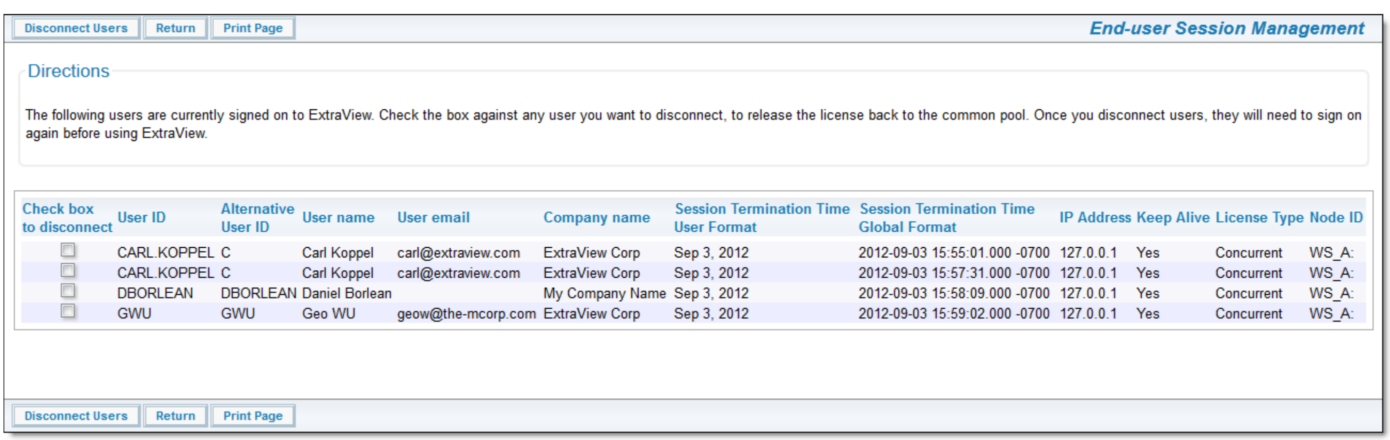
This feature gives the Administrator complete knowledge of who is signed on to the system at the current time. The A permission to this feature is also permitted to sign off any user. This may be needed if you have reached the limit of th licensed users, and you want to sign off some individual users, in order to let other users access the system.

The time that an individual user's session remains open, when there is no further activity is controlled with the behavi SESSION_EXPIRE_TIME_HOURS. This is found within the Security and Session Settings administration menu, on Controls tab. The administrator can adjust this time to give a reasonable balance between a user's session expiring, the available licenses to other users, and security. For efficiency, the session termination time shown on the screen for eac updated internally within ExtraView every few minutes, so the time shown is only approximate.

In addition, you can observe the IP address of any connected user. This can be useful for troubleshooting on networks addresses are translated for any purpose. ExtraView has a behavior setting within the Security and Session Settings se whether a client connection must maintain a constant IP address during a session. This is named CLIENT_IP_ADDRI Usually this is set to YES, but it may need to be set to NO if your server is accessed via a proxy server, and the IP add individual user may change through time.

A further behavior setting controls how ExtraView reacts when the user either closes their last remaining open windov browser, with ExtraView being the last window open. If the behavior setting named AUTO_SIGNOFF_ON_USER_E (this is the default), then ExtraView will (by using a session cookie) remember that it is signed on, and an open license the setting is YES, then when the user presses the browser back button, or other means, to go back to the ExtraView s will need to sign on again, taking a fresh license.

Note that two timestamps are displayed in the report. One timestamp is shown in the personal date/time format of the administrative user. The other is shown in an extended, unambiguous format.



Check box to disconnect	User ID	Alternative User ID	User name	User email	Company name	Session Termination Time User Format	Session Termination Time Global Format	IP Address	Keep Alive	License Type	Node ID
☐	CARL.KOPPEL	C	Carl Koppel	carl@extraview.com	ExtraView Corp	Sep 3, 2012	2012-09-03 15:55:01.000 -0700	127.0.0.1	Yes	Concurrent	WS_A:
☐	CARL.KOPPEL	C	Carl Koppel	carl@extraview.com	ExtraView Corp	Sep 3, 2012	2012-09-03 15:57:31.000 -0700	127.0.0.1	Yes	Concurrent	WS_A:
☐	DBORLEAN	DBORLEAN	Daniel Borlean		My Company Name	Sep 3, 2012	2012-09-03 15:58:09.000 -0700	127.0.0.1	Yes	Concurrent	WS_A:
☐	GWU	GWU	Geo WU	geow@the-mcorp.com	ExtraView Corp	Sep 3, 2012	2012-09-03 15:59:02.000 -0700	127.0.0.1	Yes	Concurrent	WS_A:

On the screen is also the column **Keep Alive**. This signifies whether a user's session is still current and whether it may exceeding the idle time expiry period. If the value is No, then the session has exceeded the value of USER_EXPIRE_ but has yet to be terminated by ExtraView. If the user is idle, but is accessing an add or edit screen, then the value may the server will preserve the session information for the user for as long a period as possible, up until the value of time SESSION_EXPIRE_TIME_HOURS is reached.

Session Expiry

Session expiry is a two-stage process. For users occupying a concurrent license, when the user has been idle, (i.e. they accessed the server from their browser for the time defined in USER_EXPIRE_TIME_HOURS), they will receive a s message from ExtraView when they next access the server. If the user was in the middle of a session creating a new is existing issue, then ExtraView will attempt to restore all the data held in the user's browser from the time they last ent happens after they re-authenticate their sign on credentials.

This capability comes at a price, in that the server must hold all the data necessary to restore the session within the app memory. With a significant number of users, this can mount up, and so there is a second time out defined in SESSION_EXPIRE_TIME_HOURS. If the user attempts to restore their session after this time, no data can be restore will be taken to their usual destination page upon signing on, usually the Home Page.

For users who occupy a named user license there is a separate behavior setting for control. This is named SESSION_NAME_EXPIRE_TIME_HOURS.

When a user receives an alert informing him that their **Session expired or was removed**, it may be for one of several

Alert Code	Meaning
RC1	The most likely reason is that the user was idle longer that the time allotted by the administrator in the beha named SESSION_EXPIRE_TIME_HOURS. ExtraView then signs the user out of the system. This conditio caused by the administrator restarting the server while you were in the middle of a task
RC2	The cookies returned by the browser don't match session cookies held on the server. There are two possible First, the expiry may happen if the user attempts to sign on to ExtraView, from two different instances of th Secondly, if the server is first accessed by a specific URL from a user's browser, the same URL must then b subsequent accesses by all users.
RC3	The session expired in the server. This is most often due to an error condition that could not be handled
RC4	The session was removed by administrator. This happens when the administrator uses the Manage Connecte administrative function to cancel a user's session.
RC5	Your IP address changed during the session and CLIENT_IP_ADDRESS_CHECK is "YES". Normally Ext performs a check for security purposes, to ensure that your IP address remains consistent. However, this che disabled if you part of a network where your IP address is automatically translated for any reason. This is m when accessing a corporate network via a VPN with a proxy server.

You may turn on a warning to the user, that their session is about to expire, using the two behavior settings named SESSION_WARNING_TIME_SECS and SESSION_WARNING_INTERVAL_SECS. This will give them additional their session is about to expire.

For users occupying concurrent licenses, the session expiry is controlled by a number of settings, some optional, some two mandatory settings are

Behavior Setting	Purpose
SESSION_EXPIRE_TIME_HOURS	This is the session expiry period measured in hours for a user who occupies a license and who remains idle. Note that this is different from the period for u a named license. Their expiry period is defined in the behavior setting named

	where they were working. Note that the ability to restore data is only enabled specified in the setting named SESSION_EXPIRE_TIME_HOURS. For this SESSION_EXPIRE_TIME_HOURS should always be equal to or greater tha USER_EXPIRE_TIME_HOURS. If the value of this setting is less than one then the session will not time out

There are further settings that may be used to determine if a user is really inactive, or whether they have closed their b to another page or performed some other action that means that the session information held on the server is no longer principally used to allow the administrator to fine tune the allocation of concurrent user licenses after the USER_EXPIRE_TIME_HOURS and before the SESSION_EXPIRE_TIME_HOURS is reached, and to ensure that u a license if there is no need. The basic principal is that if the user requires resource to be retained on the server, they w license during this period, but if they do not require resources on the server, their license will be released. Resources a server if the user is in one of these functions:

- *Add* screen
- *Edit* screen
- Item History screen
- Related Issue Update screen

This functionality comes at a modest performance cost, in that there needs to be communication at regular intervals be browser and the server to determine a user's status. These packets of information may have an affect on performance, feature may be turned on or off, and the administrator may determine how frequently checks are made.

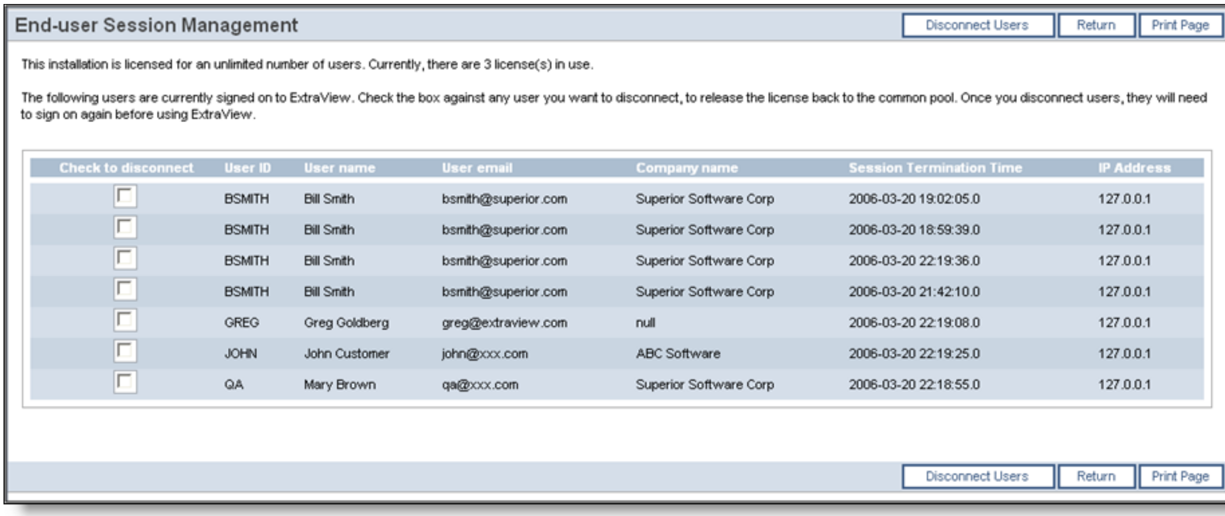
If you are using named user licenses the recommendation is to turn the feature off using the USER_TIMEOUT_SESS setting.

Behavior Setting	Purpose
USER_TIMEOUT_SESSION_REMOVAL	This is used to turn this feature on or off. The value of YES implies tha killed after USER_EXPIRE_TIME_HOURS of inactivity, unless the u that remain active in the *add* or *edit* screen mode. NO implies that thes not killed after this period of inactivity. The user's browser is checked every SESSION_MONITOR_POLL_SECS to see if the ExtraView ses active and the client updates the server with this information every KEEPALIVE_INTERVAL_SECS seconds.
KEEPALIVE_INTERVAL_SECS	This is the number of seconds between polling operations from the *add* This timer is used to send a message from the user's browser to the ser server to keep track of users with open *add* or *edit* sessions. If the user browser or navigates away from an *add* or *edit* page, then the server w recognize this event
SESSION_MONITOR_POLL_SECS	This is the number of seconds between periodic tests from the server, f removal due to user expire time activity. The server will test to see if th an open session at this interval. This is only used if USER_TIMEOUT_SESSION_REMOVAL is YES. and if the user's br reported to the server that a session is still active with the KEEPALIVE_INTERVAL_SECS timer.

Disabling User Access

Occasionally, the administrator may wish to lock users out of ExtraView, for maintenance purposes such as creating n or business rules or when performing a mass update of many issues. To facilitate this requirement, the feature **Disable User Access** is available from the **Administration**, **Operational Tasks** menu.

You must be the ADMIN user, or in the role specified by the ADMIN_OVERRIDE_ROLE behavior setting in order t



End-user Session Management

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This installation is licensed for an unlimited number of users. Currently, there are 3 license(s) in use.

The following users are currently signed on to ExtraView. Check the box against any user you want to disconnect, to release the license back to the common pool. Once you disconnect users, they will need to sign on again before using ExtraView.

Check to disconnect	User ID	User name	User email	Company name	Session Termination Time	IP Address
☐	BSMITH	Bill Smith	bsmith@superior.com	Superior Software Corp	2006-03-20 19:02:05.0	127.0.0.1
☐	BSMITH	Bill Smith	bsmith@superior.com	Superior Software Corp	2006-03-20 18:59:39.0	127.0.0.1
☐	BSMITH	Bill Smith	bsmith@superior.com	Superior Software Corp	2006-03-20 22:19:36.0	127.0.0.1
☐	BSMITH	Bill Smith	bsmith@superior.com	Superior Software Corp	2006-03-20 21:42:10.0	127.0.0.1
☐	GREG	Greg Goldberg	greg@extraview.com	null	2006-03-20 22:19:08.0	127.0.0.1
☐	JOHN	John Customer	john@xxx.com	ABC Software	2006-03-20 22:19:25.0	127.0.0.1
☐	QA	Mary Brown	qa@xxx.com	Superior Software Corp	2006-03-20 22:18:55.0	127.0.0.1

Disconnect Users | Return | Print Page

Disabling and enabling user access

When entering this feature, the administrator will see a list of all users who are currently signed on, giving them and i level of activity. A message can be defined, that is displayed to the user when they sign on. It is suggested the messag indication of when service is expected to be restored. When the system is disabled, there is a confirmation message to the time that the administrator re-enables access, end users are prevented from activity, and will see the message defin they attempt to sign on. Access will continue to be granted to administrators who are members of the group defined in setting named ADMIN_OVERRIDE_ROLE. A security key controls access to this feature. It is named CF_ENABLE_DISABLE_USER_ACCESS.

Note: It is not recommended that anyone other than administrators who are part of the ADMIN_OVERRIDE_ROLE t this feature.

Disconnecting Users

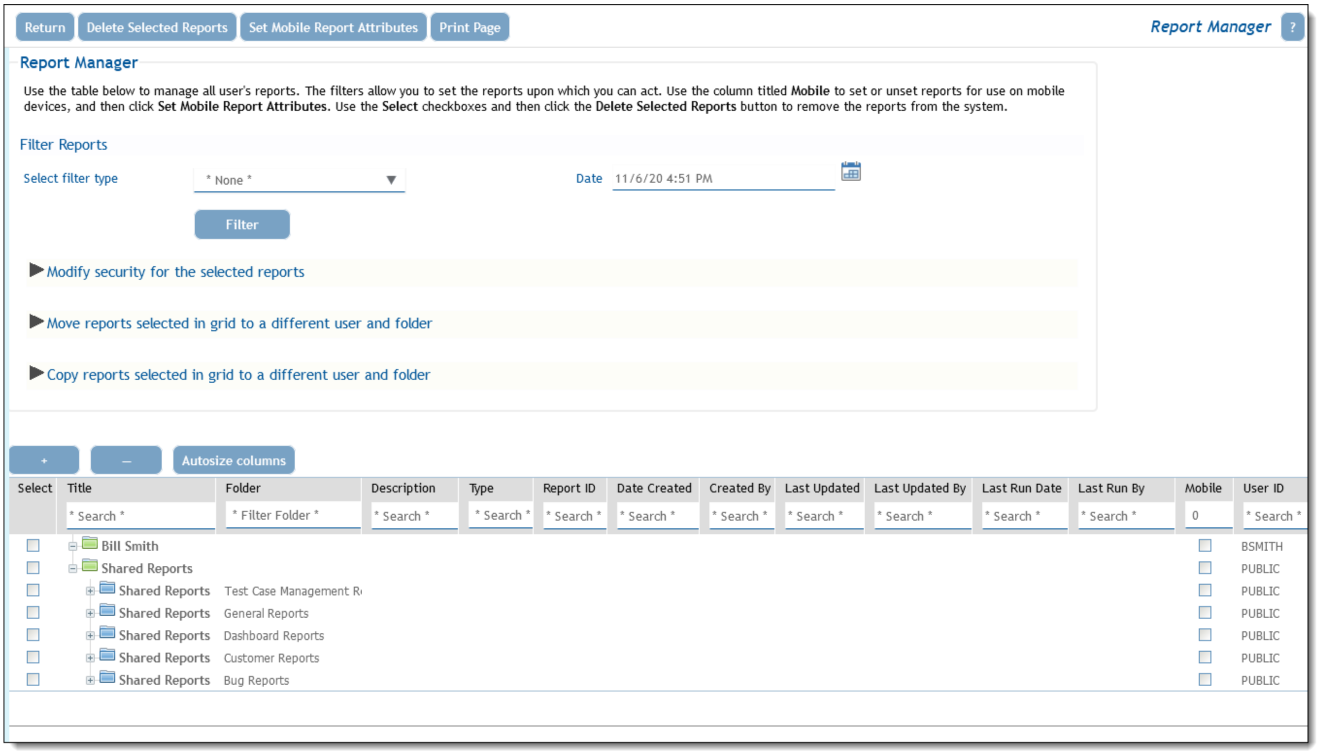
1. Click **End-User Session Management** link within the **Administration** ==> **Operational Tasks** menu.
2. Click on the checkbox associated with the user(s) whom you want to remove from active sessions within Extra\
3. Click the Disconnect Users button. This action will expire the selected user sessions and open up concurrent lic access by other users.

Report Manager

The Report Manager utility allows the ExtraView administrator to maintain shared reports and user's reports. Both sh reports owned by individual users may be accessed, deleted and some report attributes may be updated. Reports may from one user to another. The update operations act on single reports or different filtered groups of reports. The typic the utility are to perform the following tasks:

- Delete all reports in the system that have not been run in a while, say the last year
- Delete all the reports in the system belonging to an individual user, after they have ceased being an ExtraView u

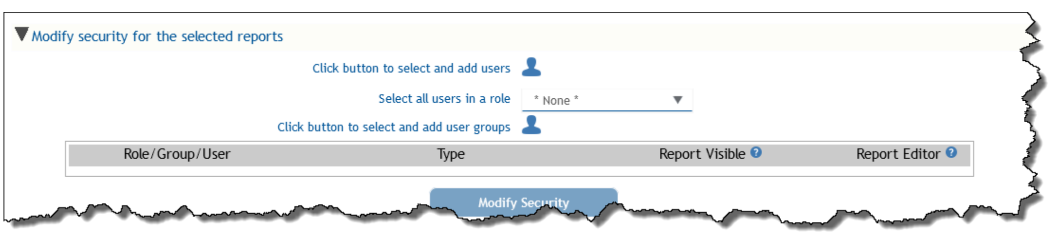
The utility is extremely flexible in allowing the administrator to filter through very large groups of reports, to quickly reports the mass operation is to be fulfilled. It is possible to delete many reports with a few keystrokes, so unless you the operation of this utility, it is suggested you take a backup of the entire site before beginning. When first entering t screen will look somwewhat similar to this:



The filters allow you to select the date range to be viewed, based on either the dates the reports were created, the dates updated, or the dates they were last run. If you do not use the filters, you are able to view all the reports in the system

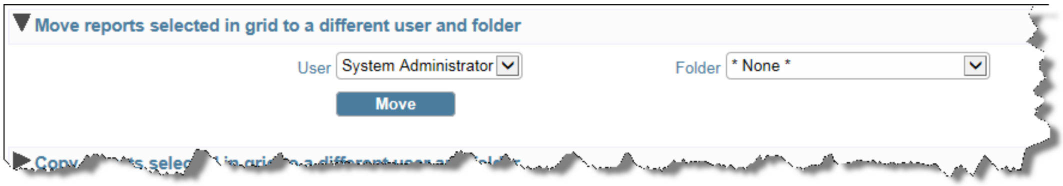
The overall functionality of the report grid is:

- **Filters** - Based on a date that you select, you can filter the reports that are displayed within the grid with the fol types:
  - Last run on or before a date
  - Created on or before a date
  - Last updated on or before a date
  - Last run on or after a date
  - Created on or after a date
  - Last updated on or after a date
- **Modify Security** - Click on the fold to expand it to view the following screenshot:



Once you have selected the reports to modify, you can use the options to first:

  - Select users to add security criteria
  - Select users within one role
  - Select users within a user group



Once you have selected the reports to move, select the user and their folder into which to move the reports. The
button

- **Copy Reports** - Click on the fold to expand it to view the following screenshot:

Once you have selected the reports to copy, select the user and their folder into which to copy the reports. Then
button

- Click **+** to view all the reports that are defined by the filters you have set. Note that if you have selected a large reports, this might be a time-consuming task to read the database and to render the grid with the report
- Click **—** to reduce the grid to the level of shared reports and the reports for each user defined within the filters y
- **Autosize columns** will set all the columns in the grid to a size where all the contents of all columns will be disp
- Click on any column title to sort the grid by that column. A second click will reverse the order of the sort
- Drag the edge of column with your mouse to widen or narrow its display
- Click on the **+** or **-** within the report tree to expand or contract that segment of the grid, for example to see all th belonging to a specific user
- Use the filter boxes within the title section to select a single category within the column. If the box is a simple t your entry is treated as a wildcard and only the reports that match the wildcard will be displayed.

The columns in the grid have the following functions:

Select	This is the checkbox that allows the selection of a report upon which you want to act. Note that you c box within the title to select all the filtered reports and you can check at a node within the tree to selec that reside within that node, such as all the reports that belong to a user or the reports that reside withi folder
Shared / Private	All *Shared* reports are grouped together, within the *Shared* node of the tree. Within the grid, the *Shar* followed by the reports for each user. If you place your mouse over the folder that contains a user's re see the key data associated with the user's account, such as their user ID, Comany name and whether t enabled or disabled user. When you place your mouse over a report, you will see data such as the rep database and whether the report is shared
Folder	This is the folder name, if any, beneath which the report is stored
Type	This is the type of report, such as Column Report, Matrix Report, etc.
Title	The title of the report
Description	The description of the report
Created	The date the report was created. This is one of the filters that may be used when creating the grid
Last updated	The date the report was last update. This is one of the filters that may be used when creating the grid
Last update user	This is the user ID of the person who last update the report
Last run	The date the report was last run, by any user with permission to the report. This is one of the filters th

Report Scheduler

The report scheduler allows end users to set up and maintain a schedule for their reports. There is an internal ExtraVie monitors these reports and at the appointed time, will prepare the report and attach it to an outgoing email. The report maintains a list of recipients for each report. See here for details on setting up and managing the task.

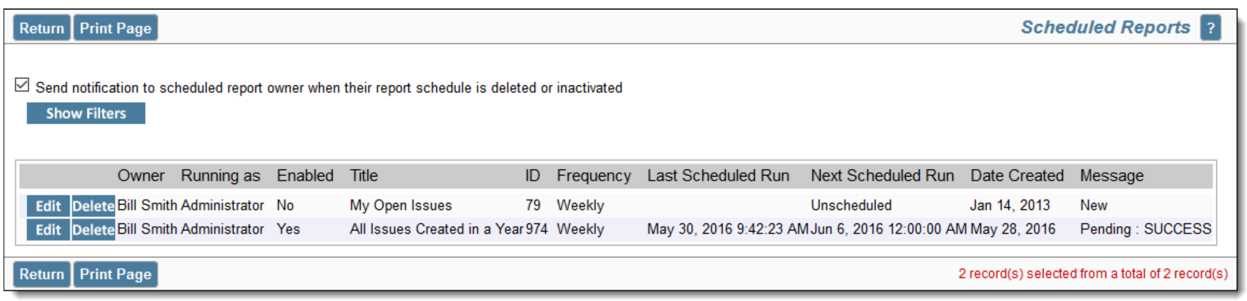
Column reports, Summary reports, Matrix reports, Charts and Container reports may be scheduled and delivered via e

Security Permission Keys

SR_REPORT_SCHEDULE	This is the overall security permission key that allows access to the r by user role
SR_REPORT_REPOSITORY_ACCESS	Within the report scheduler, access to write report output to the docu is controlled by this security permission key
SR_SCHEDULE_ALLOW_ROLE_SELECT	This permission key controls the presence of the list of user roles to schedule may be sent, or who may access documents written to the c repository by the report scheduler

Administrative Control

As scheduled reports may have a large impact on system performance, there is an administrative control interface ove reports. Scheduled reports are not necessarily run immediately according to their schedule. They are queued and run s is why the scheduler interface says "Start no sooner than". As an administrator, you may still want to adjust, or even d reports. Imagine the consequences if the scheduler tried to send out 100 separate reports, to 100 separate users all at 9: Monday morning, at the same time these users are all trying to sign on to ExtraView.



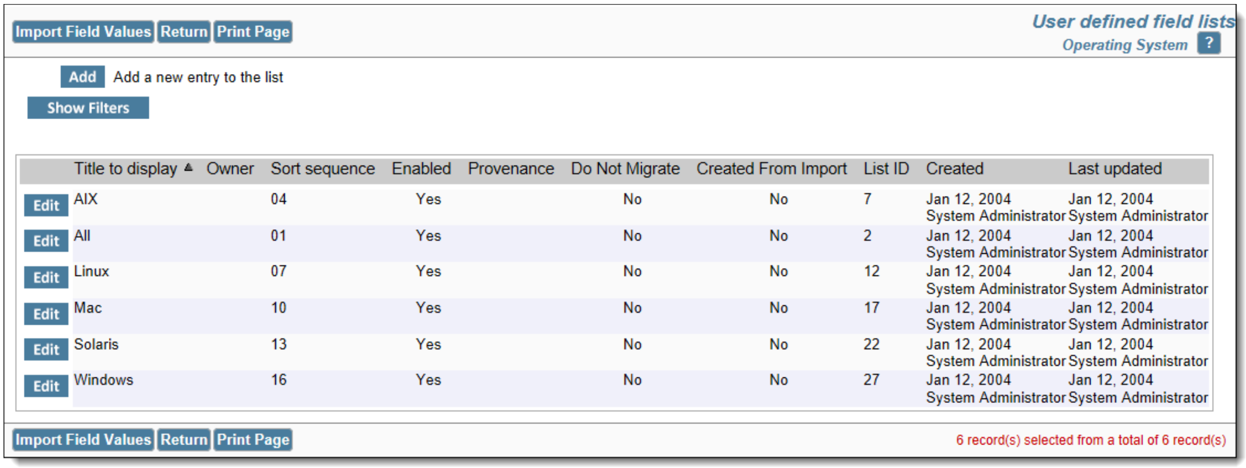
Setting the schedule for a report

The administrator can manage the schedule for any user's scheduled report, they may deactivate the schedule, or they schedule. There is an option to send email to the report owner, when their report schedule is removed. There is also an allows the scheduled report to be suppressed, if there are zero results on the output.

Field List Values

For convenience, list values may be maintained from several places:

- Within the **Administration**, **Operational Tasks**, **Manage List Values** menu. For convenience, the list of items includes Privacy Groups and User Roles. These lists can be viewed and modified both from this administrative within the Users section. The metadata field lists that appear on this screen include all fields with a data dictiona of List, Popup, Checkbox, Radio Button and Tab.



Import Field Values | Return | Print Page

User defined field lists
Operating System

Add — Add a new entry to the list

Show Filters

	Title to display	Owner	Sort sequence	Enabled	Provenance	Do Not Migrate	Created From Import	List ID	Created	Last updated
Edit	AIX		04	Yes		No	No	7	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	All		01	Yes		No	No	2	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Linux		07	Yes		No	No	12	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Mac		10	Yes		No	No	17	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Solaris		13	Yes		No	No	22	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Windows		16	Yes		No	No	27	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator

Import Field Values | Return | Print Page

6 record(s) selected from a total of 6 record(s)

On the above display, note the column titled **List ID**. This value is useful when writing user custom code and when a
ExtraView databasse via the APIs.

Lists values may be dependent upon values in other lists. This is termed *Allowed Values*, and is covered in more depth
Value page within the **Site Configuration** section of this guide.

Note the field within the list titled **List ID**. This is the internal UDF_LIST_ID of the field value. Knowing this value
custom programming and accessing the field values via the APIs.

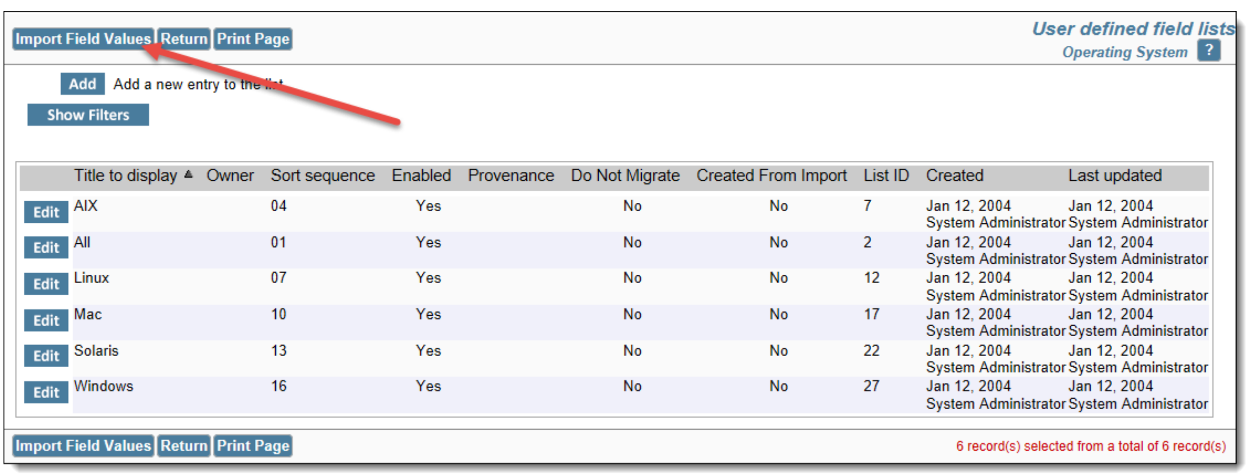
Within all user defined field lists, there is the opportunity to disable a value. Once the value has been disabled, it will r
screen in a selectable manner. If an existing record already has the value set, then the user may leave the value in plac
select a new, enabled value.

Note that checkbox fields are stored internally as lists that are constrained to just two values, typically Yes and No, Or
something similar. You may not disable a value within a checkbox field.

Interest Lists are also maintained for field values within List maintenance. For example, if you want to maintain an in
specific product, or an interest list for Priority 1 issues, then this may be completed through the add and edit functions

Loading List Values from Files

This feature only works to load values into user defined field lists. It does not work with inbuilt fields such as **STATU**
RESOLUTION and user field lists. This is not a real limitation as these inbuilt field lists tend to be small lists. Each u
list has a button **Import Field Values**. When this is pressed, the administrator is able to load a file of values into the fi



Import Field Values | Return | Print Page

User defined field lists
Operating System

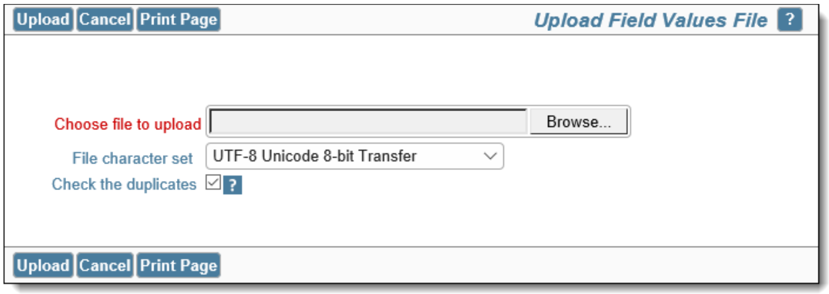
Add — Add a new entry to the list

Show Filters

	Title to display	Owner	Sort sequence	Enabled	Provenance	Do Not Migrate	Created From Import	List ID	Created	Last updated
Edit	AIX		04	Yes		No	No	7	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	All		01	Yes		No	No	2	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Linux		07	Yes		No	No	12	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Mac		10	Yes		No	No	17	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Solaris		13	Yes		No	No	22	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator
Edit	Windows		16	Yes		No	No	27	Jan 12, 2004 System Administrator	Jan 12, 2004 System Administrator

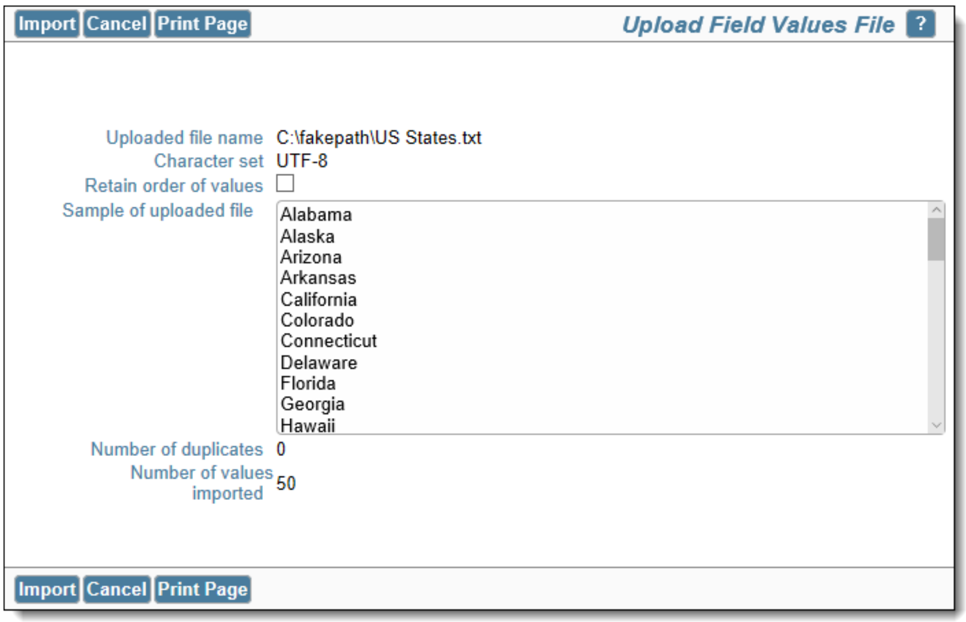
Import Field Values | Return | Print Page

6 record(s) selected from a total of 6 record(s)



Specifying the file to upload

When the file is uploaded, you will see a sample of the file:



Sample of uploaded file

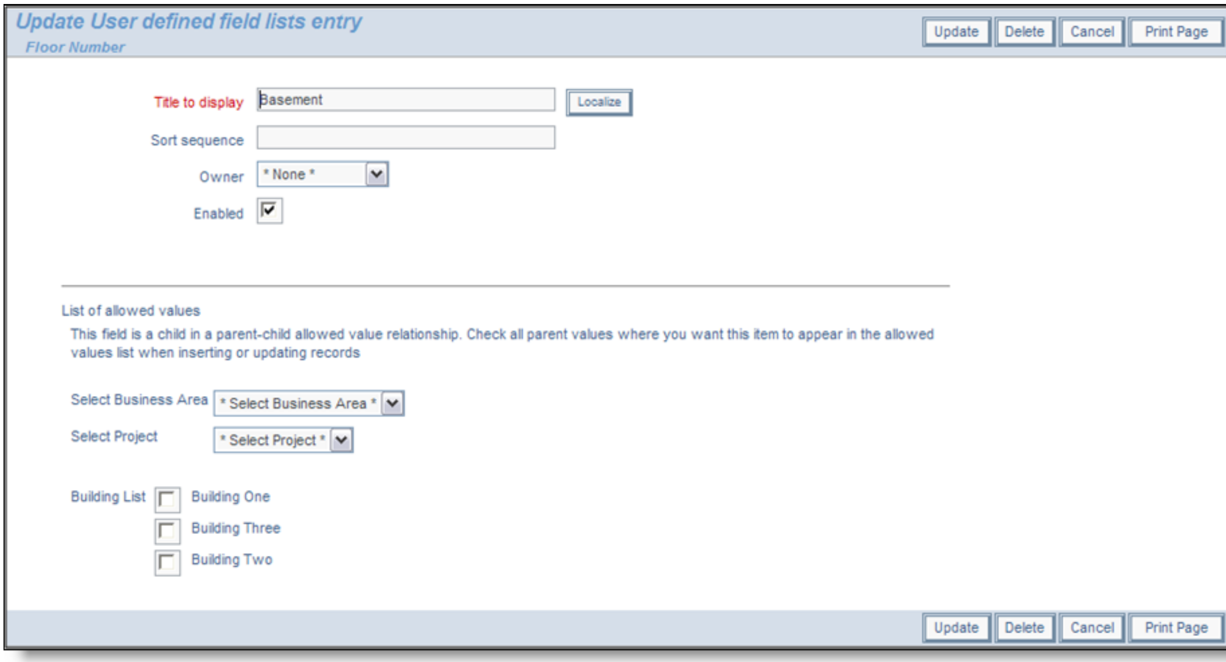
Note the prompt that allows you to retain the order of the field values in your import file, or allows the list to be sortec alphanumerically.

The import may also handle importing list values that have an associated image. In this case, the import file must hav be imported encoded with the Base-64 algorithm. A common use of this feature is to export a field with a set of imag instance and to load the list values with their images into a different field on the same or on a different ExtraView inst screen showing the Base-64 encoded values is shown below:

List Entries with Allowed Values

Editing lists that are the child in an allowed value relationship is a little different. As seen in the screenshot below, the potential parents is displayed, each with a checkbox. Also, if Business Areas and Projects are enabled, you must selec Area and Project for which you want to set the allowed values (see the next section).

Click on each of the parent values that this child is allowed to be related to. The example shows an allowed value rela two fields, where the field named *Building* is the parent and the field named *Floor Number* is the child.



Allowed Value relationships are maintained within their child list

Note that this screen allows you to modify the allowed value children for a single parent, on a single screen. This is id alterations to existing relationships. If you want to add a series of allowed value relationships for different parents, yo more convenient to use the administration screen under Allowed Value Types. Both methods will result in the same ch sometimes it is more convenient to take a “top-down” rather than “bottom-up” approach.

Business Areas and Allowed Value Relationships

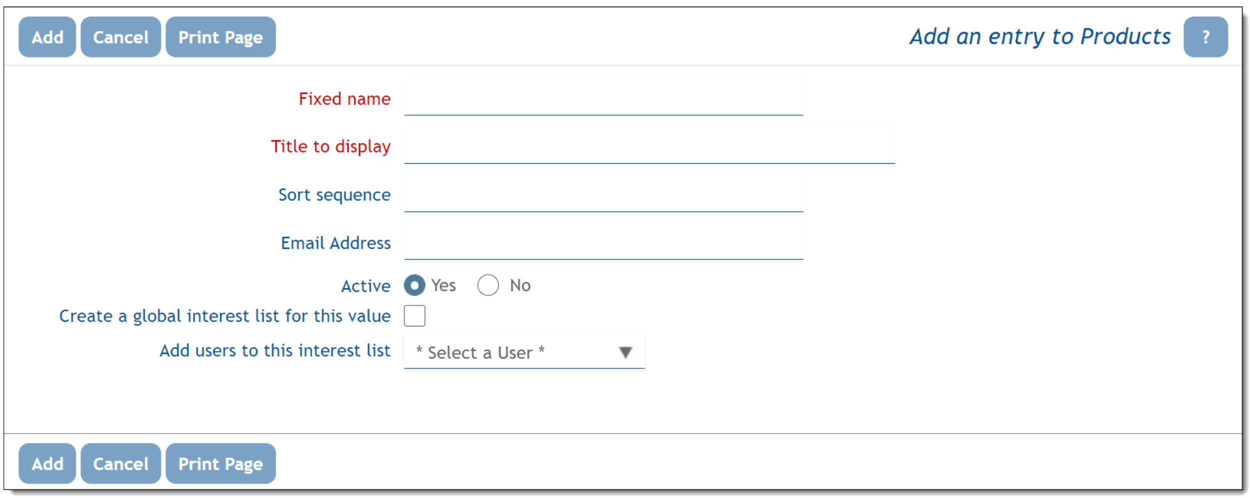
It is important to note that when Business Areas and Projects are enabled, the allowed values that you set are only for Business Area and Project. This is controlled by additional prompts on the maintenance screen as shown above. You r allowed value relationship for each Business Area and Project.

Note: If the Business Area field is the parent field in the allowed value relationship then you should be aware of how t with the fact that allowed values are dependent upon Business Area works. The implication is that you can only define relationship to either belong, or not belong to the currently selected Business Area. There is no meaning to allowing th selected with other Business Areas. Therefore, you will only see the currently selected Business Area with a checkbox possible allowed values.

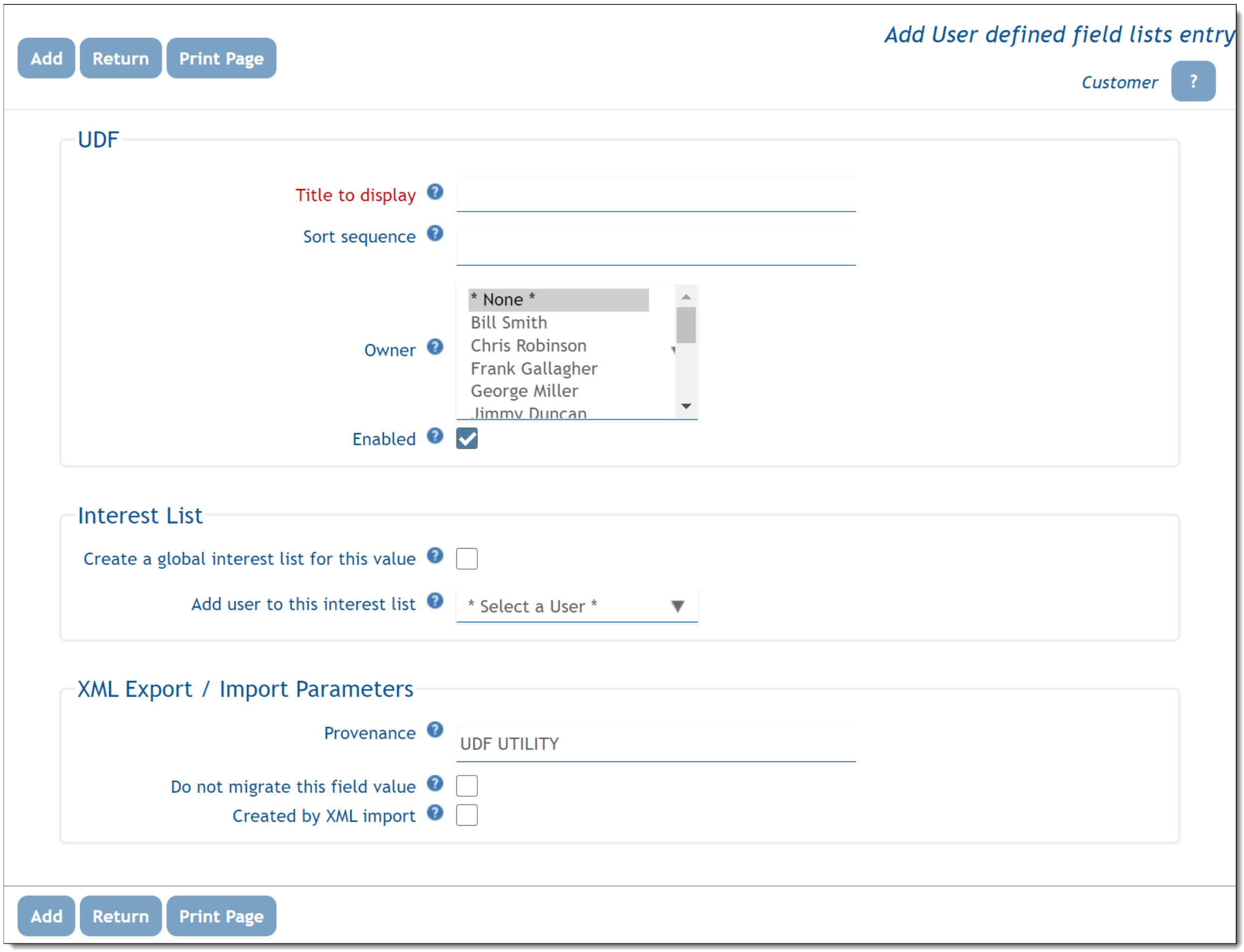
Note: You can set up a set of default values for a relationship. These will be used, unless overridden by a specific set u Business Area and Project.

Adding a new value to a list

When the end user selects the * **New** * entry in the list, a window pops up, asking for the details of the list. The appea popup varies a little, according to whether the list is an inbuilt list field (such as **product_name**), a child list such as **n** **release_found** or **release_fixed**, or is a user-defined field list. The inbuilt fields require the addition of the field's fixe title. Dependent child fields require the parent field to be selected, and the relevant fixed name and/or title. User defin require the title to be input. This is an example of a popup for the **product_name** field:



This is an example of adding a User Defined Field list value:

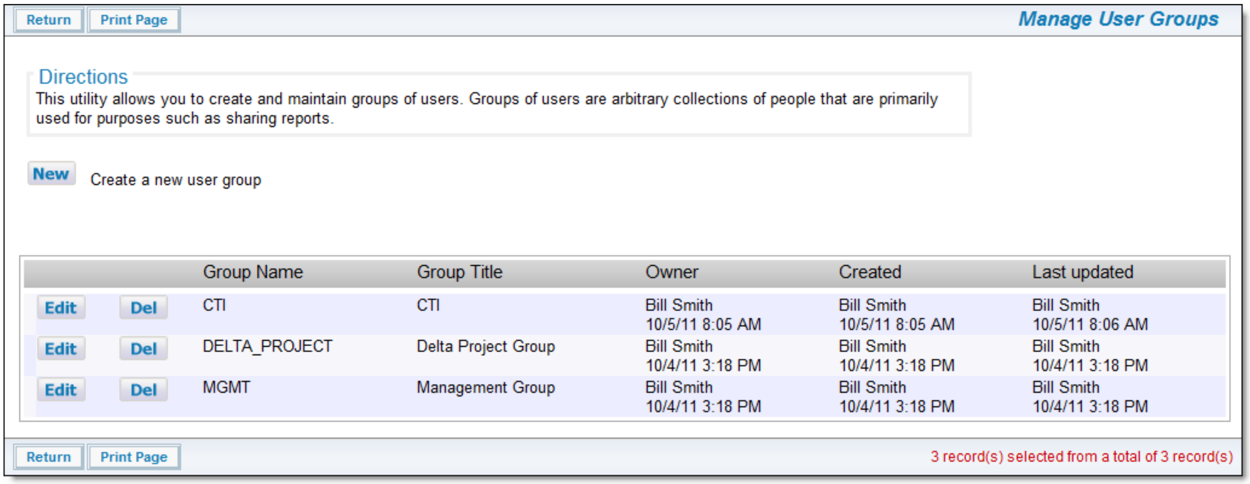


To configure a field to use this feature, take the following steps. Note that only a small number of inbuilt fields may b
way, but any user defined field list may be configured.

Field	Security Permission Key
PRODUCT_NAME	CF_PRODUCT
MODULE_ID	CF_MODULE
RELEASE_FOUND, RELEASE_FIXED	CF_PRODUCT_RELEASE
All UDF's with a display type of List, with the exception of multi-valued lists	CF_UDF_LIST

- For the user role or user roles that you want to be able to add new values to a list, give the security permission k table write access
- The * **New** * entry is added to the list by adding a layout cell attribute to the field on the appropriate *add* and/or layout cell attribute is FIELD ADD NEW and it applies to ADD PROBLEM and EDIT PROBLEM layouts.
- The feature works with UDF list and popup fields on repeating rows as well as on standard list fields
- The feature works with multi-valued list and popup fields on standard list fields only. It does not work with mul fields on repeating row fields
- The feature does not work with fields being used on reports with the Quickedit mode
- The feature does not work with other types of list fields such as tab and radio button.

User Groups



Managing User Groups

With the use of the SR_REPORT_GROUP security permission key, there is control over access to user groups. Witho this permission key, end users are not able to save reports to be shared by a user group, and are not able to see the **Ma Groups** button on the **Report** screen. The permission key that controls administrative access to the **Manage User Gr** the **Operational Tasks** tab of administration is named CF_USER_GROUP.

The **Manage User Groups** function looks similar to both end users and to administrators. However, end users may cr user groups and then have control over these user groups, but not user groups created by other end users. The **Manage** function for administrators allows the complete management of all user groups.

Interest Lists

An interest list is placed upon a value or combination of field values in order to notify one or more users when an issu field or fields with the value or values. For example, a product manager may want an interest list on all issues that tou The engineering director may want to see automatically, all the issues that are marked with a **severity level** of *critical*

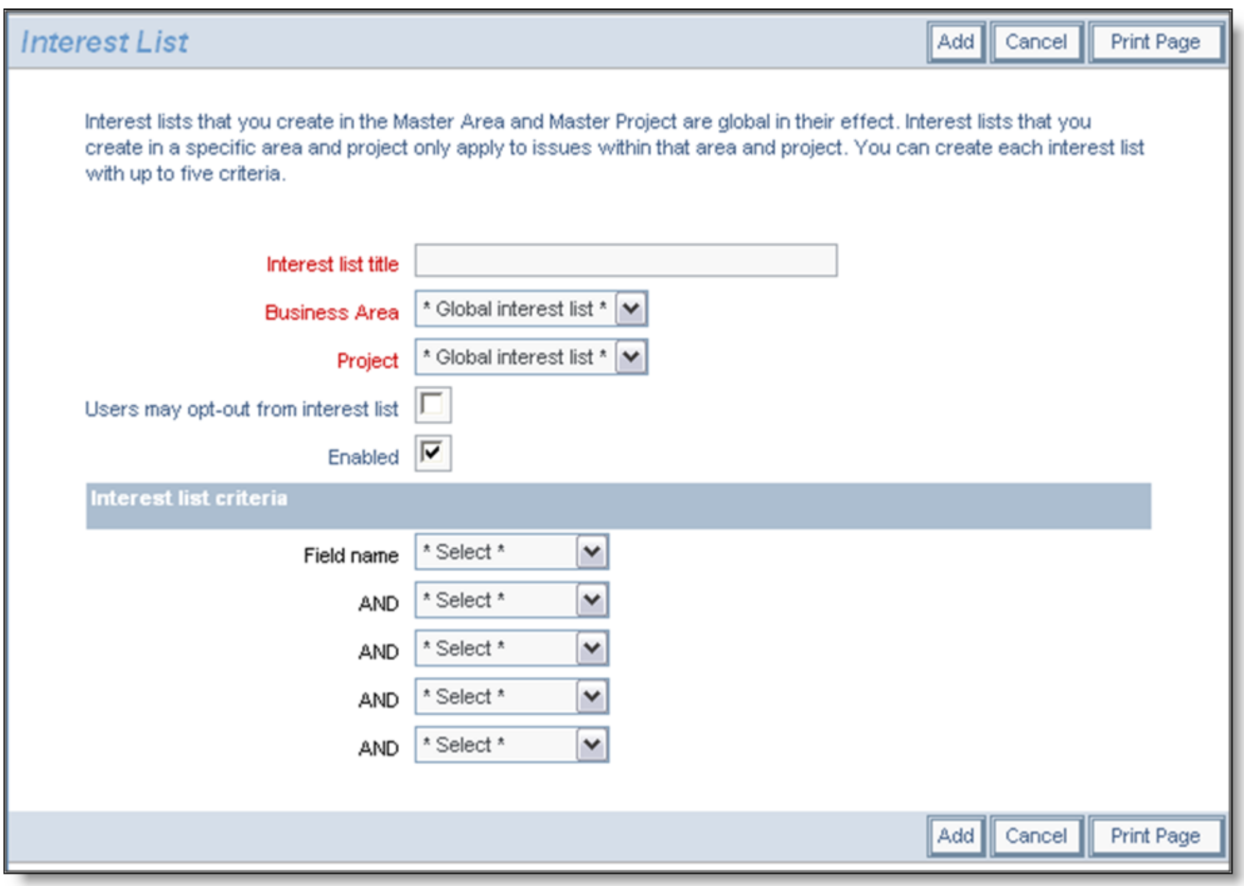
Both administrators, and to a more limited extent, users may manipulate interest lists. There is one special interest, wh issues, that is not dependent upon the value of any field within an issue. In this case members of the interest list will re notification upon all changes to the issue.

Interest lists may be global, or they may refer to a single combination of Business Area and Project. Interest lists are n layouts and security permissions.

Interest lists are enabled on each field from within the field’s data dictionary definition.

Interest List Definition

Any interest list for any field can be maintained from this screen. Use the **Edit** button by any entry to modify an existi details, use the **List** button to modify the users who belong to the interest list, and to create a new interest list, click on by the prompt **Add a new interest list**. The following screen appears when you add a new interest list:



Note: Only regular users of ExtraView can be added to interest lists. According to the terms of the license agreement, users who only belong to the behavior setting named LIMITED_USER_ROLE, cannot be added to interest lists.

If you are creating a list value for a field in the list management area and interest lists are enabled for the field, the adr allowed to create an interest list for the field at that point, without going to the interest list administration screen. This convenience.

Also note that if the user has write permission to CF_INTEREST_LIST, then the user will see all the global interest lis and opt out of these lists. The user needs write permission to individual business areas and projects to be able to opt in any interest lists defined within these.

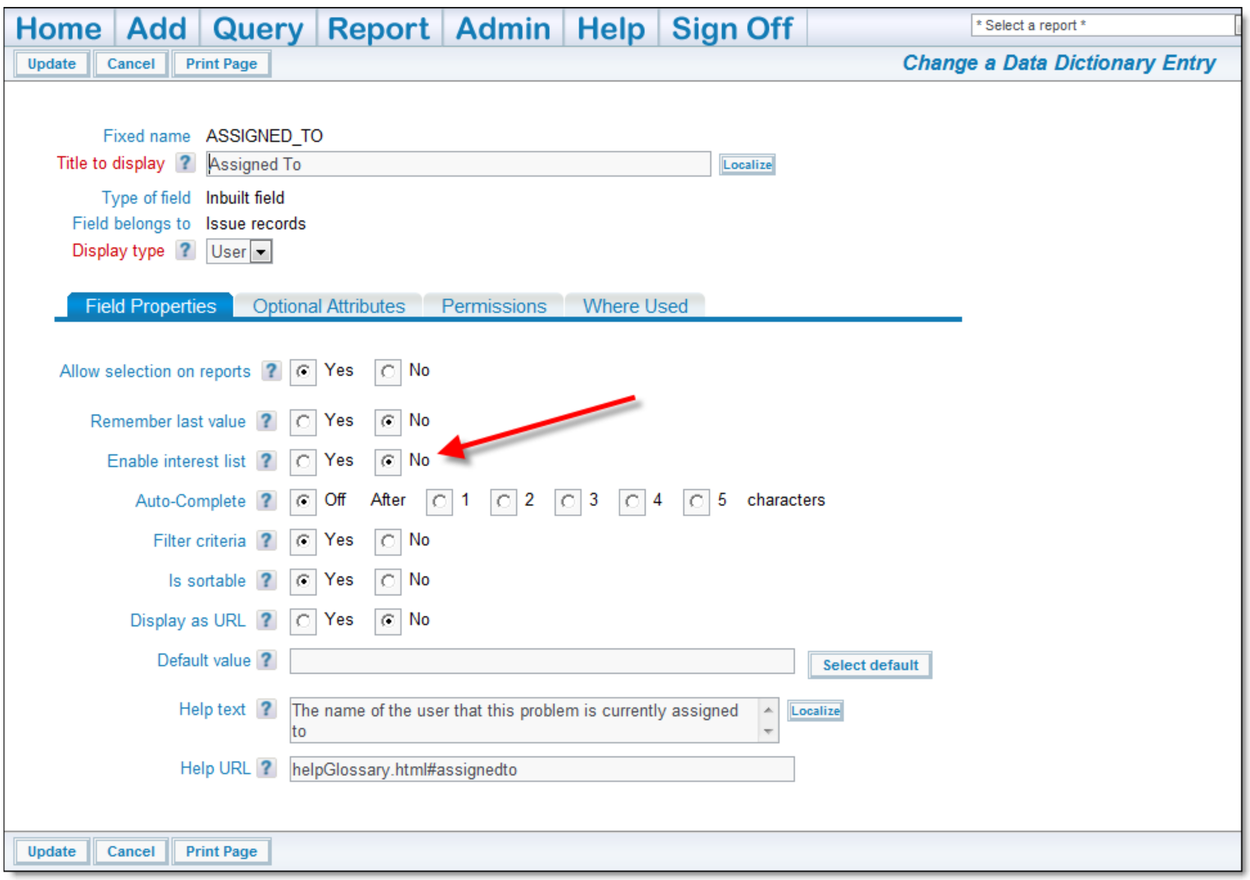
Personal Administration of Interest Lists

Please see the section on User Account Maintenance for details on how a user or the administrator can maintain the in individual user.

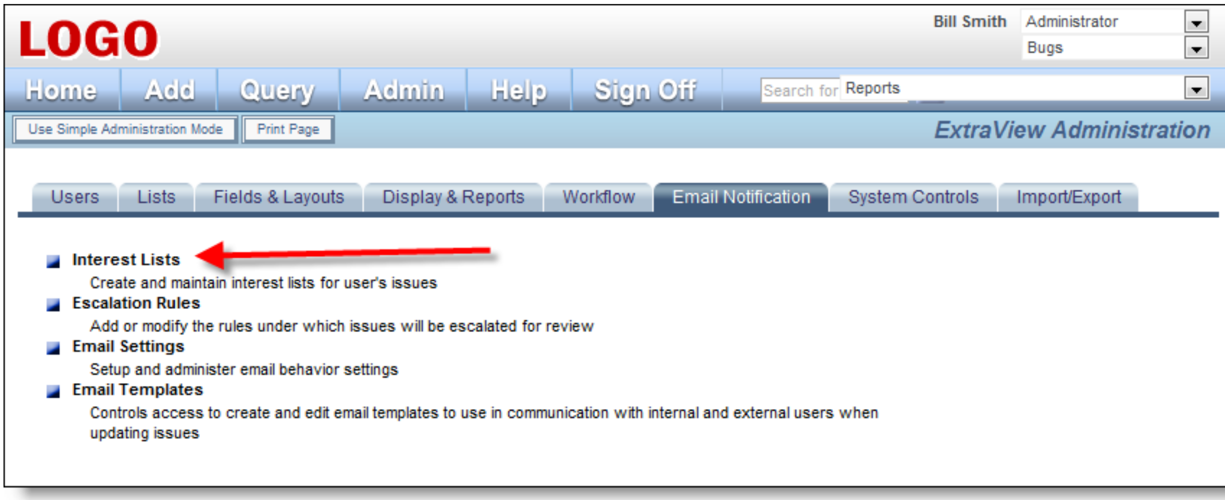
Field-Based Interest Lists

Enabling Interest Lists on Fields

You many enable interest list on fields that have a display type of List, Tab, or Popup. In addition, end users may creat on any issue, provided their role has permission to the security keys PR_ADD_PROBLEM.INTEREST_LIST or PR_RESOLUTION.INTEREST_LIST. Interest list on fields are enabled within the data dictionary.



administration, there is a menu entry named **Interest Lists**. This administration function is controlled by the security p named CF_INTEREST_LIST.



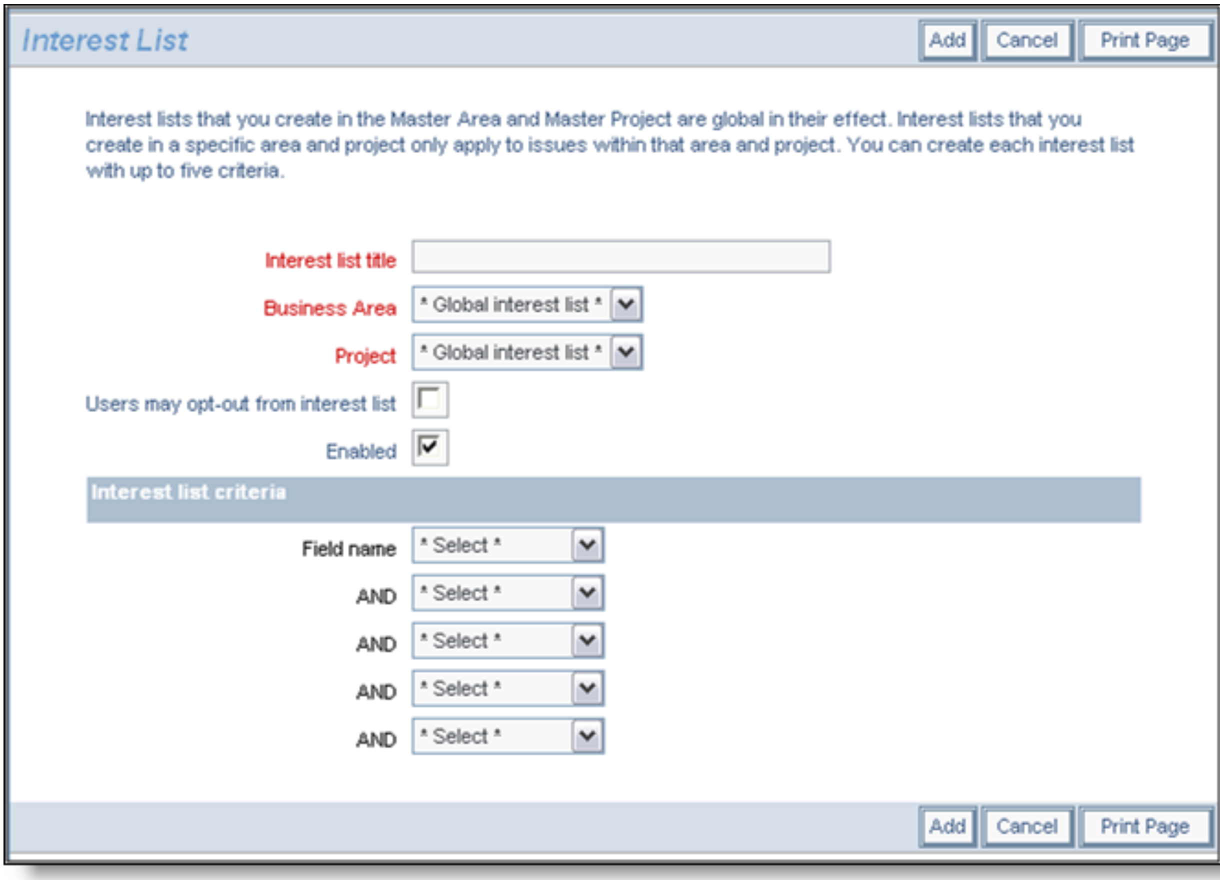
Interest List Access

Note that you may grant non-administrative users permission to this permission key. When you do this, they will see a Notification section of their Personal Options screen that allows them to administer the interest lists. Note that this giv administrative privilege, including being able to create and delete interest lists, and to add and remove any user to and list. When you select this menu entry, a screen similar to the following will appear:

	Title	Area	Project	Opt Out Allowed	Enabled List	Created	Last updated
Edit List	Interest list for the Tracker product	Master Area	Master Project	Yes	Yes	Bill Smith Apr 4, 2006	Bill Smith Apr 4, 2006
Edit List	Interest list for the Tracker Enterprise product	Master Area	Master Project	Yes	Yes	Bill Smith Apr 4, 2006	Bill Smith Jun 7, 2006
Edit List	Interest list for the Tracker Lite product	Master Area	Master Project	Yes	Yes	Bill Smith Apr 4, 2006	Bill Smith Apr 4, 2006
Edit List	Interest list for P 1 issues	Master Area	Master Project	No	Yes	Bill Smith Apr 4, 2006	Bill Smith Apr 4, 2006
Edit List	Interest list for P 2 issues	Master Area	Master Project	Yes	Yes	Bill Smith Apr 4, 2006	Bill Smith Apr 4, 2006
Edit List	Carl's interest list	Master Area	Master Project	Yes	Yes	Bill Smith May 18, 2006	Bill Smith May 18, 2006
Edit List	High Severity Interest List	Bugs	Bugs Defaults	No	Yes	Bill Smith Apr 27, 2006	Bill Smith Apr 27, 2006
Edit List	Newly published Knowledge Base items	Knowledge Base	Knowledge Base Defaults	Yes	Yes	Bill Smith Jun 21, 2006	Bill Smith Jun 22, 2006

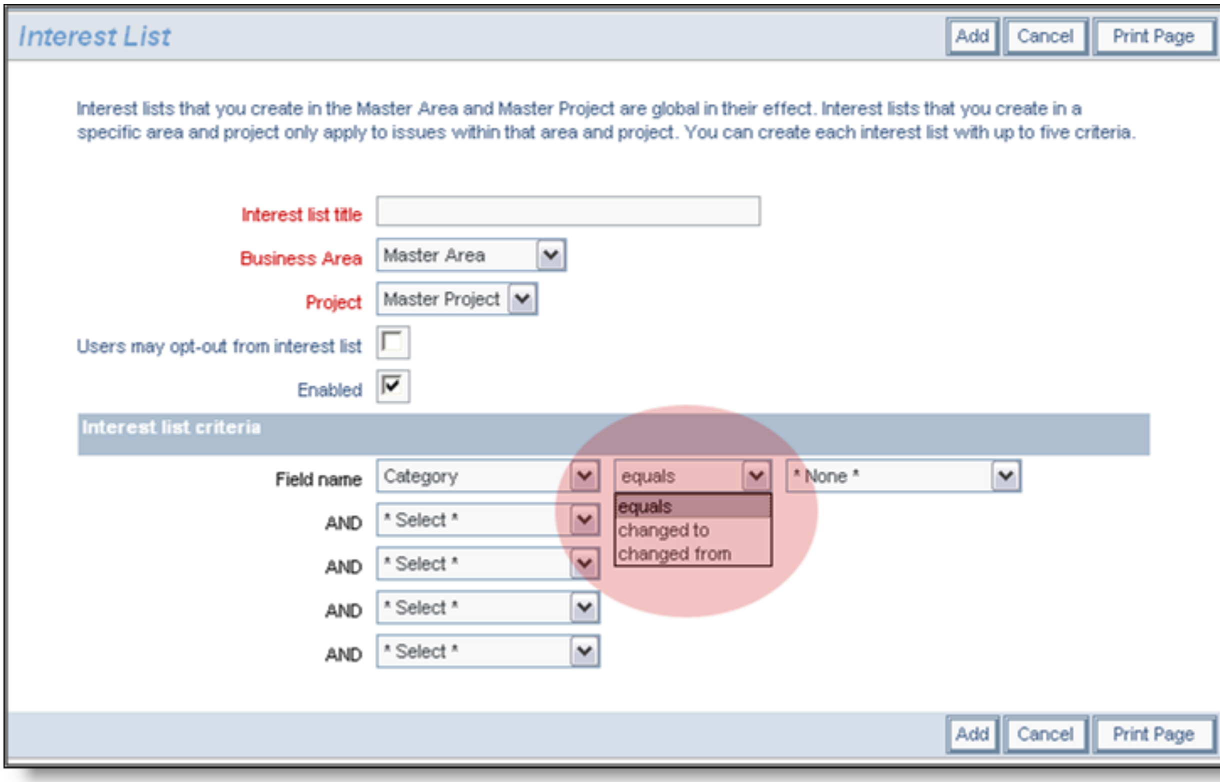
Interest List Definition

From this screen you may create new interest lists, modify existing interest lists, or manage the list of users who are su interest list. To create a new interest list, click on the **Add** button. The following screen appears:



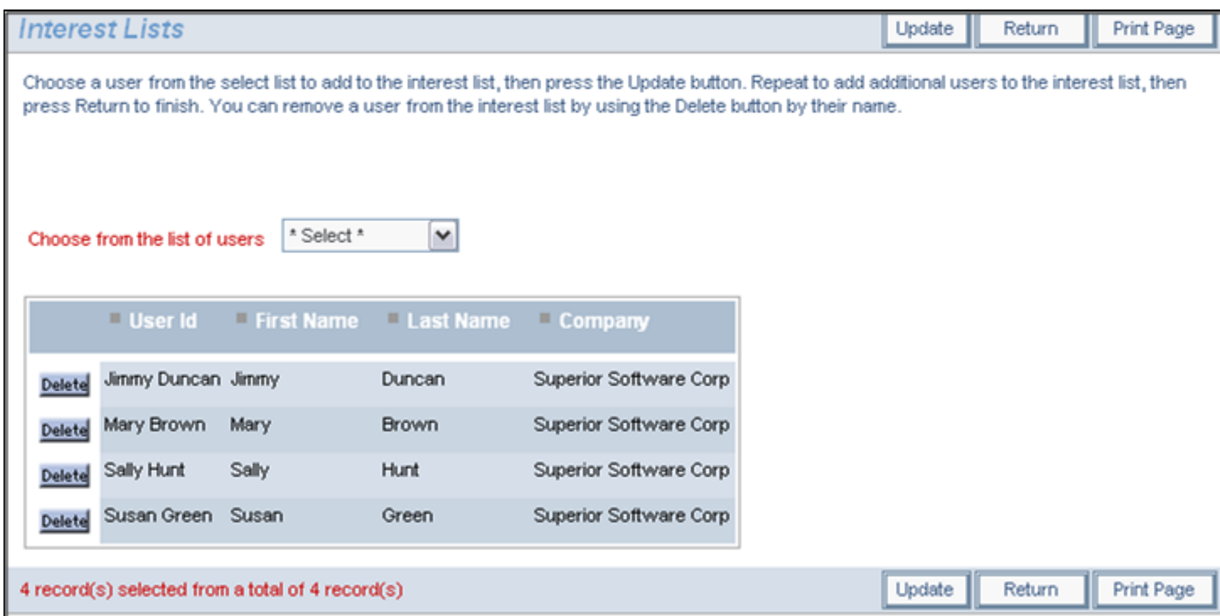
Adding a new interest list

If the interest list you create is to be global, create it with the Business Area and Project having a value of * **Global in** you want the interest list to be mandatory for all users, then do not check the box **Users may opt-out from interest li** this box, users will be able to opt-out of the interest list from their personal account option screen. You can also disabl without deleting it from the system with the **Enabled** checkbox. If the field you select for the interest list criteria is a r field, then you may only select a single value for the interest list. If you need to select multiple values, you will need t interest lists. Interest lists may be built upon field conditions beyond looking for equality with a value. For example, f display type of LIST, POPUP, and TAB, you may create an interest list condition looking for when a field is **changed from** a specific value. The following screenshot displays how this is achieved.



Setting the operator for an interest list field

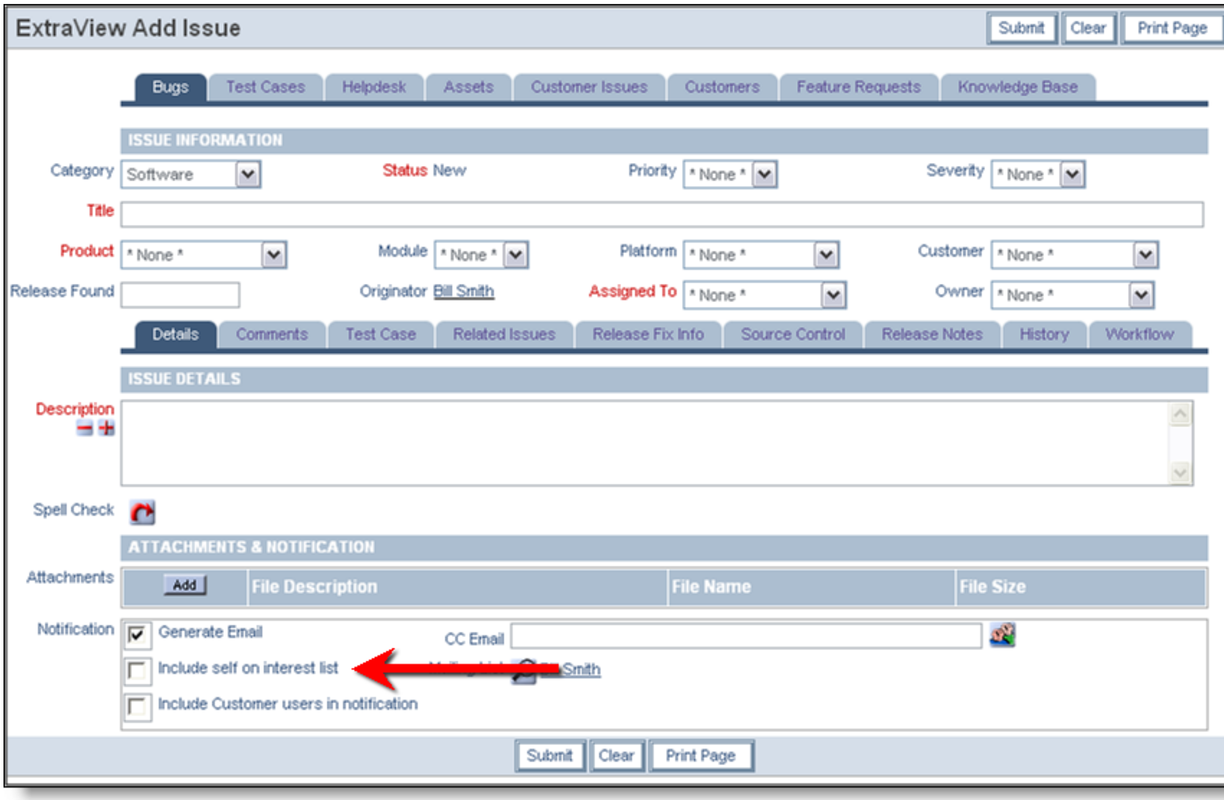
After adding an interest list, you manage the users associated with the list using the **List** button by the interest list deta following screenshot shows the presentation of the interest list members and where they are maintained.



Creating Interest Lists on Issues

On the *add* screen and from the *edit* screen, there is a checkbox named **Include self on interest list**. When a user chec add themselves to an interest list for this individual issue. If the user is already subscribed to the interest list then they box to remove themselves from the interest list.

Within a user's personal notification options, they may remove themselves from any issue-based interest list to which subscribed, but the only way to add themselves to an issue-based interest list is to update the issue and check the **Inclu interest list** checkbox. The reason for this is that in a large installation, there could be tens of thousands separate issue lists, and this would be unmanageable on a maintenance screen.



Subscribing and unsubscribing from an issue interest list

Security Permissions & Interest Lists

Due to the potential for change in the valid user roles for any user, and the potential for change in the security permiss there is no direct connection between the setup of an interest list and the users who may belong to that interest list. Fo be that a user belongs to interest list on a field named *any_field*. A specific user may not have permission with their cu this field, but they may be on an interest list that contains a reference to *any_field*.

The key point is that although a notification to the user may be generated when the value of *any_field* changes, the use the field or its contents without permission to the security permission key.

Also, remember that there is a behavior setting named EMAIL_NOTIFY_USERS_ALWAYS that can be set to suppre any user, if no field that is visible to them changes upon the update of an issue.

task to check for issues that should be updated to signify that they have met the rules defined for the escalation to take the section on [Managing Tasks](#) for more information on setting up the escalation task.

Escalation rules are used to update issues based on the time spent in a given Status. This update will generate notificat thereby notifying the issue owners.

Escalation rules may be global, i.e. they are defined in the Global Area and Global Project, or they are defined in a spe area and project. There is no inheritance of escalation rules through the hierarchy of business areas and projects.

Each escalation can use a different **Business Calendar**. Each calendar can define working and non-working days, wo working hours. In this way the escalations you define can calculate times accurately according to your business practi your team may have an SLA that guarantees the resolution of a problem in 3 business days. A correctly defined calen weekends and holidays that your company respects.

Initial Setup

Two User Defined Fields are defined to support the use of escalation. These are:

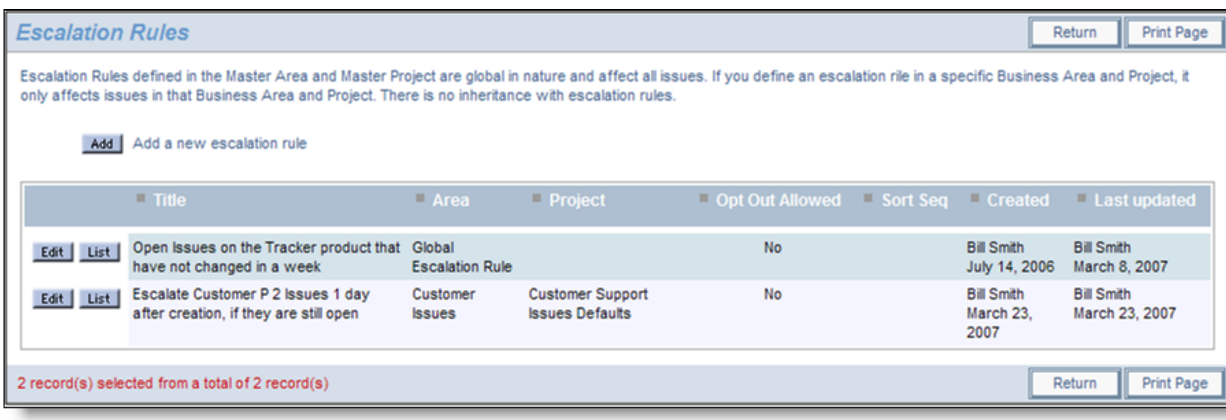
- EV_ESCALATED_LAST, a date field
- EV_ESCALATED_COUNT, a number field.

In the data dictionary, you must set both **Allow selection on reports** and **Filter criteria** to have a value of *Yes* on thes addition, you must have granted permission to read and update these fields for the user role of the ADMIN user. Thes need to appear on a layout. In a new ExtraView system, these fields are supplied with read and write permissions for t role.

Also, the date mask for the ADMIN user account that is running the escalation task must include a time component; it simple day format.

Creating and Maintaining Escalation Rules

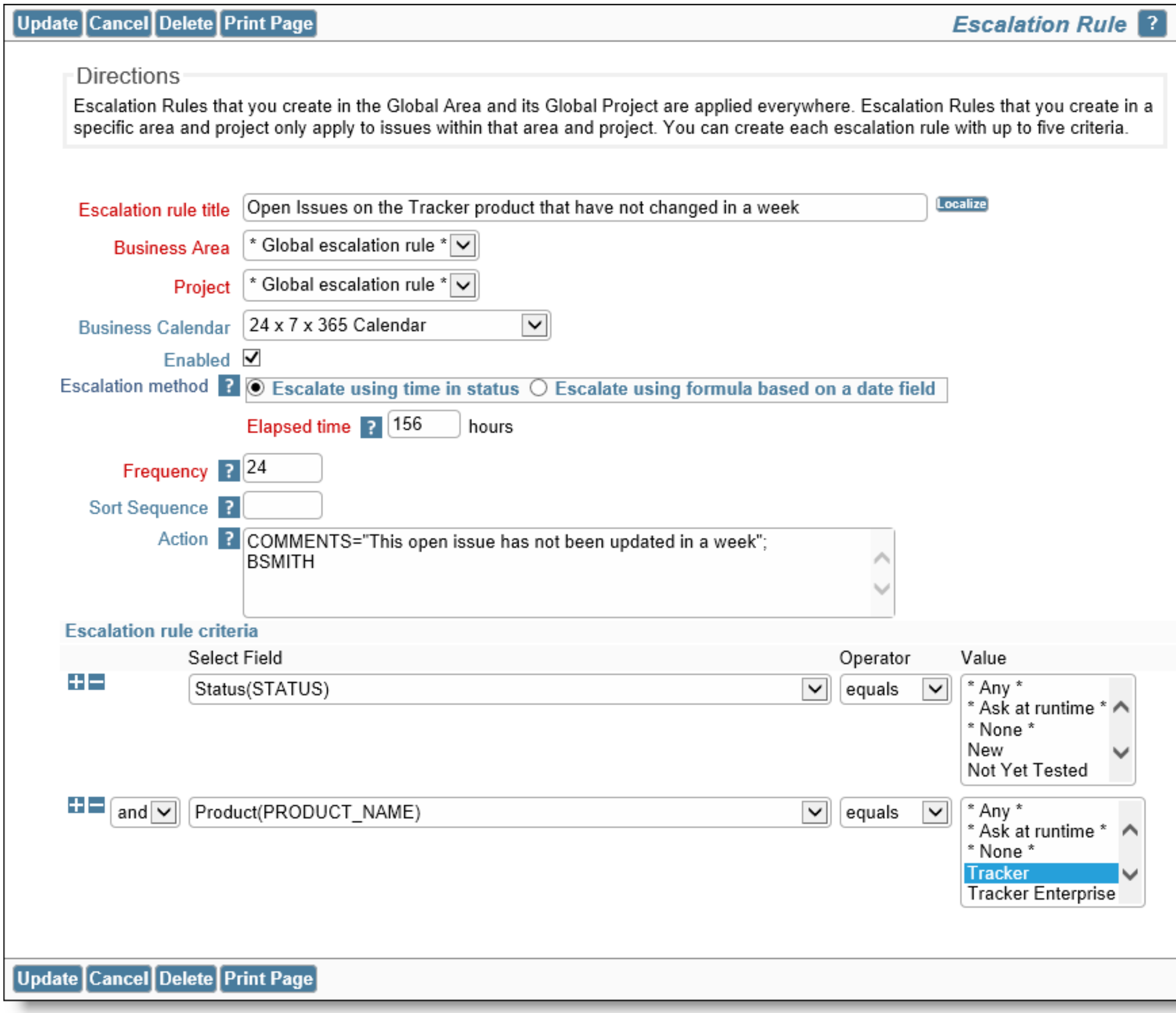
The initial maintenance screen shows a summary of all the escalation rules in your installation



Maintaining escalation rules

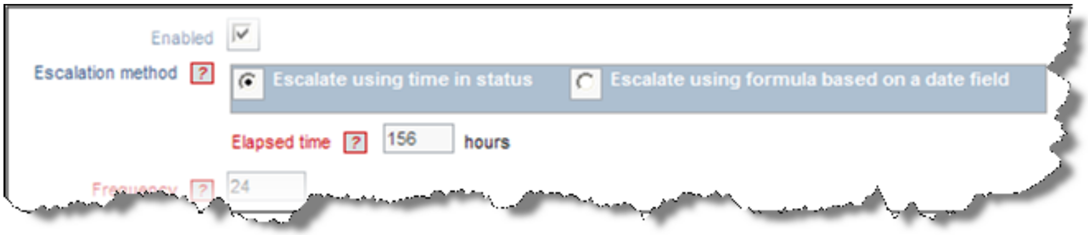
From this screen, you can create new escalation rules, or maintain the list of users attached to each escalation rule. Yo whether the escalation rules are global or whether they are executed for an individual business area and project.

Also note that if the user has write permission to CF_ESCALATION_RULES, then the user will see all the global esc



Adding and updating escalation rules

Field	Purpose
Escalation rule title	The title of the escalation rule that is presented to the administrator and to users when opting in or out
Business Area & Project	If the rule being defined is to be global in its scope, then these should be set to * **Global escalation ru** **Global escalation rule** *. A rule will only apply to an individual area and project if you select a speci project
Business Calendar	Select the Business Calendar to use in the calculation of the time to escalate the issue. The default cal with ExtraView is 24 hours by 7 days a week by 365 days per year. Create your own calendars to set t and workhours for different escalation rules. Non-workhours and non-workdays will be skipped in the escalations
Enabled	This allows the rule to be turned off and turned on
Escalation method	Issues may be escalated based upon the amount of time spent in a single status without change of that may be escalated according to the value of a date or day type field on that is on the edit layout of the i business area and project **Time in status escalations** The number of hours an issue has been in a give



Setting the elapsed time for an escalation based on status

Formula-based escalations You may escalate an issue based upon the value of a date field contained layout of the issue, plus or minus an offset. For example, you may set a reminder 1 day before an item may set a reminder when an item reaches an expiry date. The escalation will occur at the time the eve fires following the rule you create. Click on the **Escalate using formula based on a date field** radio l type of escalation.

Basing an escalation on a date field in an issue

The offset may be left blank, in which case the escalation happens at the next time the script fires, foll of the date field you select. You can set the offset to a positive or negative number of hours as require

Frequency	After the issue is escalated, this is the amount of time that elapses, before the issue is again escalated. any number of hours or part of an hour as a decimal portion.
Sort Sequence	Providing a sort sequence for escalation rules has two purposes. First, this will affect the order they ar Rules with no sort sequence are displayed in alphabetic order. Secondly, and importantly, rules are exe order of the sort sequence. Therefore, if you have a number of rules which could conflict with each ot becomes significant, and you should provide a high-order sort sequence for your most important rules are executed before less important rules.
Action	This is where you place assignments to fields, to update these fields to the new value(s) you provide v Actions are delimited with semi-colons and follow the same syntax rules as described in the section ir named Business Rules. Leave this field blank if you simply want to have the escalation rule notify use changing the values of fields in the issue. You can notify additional users in the **Action** field, either by explicit user ID in the field (followed by a semi-colon) or by using the data dictionary name of a field ORIGINATOR, ASSIGNED_TO or OWNER. In the second case, the person whose value is in that fi upon the triggering of the escalation.
Escalation rule criteria	These are filters that are used to provide the specific set of values, in addition to any date value you se example, you may set a filter to only fire the trigger base on the value of the product, or based on the of the issue.

Note: There is only one field named EV_ESCALATED_LAST. This is shared by all escalation rules. The rule that fire update this field, perhaps preventing other rules from being triggered. If you want other rules to fire in addition to the triggered, set their interval to 0; these rules then fire every time the escalation engine runs. This may not be desirable, performance reasons, but is a way to solve the problem.

Escalate all issues with **PRIORITY**=*P 1* and **STATUS**=*Open* if status has not changed for at least 4 hours. Keep esca every two hours thereafter, as long as the **STATUS** and the **PRIORITY** remain unchanged. At every escalation, add a **COMMENT** field with the specified text to the qualified issues and send the notification to all members of the escala

Field	Value
Escalation rule title	Escalate all P1 and Open Issues
Business Area	Global Area
Project	Global Project
Elapsed time	4
Frequency	2
Enabled	Checked
Action	COMMENTS = “This issue is escalated because its priority is P1 and its Status is Open”; CC SYSDATE;
Escalation rule criteria	STATUS = Open PRIORITY=P 1

Example 2

Escalate all Bugs issues where the **SEVERITY** is *High*, if the **STATUS** has not changed in at least 2 hours. Keep esca every hour as long as the **SEVERITY** and the **STATUS** remain unchanged. At every escalation send notification ema who opt-in to the escalation rule.

Field	Value
Escalation rule title	Escalate all issues which have a High severity level for more than 4 hours
Business Area	Bugs
Project	Bugs Data
Elapsed time	2
Frequency	1
Enabled	Checked
Action	COMMENTS = COMMENTS = “This issue is being escalated because its Priority is P 1 and Open”;COMMENTS &= SYSDATE;
Escalation rule criteria	SEVERITY_LEVEL=1;

Example 3

Escalate all Customer **P 2** issues 24 hours after they were due, based upon the value of a date field named **due_date**, i issue is **Open**. Set the **Priority** to a new value of **P 1**.

Field	Value
Escalation rule title	Escalate Customer P 2 Issues 1 day after creation, if they are still open
Business Area	Customer Issues
Project	Customer Issues Defaults
Date Field	Due Date
Offset	24
Frequency	24
Enabled	Checked
Action	COMMENT = "This customer issue has been escalated to P 1 as the SLA for a P 2 issue mar must be handled within 24 hours"; PRIORITY = "P 1";

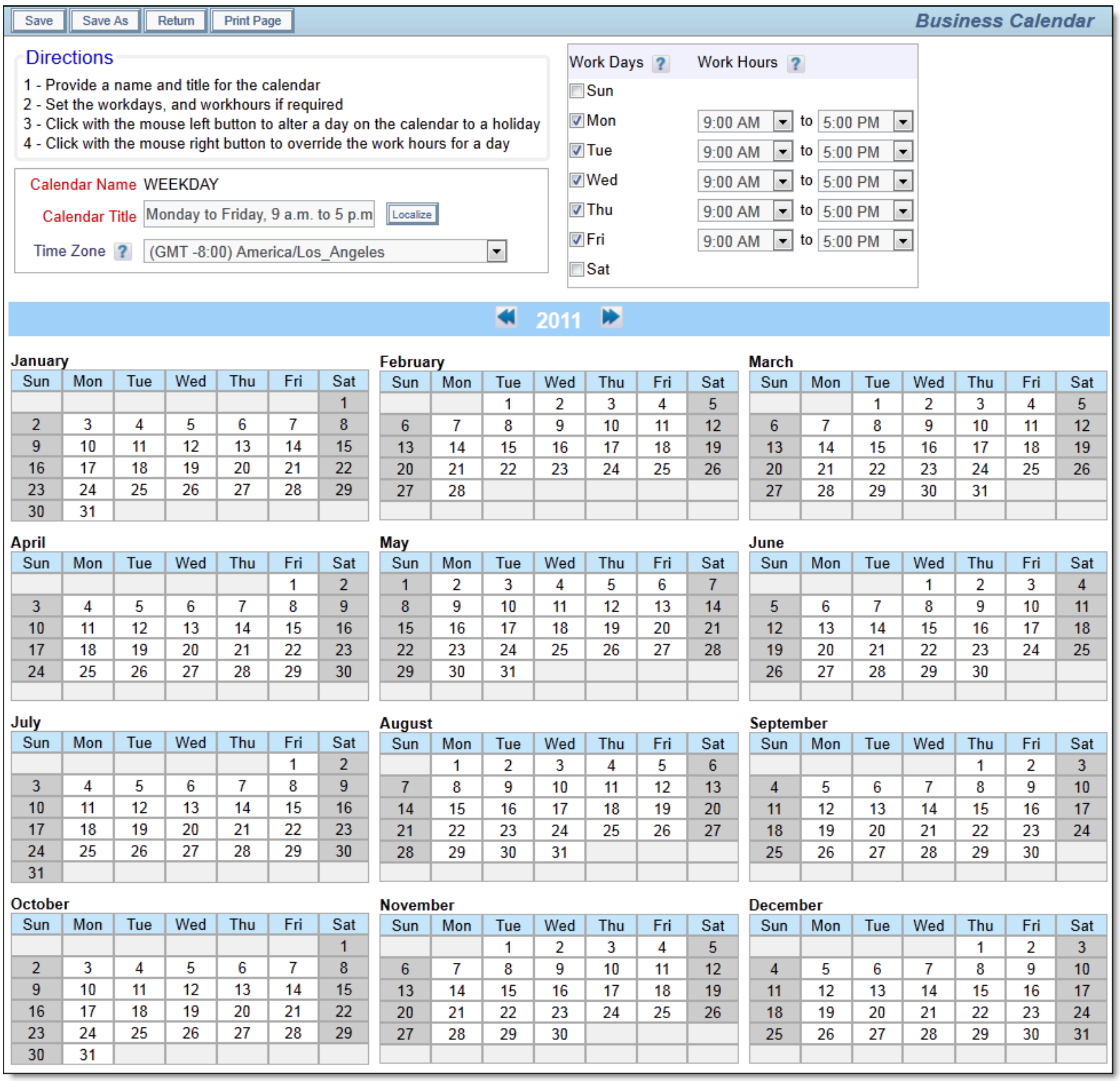
Saturdays and Sundays. Similarly, you might want to omit hours outside of 9:00 am through 5:00 pm when you calcul time.

The Business Calendar feature allows the setup of any number of calendars for different purposes, so if different grou parts of your organization work different hours or days, then this can be taken into account. Each calendar is independ example, have different company holidays.

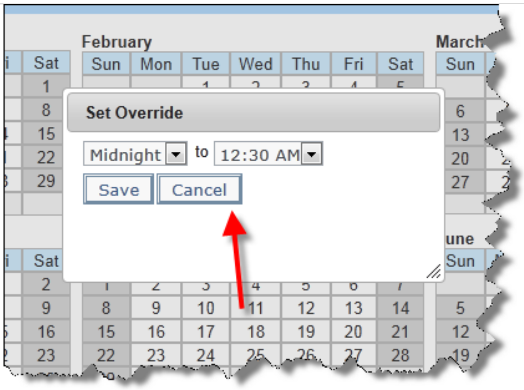
ExtraView comes with two default calendars, one named 24_BY_7 and one named WEEKDAY. The 24_BY_7 calend holidays, or non-workdays and therefore counts the absolute time between two dates. The WEEKDAY calendar has S Sunday set as non-work days, and the work hours are set to 9:00 am to 5:00 pm. These default calendars can be updat create any number of new calendars.

There is a behavior setting named RULES_DEFAULT_CALENDAR. If a business rule does not specify a calendar in this calendar will be used for computations involving dates. If this does not have a valid entry, then the 24_BY_7 cale within the rules.

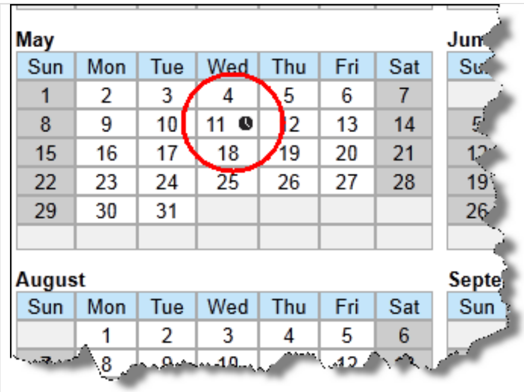
You can use a business calendar by specifying which one to use within escalation rules or within business rules. Wher calendar, the screen will look similar to this:



- You use the Work Days checkboxes to nominate the standard work and non-work days through the calendar
- You use the Work Hours select lists to nominate the standard work and non-work work hours for each work day calendar
- Use the arrows on either side of the year to move forward and backwards, in one-year intervals
- The numbers on the calendar with the grey background are the non-work days; numbers with a white backgrour
- To set a work day to a holiday, click once on the date with your mouse. To change the day to a non-work day, cl To restore the date back to a work date, click again. At this point in time, there is no difference between holiday days. In the future, there may be differentiation between holidays and non-work days
- You can override the work hours for any work day on the calendar by right-clicking with the mouse on the day. this, a popup window allows you to set new work hours for that day only. Once you have overridden work hour small clock will appear by the date, to show that the day has different work hours than the base work hours for t following screenshots show how to override the time on a work day:



Overriding work hours

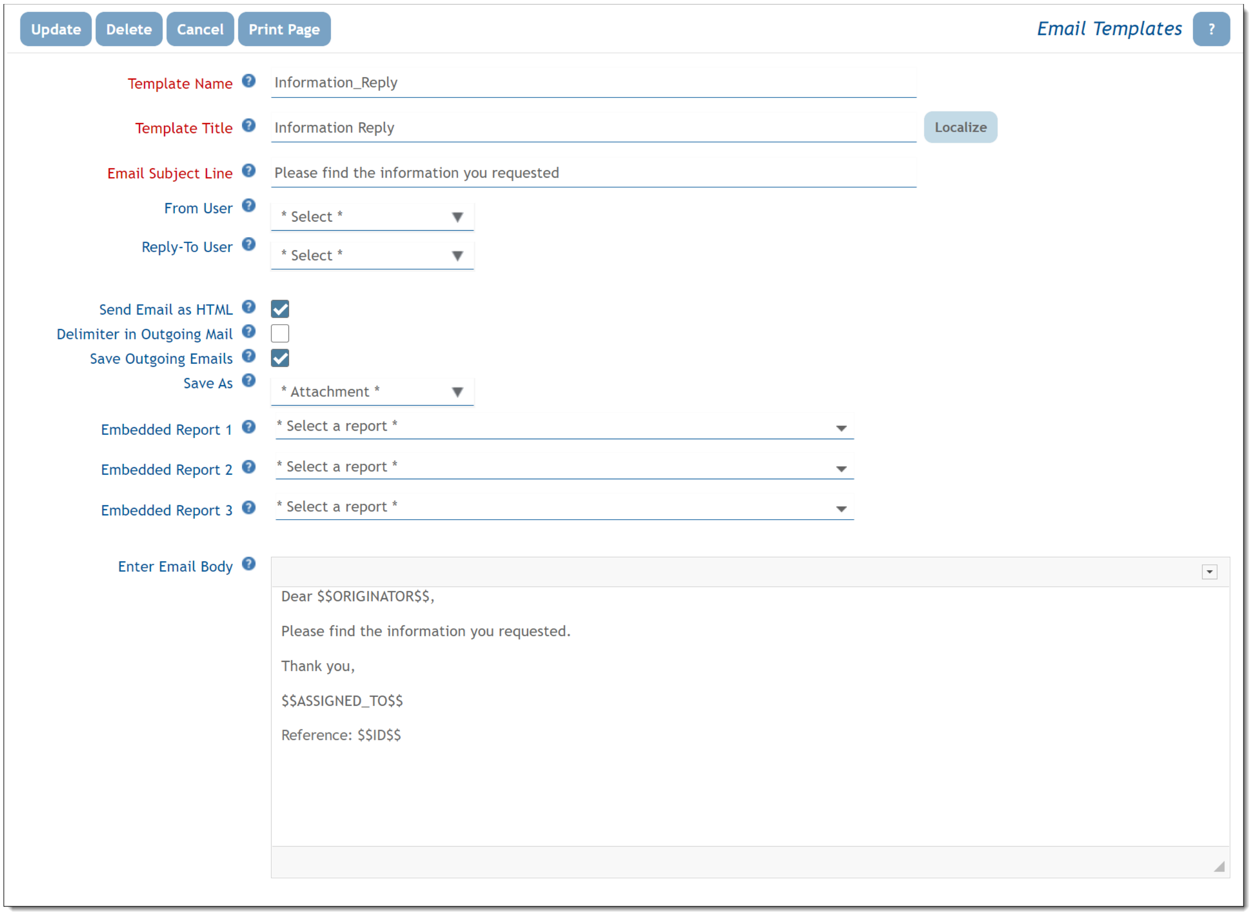


Seeing overriden work hours

Custom Email Templates

This feature allows the administrator to create standard email templates for email notification in situations where a sta warranted. For example, if your product team had a number of issues entered by the members of a beta test group, and be able to send a standard confirmation to a group member whenever there was a resolution, this feature could be emp purpose. Another example is that a customer support representative could choose from one of several standard replies reporting a problem. These replies could be geared to acknowledging receipt of a problem, informing the customer of resolution of a problem or notifying the customer that a problem has been resolved. Custom email notifications may b *edit* screen of an issue, using the **Email** button on the menubar, or they may be sent using an automated process via a l From the administration **Operational Tasks** menu, click the **Email Templates** button. The following screen appears:

Email Templates screen



Add Email Template screen

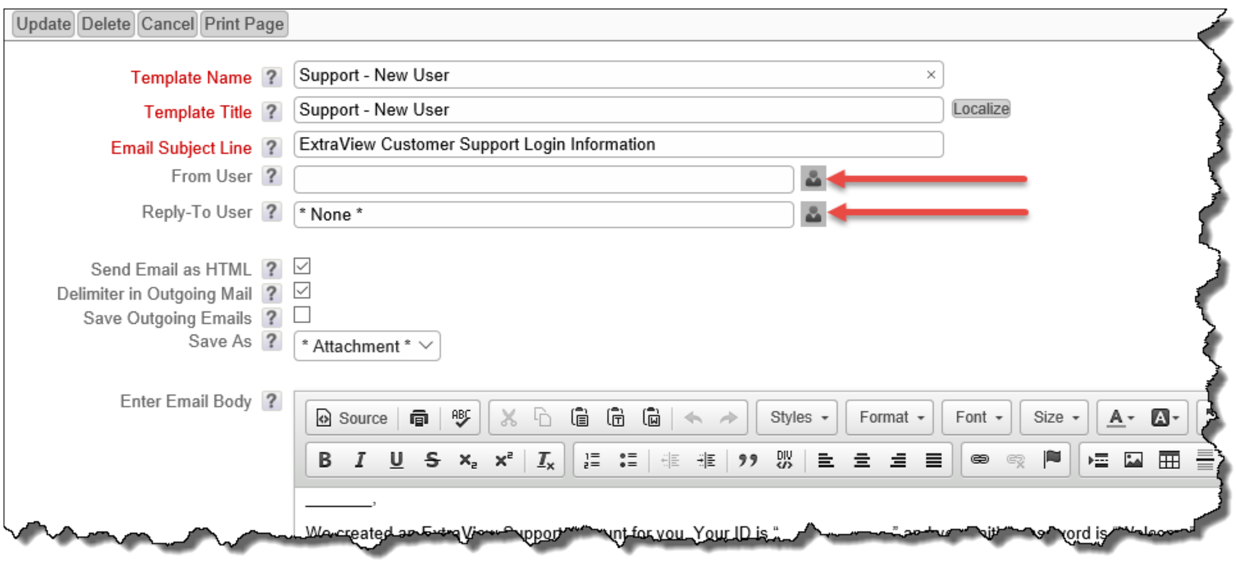
- Provide a name for the template
- Provide a title for the template
- Provide the email subject line for the outgoing email. This may include tokens that will be replaced by field valu email is sent, as described below
- If you want to specify the email as originating from a specific user, select the user's name from the *From User* l you to select a single user whose primary email address will be used as the *From Address*. Note that you can sel user, in order to allow the sender to be the person who initiates the email. If this option is not selected, the email EMAIL_FROM_USER_ID behavior setting is used
- If you want to specify the *Reply-To User* of the generated email to be set to the primary email address of a speci their name from the **Reply-To User** list. This allows you to select a single user whose primary email address wi reply-to address. Note that you can select the current user, in order to allow the recipient of a reply to be the per the outgoing email. If this option is not selected, the email address in the EMAIL_FROM_USER_ID behavior s
- Indicate whether the mail is to be sent as plain text or as HTML using the checkbox **Send Email as HTML**
- If you intend for the recipient of the outgoing email to reply to the email when you generate the email from the issue, and for EVMail to process the reply, such that it will update the issue with the recipient's reply, then checl **Delimiter in Outgoing Mail**. This introduces an invisible delimiter into the email so that EVMail will discard a following this delimiter, leaving only the recipient's reply to the mail being added back into the issue. The text f defined in the behavior setting named EVMAIL_DELIMITER_TEXT.
- The outgoing email can be saved back with the issue from which you originated the template. You enable this b checking the **Save Outgoing Emails** option
- If you are saving the outgoing email, then the default is to save it as an attachment to the issue. However, if the

better auditing of the history of email transactions. Just like in email clients, if the user wants to see all the ema information, they can view the source of the downloaded attachment
- Use the text area to compose the email that is to be sent. The text for the email can be plain text, or can be HTM appropriate type of text box will be displayed, dependent upon the selection for whether the mail is to be sent as plain text.

Within the subject and the body of the mail, you may insert tokens that are replaced when the email is sent. These toke value associated with the field from the record that is currently displayed when the mail is being sent. For example, if substitute the issue ID in the mail, you would use $$ID$$. To insert the issue status, you would use $$STATUS$$. Val dictionary field names, data dictionary UDF's as well as the following:

$$SYSDATE$$	The current date, including time
$$SYSDAY$$	The current date
$$SITE_URL$$	The URL of the site
$$EXT_SITE_URL$$	The external site URL. This provides a link within the email which can be used to access E the email being generated. The most common purpose for this is to drill down to an issue u or $$ALT_ID$$ of the issue.

It is possible to substitute the **From User** and **Reply-To User** values at runtime, by populating their values from fields underlying *edit* screen. The fields used to populate the template must have a display type of either TEXT FIELD or U single-valued. The template will contain $$FIELD_NAME$$ in the **From User** and/or **Reply-To User** fields. The $$FIELD_NAME$$ must exist on the *edit* screen. When the user enters data into the *edit* screen, they may either ent or an explicit email address.



An example email template body:

Dear $$CUSTOMER_NAME$$,

We are in receipt of your issue, reported on $$DATE_CREATED$$, is receiving our prompt attention.

Our records show that you reported the issue with the following description:

$$DESCRIPTION$$

Dear Brian Jones,

We are in receipt of your issue, reported on 12/11/2002, is receiving our prompt attention.

Our records show that you reported the issue with the following description:

I cannot access the top-level widget within the cabinet of the power supply, unless the power is turned off and the un
disconnected from the power. I understood that changes like this could be achieved without powering down the equi

Can you please provide a solution?

We will contact you as soon as we can provide a solution to your report.

Thanks,

Tony Smith

You may include image fields and document fields as part of a custom email. When you place an image field name int (e.g. $$MY_IMG_FIELD$$), the image will appear inline within the body of the email. If you place a document fiel $$MY_DOC_FIELD$$), then the name of the document file is placed into the email body in place of the token, and t added as an attachment to the outgoing email notification.

As well as fields that you can refer to with the tokens surrounded with the $$ characters, there is a selection of inbuilt can refer to as tokens. This list is:

- APP_HOME - the relative path to the WEB-INF folder on your application server
- BG_COLOR - one of the two background colors used to draw tables in ExtraView
- BG_ALT_COLOR one of the two background colors used to draw tables in ExtraView
- BROWSER_NAME - the name of the user's browser that generates the email
- COMPANY_LOGO_IMG_HOME - the relative path to the location where the CompanyLogo.gif is stored
- DEFAULT_FONT - the name of the default font used in the installation
- EXT_URL - the absolute path to the ExtraView installation
- FIXED_WIDTH_FONT - the name of the fixed width font used in the installation
- IMG_HOME - the relative path to the location where the ExtraView images are stored
- JAVASCRIPT_HOME - the relative path to the location of the ExtraView JavaScript files
- LABEL_COLOR - the color of labels on ExtraView screens
- STYLESHEETS_HOME - the relative path to the location where the ExtraView stylesheets are stored
- WINDOW_BGCOLOR - the background color of the ExtraView screens

Once you click the **Add** button to save the template, it will appear in the template dropdown box for users when they button from a given issue's Edit screen.

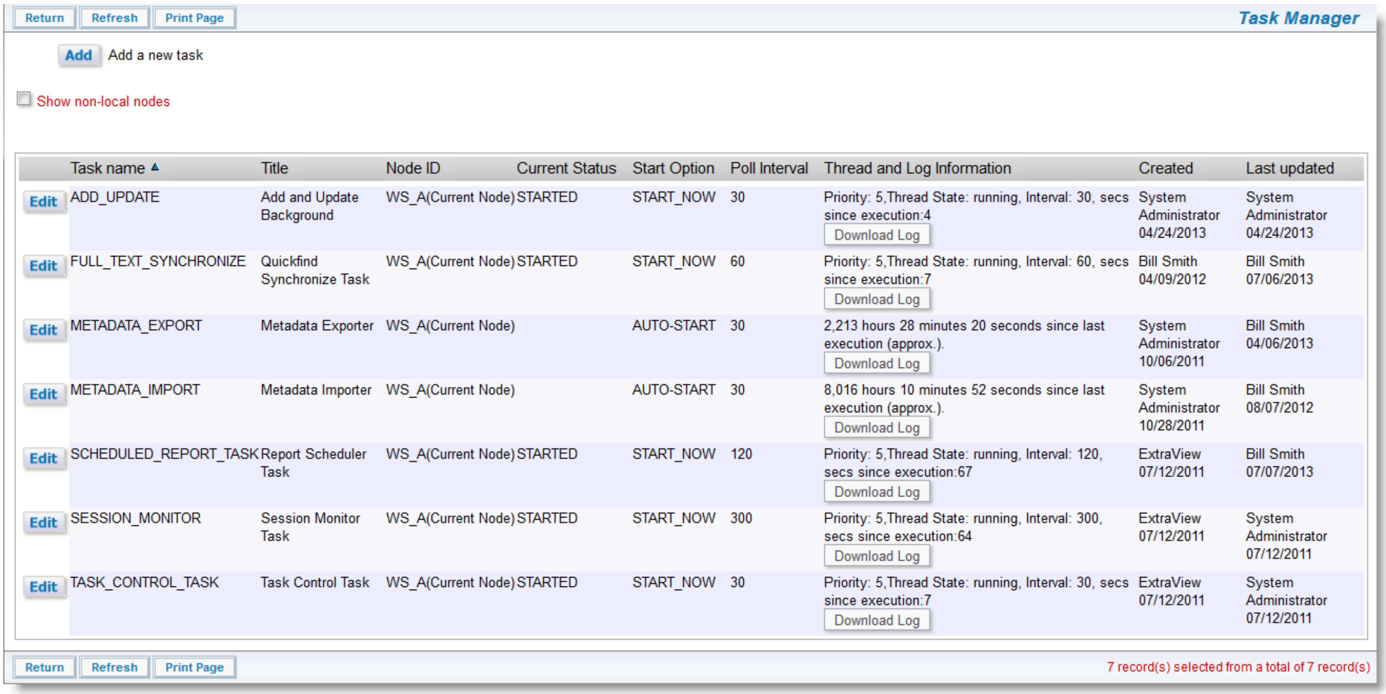
Note: A field named EMAIL_ADDRESS is available as a UDF field with a display type of Text. This field may be pl layouts. It serves a special purpose. When a user accesses the custom email function from the edit screen, to send an a an email created from a pre-defined template, this field will be used to automatically populate the email address to wh be sent. This simplifies communication to users who, for example, enter an email address when reporting an issue. Th this field automatically gives a return address.

Managing Tasks

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to use this feature without contacting ExtraView support.

noted that some ExtraView environments do not handle the = character within passwords correctly when validating th
If the ExtraView application server log indicates that the password is **null**, then the most likely reason is the presence

When you enter the default ExtraView setup, you will see a screen similar to this:



Return Refresh Print Page **Task Manager**

Add Add a new task

Show non-local nodes

	Task name ▲	Title	Node ID	Current Status	Start Option	Poll Interval	Thread and Log Information	Created	Last updated
Edit	ADD_UPDATE	Add and Update Background	WS_A(Current Node)	STARTED	START_NOW	30	Priority: 5,Thread State: running, Interval: 30, secs since execution:4 Download Log	System Administrator 04/24/2013	System Administrator 04/24/2013
Edit	FULL_TEXT_SYNCHRONIZE	Quickfind Synchronize Task	WS_A(Current Node)	STARTED	START_NOW	60	Priority: 5,Thread State: running, Interval: 60, secs since execution:7 Download Log	Bill Smith 04/09/2012	Bill Smith 07/06/2013
Edit	METADATA_EXPORT	Metadata Exporter	WS_A(Current Node)		AUTO-START	30	2,213 hours 28 minutes 20 seconds since last execution (approx.). Download Log	System Administrator 10/06/2011	Bill Smith 04/06/2013
Edit	METADATA_IMPORT	Metadata Importer	WS_A(Current Node)		AUTO-START	30	8,016 hours 10 minutes 52 seconds since last execution (approx.). Download Log	System Administrator 10/28/2011	Bill Smith 08/07/2012
Edit	SCHEDULED_REPORT_TASK	Report Scheduler Task	WS_A(Current Node)	STARTED	START_NOW	120	Priority: 5,Thread State: running, Interval: 120, secs since execution:67 Download Log	ExtraView 07/12/2011	Bill Smith 07/07/2013
Edit	SESSION_MONITOR	Session Monitor Task	WS_A(Current Node)	STARTED	START_NOW	300	Priority: 5,Thread State: running, Interval: 300, secs since execution:64 Download Log	ExtraView 07/12/2011	System Administrator 07/12/2011
Edit	TASK_CONTROL_TASK	Task Control Task	WS_A(Current Node)	STARTED	START_NOW	30	Priority: 5,Thread State: running, Interval: 30, secs since execution:7 Download Log	ExtraView 07/12/2011	System Administrator 07/12/2011

Return Refresh Print Page 7 record(s) selected from a total of 7 record(s)

Managing tasks

Note the **Show non-local nodes** prompt on the screen. If you are running in a clustered system, clicking this will shov
running on all nodes. The task management utility runs as an interactive administrative utility controlled by the
CF_MANAGE_TASKS security permission key. This utility displays a list of tasks currently defined. New tasks (add
task object to a node, for example) can be added, and existing tasks may be edited. The task management utility allow
administrator to create/modify and delete background tasks that may run in any node clustered on the ExtraView datal
standard tasks are automatically cloned and started as necessary when a new node joins the application server cluster.
makes no attempt to describe how to create your own tasks that can be managed by ExtraView. At some future time th
be documented and opened for customer use. The tasks managed by ExtraView are detailed in the following sections:

Session Monitor Task

This is an internal task which should not be altered by the administrator. It must be running for ExtraView to function
task manages the internal ExtraView sessions that are created by users as they perform their work inside ExtraView. F
sessions are created when users add or update issues or when they run reports. This task is responsible for cleaning up
are left behind when users do not "clean up" after performing a task. This improved memory utilization on the server.
user may simply close their browser without updating an issue on the screen, and after some time the session monitor
recognize that this has happened and will remove the session objects associated with the browser window.

Task Control Task

This is an internal task which should not be altered by the administrator. It is the overall control for the task manager.
integral working of ExtraView and should not be altered by the administrator. The task control task on any node ID is
task is used to control all other tasks that run under task management. It must be running for ExtraView to function co
Therefore, if the task control task is not running on a node, there can be no changes to other task states on that node. T

This is an internal task which should not be altered by the administrator. This task is responsible for ensuring the corre
metadata exports performed by an administrator. There is no reason to alter the default properties of this task.

Batchmail Task (Outgoing email)

This task is responsible for handing off outgoing email notifications created within ExtraView, to your company's ema
a log of all activity and removes the email text from the server once it has been successfully sent. If there was a proble
to the email server, then the email text is left on the server. In many instances the email will be sent once the problem

Quickfind Synchonization Task

This is the task that routinely scans newly entered issue text to be indexed for use by the Quickfind search engine. Thi
required if Quickfind is not turned on within ExtraView.

ExtraView Peer Integration Task

This task is only configured if you require ExtraView to be synchronized with one or more remote ExtraView installat

Email Escalation Task

This task initiates the escalation mechanism which automatically updates issues and notifies users according to criteri
by the administrator. When installing ExtraView you should add this task to be started automatically by ExtraView. Th
interval is 2 minutes (120 seconds). This task does not require further configuration. Note that the task runs using the
account. When configuring the escalation task, you should also ensure that the date format selected for the ADMIN us
includes a time component. If this is not done, the escalation task will not run correctly.

EVMail Task (Incoming Email)

This task controls the functioning of the EVMail utility that interfaces and imports incoming email to Extraview. This
creating of new issues or the updating of existing issues within your ExtraView system, from incoming email to an em
you use for this purpose. First you create the task, and then you configure the task. To create a new EVMail task on th
add the task and select a poll interval of 30 seconds or so, with START_NOW as the start option. This sets the frequen
EVMail checks for new incoming emails.

Report Scheduler Task

The Report Scheduler Task must be running in order to deliver scheduled reports that users create for email delivery.
this task so that it starts at boot time. The default is that this task will execute every two minutes, but this time can be
accommodate your specific requirements.

LDAP Background Task

This task should only be configured when you are connecting your installation to an LDAP server. It is optional to run
it is running, it will synchronize the LDAP server data that is required within ExtraView on a periodic basis. This avoi
reaching out to the LDAP server for user information as it is required, and uses the information previously read into E
task should be configured in preference to the *LDAP Synchronize Task*.

LDAP Synchronize Task

This task should only be configured when you are connecting your installation to an LDAP server. It is optional to run
it is running, it will synchronize all the LDAP server data to ExtraView on a periodic basis. It is preferable to use the *L
Background Task*.

Principally, some tasks should be run on all nodes of the cluster, and some should not be run on all nodes of the cluste configure a clustered environment in the following way:

- Configure the multiple nodes of the application server, whether you are using WebLogic or multiple load-balanc servers
- Select a single node and configure the tasks on that node only. We suggest you use the first node in the cluster fo
- The Task Control and the Session Monitor tasks must be configured on all nodes in a load balanced environmen
- Only one EVMail task should be configured on one node, per installation - that is one per mailbox checked
- Only one Escalation task should be configured per installation - for multiple node installations, create a single E a single node only
- Only one Report Scheduler task should be configured per installation
- Configure only one Quickfind task per installation on a single node. However, the Quickfind index location mus system location accessible to all nodes in the cluster
- With the Batchmail outgoing email task, there are options:
    - If all nodes are able to write to a common email directory, only configure Batchmail on a single node
    - If the nodes are on separate application servers, each node must be able to write to a filesystem location d path in the behavior setting named EMAIL_DIRECTORY. You configure all nodes to have the same path Batchmail task must be configured per separate email directory folder

  Overall, only a single Batchmail task should be polling the email directory folder. If you have multiple separate locations for this folder, you need multiple Batchmail tasks, one for each location

- Once the tasks are configured, restart ExtraView on all nodes of the cluster

In the case where the load-balancing algorithm does not send any users to the node where your managed tasks are run and escalation tasks will not operate. Simply starting the application server does not initialize the ExtraView applicatio nobody signs onto your installation, no tasks will start up. This is not simply a load-balancing issue - if your system is restarted, and nobody signs on, the application is not initialized and the tasks are not started up. For correct operation, cluster should be started. One way to make sure that your site is initialized when the application server is restarted is t monitoring tool such as Nagios, and to use the ExtraView get_heartbeat API call against each individual node on a sch this will ensure that if an application server is restarted for any reason, then the API call will "touch" each node, and s of ExtraView in the load-balanced installation.

Error Conditions

Tasks are often reliant on programs running external to ExtraView. When an external program fails, the ExtraView tas task may be able to recover when the external program is restarted. When a task is seen to be in an error state, email is ExtraView administrator. If ExtraView is able to recover from the error, then another email is sent to inform the admir recovery.

User Custom Tasks

These are used to create tasks for specific purposes within an installation. Knowledge of user custom coding is require use these tasks. Please contact ExtraView Support if you believe you have a requirement for a customized task.

Task Options

Creating a Task

Each task has the following properties:

- **Task Name** – this specifies the functional operation that the task performs
- **Title** – this is a localizable title that is visible in the utility to identify the task

    - **STOPPED**: the task is currently stopped, but if required again, it will be started automatcially. For examp Export and Metadata Import tasks are stopped when they have completed their functionality, but can be st required
- **Poll Interval** – This is the number of seconds between each triggering of the task. Once the task has finished, it until the poll interval is reached
- **Class Name** – This is the name of the Java class that contains the code for the task to be executed
- **ERROR_NOTIFICATION_WARNING**: The value to this optional property specifies a period of time which is th amount of elapsed time during which the task may be idle before an email warning is sent to administrators. If the tas START_ON_BOOT start option set, then if the amount of specified idle time is exceeded, warning emails are sent to use role. The syntax to set this option is either of the following two options:
    - `ERROR_NOTIFICATION_WARNING =` *`nn`* `MINUTES`
    - `ERROR_NOTIFICATION_WARNING =` *`nn`* `MISSED_POLLS`
- **ERROR_NOTIFICATION_REMINDER**: The value to this optional property specifies a period of time which is t amount of elapsed time during which the task may be idle before an email reminder is sent to administrators. If the ta or START_ON_BOOT start option set, then if the amount of specified idle time is exceeded, reminder emails are sent to ADMIN role. The syntax to set this option is either of the following two options:
- `ERROR_NOTIFICATION_REMINDER =` *`nn`* `MINUTES`
- `ERROR_NOTIFICATION_REMINDER =` *`nn`* `MISSED_POLLS`

Modifying a Task

After viewing the list of tasks, the administrator may modify some aspects of any one of the tasks:

1. Title
2. Node Id
3. Start Option
4. Start Option
5. Poll Interval
6. Class name

Generally, this function is used to modify the start option, either to start or to stop a task from executing or to alter the which the task executes. No matter what the prior value is for start option, when the user updates the task, the specifie carried out by the task control task. START_NOW and STOP_NOW have immediate consequences on the target node task control task (TASK_CONTROL_TASK) is running.

Deleting a Task

One of the options in the task management utility EDIT screen is to delete a task. Note that this only removes the task management utility and has no effect on the background processing of the task. If it is already running, it continues to stopped or in error it remains in that state.

Tasks in a Multi-Node (Clustered) Environment

Some tasks run on a single node, and some may or must run on all nodes in your network. There are some considerati

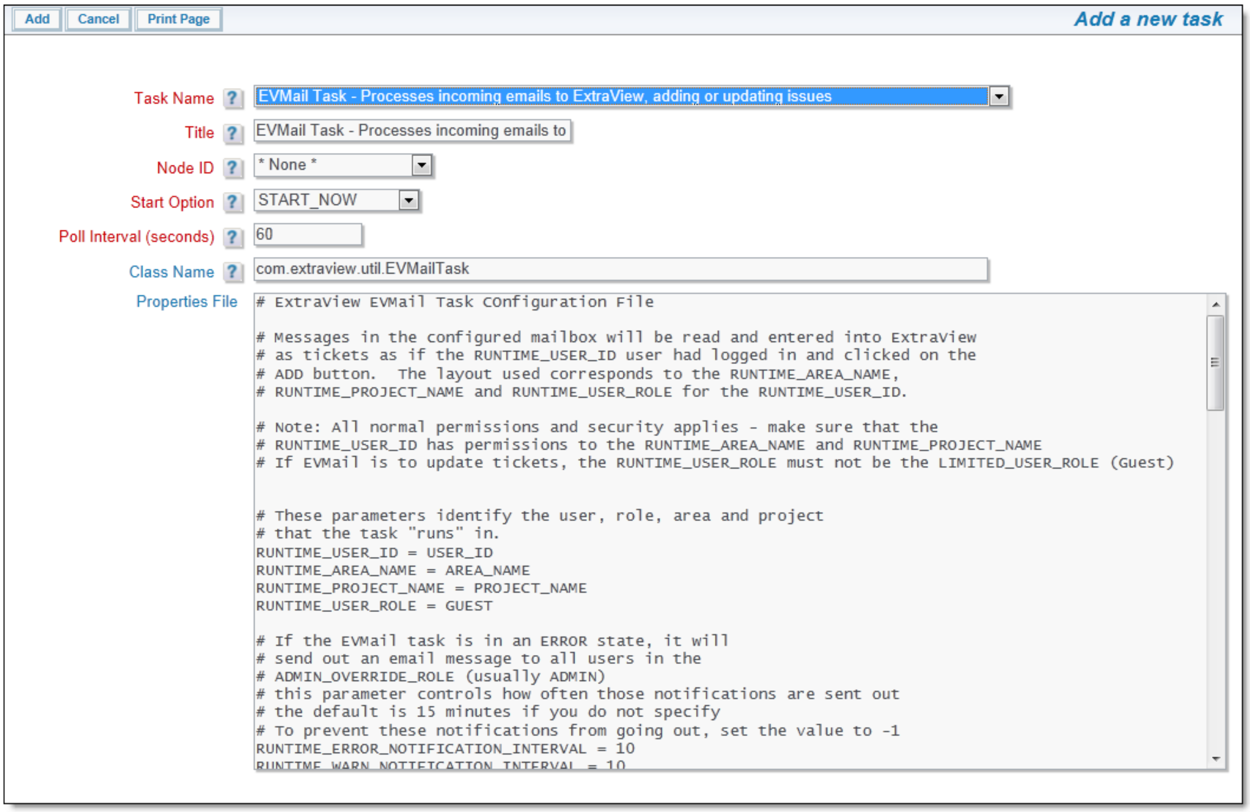
ADD_UPDATE	Add & Update Task	Optional. This may be run on any or all nodes and must be run ADD, COPY and UPDATE business rules or handling large-siz
BATCHMAIL	Batchmail Task	Optional. Should but should be run on a single node to process notifications
ESCALATION	Escalation Task	Optional. Should be run on a single node to process issue escal
EVMAIL	EVMail Task	Optional. Can be run many times on one or more different node incoming emails. Each instance of the task can be configured d
FILE_IMPORT_WORKER	File Import	Optional. Used to process file imports

TEMPLATE_LOADER	Template Loader Task	Optional but if used should be run on all nodes. Used in a small to pre-load the most commonly used templates, thereby improvi to users when the application server is first started

On any node, you may monitor the status of tasks running on that node or other nodes within the cluster. You can star from any node and download the application server log from any of these nodes. This is providing that you have pern part of the file system with an absolute path.

Configuring EVMail

EVMail is configured as a task. If you are setting up EVMail for the first time, you will need to create the task. Use th **Add** to add the task from the **Task Manager** screen, or use the **Edit** button to modify the attributes that control the E\ the **EVMail Task** task name and observe a screen similar to:



EVMail configuration screen

Basic Configuration

To configure EVMail, you will need a properly configured POP3 mailbox and you will need its username and passwo need to know the port to use for communication with the mailbox. It is strongly recommended that you use the POP3 higher level of security than is achieved with POP3.

Next, you will need to identify an ExtraView user account, and a user role that EVMail will utilize. These, along with Business Area and Project, determine the *add* and *edit* screen layouts that will be used by EVMail to create new issues existing issues. When selecting these values, take into account the standard licensing condition of ExtraView, i.e. non-

You will then need to set up the fields that the EVMail task will populate - there are some field options that map to po
incoming email message according to whether you are inserting a new issue or updating an existing issue.

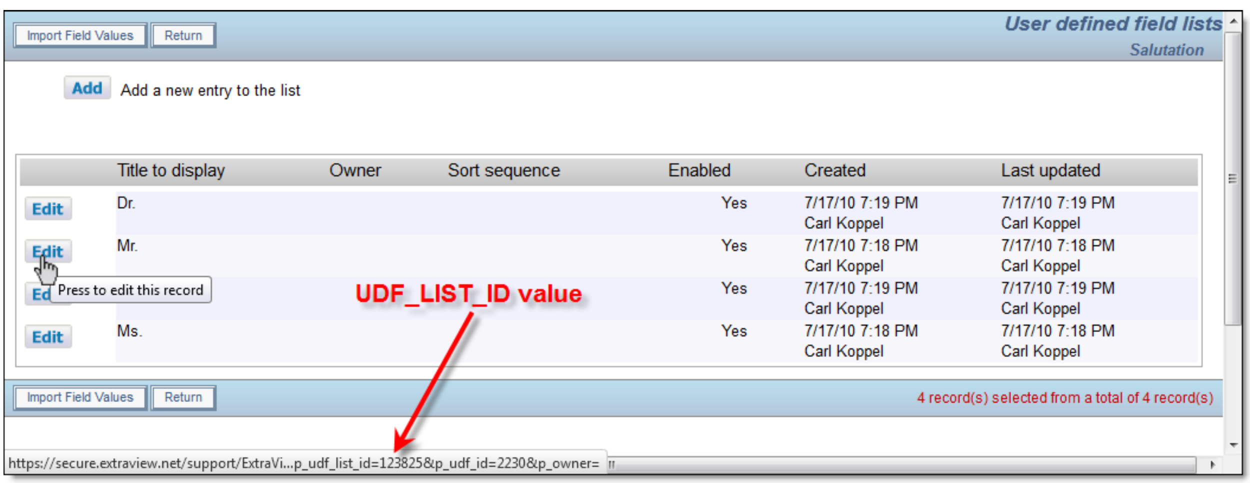
EVMAIL_BODY_UDF and/or EVMAIL_BODY_HTML_UDF	For a new issue being created, use either or both of these fields of the email message. This allows you to store the body as text, Typically this will be mapped to the DESCRIPTION field or an field
EVMAIL_BODY_UPDATE_UDF and/or EVMAIL_BODY_HTML_UPDATE_UDF	For issue updates, use either or both of these fields to store the b email message. This allows you to store the body as text, HTMI Typically this will be mapped to the COMMENTS field or an H field, so that successive updates will create a new entry in this l Note that the COMMENTS field may use an option in the data it directly with HTML.
EVMAIL_SUBJECT	This ExtraView field will be where the subject of the email mes Typically this will be the SHORT_DESCR field

You can select other fields and set values, allowing you to set list values and user fields when creating new issues. The
fields is EVMAIL_*FIELDNAME*, where *FIELDNAME* is the field name of the field being mapped. For example, thes
expressions:

EVMAIL_AREA = 10	You must use the AREA_ID for the AREA field
EVMAIL_PROJECT = 19	You must use the PROJECT_ID for the PROJECT field
EVMAIL_STATUS = NEW	You must use the name for inbuilt fields
EVMAIL_ORIGINATOR = BSMITH	You must use the User ID for user fields
EVMAIL_COMPONENT = 12435	You must use the UDF_LIST_ID for user defined list fields
EVMAIL_INSTRUCTIONS = Here are instructions	You can popuplate text, text area and log area fields with text

Note: Updating existing issues will only result in the update of the EVMAIL_BODY_UPDATE_UDF field.

The values for these fields are database values or the internal ID value of the field (i.e. the UDF_LIST_ID value), not
field. You can find the internal ID value by placing your mouse cursor over the list value in its maintenance screen, an
status bar of your browser.



Finding the UDF_LIST_ID internal ID value

You can use a similar technique to find the AREA_ID for the AREA field and the PROJECT_ID for the PROJECT fie
p_aid parameter for the AREA and the p_pid parameter for the PROJECT field.

Full List of EVMail Settings

EVMAIL_*FIELDNAME*	See the description above on how to map different fields fı ExtraView
EVMAIL_ADDL_DELIMS_TEXT	This setting is used in conjunction with the behavior settin EVMAIL_DELIMITER_TEXT and the EVMail configura EVMAIL_ADDL_DELIMS_HTML. Together they provi controls on incoming email to the EVMail feature, to parse looing for the new content to include and to inhibit the rep older content of the emails. This is typically seen when us emails add simply append their new message to the thread messages. It is often desirable to only include the latest m to the ExtraView issue, and not to repeat existing, older co settings are only used when updating existing issues withir database, and not used when new issues are being inserted The EVMAIL_ADDL_DELIMS_TEXT setting is used w incoming email has a contentType of **text/plain**. Any number of delimiters may be specified, delimited witl with `||`. **Example:** `EVMAIL_ADDL_DELIMS_TEXT = delimiter string 1 || string 2 || delimiter string 3` Three delimiters are specified in the example, and the inco parsed looking for all occurences of the three strings
EVMAIL_ADDL_DELIMS_HTML	See EVMAIL_ADDL_DELIMS_TEXT above. The princ that the delimiter being parsed within the incoming email l contentType of **text/html**. Different email clients generate delimiters and some experience with examining different e required in order to be able to successfully determine the r delimiters you expect. **Example:** `EVMAIL_ADDL_DELIMS_HTML = <div style="border:non top:solid #B5C4DF 1.0pt;` This delimiter string is often seen within Microsoft Outloo
EVMAIL_ALLOW_HTML_MSG	Valid values are YES, NO and PARSE. If this is not specif value is PARSE
EVMAIL_ALLOW_HTML_MSG_FAIL_TEMPLATE	This is used only if the EVMAIL_ALLOW_HTML_MSG to is NO. If it does not exist, then SMTP_MSG_FAIL_TEI used, if it exists
EVMAIL_ATTACH_EML	This parameter allows you to attach a copy of the received format to the created or edited issue when it is set to YES. or the absence of this entry means the attachment will not : mail
EVMAIL_BODY_UDF	For a new issue being created, use this field to store the bo message as text. Typically this will be mapped to the DES field

EVMAIL_BODY_UPDATE_UDF	For issue updates, use this field to store the body of the em This allows you to store the body as text. Typically this w the COMMENTS field, so that successive updates will cre in this log area field.
EVMAIL_BODY_UPDATE_UDF_ATTACHMENT_LINK	Set this option to a value of YES if you want ExtraView to associate an the incoming email to the field set in EVMAIL_BODY_UPDATE_UDF
EVMAIL_BODY_HTML_UPDATE_UDF	When you want to retain the HTML within the body of an that is updating existing issues, use this in place of, or as a EVMAIL_BODY_UDF. This field should be an HTML A LOG AREA field configured to use HTML
EVMAIL_CC_UDF	This parameter takes the entries in the CC field of an incor being processed by EVMail. You may set the value of this field with a display type of *text* or *text area*. The contents of the EVMAIL_CC_UDF field are not cumu issue history will show the successive values from each iss value stored in the field will simply be the CC addresses o incoming email message. The email address within the setting named MAILBOX_U as a recipient.
EVMAIL_FROM_UDF	You may set the value of this parameter to a field with a di *text* or *text area*. If an incoming email is processed by EVMail and ExtraVi valid user who has an email address or alternate email add matches the incoming message FROM address, Extraview incoming FROM email address in the EVMAIL_FROM_U If ExtraView finds a matching user, it will not populate the will simply set the Originator field to the identified user ac This action works only when creating new issues - the EVMAIL_FROM_UDF field is not modified when an exis being updated.
EVMAIL_ID_REGEX	This is a regular expression used to parse the subject line a ExtraView ID value. If an ID is found, EVMail attempts to matching issue ID in ExtraView. If no matching ID is foun created. If you enter an invalid regular expression, ExtraVi this information to the application server log.
EVMAIL_PRIORITY_FIELD	This is an optional property. If this is set to a value that is Field with a display type of Checkbox, then the following • Incoming email headers are examined to see if there **priority** flag set • If the flag is set, the User Defined Field checkbox is Note that during the updating of an issue, the value assign reset and set again according to the priority of the incomin being processed.
EVMAIL_SENDER	When set, this option will take the email address of the sen incoming email and store it within a field within the issue inserted or updated. The usage is:

EVMAIL_SUBJECT	This ExtraView field will be where the subject of the emai placed. Typically this will be the SHORT_DESCR field
EVMAIL_SUBJECT_LOOKUP	The EVMAIL_SUBJECT_LOOKUP setting works in add EVMAIL_ID_REGEX setting by searching existing recor subject line. When no ExtraView ID is detected in the subj EVMAIL_SUBJECT_LOOKUP is set to YES, then existi searched by the field specified in the EVMAIL_SUBJECT matched against the incoming email subject line. If a record matches, then that record is updated. Otherwise is found, then a new record is inserted. Note that subject li as **Re:** and **Fwd:** are removed from the incoming email su purposes of performing the search and match. Also, the fie the EVMAIL_SUBJECT setting must be configured in Da have their **Filter Criteria** attribute set to *Yes*, so that a que executed with that field as a filter. If multiple records match the subject line, then a new reco opposed to updating multiple existing records.
EVMAIL_SUPPRESS_HEADER	This configuration option allows ther administrator to rem lines from the header of the incoming mail, before the mai a field within ExtraView. The remaining text is inserted in destination field defined with EVMAIL_BODY_UDF. Th removed begin with the following strings and they must ap incoming mail before the occurrence of the EVMAIL_DELIMITER_TEXT contained within the emai **From:** **To:** **Send:** **Subject:** **Date:** Only header lines that begin with these strings are remove not be blank lines between the header lines and they must within the mail body by the EVMAIL_DELIMITER_TEX does not contain a the expected value for EVMAIL_DELI then this configuration option is ignored. This implies tha information is not removed when creating a new issue wit and is only operable when updating issues.

EVMAIL_TO_UDF	You may set the value of this parameter to a field with a di *text* or *text area*. EVMail parses the TO header within the incoming email a email address(es) in this list. If the EVMail address is in th removed. This may result in an empty list. If the list is not creates a semi-colon separated list of email address and us value within the EVMAIL_TO_UDF field. This processin both emails that create new issues within ExtraView as we that update issues within ExtraView. The contents of the EVMAIL_TO_UDF field are not cumu issue history will show the successive values from each iss value stored in the field will simply be the TO addresses o incoming email message. The email address within the setting named MAILBOX_U as a recipient. Great care should be taken in the use of this parameter, as generate an endless loop whereby an email generates an er processed by EVMail, generating an email notification tha by EVMail and updates the same issue, ad infinitum.
IGNORE_SUBJECT.xx	The optional IGNORE_SUBJECT setting can be used to s more strings to detect within the subject line of the incomi determine whether to ignore and skip the entire email mes processed. The string text configured in this setting is case and be matched exactly anywhere in the subject line of the message. Note: For a single text, use simply IGNORE_SUBJECT; f texts, use IGNORE_SUBJECT with a unique postfix for e as a number. For example to configure multiple entries to be ignored: `IGNORE_SUBJECT.1 = Mail Delivery Failure` `IGNORE_SUBJECT.2 = Automatic reply:` `IGNORE_SUBJECT.3 = Free offer`
MAILBOX_PROCESSED_EMAIL_FOLDER	This setting works only with Exchange and IMAP type ma When configured with the name of a folder on your local f incoming mail that has been processed is copied to a file w
PARSE_EMAIL PARSE_VALUE_DELIMITER PARSE_FIELD.STATUS PARSE_FIELD.COMMENTS PARSE_FIELD.DUE_DATE	This collection of properties allow parsing of incoming ma ExtraView. You may configure the parsing of the incoming email mes and the body looking for specific tags to specify the field a assign to the ExtraView record being created or updated. The PARSE_EMAIL setting must be configured to one of • INSERT enables the feature for new records only • UPDATE enables the feature for updates to existing • BOTH enables both inserts and updates

pattern that appears in the subject or body of the incoming

Note: Do not use the equals character within `<tag>`.

The value to set the field to must follow the tag in the ema
must be on the same line as the tag in the email body. For e
specify value of *John Doe* for the `[Reporter]` tag:

```
[Reporter] John Doe
```

In the subject line, the value must be enclosed in double-qu
from the rest of the subject line text. For example, to speci
for the `[Severity]` tag:

```
Subject: [Severity] "High" - The roof is leaking
```

Multi-line text or multi-list values must be ended with the
within the email body.

For example, to specify multi-line text for the [Comment]
area display type field):

```
[Comment] This is a multi-line
comment that spans
three lines
[Comment]
```

When this setting is used, but the field configured with PA
does not exist on the *Add* or *Edit* screen layout, or the EVM
not have write access to the field, or the value specified in
valid, the expected behavior for the field is to not be assign
EVMail. A warning message is written to the ExtraView a

If you are writing to a multi-valued list field, then values a
the new values are added to existing values in the list.

If you mistakenly utilize the same tag more than once with
message, only the first occurrence is processed and the oth

Examples

```
PARSE_FIELD.TEST_CURRENCY = $$Currency Test$$
PARSE_FIELD.DUE_DATE = [Due by]
PARSE_FIELD.TEST_DATE2 = [Date test]
PARSE_FIELD.CUST_RMA_NUM = "number test"
PARSE_FIELD.TEST_DECIMAL = (Decimal Test)
PARSE_FIELD.CUST_LIST = /Customer Name/
PARSE_FIELD.CUST_LIST_MULTI = #Multi-Customers#
PARSE_FIELD.TEST_POPUP_SINGLE = 'popup'
PARSE_FIELD.TEST_POPUP_MULTI = __multi-popup__
PARSE_FIELD.TEST_HTML_AREA = <HTML>
PARSE_FIELD.TEST_PRINT_TEXT = --PRINT--
PARSE_FIELD.TEST_RADIO_H = hRadio
PARSE_FIELD.TEST_RADIO_V = vRadio
PARSE_FIELD.CUST_SELECT_TABS = {tabs}
PARSE_FIELD.CUST_ADDRESS = |Address|
PARSE_FIELD.CUST_EMAIL = @EMAIL@
PARSE_FIELD.IT_REQUESTOR = *User*
PARSE_FIELD.TEST_USER_MULTI = ++USERS++
```

The PARSE_VALUE_DELIMITER is an optional property

	`PARSE_VALUE_DELIMITER={}` `PARSE_FIELD.STATUS = {Status}`
SMTP_CC	Other email addresses to copy when sending auto-reply or messages back to the sender of the email
SMTP_FAIL_MSG_TEMPLATE	The database name of an Ad Hoc email template to use wh failure messages. The template supports the use of the spec $$BODY$$. If you include $$BODY$$ in the template, tl original incoming email will be included.
SMTP_FROM	The email address used when sending auto-reply or failure to the sender of the email
SMTP_NAME	The friendly name used when sending auto-reply or failure to the sender of the email
SMTP_REPLY_TEMPLATE	The database name of an Ad Hoc email template to use wh auto-reply messages. The template supports the use of two variables, $$ID$$ and $$BODY$$. If you include $$ID$$ then the ID of the newly created issue is retrieved and inclu template email. If you include $$BODY$$ in the template, original incoming email will be included.

The behavior of the last two parameters controls how HTML-based incoming emails are handled.

1. Accept HTML mail as is, and place it into an HTML area field, trying to preserve the formatting - the assumptic mainly receiving short emails, and you want to attempt to preserve HTML constructions such as tables and link:
2. Strip the incoming HTML-formatted mail of HTML tags, and place the contents into a text area or comments fi will parse the text, removing as much HTML as possible. This is not a perfect solution, as some tags may not be any poor HTML may not be rejected.
3. Reject the incoming HTML-only mail and send back to the submitter a rejection notice.

Configuring RUNTIME_ Parameters

- For updates to occur, choose a RUNTIME_USER_ID that occupies a real license as opposed to a GUEST user l pick a GUEST user as the RUNTIME_USER_ID, then issues will only ever be created, never updated
- The RUNTIME_USER_ROLE needs to be a role that has access to the fields and layouts for the Business Area issues that you want to create and/or update. Again, if you select the GUEST role, issues will only ever be creat updated
- RUNTIME_AREA_NAME and RUNTIME_PROJECT_NAME - these parameters determine the Business Are issues created by EVMail.

Sample EVMail configuration

```
RUNTIME_USER_ID = BSMITH
RUNTIME_AREA_NAME = CUST_ISSUES
RUNTIME_PROJECT_NAME = CUST_ISSUES_DATA
RUNTIME_USER_ROLE = SUPPORT

MAILBOX_TYPE = POP3
MAILBOX_PORT = 110
MAILBOX_SECURE = NO
MAILBOX_SERVER = mail.mycompany.com
MAILBOX_USER = support
MAILBOX_PASSWORD = myPassword

SMTP_FROM = support@mycompany.com
SMTP_NAME = "The Support Team"
SMTP_CC = leeann@mycompany.com
```

When a user sends an email to ExtraView, EVMail examines the incoming email to determine whether this is a reply t issue which should update the existing issue, or whether to generate a new issue within ExtraView. This determinatior parsing the subject line of the incoming email. If the EVMail utility is able to parse a valid, existing issue ID out of th then it is assumed that the mail is being used to update an issue; else it is assumed that the mail is meant to generate a

One consequence of this is that when a user replies to an email notification which was generated by ExtraView autom original notification will be included in the reply, simply adding to the update with information that already exists. To the value within a behavior setting named EVMAIL_DELIMITER_TEXT is used. This value is embedded with invisi HTML emails from ExtraView to surround the entire contents of the outgoing email. When EVMail is updating the is the value of the behavior setting and removes all text between the tags. Thus, only the new comment made by the user issue.

When issues are updated via EVMail, the **Last Change User** field is set to the value of the RUNTIME_USER_ID, an person who sent the email.

Note that if EVMail is running with a user who only has a GUEST role, updates to issues are not permitted.

Which Issue is Updated Via EVMail?

The logic to locate which issue to update with a received mail is a multi-step process, as follows.

1. First, the EVMAIL_ID_REGEX parameter is used to attempt to identify a unique ExtraView issue ID in its sub
2. Second, the MESSAGE_ID within the message header is examined and used to try and find a matching ExtraVi

   This is accomplished if the configuration parameter EVMAIL_MESSAGE_ID points to a TEXTAREA field to MESSAGE_ID. This field must be present on both the ADD_PROBLEM and EDIT_PROBLEM layouts and n although you can hide the field.

3. If more than one matching issue is found, ExtraView next looks at the date of the incoming mail. This logic is c the definition of the EVMAIL_RECORD_MATCHING_DATE parameter within the task configuration. The fi with this parameter must have a display type of DATE or DAY. For example, you can use the inbuilt TIMESTA DATE_CREATED fields
4. DATE_RANGE checking logic is then triggered with the configuration value of EVMAIL_RECORD_MATCHING_DATE_RANGE.

   Supported formats and their meanings are:

- **SYSDATE-2** means between SYSDATE and 2 hours or 2 days earlier.
- **0-2** has the same meaning as **SYSDATE-2**. Zero is interpreted as SYSDATE
- **1-3** has the meaning of between 1 hour earlier than the SYSDATE and 3 hours earlier than the starting point, or than the SYSDATE and 3 DAYS earlier than the starting point.

  Examples:

  - Both the DATE field and DATE RANGE field are defined:
    - The one with latest DATE value withing the DATE_RANGE is chosen
    - No issue is found if there are no results within the DATE RANGE.
  - The DATE field is defined but the DATE RANGE field is not:
    - The issue with the latest DATE value is chosen
  - Both the DATE and DATE RANGE fields are not defined oronly the DATE RANGE field is defined:
    - No issue is selected

1. ExtraView uses SUBJECT line matching if none of the above steps work, and if EVMAIL_SUBJECT_LOOKU defined within the configuration.

If the source of the incoming email is pure HTML, then the presentation of the data within the fields will look extreme source data. If the source of the data is an email client such as Microsoft Outlook, there may be differences in the pres cannot be reconciled.

The major differences occur for these reasons:

- Microsoft Outlook typically uses Microsoft Word as its internal editor and this does not produce standard HTM there are often formatting tags within the contents that have no equivalent within HTML. Similarly, Outlook of Cascading Style Sheet (CSS) classes that cannot be interpreted within an HTML browser
- If the source of the data relies on CSS styles and these are not transmitted with the email, ExtraView has no way understanding what the style might be

The result is that underlying text within the email will be displayed, but sometimes will not have the correct formattin

Testing EVMail

EVMail follows all the status change rules and the ALLOW_EDIT_CLOSED behavior setting. These may be based o role, their current business area and project as configured in your installation.

If you want to bypass all of those constraints for testing purposes, and make sure that tickets are updated regardless of place, use the ADMIN user account. This account (which should not be used for ordinary purposes) bypasses all statu

It is worth ensuring that your workflow does not put any issue into a status value where EVMail will not be able to up get failures, and/or the update will be captured as a new issue within the system as opposed to an update to an existing

Using a Secure Mail Server

This section covers instructions on how to connect ExtraView to a POP3 mail server configured with SSL, i.e. POP3S recommended that you configure POP3S rather than POP3.

The instructions here are for a Microsoft Windows environment, but are similar for other operating systems. The basic configure SSL, are to install the SSL certificate on your mail server into the Java keystore, as a trusted root certificate.

- Use a browser to go to the web management interface for your mail server, or to some other URL provided by y to access your rootca certificate
- You should now see a dialog box warning you about the certificate. Click on the **View Certificate** and install th can ignore any warning messages
- Now that the server certificate is installed on your computer, your browser will no longer warn you when you vi again. However your Java runtime JRE does not yet know about this certificate's existence until you add the cer keystore. Usually you will use the Java keytool utility to manage certificates. keytool is a command-line utility arguments that allows you to create and manage keystores that house digital certificates. For the complete docu keytool, visit http://java.sun.com/j2se/1.3/docs/tooldocs/win32/keytool.html
- You can list the current certificates contained within the keystore using the keytool -list command. The initial pa cacerts keystore is *changeit*. For example, you may see the following in a Windows environment:

  C:\ExtraView\java\jre\bin>keytool -list -keystore ..libsecuritycacerts Enter default keystore password: changeit

  You will then see the something like this:

  Keystore type: jks
  Keystore provider: SUN

  Your keystore contains 11 entries:

15:13:21 EST 1999, trustedCertEntry?,
Certificate fingerprint (MD5): 3A:B2:DE:22:9A:20:93:49:F9:ED:C8:D2:8A:E7:68:0D verisignclass4ca, Mon Ju
EDT 1998, trustedCertEntry?,
Certificate fingerprint (MD5): 1B:D1:AD:17:8B:7F:22:13:24:F5:26:E2:5D:4E:B9:10 verisignclass1ca, Mon Jun
EDT 1998, trustedCertEntry?,
Certificate fingerprint (MD5): 51:86:E8:1F:BC:B1:C3:71:B5:18:10:DB:5F:DC:F6:20 verisignserverca, Mon Ju
EDT 1998, trustedCertEntry?,
Certificate fingerprint (MD5): 74:7B:82:03:43:F0:00:9E:6B:B3:EC:47:BF:85:A5:93 thawtepremiumserverca, F
15:15:26 EST 1999, trustedCertEntry?,
Certificate fingerprint (MD5): 06:9F:69:79:16:66:90:02:1B:8C:8C:A2:C3:07:6F:3A verisignclass2ca, Mon Jun
1998, trustedCertEntry?,
Certificate fingerprint (MD5): EC:40:7D:2B:76:52:67:05:2C:EA:F2:3A:4F:65:F0:D8

- Now you have to add the certificate you previously installed to this keystore. Begin by exporting your CA Root your browser as a **DER-encoded binary file** and save it as C:root.cer. Within Internet Explorer, you can view th certificates under **Tools** --> **Internet Options** --> **Content** --> **Certificates**. Once you open the certificates, loca just installed under **Trusted Root Certification Authorities**. Select and click on **Export**. You can now save it a **encoded binary** under your C: drive
- Use the keytool -import command to import this file into your cacerts keystore. For example:

  C:\ExtraView\java\bin\keytool -alias myprivateroot -keystore ..libsecuritycacerts -file c:root.cer

  Enter default keystore password: changeit

  Owner: CN=Division name, OU=Department, O=Your Company, L=Anytown,

  ST=NC, C=US, EmailAddress?=you@company.com
  Issuer: CN=Division name, OU=Department, O=Your Company, L=Anytown,
  ST=NC, C=US, EmailAddress?=you@company.com
  Serial number: 79805d77eecfadb147e84f8cc2a22106
  Valid from: Wed Sep 19 14:15:10 EDT 2001 until: Mon Sep 19 14:23:20 EDT 2101
  Certificate fingerprints: MD5: B6:30:03:DC:6D:73:57:9B:F4:EE:13:16:C7:68:85:09
  SHA1: B5:C3:BB:CA:34:DF:54:85:2A:E9:B2:05:E0:F7:84:1E:6E:E3:E7:68

  Trust this certificate? [no]: yes

  Certificate was added to keystore
- Run keytool -list again to verify that your private root certificate was added:

  C:\ExtraView\java\bin\keytool -list -keystore ..libsecuritycacerts

  You will now see a list of all the certificates including the one you just added. This confirms that your private rc been added to the ExtraView Java cacerts keystore as a trusted certificate authority

- Stop and restart your application server to pick up the new certificate.

Configuring EVMail with Microsoft Exchange as a Server

Microsoft Exchange Server 2007 and newer is recommended. Configure these settings to achieve this connection:

MAILBOX_TYPE	Set this to a value of EXCHANGE to use Microsoft Exchange Server
MAILBOX_USER	Set this to the user name of the connection to Exchange
MAILBOX_PASSWORD	Set this to the password of the user with which you are connecting to Exchange
EXCHANGE_URL	This value should be the URL of the Exchange

MAILBOX_PASSWORD = password

#These parameters are used when MAILBOX_TYPE = OWA
for connecting to Exchange 2003 using OWA
OWA_PATH = Exchange
OWA_DESTINATION = https://owa.exchange.ms/Exchange/evmailuser@yourdomain.com
OWA_ISA = true
OWA_DOMAIN = companydomain
OWA_FBA_PATH = /exchweb/bin/auth/owaauth.dll

Notes:

1. Do not configure these parameters for Microsoft Exchange Server if you are using a POP3 or POP3S server
2. For OWA the mailbox_port is not used, but it is a required parameter; leave its value as 110
3. MAILBOX_SECURE - set to YES if your OWA url is https, set to NO if your OWA url is http
4. MAILBOX_SERVER - your Exchange Server
5. MAILBOX_USER and MAILBOX_PASSWORD - the username and password of your Exchange 2003 mailbo

Specific settings for OWA Exchange 2003 connections only - we provide sample settings to help you identify the equi
your Exchange Server.

MAILBOX_SERVER = Name of your MS Exchange Server

OWA_PATH - Exchange path for MS Exchange OutLook Web Access

The URL used to access your Outlook Web Access page is made up of the values for MAILBOX_SERVER and the O

http(s)://MAILBOX_SERVER/OWA_PATH/ - should take you to your Outlook Web Access page

OWA_DOMAIN - the Exchange/Windows domain for the MAILBOX_USER account

OWA_FTA_PATH - path to Form based authentication - this can be found if you look at the HTML source of the OW.
authentication/login page - search for "destination".

OWA_DESTINATION - on the OWA login page, search for the hidden field "destination" OWA_ISA - needed for use
OWA_DESTINATION

How EVMail Handles Errors

When EVMail encounters a problem, it may be either a "transient" error, i.e. one that might fix itself if the operation i
later time, or it might be a "permanent" error, i.e. one that needs a change in the EVMail configuration in order to be r
Examples of permanent errors include:

1. Bad username/password for the MAIL_USER or MAIL_PASSWORD parameters
2. Invalid values for RUNTIME_USER_ID, RUNTIME_AREA_NAME, RUNTIME_PROJECT_NAME, RUNTIME_USER_ROLE

An example of a transient errors would be the inability to connect to the mail server because of a network error. In a te
can create a transient error by setting MAILBOX_PORT or MAILBOX_SERVER to an invalid value temporarily. Wh
encounters a permanent error, it does the following:

1. Changes the task status to ERROR
2. Sends an email to all users in the ADMIN role indicating that EVMail is in an ERROR state **Fatal Task Config**
3. Stops the task so that it no longer runs

Once the task is in an ERROR state, the following must be done to repair the error

1. Generate a system_log warning message indicating that it has encountered a transient error
2. Check the values for the new EVMail configuration parameters RUNTIME_WARN_NOTIFICATION_INTER RUNTIME_WARN_NOTIFICATION_COUNT
3. Check the system log table and see how many warning messages have been created within the past RUNTIME_WARN_NOTIFICATION_INTERVAL minutes. If there are more than RUNTIME_WARN_NOTIFICATION_COUNT of them, it will create a new notification entry in the system lo
4. Check the RUNTIME_ERROR_NOTIFICATION_INTERVAL. If this is the first notification entry in the syste warning, in the last RUNTIME_ERROR_NOTIFICATION_INTERVAL minutes, send the email out to the AD
5. Note that EVMail will continue to run

Example:

- RUNTIME_ERROR_NOTIFICATION_INTERVAL = 15 minutes
- RUNTIME_WARN_NOTIFICATION_INTERVAL = 3 minutes
- RUNTIME_WARN_NOTIFICATION_COUNT = 3
- EVMail is set to run every minute

At 10:00 a.m. EVMail runs, and encounters a transient error as it cannot connect to the POP3 mailbox. A message is p system_log table similar to the following:

<LOG_MESSAGE>EVMail Task had a WARN condition</LOG_MESSAGE>
<TASK_ID>700983</TASK_ID>
<TASK_TITLE>EVMail Task (Incoming email)</TASK_TITLE>
</LOG_MESSAGE>

ExtraView checks to see how many messages of this type, for this task_id exist in the system log table in the past 3 mi 1 is less than 3 so ExtraView does not send any notification to the administrators.

At 10:01 a.m. EVMail runs again, and encounters the same error - a message is placed in the system_log table:

<LOG_MESSAGE>EVMail Task had a WARN condition</LOG_MESSAGE>
<TASK_ID>700983</TASK_ID>
<TASK_TITLE>EVMail Task (Incoming email)</TASK_TITLE>
</LOG_MESSAGE>

ExtraView checks to see how many messages of this type, for this task_id exist in the system log table in the past 3 mi 2. 2 is less than 3 so ExtraView does not send any notification to the administrators.

At 10:02 a.m. EVMail runs again, and encounters the same error - a message is placed in the system_log table:

<LOG_MESSAGE>EVMail Task had a WARN condition</LOG_MESSAGE>
<TASK_ID>700983</TASK_ID>
<TASK_TITLE>EVMail Task (Incoming email)</TASK_TITLE>
</LOG_MESSAGE>

ExtraView checks to see how many messages of this type, for this task_id exist in the system log table in the past 3 mi now 3. 3 is not greater than 3 so ExtraView does not send any notification to the administrators.

At 10:03 a.m. EVMail runs again, and encounters the same error - a message is placed in the system_log table:

<LOG_MESSAGE>EVMail Task had a WARN condition</LOG_MESSAGE>
<TASK_ID>700983</TASK_ID>
<TASK_TITLE>EVMail Task (Incoming email)</TASK_TITLE>
</LOG_MESSAGE>

ExtraView checks to see how many messages of this type, for this task_id exist in the system log table in the past 3 mi

At 10:04 a.m. EVMail runs, and encounters the same error - a message is placed in the system_log table:

<LOG_MESSAGE>EVMail Task had a WARN condition</LOG_MESSAGE>
<TASK_ID>700983</TASK_ID>
<TASK_TITLE>EVMail Task (Incoming email)</TASK_TITLE>
</LOG_MESSAGE>

ExtraView checks to see how many messages of this type, for this task_id exist in the system log table in the past 3 mi
now 4. 4 is greater than 3, so a new message is added to the system log table:

<LOG_MESSAGE>EVMail Task had a transient error that persisted more than 3 times in 10 minutes.
<TASK_ID>700983</TASK_ID>
<TASK_TITLE>EVMail Task (Incoming email)</TASK_TITLE>
</LOG_MESSAGE>

ExtraView checks to see how many messages of this type for this task_id, exist in the system log table in the past 10 n
1, so ExtraView will send an email to all ADMIN users. Even if the transient error persists ExtraView only sends out
every 10 minutes. If your EVJ.log shows errors similar to:

2012-10-30 13:45:54 [ERROR] EVMT: EVMail Task (Incoming email) Mailbox Authentication failed - check your
MAILBOX_USER and MAILBOX_PASSWORD
2012-10-30 13:45:54 [ERROR] Exception = javax.mail.AuthenticationFailedException: Command is not valid in this
javax.mail.AuthenticationFailedException: Command is not valid in this state.

Check to see if the POP3 account is on an Exchange2010 server. If so, the problem is likely due to the fact that the Ex
expecting encrypted credentials. To resolve your email administrators will need to run the following command in an E
which allows Exchange POP to use plain text credentials:

Set-PopSettings -LoginType PlainTextLogin

Then restart the POP3 service and the problem should be resolved.

Multiple EVMail Tasks

It is possible to configure multiple EVMail tasks, each with their own configuration. If you configure this on a single
server, then all the mail connections must either be secure (using POP3S) or not secure (using POP3). If there is a requ
mixed secure and non-secure servers, then you should set up a cluster of application servers, and then different servers
configured to be secure or non-secure.

Technical Note on Incoming Emails with Attachments

There are three possible ways in which attachments to incoming emails can be handled. The first type is handling atta
non-body parts of the incoming email. In general, anything that is attached to the incoming email should be uploaded
issue as a file attachment. The second type is when the body of the email message is not copied to a field on the Extra
instead uploaded as a file attachment to the ticket. This happens automatically if the body of the message itself is grea
size. The third type is when the incoming email message itself is attached to the ExtraView issue. This will occur, thro
settings, or encountering a message that cannot be processed for some reason.

1. The part disposition is **Part.ATTACHMENT**

   Incoming emails processed by EVMail that have their own attachments - those files are always attached to the t

   contentType.toLowerCase() = image/gif; name="ali's.gif" (the BODY is empty)

- The part disposition is **Part.INLINE**

1. The part disposition is **null**

   If the incoming body of the email message exceeds a size of 512kb, ExtraView will NOT put the message body description/comments field, but will attach the email message to the issue and insert a line of text in the issue, ir *attachment <attachment filename> for body of email*."

   contentType.toLowerCase() = text/plain; charset=utf-8; format=flowed (this has a BODY)
   contentType.toLowerCase() = text/html; charset=utf-8 (the BODY is empty)

2. In all cases, and in addition to any other attachments added to the issue, there is a behavior setting named EVMAIL_ATTACH_EML. When this is set to a value of YES, the source text of the incoming email is also atta as an .eml type file
3. If EVMail receives a badly formed email message for some reason, and it cannot be processed, it is attached to created, as opposed to throwing it away.

Configuring BatchMail

This task controls the sending of email notifications by ExtraView. In previous versions this was a separate process to version 6.1, the BatchMail task can be started and stopped within ExtraView, and the log can be examined. It is recom task be set to START_ON_BOOT, so that it initializes automatically when ExtraView starts. The parameters to set up BatchMail are as follows:

Parameter	Explanation
ALLOW_ENCRYPTION	This flags whether email encryption is to be set or not. The default is NC
BatchMail.properties	This configuration file is used for standalone BatchMail operation. If yo BatchMail from within this menu, this file is not needed. It is provided f compatibility with previous versions of ExtraView, which did not run Ba task within ExtraView. See the Installation Guide for details of the settin file.
CHECK_CONNECTION_PAUSE	This defines the number of seconds to wait when contacting your mail s assuming there is no connection. The default is 30 seconds
ENCRYPTION_DIR	The directory where the encryption program is stored. This may be an al pathname or a relative pathname. Relative paths are relative to the WEB on the server
ENCRYPTION_SCRIPT	The script to be used to generate the encrypted result (either file or writt out). To test this execute the following from the scripts folder: ./encrypt. placeholder for the recipient. It will be retreived by the BatchMail progr match the name on the keyring. is the placeholder for the filename. Its v retreived by the BatchMail program and will be based on the filename g ExtraView. For example, this might be: ENCRYPTION_SCRIPT=script
ENCRYPTED_TO_STANDARD_OUT	If this has a value of "yes" then BatchMail reads the encrypted standard there is a value of "no" it reads the encrypted file
FORCE_DIRECTORY_RELOAD	This may be YES or NO. It is used principally for NFS mounted directo used to store the outgoing emails. Occasionally, the directory entries ma become stale, leading to ExtraView seeing out-of-date information. Whe YES, ExtraView forces a re-read of the directory for all operations.
LOG_FILE_MAX_RETAINED	This is the maximum number of "rolled over" log files that are retained before they are deleted. The default is 5
LOG_FILE_MAX_SIZE	This is the maximum size to which the log file is allowed to grow, befor

MAIL_DIR	This is the absolute or relative path to the mail directory where outgoing stored temporarily, defined in the Configuration.properties file. This mus Relative paths are relative to the WEB-INF directory on the server
MAIL_ENABLE_TLS	This parameter enables TLS (Transport Layer Security) to facilitate end- encryption of the connection to the mail server. Set the value of the prop enable.
MAIL_PASSWORD	When the outbound SMTP server requires a username and password to a before sending the email, this parameter provides the password
MAIL_PORT	The MAIL_PORT is typically 25 or 465, depending on whether you are connection
MAIL_SERVER	The domain name to your mail server. This must be set
MAIL_USER	When the outbound SMTP server requires a username and password to a before sending the email, this parameter provides the username
NOTIFICATION	This setting can be either NOTIFY_NEVER (by itself), or any combinat following with each setting separated by semicolon(;) : • NOTIFY_DELAY • NOTIFY_FAILURE • NOTIFY_SUCCESS For example, the setting might be **NOTIFICATION=NOTIFY_SUCC NOTIFY_FAILURE**
PAUSE_AFTER_NUM_OF_EMAIL	This setting pauses the EVMail task after sending the number of mails in the setting. This pauses the EVMail task to stop it commanding all the re server for long periods of time, such as might happen with a mass updat sending out thousands of notifications in a very short period of time. An method is to use the PAUSE_BETWEEN_SEND setting, It is recommen use only one of the two settings.
PAUSE_BETWEEN_SEND	This is the number of milliseconds to wait between the sending of each r notifications, to allow the server to process other tasks. Similar to the PAUSE_AFTER_NUM_OF_EMAIL setting, it reduces the load on the s recommended that you use only one of the two settings. The default is 2
POLL_RATE	The number of seconds to pause between checking for emails to be sent. seconds
RECIPIENTS_PER_CONNECTION	Most mail servers have a limit in how many emails they will send with a connection, typically 100. Within sites that generate a large volume of e BatchMail configuration property is available to prevent this causing a p property is named RECIPIENTS_PE R_CONNECTION. BatchMail qu of mail to make sure no more than this number of mails are generated at
RETURN_OPTION	This defines the action to take with returned mail. You can elect to either email or just the headers. The value can be either RETURN_FULL or R
SECURE_PORT	This is a dedicated port number for this application. The default is 879. T must always be less than 1024
SEND_TO_ALL_ONCE_ADDR	This is used in conjunction with SEND_TO_ALL_ONCE setting to dete recipients of email notifications will see the other addressees who receiv notification. The default for this optional setting is **BCC**.
SEND_TO_ALL_ONCE	The default for this optional setting is **false**. It may be set to a value of **t** case you can set the SEND_TO_ALL_ONCE_ADDR to a value of **TO** (

SIGNING_SCRIPT	The script to be used to generate the signed result (either file or written t To test this, execute the following from the scripts folder: ./sign.sh The r be retrieved by the BatchMail program and will be based on the filenam ExtraView. For example, use this: SIGNING_SCRIPT=scripts/sign.sh
TRANSPORT	Use either *smtp* or *smtps* for a secure connection if this is configured on
XML_LOG_FLAG	The default for this is FALSE. If you set it to true, the log will be createc format

Session Monitor

This is a cleanup task which periodically monitors user sessions and removes expired sessions from the database, thus old, expired sessions do not accumulate and cause an unnecessary load on the system. Again, the recommendation is t START_ON_BOOT and that the default properties of the task are not altered by the administrator.

Managing Quickfind

This task automatically indexes newly added text to all issues entered or updated by users in order to speed up keywo configured and started, this task will keep the indexes up-to-date as users add or update any text within issues.   It also properties in better use of wildcards, phrase search, and in the support of Boolean logic within your searches.

This task defines exactly what text will be indexed, and where the indexes will be stored on the file system of your se Quickfind indexing mechanism is based upon the Apache Foundation Lucene technology.

Note that files larger than 16MB in size are not indexed. For full end-user information on the use of Quickfind, see th Keyword Searching.

What is Indexed

The following are indexed as part of Quickfind's operations.

- Inbuilt Fields
  - the SHORT_DESCR field
  - If the behavior setting named QUICKFIND_INDEX_USERS is YES, the following user fields are index
    - OWNER
    - ASSIGNED_TO
    - LAST_UPDATED_BY_USER
    - ORIGINATOR
    - CONTACT
    - All MODULEs: ASSIGNED_TO field
- User Defined Fields (UDFs)
  - User Defined Field USER type fields
  - All User Defined Fields with a display type of TEXTFIELD
  - All large User Defined Fields with a display type of TEXTAREA, LOGAREA, PRINT_TEXT
  - The User Defined Fields with a display type of HTMLAREA, after removing the HTML tags
- DOCUMENT fields
  - Document description
  - File name
  - Document content according to MIME type and content size:

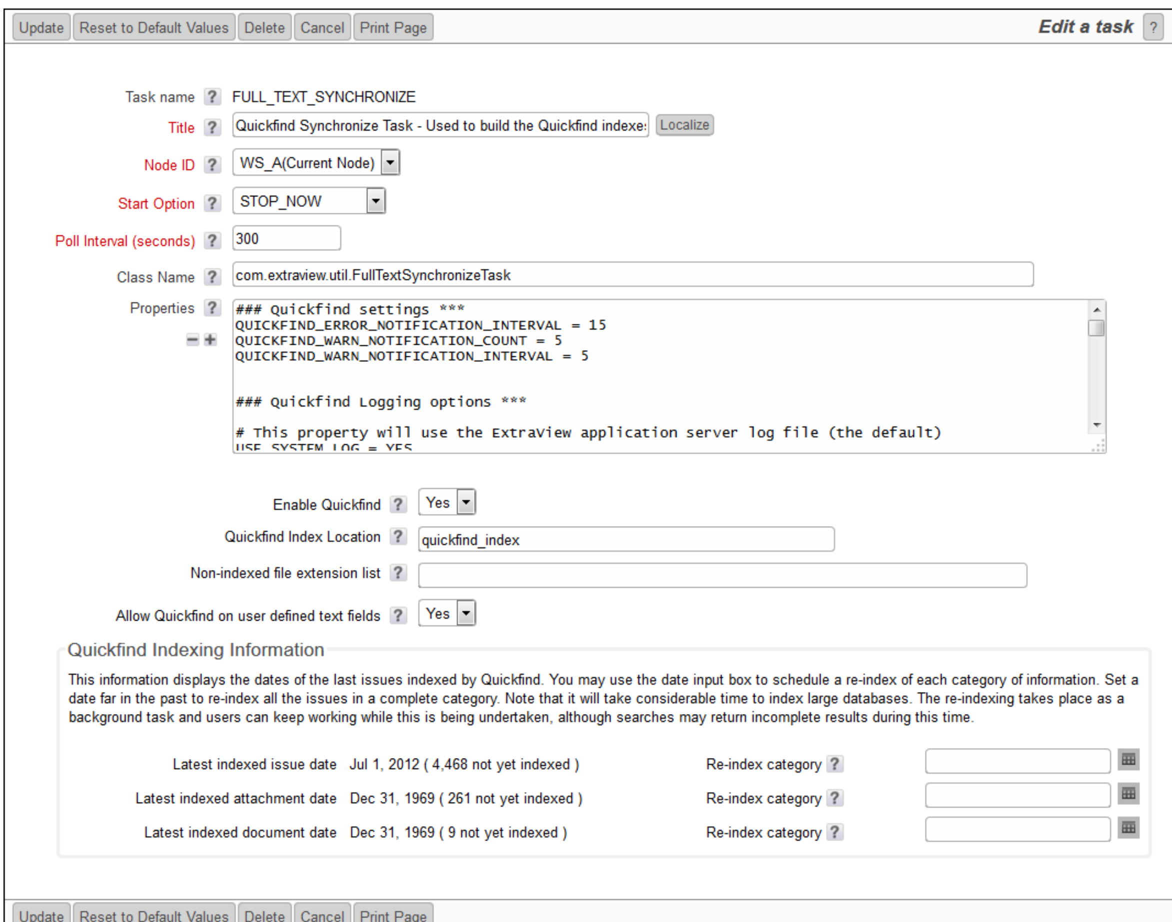
- MIME type must not be any kind of video, audio, or image
- MIME type is mapped to an extractor – see MIME type extractors below

First-time Setup

If your database contains a significant amount of text, you should follow the process within the Installation Guide, at t [Quickfind](#) before following this page to configure and start the Quickfind task.

The basic setup and configuration of the Quickfind task is accomplished on the **Admin** ==> **Task Manager** screen.

- First, *Add a new task*, and select the *Quickfind Synchronization Task*
- Select a Node ID on which to run the task. You must not run the task on more than one node within a clustered s so, you risk corrupting the indexes created with the utility
- Set the Start Option to *STOP_NOW*. More configuration is required before starting the task
- You can set the frequency with which the task runs with the Poll Interval. It is recommended that this is set betw seconds. The default is 300 seconds
- Do not alter the class name of the task
- If you enter an absolute path to the index files in the **Quickfind Index Location**, and the path already exists, th named QUICKFIND_INDEX is updated to reflect that path. If the path does not exist when you create the task created, but you will encounter an error, and you are taken to the edit mode, where you can correct the path. Su index names are:
  - **C:\ExtraView\<instance name>\<*index name*>** on Microsoft Windows platforms, e.g. C:\ExtraView\QuickfindIndex
  - **/usr/local/extraview/<instance name>/<*index name*>** on Linux and Unix platforms, e.g. /usr/local/ExtraView/QuickfindIndex
  - On an NFS mount, include this fact in the index name by using the convention nfs:pathname
- The behavior setting is updated with the index name you supply
- Click **Add** to create the task
- Notice that the **Task Manager** screen now shows the FULL_TEXT_SYNCHRONIZATION Quickfind Synchro
- Click on the *Edit* button of the Quickfind Synchronize task. You will now see a screen that looks similar to the f



- Notice the new configuration options that are now displayed
- Set *Enable Quickfind* to a value of *Yes*
- Enter the path to the location where the index files are to be stored on your file system. If you will use the defau explained below, you can skip this step. All application servers within a clustered server environment must have access to the index file location. The index location is also the value stored in the behavior setting named QUICKFIND_INDEX_LOCATION. Further, you must make sure you have sufficient disk space to store the in grow. The amount of disk space is highly dependent on the quantity of text and number of fields being stored
- The prompt **Allow Quickfind on user defined text fields** determines whether the text within all the user define indexed. The recommendation is that you set this to *Yes*
- Observe the dates on which files were last indexed, and the count of files still to be indexed
- If this is new site with no issue data, then you may now set the value of the *Start Option* to START_NOW, and start the Quickfind synchronization task and begin to index issues as they are entered by users
- If the site that has existing data and you have not already done so, run the external utility named FullTextIndexS described on the page Quickfind in the Installation Guide at the page Quickfind. The utility creates the Quickfir fell swoop, in a fast manner. After completing this indexing operation, you can return to this screen, and set the *Option* to START_NOW, and **Update**
- If you need to re-index all or part of the issue data within your database, the bottom section of the screen provid can re-index just the issue data, just the attachments or just the data within document field types, or all of these, date within each category. To re-index the complete database, put a date in each of the fields, earlier than the da was first entered into the site, and then press **Update**. On a large site it can take a considerable amount of time but your users may continue accessing the site in the meantime. Obviously, some searches may not return comp can use this screen to see the progress and how many items remain to be indexed
- If the behavior setting QUICKFIND_INDEX_ENUMERATED is set to a value of YES, then an additional pror the administrator to re-index the list field values will also appear on the screen.

Quickfind Properties

The following properties may be set to aid in the running of Quickfind or the investigation of problems:

Property	Purpose
QUICKFIND_ERROR_NOTIFICATION_INTERVAL	The minimum number of minutes between subsequent erro notifications; this prevents multiple emails to the administr there is a persistent warning condition
QUICKFIND_WARN_NOTIFICATION_COUNT	The number of warnings in the warning notification interva notification email is sent. It is typically acceptable to have warnings before a warning is sent
QUICKFIND_WARN_NOTIFICATION_INTERVAL	The number of minutes in which the warning count specifi in QUICKFIND_WARN_NOTIFICATION_COUNT must notification email is sent
USE_SYSTEM_LOG	If this has a value of YES, then the ExtraView application s will be used, as opposed to using the log file specified in ei LOG_FILE_PATH_NAME or LOG_FILE_PATH_NAME_ If this is set to YES, do not use LOG_FILE_PATH_NAME LOG_FILE_PATH_NAME_ABSOLUTE
LOG_FILE_PATH_NAME	The relative pathname to the log file. If this is used, set USE_SYSTEM_LOG to a value of NO and do not use LOG_FILE_PATH_NAME_ABSOLUTE
LOG_FILE_PATH_NAME_ABSOLUTE	The absolute pathname to the log file. If this is used, set USE_SYSTEM_LOG to a value of NO and do not use LOG_FILE_PATH_NAME
PSP_LOG	Set this to a value of YES if you need to see the SQL stater by the task in the log
XML_LOG_FLAG	Set this to TRUE if you want the log statements to be gene

Modifying the Indexing Properties

- Use the **Allow Quickfind on user defined text fields** selector on the maintenance screen to choose whether to i defined text fields
- Use the behavior setting named QUICKFIND_INDEX_ENUMERATED to determine whether to index the title text fields
- Use the behavior setting named QUICKFIND_INDEX_USERS to determine whether to index user names with indexes

MIME Type Extractors

There are two text extractors:

1. PDF Text Extractor: uses iText PdfReader object to tokenize the PDF strings. Document content will NOT be in marked as being “encrypted”
2. Office Text Extractor: uses one of the POI extractors appropriate to the type (Word, Excel, Powerpoint, Outlook Visio). Note: if Excel text extractor fails, it tries to extract text assuming it is a comma-separated or tab-separate Excel MIME type
3. Other MIME type documents are indexed as text

Updating Quickfind

The instructions to update Quickfind are found here.

Notes

As stated above, Quickfind utilizes the Apache Lucene software to provide the indexing mechanism. One support issu Java Virtual Machine, or your application server (Apache Tomcat or similar) crashes for any reason, then the indexes r locked state on the server.

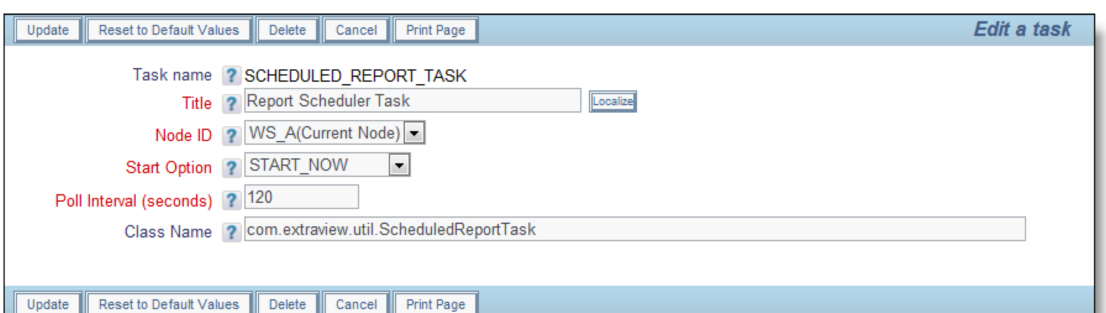
The lock files are kept in the directory specified by the **org.apache.lucene.lockdir** system property if it is set, or by d directory specified by the **java.io.tmpdir** system property (on Unix boxes this is usually **/var/tmp** or **/tmp**). If for so **java.io.tmpdir** is not set, then the directory path you specified to create your index is used.

Lock files have names that start with *lucene-* followed by an MD5 hash of the index directory path. If you are certain t not in use, you can delete it manually.

Report Schedule Task

When ExtraView is first installed this task is not set to start and no reports may be scheduled for delivery at specific ti order to allow reports to be scheduled for email delivery by users, the **Report Schedule** task must be configured. The must also be configured as this is used to deliver the mail once the report is generated by the schedule task.

Note that the default polling interval for the task is 120 seconds. If you are unlikely to have users schedule many repor critical for recipients to receive these reports on time, consider making this interval longer.

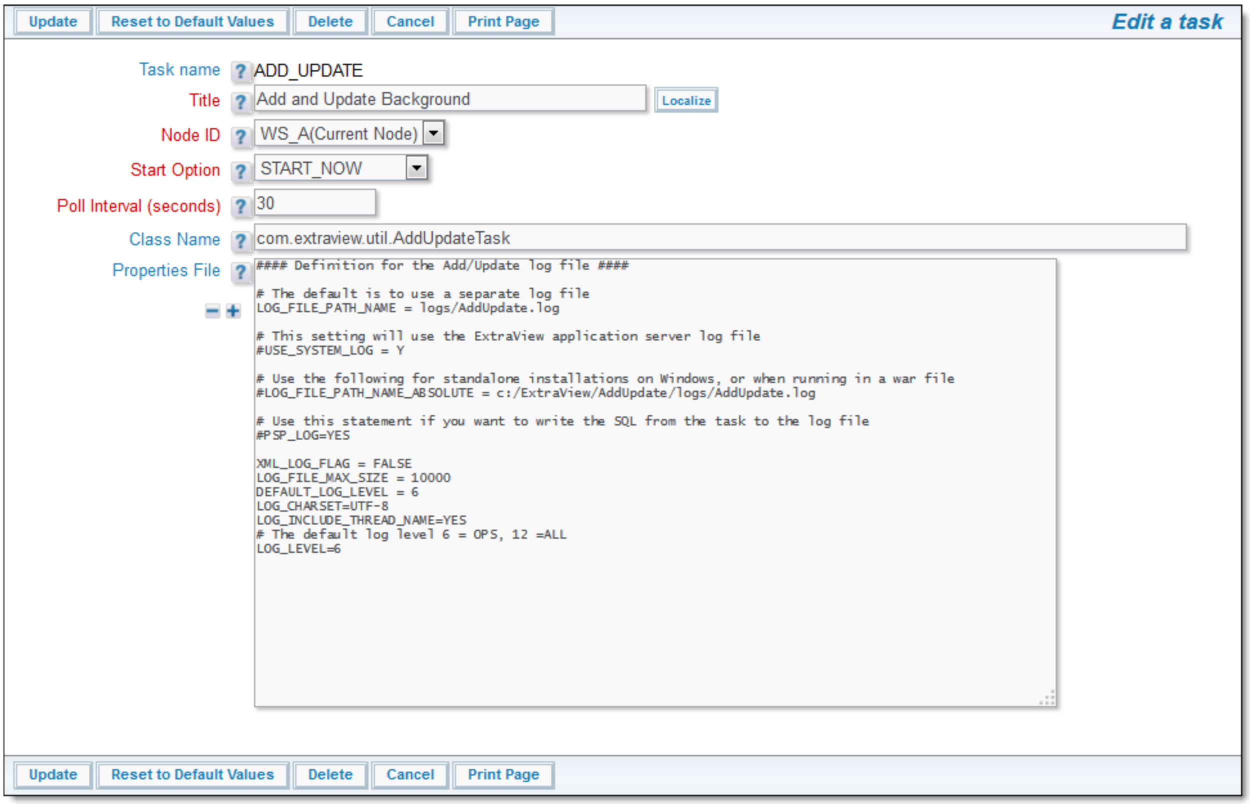


Add / Update Task

The Add / Update task is responsible for the following actions:

- It actions the NOWAIT option with Business Rules. The option works with the ADD, COPY and UPDATE acti task is not configured, the updates from ADD, COPY and UPDATE rules are queued, but never applied.
- The task handles issue import from the administrative File Import Utility. This allows the import of issues to ha background, thereby speeding the utility. Generally, Add / Update tasks that are configured to run on nodes oth where the file import originated can participate in the parallelism of inserts and updates, thereby speeding the o However, if there are images, documents or attachments that are part of the imported issue, then the insert/upda completed by the originating node. There is nothing for the user to do to ensure this, but the parallelism will be those update/inserts are dedicated to a single node.

The task is configured on the following screen:



Task manager for adding / updating tasks

The task should be run on a single node a clustered environment. A suitable poll time is 30 seconds as the task takes li the server. The options within the properties manage the log file options as follows:

Property	Function
LOG_FILE_PATH_NAME	Specifies the path name to the log file, relative to the WEB-INF director
USE_SYSTEM_LOG	This is an alternative to using a log file solely for the Add / Update log, interleave the log messages with the standard ExtraView application ser
LOG_FILE_PATH_NAME_ABSOLUTE	This is used as an alternative to the previous two options, and is used for

LOG_INCLUDE_THREAD_NAME	Includes or excludes the thread name in the log output
LOG_LEVEL	The level of log messages, from 1 to 12. The default level is 6. Increasin increases the number of log messages

Extraview - ExtraView Integration Task

The ExtraView - ExtraView peer daemon synchronizes items and specific metadata between two ExtraView instances mappings and filters configured in a configuration file.

This configuration file is part of an ExtraView task.

The synchronization supports all field types stored in the database with item data, including file attachments. Item rela also synchronized. The daemon synchronizes specific metadata objects such as list values and allowed values combin However, metadata such as field definitions, layouts, rules and other metadata is not synchronized – these objects are XML export / import feature.

The feature is fully described in the [Extraview - ExtraView Instance Integration] section of these guides.

Add the task, then use the above link to configure the integration of two or more ExtraView instances.

LDAP Background Task

This task should only be configured when you are connecting your installation to an LDAP server. It is optional to run it is running, it will synchronize the LDAP server data that is required within ExtraView, on a periodic basis. This avo reaching out to the LDAP server for user information on each occasion it is required, and uses the information previou ExtraView. Simply adding, or editing may often require reading many users' details, and this task makes this operatior efficient. This task should be configured in preference to the *LDAP Synchronization Task*. You should not configure b

Without this task being started, ExtraView makes a call to the LDAP server for each and every requirement for any us that is required. This ensures that ExtraView always receives up-to-date information. Unless the LDAP server is confi high speed delivery of all responses, this can lead to minor delays in the processing within ExtraView and a resultant s end users.

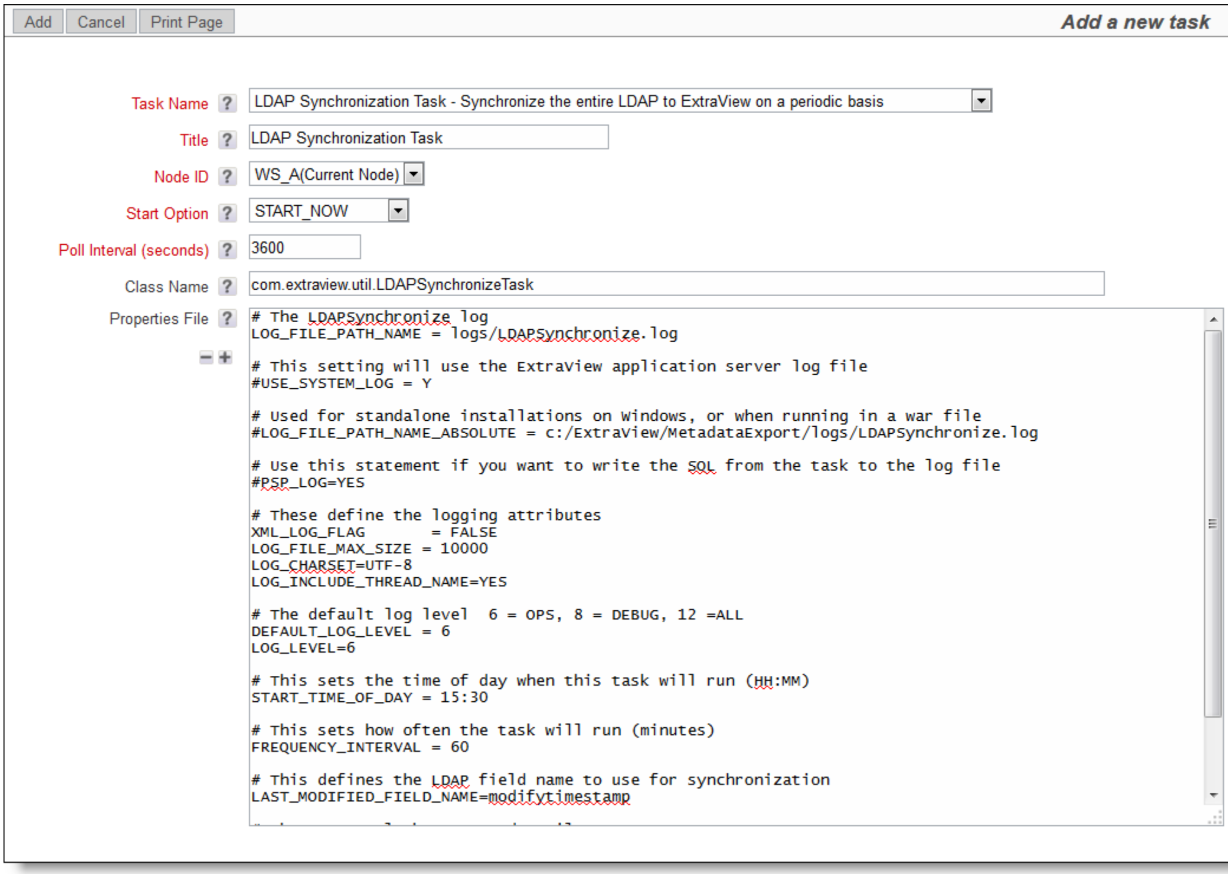
However, user data within an LDAP server is typically "slow-moving", and changes infrequently. This task will refres users whose information is stored within ExtraView on a timed basis. There is a possibility that the user's data may ha LDAP server, but as long as the poll interval is kept to a modest time, the chances are that the cached data within Extr correct.

This task should only be run on a single node within a clustered environment.

LDAP Synchronization Task

This task should only be configured when you are connecting your installation to an LDAP server. It is optional to run it is running, it will synchronize the all LDAP server data on a periodic basis that is defined in the task configuration. ExtraView reaching out to the LDAP server for user information as it is required, and uses the information previously ExtraView. Unless you require the synchronization of all the data in your LDAP server, you should configure the *LDA Task* as opposed to this task. You should not configure both this task and the *LDAP Background Task*.

Without this task, ExtraView makes a call to the LDAP server for each and every requirement for any user's informati required. This ensures that ExtraView always receives up-to-date information. Unless the LDAP server is configured speed delivery of all responses, this can lead to minor delays in the processing within ExtraView and a resultant slow



The purpose of the properties in the configuration are as follows:

Property	Purpose
DEFAULT_LOG_LEVEL	The default is 6 for normal operations, but you may set this tc increasing number of log messages. Only use `8` or `12` when dc
DISABLED_USER_LDAP_SEARCH_FILTER	This property specifies a search filter that selects users that ha disabled or removed in the LDAP server. This property overr behavior setting named LDAP_SEARCH_FILTER
EARLIEST_SYNCHRONIZATION_TIMESTAMP	This setting specifies a timestamp that will be used, instead o taken from the database table named TABLE_TIMESTAMP. the synchronization tasks' run times. This timestamp is only u if, the timestamp in the table is earlier than the specified time timestamp within the property must be in the format: YMMddHHmmss'Z
ENABLED_USER_LDAP_SEARCH_FILTER	This property specifies a search filter that selects only users tl in the LDAP server. This overrides the behavior setting name LDAP_SEARCH_FILTER
FREQUENCY_INTERVAL	Once the task runs, this is the number of minutes before the ta again. In the example of the previous property, you could set order to run the task once each day at 3:00 AM. `1440` is the d this property, if it is not set
	This defaults to a value of `7`. It may have one of the followin

GT_FRACTION_DELIMITER	This defaults to a value of `DOT`. It may have one of these valu • `DOT` • `COMMA`
GT_FRACTIONAL_DIGITS	This setting is a positive integer that indicates the number of fractional part of the generalized time. The default value is `3`
GENERALIZED_TIME_FORMAT	This setting has a default value of YEAR_MONTH_DAY_HOUR_MIN_FRACTION. The cor values that may be set are: • `YEAR_MONTH_DAY_HOUR` • `YEAR_MONTH_DAY_HOUR_FRACTION` • `YEAR_MONTH_DAY_HOUR_MIN` • `YEAR_MONTH_DAY_HOUR_MIN_FRACTION` • `YEAR_MONTH_DAY_HOUR_MIN_SEC` • `YEAR_MONTH_DAY_HOUR_MIN_SEC_FRACTION`
LAST_MODIFIED_FIELD_NAME	When synchronizing with the LDAP server, you use this prop the field within the LDAP that can be used to ensure you only that has changed since the last occasion on which the synchro ran. For example, if you have 50,000 names in your LDAP, a handful change each day, then you only want to retrieve and s changed names. Specification of this property generates an L similar to: <att name> >= <last synchronization run time> where <last synchronization run time> is the Generalized Tin the date/time (in GMT time zone) of the last synchronization this task
LOG_CHARSET	The character set of the log file. Normally this is `UTF-8`
LOG_FILE_MAX_SIZE	The maximum size of the log file in kB, before it is archived file started
LOG_FILE_PATH_NAME	The path and name to the log file for the task. This path name the WEB-INF folder
LOG_FILE_PATH_NAME_ABSOLUTE	This provides an absolute path name to the log file as an alter LOG_FILE_PATH_NAME. This is useful if you are running Windows, or running ExtraView within a WAR file
LOG_INCLUDE_THREAD_NAME	When set to `YES`, the thread name of the task running on the s in the task log
PSP_LOG	This is useful for debugging purposes only and should be con set to NO. If it is set to YES, then ExtraView logs all the SQL generated by the task
RUNTIME_ERROR_NOTIFICATION_INTERVAL	The number of minutes between sending emails when an erro the administrator is notified
RUNTIME_WARN_NOTIFICATION_COUNT	The minimum number of warning occurrences in the notificat time period before an administrator notification email is sent
RUNTIME_WARN_NOTIFICATION_INTERVAL	The number of minutes during which warnings are counted b notification email is sent to the administrator
	The time of day to start the task running. This is useful if you

User Management Task

It is often useful to notify users before their passwords expire. The administrator may set policies to force users to up passwords. This is achieved within the User Maintenance screens along with the default behavior setting named PASSWORD_EXPIRE_TIME_DAYS.

The task named **User Management Task** allows each user to be notified a certain number of days before their passwo email.

To configure this feature, follow these steps from the Task Management administrative utility:

1. Navigate to the operational administrative utility named **Email Templates**. Create an email template that is to b communicate with users in advance of their password expiring. The template may contain the following tags w substituted with the appropriate values when an email warning is sent to a user:
    1. __TITLE__ is the value taken from the behavior setting named EXTRAVIEW_TITLE
    2. __COMPANY_NAME__ is the value taken from the behavior setting named COMPANY_NAME
    3. __SITE_URL__ is the value taken from the behavior setting named SITE_URL
    4. __USERID__ is the value of the user's USER ID which is about to expire
    5. __PASSWORD_DAYS_LEFT__ is the value from the task property whichis the number of days before the password
2. Click the **Add a new task** button
3. Select **User Management Task** from the list of Task Names
4. Set the **Node ID** where you want the task to run. You should only create a single instance of the task on a singl work across the entire system
5. Set the poll interval for the task. This has a default of 86,400 seconds, i.e. the task will run once per day
6. Set the warning period before password expiry via the property named PASSWORD_EXPIRY_WARNING_D
7. Set the name for the email template that yo created in the first step within the property named PASSWORD_EXPIRY_MSG_TEMPLATE. This email template defines the contents of the email that is to be when they are PASSWORD_EXPIRY_WARNING_DAYS before the password expires
8. **Add** the task.

Note that the notifications to the user will continue until the user's password expires, at which point they will cease.

ExtraView System Logs

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to use this feature without contacting ExtraView support. There are four primary logs used within ExtraView to record i activities and errors.

- **Sign On Log**. This records all sign on and sign off activities, and any unauthorized access attempts. Please cons Administration section of this guide for information on this log and how to use it.
- **System Log**. This records all metadata transactions. Please consult the System Controls section of this guide fo this log and how to use it.
- **Application Server Log**. This records each entry and departure of each access to the ExtraView servlet. This lo record of who performed what accesses, and how long each access took to perform.
- **BatchMail Log**. This records the flow of email notifications from ExtraView.

Application Server Log

The application server log is not resident within ExtraView. The administrator normally accesses this log from the file

A typical section of the log file in plain text may look like this:

```
2003-07-17 17:45:46 [ info  ] ExtraView.,6544,Thread-31,>>>Entering
service,security.LoginDisplay.getMenu,sc,0,tmem,126,fmem,75,,,,,uid,SHOYDIC,nid,http://avalon.extr
aview.net/med ON WS_A:
2003-07-17 17:45:46 [ info  ] ExtraView.,6544,Thread-31,>>>Leaving
service.security.LoginDisplay.getMenu
,sc,0,tmem,126,fmem,75,cc,22,time,20,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:46 [ info  ] ExtraView.,6544,Thread-21,>>>Entering
service,security.LoginDisplay.getMain,sc,0,tmem,126,fmem,75,,,,,uid,SHOYDIC,nid,http://avalon.extr
aview.net/med ON WS_A:
2003-07-17 17:45:46 [ info  ] ExtraView.,6544,Thread-21,>>>Leaving
service.security.LoginDisplay.getMain
,sc,0,tmem,126,fmem,75,cc,22,time,10,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:46 [ info  ] ExtraView.,6544,Thread-31,>>>Entering
service,Display.doEditDisplay,sc,0,tmem,126,fmem,75,,,,,uid,SHOYDIC,nid,http://avalon.extraview.ne
t/med ON WS_A:
2003-07-17 17:45:46 [ info  ] ExtraView.,6547,Thread-29,>>>Leaving service.Display.evSignon
action ,sc,1,tmem,126,fmem,72,cc,24,time,54,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON
WS_A:
2003-07-17 17:45:47 [ info  ] ExtraView.,6547,Thread-15,>>>Entering
service,security.LoginDisplay.getMenu,sc,1,tmem,126,fmem,82,,,,,uid,SHOYDIC,nid,http://avalon.extr
aview.net/med ON WS_A:
2003-07-17 17:45:47 [ info  ] ExtraView.,6547,Thread-29,>>>Entering
service,security.LoginDisplay.getMain,sc,2,tmem,126,fmem,82,,,,,uid,SHOYDIC,nid,http://avalon.extr
aview.net/med ON WS_A:
2003-07-17 17:45:47 [ info  ] ExtraView.,6547,Thread-29,>>>Leaving
service.security.LoginDisplay.getMain
,sc,2,tmem,126,fmem,82,cc,24,time,10,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:47 [ info  ] ExtraView.,6547,Thread-15,>>>Leaving
service.security.LoginDisplay.getMenu
,sc,1,tmem,126,fmem,82,cc,24,time,27,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:47 [ info  ] ExtraView.,6547,Thread-15,>>>Entering
service,Display.doEditDisplay,sc,1,tmem,126,fmem,76,,,,,uid,SHOYDIC,nid,http://avalon.extraview.ne
t/med ON WS_A:
2003-07-17 17:45:48 [ info  ] ExtraView.,6545,Thread-31,>>>Leaving service.Display.doEditDisplay
,sc,0,tmem,126,fmem,74,cc,25,time,1842,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:48 [ info  ] ExtraView.,6548,Thread-15,>>>Leaving service.Display.doEditDisplay
,sc,1,tmem,126,fmem,82,cc,25,time,1322,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:48 [ info  ] ExtraView.,6544,Thread-21,>>>Entering
service,security.LoginDisplay.doMenuLoadDone,sc,0,tmem,126,fmem,81,,,,,uid,SHOYDIC,nid,http://aval
on.extraview.net/med ON WS_A:
2003-07-17 17:45:48 [ info  ] ExtraView.,6544,Thread-21,>>>Leaving
service.security.LoginDisplay.doMenuLoadDone
,sc,0,tmem,126,fmem,81,cc,25,time,10,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:45:49 [ info  ] ExtraView.,6547,Thread-29,>>>Entering
service,security.LoginDisplay.doMenuLoadDone,sc,0,tmem,126,fmem,81,,,,,uid,SHOYDIC,nid,http://aval
on.extraview.net/med ON WS_A:
2003-07-17 17:45:49 [ info  ] ExtraView.,6547,Thread-29,>>>Leaving
service.security.LoginDisplay.doMenuLoadDone
,sc,0,tmem,126,fmem,81,cc,25,time,10,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
2003-07-17 17:46:08 [ info  ] ExtraView.,6537,Thread-24,>>>Entering
service,search.SearchDisplay.doDisplay,sc,0,tmem,126,fmem,81,,,,,uid,SHOYDIC,nid,http://avalon.ext
raview.net/med ON WS_A:
2003-07-17 17:46:08 [ info  ] ExtraView.,6537,Thread-24,>>>Leaving
service.search.SearchDisplay.doDisplay
,sc,0,tmem,126,fmem,77,cc,25,time,400,uid,SHOYDIC,nid,http://avalon.extraview.net/med ON WS_A:
```

- Each entry begins with a timestamp
- Each “>>> Entering Service” message has a corresponding “>>>Leaving Service” log entry. This allows a trace to ExtraView, from the moment the request is made, to the moment the request has been serviced, and ExtraVie

timestamp	The date and time of the entry
log entry type	Normal entries will be shown as INFO. You may also see entries such as ERROR and WARNING
Servlet name	Should always be ExtraView
session ID	A unique identifier for the session
thread #	The thread number that this task is using for execution
Entering / Leaving	Shows whether the task is beginning or ending
class and method entered	This is the class path and the method within the class that is being executed
Service count ***sc***	The number of processes waiting for service at the instant this request is received. The lower this nun the performance of the system. For short periods of time, this number may exceed 5, but this indicate: waiting upon machine resources to execute their tasks. Setting up multiple application servers that ea the load is a good solution if this number is consistently high
total memory available ***tmem***	The total memory allocated to this application server. Usually set by the administrator within the start the application server
free memory available ***fmem***	The amount of unused memory. If this drops to a very low number, out of memory errors may occur. allocate more total memory to this application server
cache count ***cc***	The total number of user sessions in cache at the time this request is executed.
time	The time, in milliseconds, that the request took to execute
“morgue” count ***mc***	The number of sessions currently in the “morgue”. ExtraView allocates sessions to each user to perfo every task such as add or update issues, or to run reports. The server stores information about these se retains the information for as long as is needed. Given browser windows may be closed unexpectedly may be left open for an indeterminate amount of time, the session information is held on the server ui signs off or their session expires. So that the sign off does not take excessive time, the sessions are no time, but are flagged as being in the “morgue”. The ExtraView background task named *session monit* at a later time and permanently removes the sessions in the morgue, thus killing them permanently.
user ID ***uid***	The user ID of the person who made the request
network ID ***nid***	The network ID and node name within an application server cluster that made the request

Errors in the Application Server Log

Errors in the log are generated by ExtraView when it encounters an unexpected event or a programming error. Not all indeed, it is possible to see an error in the log that has absolutely no consequences to the user of ExtraView who cause However, ExtraView endeavors to minimize all programming errors and exceptions in the log. An exception in the log the following error. This error occurred due to a programming error in a pre-release copy of ExtraView.

```
2003-07-07 12:22:07 [  info   ] ExtraView.,5388,Thread-15,>>>Entering
service,admin.LayoutDisplay.doEdit,sc,0,tmem,126,fmem,106,,,,,uid,ADMIN,nid,http://avalon.extravie
w.net/med ON WS_A:
2003-07-07 12:22:09 [  ERROR] PSP: Invocation Target is:java.sql.SQLException: ORA-00001: unique
constraint (MED.PK_TITLE_MAP) violated
2003-07-07 12:22:09 [  ERROR] PSP: SQL was:  insert into title_map (title_map_key, language,
region, variant, text , date_created, last_date_updated, last_updated_by_user, created_by_user)
values (?, ?, ?, ?, ?,  SYSDATE ,  SYSDATE , ?, ?)
2003-07-07 12:22:09 [  ERROR] PSP: Bind Values are: '6436','ja','JP',' ','null','ADMIN','ADMIN'
2003-07-07 12:22:09 [  ERROR] PSP: SQL State is:23000
2003-07-07 12:22:09 [  ERROR] Exception = java.sql.SQLException: ORA-00001: unique constraint
(MED.PK_TITLE_MAP) violated
java.sql.SQLException: ORA-00001: unique constraint (MED.PK_TITLE_MAP) violated

        at oracle.jdbc.dbaccess.DBError.throwSqlException(DBError.java:180)
        at oracle.jdbc.ttc7.TTIoer.processError(TTIoer.java:208)
        at oracle.jdbc.ttc7.Oall7.receive(Oall7.java:543)
        at oracle.jdbc.ttc7.TTC7Protocol.doOall7(TTC7Protocol.java:1451)
        at oracle.jdbc.ttc7.TTC7Protocol.parseExecuteFetch(TTC7Protocol.java:862)
        at oracle.jdbc.driver.OracleStatement.executeNonQuery(OracleStatement.java:1839)
        at oracle.jdbc.driver.OracleStatement.doExecuteOther(OracleStatement.java:1764)
        at oracle.jdbc.driver.OracleStatement.doExecuteWithTimeout(OracleStatement.java:2354)
        at oracle.jdbc.driver.OraclePreparedStatement.executeUpdate
             (OraclePreparedStatement.java:421)
        at sun.reflect.GeneratedMethodAccessor13.invoke(Unknown Source)
        at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)
        at java.lang.reflect.Method.invoke(Method.java:324)
        at com.extraview.util.PreparedStatementProxy.invoke(PreparedStatementProxy.java:91)
        at oracle.jdbc.driver.$Proxy1.executeUpdate(Unknown Source)
        at com.extraview.util.Message.insertOneTitle(Message.java:611)
        at com.extraview.util.Message.insertTitle(Message.java:580)
        at com.extraview.applogic.layout.LayoutElementAttribute.executeTransaction
               (LayoutElementAttribute.java:244)
        at com.extraview.applogic.layout.LayoutElement.insertAttributes(LayoutElement.java:495)
        at com.extraview.applogic.layout.LayoutElement.executeTransaction(LayoutElement.java:344)
        at com.extraview.applogic.layout.Layout.insertElements(Layout.java:1388)
        at com.extraview.applogic.layout.Layout.executeTransaction(Layout.java:1131)
        at com.extraview.applogic.fltool.LayoutDbMaster.executeSave(LayoutDbMaster.java:390)
        at com.extraview.applogic.fltool.LayoutDbMaster.saveLayout(LayoutDbMaster.java:303)
        at com.extraview.presentation.fltool.FlexibleLayout.service(FlexibleLayout.java:494)
        at com.extraview.presentation.admin.LayoutDisplay.doEdit(LayoutDisplay.java:362)
        at sun.reflect.GeneratedMethodAccessor24.invoke(Unknown Source)
        at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)
        at java.lang.reflect.Method.invoke(Method.java:324)
        at ExtraView.service(ExtraView.java:250)
        at javax.servlet.http.HttpServlet.service(HttpServlet.java)
        at org.apache.tomcat.facade.ServletHandler.doService(Unknown Source)
        at org.apache.tomcat.core.Handler.invoke(Unknown Source)
        at org.apache.tomcat.core.Handler.service(Unknown Source)
        at org.apache.tomcat.facade.ServletHandler.service(Unknown Source)
        at org.apache.tomcat.core.ContextManager.internalService(Unknown Source)
        at org.apache.tomcat.core.ContextManager.service(Unknown Source)
        at org.apache.tomcat.modules.server.Ajp13Interceptor.processConnection(Unknown Source)
        at org.apache.tomcat.util.net.TcpWorkerThread.runIt(Unknown Source)
        at org.apache.tomcat.util.threads.ThreadPool$ControlRunnable.run(Unknown Source)
        at java.lang.Thread.run(Thread.java:536)

2003-07-07 12:22:10 [  info   ] ExtraView.,5388,Thread-15,>>>Leaving
service.admin.LayoutDisplay.doEdit
,sc,0,tmem,126,fmem,109,cc,1,time,2630,uid,ADMIN,nid,http://avalon.extraview.net/med ON WS_A:
```

When you encounter an error condition in ExtraView, the ExtraView support team may ask you to examine the applic

Significant problems can be understood by correctly interpreting the log.

As part of debugging problems you may want to change Configuration.properties values such as DEBUG_LEVEL an There is a URL that allows you to make an API call to ExtraView to change the values of the parameters in the CONFIGURATION.PROPERTIES file, without needing to restart the application server. This is of the form:

```
user_id=username
&password=password
&statevar= SET_CONFIG_VALUE
&name=parameter_name
&value=YES
```

An example may be:

http://www.myserver.com/evj/ExtraView/ev_api.action?user_id= bsmith&password=bill&statevar=SET_CONFIG_V name=PSP_LOG& value=YES

BatchMail Log

BatchMail is a separate Java program that is started by ExtraView when it starts, or when your server is booted. This that processes email notifications when they are output from ExtraView. ExtraView does not send email notifications SMTP mail server. This is because if the server goes down for any reason, ExtraView may end up waiting (and waitin

Instead, ExtraView writes each email notification sent to a temporary directory. The path to the mail directory where t program resides is specified within the Configuration.properties file for ExtraView. This file is stored within the Extra directory. The path is defined within the within the entry named MAILBOX. For example, in an Apache Tomcat insta ExtraView with a home directory of /evj, the path to the log file may be similar to /evj/tomcat/webapps/golden411/WI INF/BatchMail/logs.

An excerpt from a BatchMail log file follows.

```
2003-07-18 15:47:52 [  ALERT] mail.send() executed ExtraView Notification [10000]:  Unassigned-
Newly reported issue concerning XY module
  to--->ed@baumanns.org in 0 seconds
2003-07-18 15:51:18 [  ALERT] mail.send() executed ExtraView Notification [10001]:  Unassigned-
bug created by sweng1, assigned to qaeng1
  to--->ed@baumanns.org in 0 seconds
2003-07-18 15:56:15 [  ALERT] mail.send() executed ExtraView Notification [10001]:  Unassigned-
bug created by sweng1, assigned to qaeng1
  to--->ed@baumanns.org in 0 seconds
2003-07-18 18:06:07 [  ALERT] mail.send() executed Open[19397]-[P 3]-[Admin Admin] overriding
value for title
  to--->leeann@extraview.com in 0 seconds
2003-07-18 18:06:09 [  ERROR] Error Occured ... javax.mail.SendFailedException: Sending failed;
  nested exception is:
        javax.mail.SendFailedException: Invalid Addresses;
  nested exception is:
        javax.mail.SendFailedException: 550 unknown user

2003-07-18 18:06:09 [  ERROR] Error Occured processing file 19397HtmlQA1058576763923.html for
dpuiia@extraview.com
2003-07-18 18:06:09 [  ERROR] Renaming
/usr/local/extraview/BatchMail/mailbox/19397HtmlQA1058576763923.html to
:/usr/local/extraview/BatchMail/mailbox/__19397HtmlQA1058576763923.html
2003-07-18 18:07:15 [  ALERT] mail.send() executed Open[19398]-[P 3]-[Admin Admin] overriding
value for title
  to--->lpultz@extraview.com in 0 seconds
2003-07-18 18:07:15 [  ALERT] mail.send() executed Open[19398]-[P 3]-[Admin Admin] overriding
value for title
  to--->robbie@extraview.com in 0 seconds
2003-07-18 18:07:15 [  ALERT] mail.send() executed Open[19398]-[P 3]-[Admin Admin] overriding
value for title
  to--->support@extraview.com in 0 seconds
```

front of the original mail.

Site Configuration Menu

The Site Configuration menu contains the majority of functions used to configure and set up your installation.

Design Center

The Design Center is the principal area where all screen forms and built in user reports, along with the formatting and them, is configured. The screen forms and built-in reports are designed using **layouts**. You may also create and design layouts, embedding them within the built-in layouts. In this way you can build reuseable layouts that can be embeddec other layouts.

The design center is where you bring together fields, embedded layouts, along with attributes to build the finished lay *Issue*, *Edit Issue*, *Query Filters* and other screen layouts. In addition, built in reports such as the *Quicklist* and the *Det* use layouts defined within the Design Center. Layouts can be defined for different user roles within your system, offer amount of flexibility. See the section on Inheritance for additional details. Each layout is built on top of a **Layout Typ** create and define fields within the Design Center, or you may use the Data Dictionary for this purpose.

Layouts work in conjunction with security permissions for each field. Therefore, simply placing a field on a screen do automatically give all users the ability to read or write to the field. You can alter the permissions to each field within tl or you may use the Security Permissions option to define which fields are visible and updateable to each group of user privilege for the field overrides the fact that a field may be placed on a screen or report.

A layout may be embedded within another layout. Indeed, you may specify alternate layouts that appear, dependent up specific field. For example, you may have a category field that has the values of Software, Hardware and Documentat on which value is chosen, an embedded layout can be displayed that contains the fields pertinent to gathering the infor about each of these categories. These embedded layouts may only be embedded within an *Add* or *Edit Issue* layout.

Fields within each layout may have one or more attributes defined. These layout cell attributes affect the display of th in which it is processed. For example, a layout cell attribute may provide the field with an alternate title, just for the or attribute may define that the field is only visible if another field is of a specific value. There are two special type of lay only be embedded within other layouts. These allow the definition of **Related Issue Layouts** and **Repeating Row La**

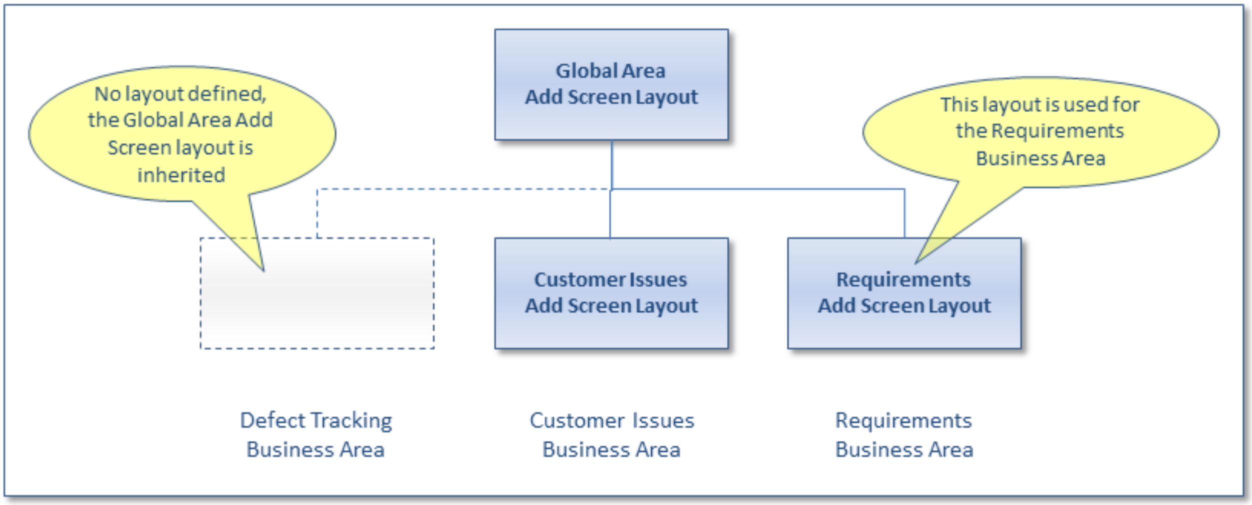
Inheritance

First, please read the Key Concepts section on Business Areas to understand the terminology used on this page. The p specific business area or project will use a layout that is defined specifically for it. If none exists, it will *inherit* a layou manner as follows:

- If a layout exists for the given business area and project, this is used
- If this does not exist, the layout that exists for this business area's master project will be inherited and used
- If this does not exist, the layout that for the global level will be inherited and used. Every inbuilt layout always (global level, and therefore is always available to be inherited if a junior layout does not exist to override its use

Inheritance is an important principle to understand, as it governs how layouts are selected for each purpose throughou Further, if you decide to create a layout for a specific purpose such as the **Add** screen within a newly created business not imply that you must create layouts for all the other layout types, such as search filters and email layouts. Each layo independently, giving tremendous flexibility and reducing the amount of setup required.

Inheritance and User Role layouts



Inheritance of layouts

Note: You should set a default value in the data dictionary, for both the Business Area and the Project fields if you hav type set to **Tab** and you intend to place the AREA and PROJECT fields on the *Add* screen layouts. However, the overr Remember Last Value. When this is set against Business Area and / or Project in the data dictionary, then the tab displ entering the Add Issue screen, will be the one last used, not the default value.

Using rules, security permissions and layout cell attributes, you can make decisions on whether field-level data entere either displayed on a second tab or is both displayed on the second tab and the values are stored with the record when updated. Consider an application where you insert and update customer information on a tab named “Customers”. You second tab named “Customer Issues” where you record issues the customers report. The approximate configuration m like this:

```
<== onchange ==>
# rules to set the customer fields in the Customer Issues area
if (CUST_LIST={CHANGED}) {
  CUST_CONTACT_NAME = (customerLink).CUST_CONTACT_NAME;
  CUST_PHONE_NUMBER = (customerLink).CUST_PHONE_NUMBER;
  CUST_ADDRESS      = (customerLink).CUST_ADDRESS;
  CUST_EMAIL        = (customerLink).CUST_EMAIL;
  CUST_PHONE_CELL   = (customerLink).CUST_PHONE_CELL;
  CUST_CONTRACT_NUM = (customerLink).CUST_CONTRACT_NUM;
}
##
## Link types - link records from different business areas
##
<== link customerLink ==> AREA='Customers',CUST_LIST=CUST_LIST
```

With the addition of each customer issue, the Customer details are saved in the Customer Issues Business Area as the selected. To not allow the user to edit the customer details, you should set the permission of each field to read/write an layout cell attribute on each filed in the Customer Issue layout to have a READ ONLY IF value. For example, set the CUST_ADDRESS field to be read only if the ID is not null. This will always be true, and therefore the field will displ to the user, but the details will be saved in each record. If you only give read access to the user, the Customer details w in the record.

How Layouts are Selected

With inheritance, and the ability to define or override an individual layout for any combination of Display Target, Use Area and Project, there is the potential for a large number of layouts in your system. Inheritance strictly controls the m an individual layout is either selected or inherited for display by the user.

When there is a choice of layouts, for the current display target, the layout is chosen using the following diagram:

The Wildcard Role infers that any role is used to determine the selection for the inheritance.

Optional Layouts

For efficiency, and to minimize the configuration effort, a few layouts are optional and are ignored if they are not pres happens, ExtraView may then default to another layout, and use this other layout instead.

Layout	Defaults To	Comments
ADD_CONFIRMATION	ADD_PROBLEM	When an issue is inserted, the behavior is to use the ADD_PROB from the inheritance path to display a verification of the issue jus most purposes this works in an obvious way and displays all the f user just entered. Occasionally, you as the administrator may war different set of fields. To accomplish this, create a layout of type ADD_CONFIRMATION in the business area and project of your inheritance path. The fields that you place onto this layout will be presented to the user when an issue is saved, as opposed to those ADD_PROBLEM layout. If the ADD_CONFIRMATION layout the ADD_PROBLEM layout is used as the verification screen
POST_EDIT_UPDATE	No Default	If this layout exists in the inheritance path, and the issue being up member of a relationship group, then this layout is rendered to gi opportunity to apply the same updates to the related issue. If the l exist, nothing is rendered, and only the current issue is updated

Layouts are a basic building block in putting together all the screen forms used within ExtraView. Layouts are all defi **type**. There are many inbuilt layout types, one for each of the basic screen forms, such as the **add**, **edit** and **detailed r** layout type has been defined, it can be reused in different business areas and projects, each with different fields as con be inherited.

You may define your own layout types. These are always used as *embedded* layouts within one of the inbuilt layout ty example, you might create a layout type titled **Customer Details** and embed this within the *Add Issue Screen* of the **C** Business Area. The layout types you define may be shared and embedded across many inbuilt layouts, within any Bu Project, Role and Display target.

Layouts are inherited at any specific Business Area from the Global Area. A new layout may be defined to override th layout within any Business Area. Within a Business Area, the default layout resides within the Master Project. Further created either inherit the layout from the Master Project, or have a specific layout defined, overriding the layout withi Project. At any level in the hierarchy you can also define different layouts for different user roles. There is a default st all roles, but this can be overridden by creating a layout for any individual user role.

Some inbuilt layout types, such as the **Related Issue Display** and the **Repeating Row Layout** can only be embedded layout types. You can create your own layout types. These are used by embedding them within an inbuilt layout. Not a can be embedded within all inbuilt layouts though. The documentation provides details.

Much of the way that layout types are used is within the Design Center; please consult this section of the guide for ad information. ExtraView has a number of default system layouts that always will exist within an installation. These are However, the administrator can create additional layout types, and create layouts using these that are embedded withi system layouts. For example, if you have a block of fields that you always want to display in the same order on severa *Edit Issue* screens, you can build these into an embedded layout, and simply include this layout within the default forn

Another use for embedded layouts is to create blocks of fields that are conditionally included in a form, dependent up specific field. For example, in a defect tracking system, you may want to include a different block of fields to record i dependent upon whether the user selects a **Category** of *Software, Hardware* or *Documentation*. At this time, embedde supported within *Search Filter* and *Report* layouts. Screen layouts can be created in a specific hierarchy, allowing ma layouts to be displayed according to your system design.

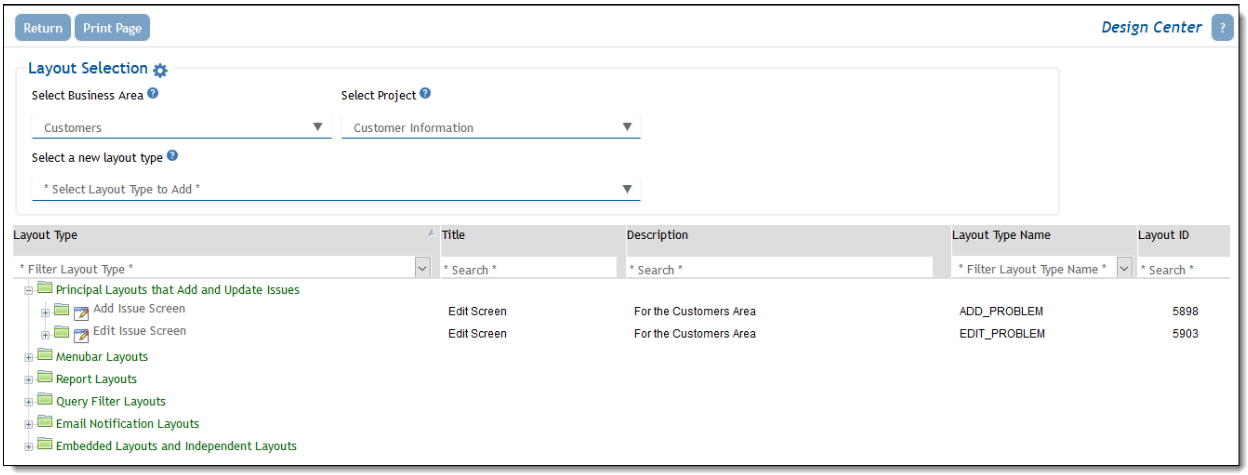
- There is always a default layout for the following screens and reports. These are provided with the default instal ExtraView and can be altered to suit your needs, although they should never be deleted:
  - Add Issue screen
  - Menubar layout
  - Attachment Section
  - Attachment History
  - Edit Issue screen
  - Brief Email Notification layout
  - Filter layout for knowledgebase on the Home Page
  - Full Email Notification layout
  - Notification Section
  - Relationship Group Email Filter
  - Relationship Group Filter for managing relationship groups
  - Related Issue Display
  - Embedded Repeating Record layout
  - Detailed Report layout
  - History Report layout
  - Quicklist Report layout
  - Full Search filter screen
  - Quick Search filter screen
  - Chart Filter screen
  - Search Aging Report
- Each of these layouts is described within ExtraView with a Layout Type. A different Layout Type exists for eac

- Security privileges set for all fields will take precedence over the placement of a field on a layout. Thus, you car layout for many user roles, but control the visibility and use of all fields simply, with security
- It is important to always include the ID field on the *add* and the *edit* layouts. This is because this is the key iden issue you create or identify. However, if you do not want the field to be visible, then you can use a layout cell at field
- Layouts for add, edit and query screens allow the titles for the fields that they contain, to be rendered to the top the value field.

Note: The initial installation of ExtraView provides a standard layout for all inbuilt screens and reports. These can be organization.

Creating & Updating Layouts

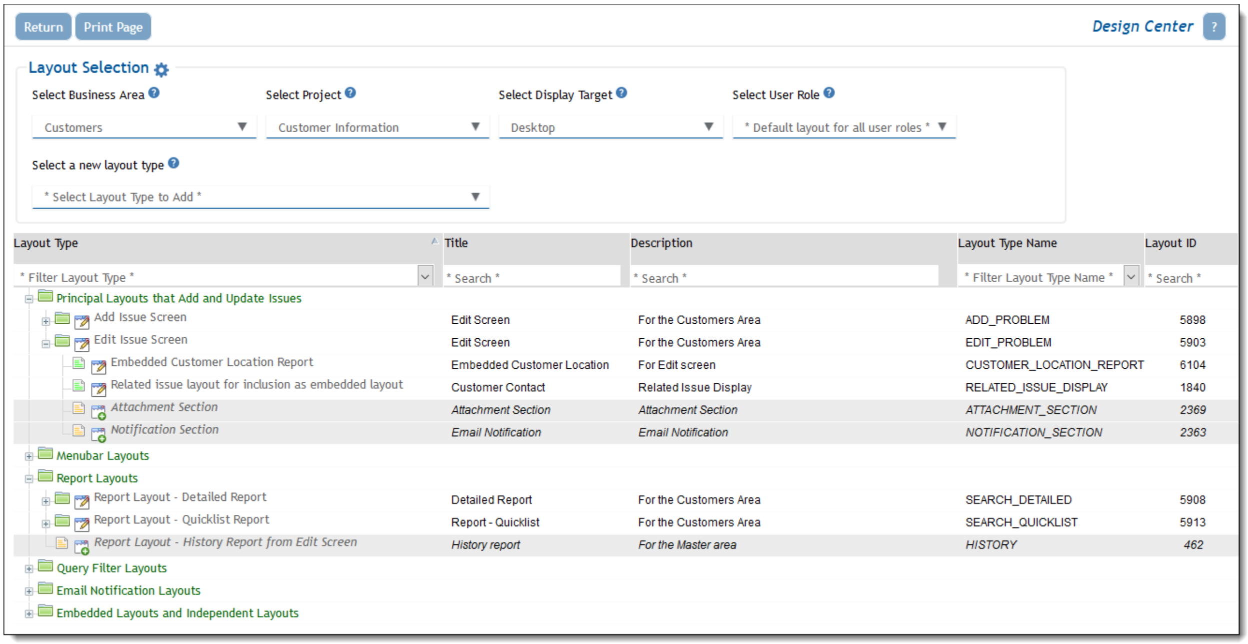
Layout types can be created from the administration utility named **Create and Maintain Layout Types** or can be crea a layout within the Design Center. Once the layout type exists, you can choose to use it within a combination of Busin Role and Display Target, from the prompt **Add a new layout for the entire system.** The following screenshot shows presentation of the Design Center.



Initial Design Center Screen

The initial layout is designed for simple access to the functionality of the Design Center. You choose the Business Ar you want to work, and can then use the display to navigate to the layout you want to work with, or you can add a new the current Business Area. The assumption is that you are always going to work within the default Project for the Bus to use the Desktop browser as the display target for the layout you are working with. The default also assumes the lay wortking with will all use the same user role.

If you want to see the full navigation to all the potential layouts, click on the icon to the right of the **Layout Select** screen then offers additional options to navigate to the layout you want to work with:



Complete Design Center Screen Options

Note: The rows in the table with a white background show layouts that are defined explicitly within the current selecti Area, Project, Desktop Target and User Role. The layouts with the grey shaded background show inherited layouts.. T complete layout details, just hold your mouse over the layout type in the table.

1	Use this icon to change between the initial and complete views of the layouts within the Design Center
2	This select list allows you to navigate to the appropriate Business Area
3	This select list allows you to navigate to the appropriate Project
4	This select list allows you to select the Display Target you want to work with. The choices are Desktop, Ta
5	This select list allows you to navigate to the user role you want to work with. The default is that the layout will work across all roles
6	Use this select list to add a layout type into the current combination set with the Business Area, Project, Dis User Role. The layout type must already exist
7	The select lists within the table can be used as filters when working with large complex sites that contain m
8	The layouts for the current selection are split into sections as follows: • **Principal Layouts that Add and Update Issues** Virtually all Business Areas will have an *Add* and a *Edit* layout that is defined here. It is unusual to s layouts that are inherited from the Global Business Area • **Menubar Layouts** These layouts define which buttons, if any, are placed on the menubar of the *Add* and *Edit* scrrens • **Report Layouts** These typically define the Detailed Report, History layout and the Quicklist • **Query Filter Layouts** These define the search filter layouts • **Email Notification Layouts** These are the layouts for the full and brief notifications • **Embedded Layouts and Independent Layouts** This section contains additional layouts such as that used for mass updates and related issue displays embedded within *Add, Edit*, and report layouts

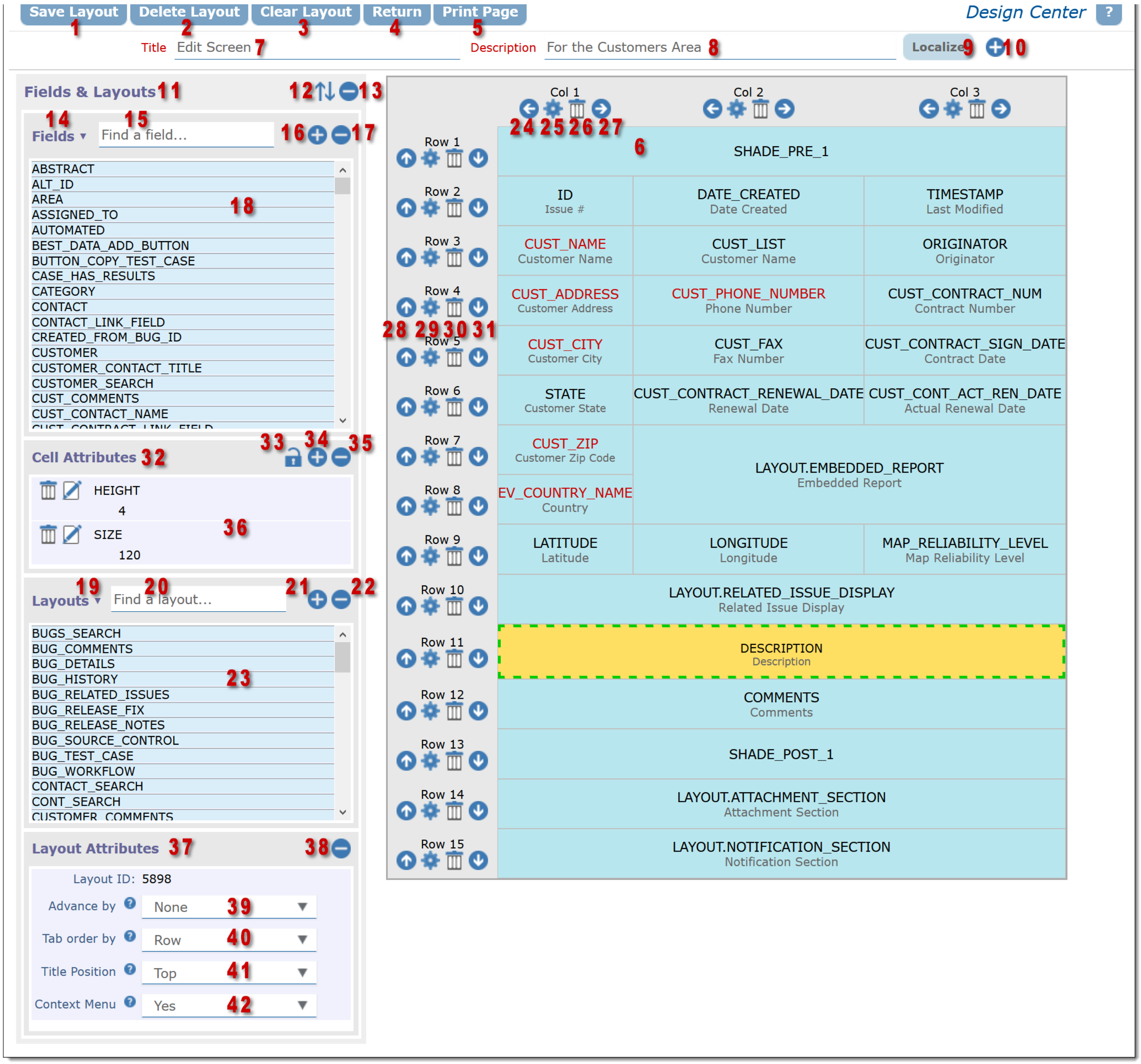
within your system, as the inheritance will look for a Desktop layout to present to the user if a Tablet or Phone layout the user accesses ExtraView from a Phone, and no Phone layout exists, the Tablet layout will be inherited. If no Table then the Desktop layout is used. Most users tend to use their phones and their tablets in portrait mode, as opposed to l The recommendation is to create phone layouts that have a single column, and tablet layouts that use two columns. M layouts use four columns.

Role-Based Layouts

Layouts are typically defined first for general use across all the roles within a selection. Field-level permissions can b much of the different behavior needed for different user roles. However, it is sometimes extremely useful to define a c different layout for a user role. For example, you might have a set of layouts used within your company to add and to but want to present a much more concise and simpler layouts to your customers so they can add and update issues. Yo this by creating role-based layouts.

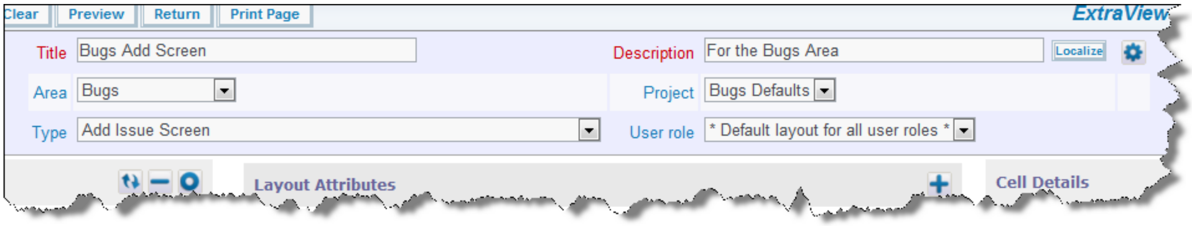
Editing Operations Within a Layout

- If you are not selecting a layout that will be used as the default across all user roles, select the user role to which apply from the select list at the top of the screen. Note that you can clone a layout for a different user role by ed layout, altering the user role to which it belongs and saving the layout
- To add a layout where an existing layout of the same type already exists, click the **Edit** button beside the existin example you would like to use. If no layout of an available type currently exists, select the desired layout type f **layout drop down** select list. You can then perform a "save as" operation
- When you click the **Edit** button, a screen similar to the following appears:



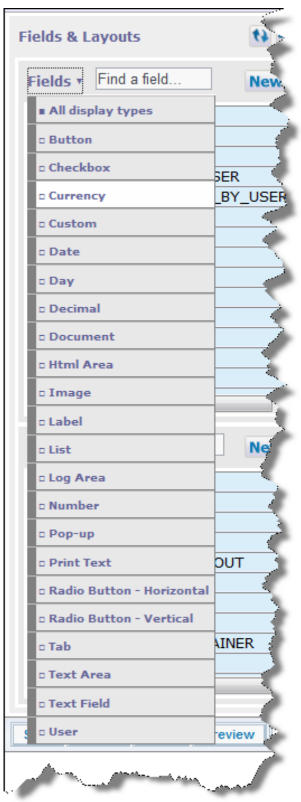
Design Center Screen

1. **Save Button** - Saves the current layout, leaving the administrator within the layout
2. **Delete Button** - Deletes the current layout. You must confirm the operation before the layout is deleted
3. **Clear Button** - Clears the current layout of all fields
4. **Return Button** - Return to the initial Design Center screen with the list of layouts
5. **Print Page** - Print the contents of the current window
6. The main grid where selected fields are shown in the position where they will be rendered on the layout. Note tl around the main grid which allow you to reposition the layout. Selected fields are highlighted. Note that a field than one row and / or column
7. The **Title** for the layout
8. The **Description** of the layout. If the behavior setting named LAYOUT_SCREEN_TITLES has a value of YES Description of the ADD_PROBLEM and EDIT_PROBLEM layouts are used as the screen title in the top right-

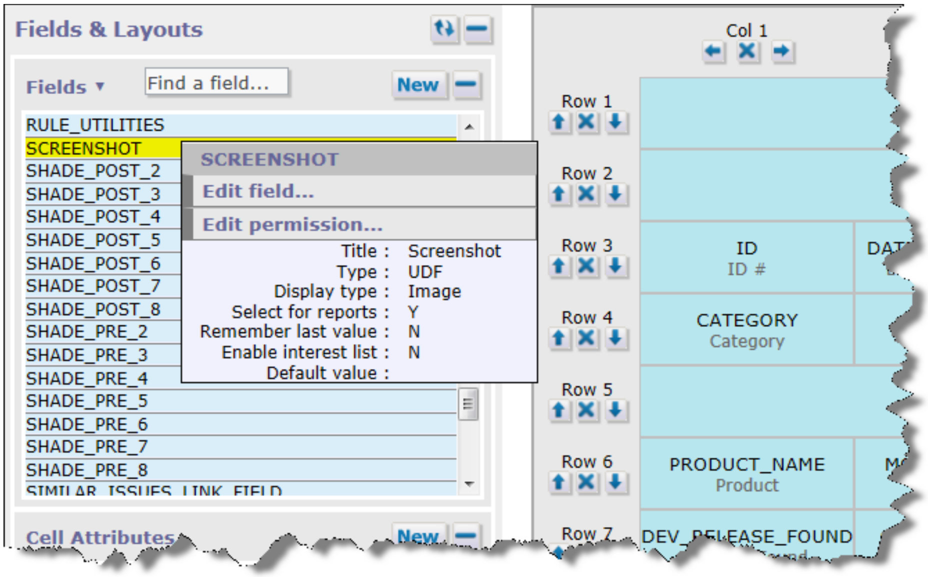


Use the select lists to alter the role, layout type, business area or project where you want to store the layout, as a operation

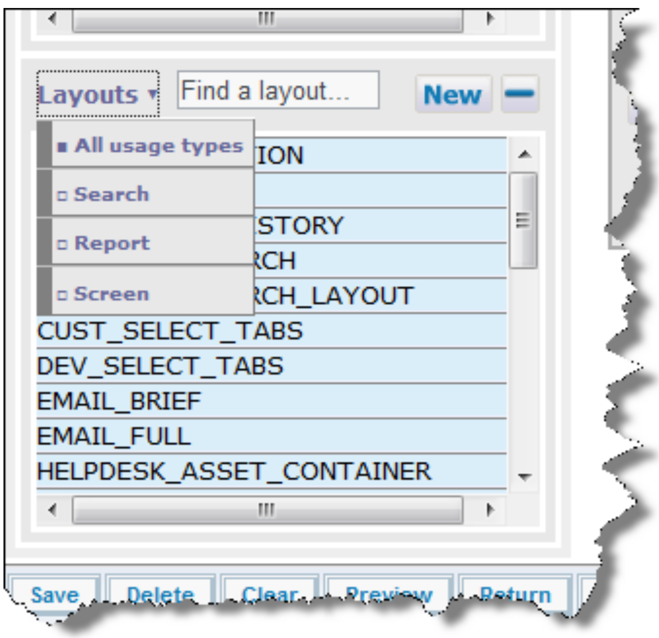
11. **Fields and Layouts** - This section is fixed to the left-hand edge of the screen and provides all the controls to cr both fields and layouts onto the grid. In addition, you can create and maintain layout cell attributes to control th fields, and layout attributes to control the behavior of embedded layouts
12. **Invert field list** button - this button toggles the field list so that field titles are displayed in order, as opposed to names
13. **Minimize field/layout lists** - this button toggles the field and layout section, reducig itsappearance to a single b screen
14. **Field filter list** - selecting this will display allow the filtering of the field list to a single field display type



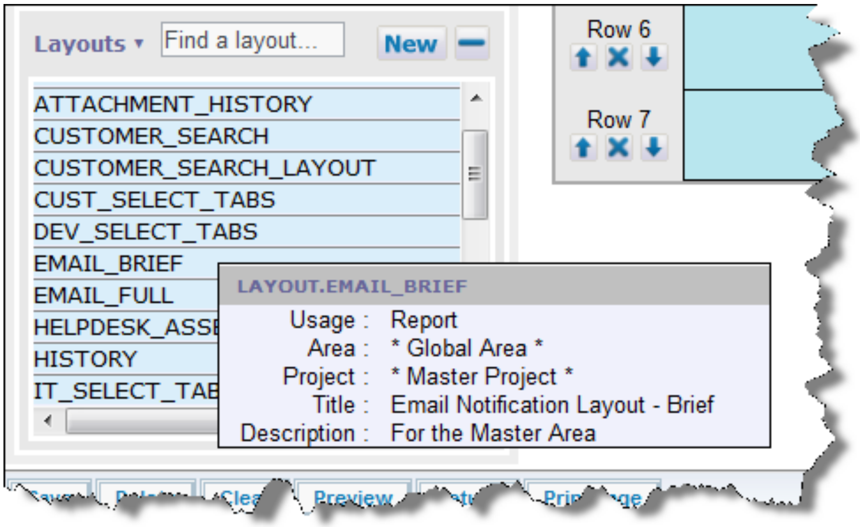
15. **Find a field** - start typing into this field and all fields in the list that match the pattern will be displayed, and all be dropped from the list
16. **New field** button - this brings up the data dictionary screen to add a new field. When you first click the button, y you are creating a new Field, Expression, Label or Screen field
17. **Minimize field list** - this button toggles the field list, to reduce its appearance to a single row on the screen
18. **Field list** - this scrollable list shows all the available fields that you can drag and then drop on the main grid. Fie dropped on any empty location in the main grid. If you right click on a field name, you will see details of the fi



19. **Layout section** - this allows you to manage your layouts to embed within the main grid, including creating new
20. **Find a layout** - start typing into this field and all layouts in the list that match the pattern will be displayed, and will be dropped from the list
21. **New layout type** button - this brings up the layout type screen to add a new layout type
22. **Minimize layout list** - this button toggles the layout list, to reduce its appearance to a single row on the screen
23. **Layout list** - this scrollable list shows all the available layouts that you can drag and then drop on the main grid dropped on any empty location in the main grid. Use the **Layouts** button to filter the layouts by type



If you right-click on a layout within the list, you will see its details. Note that layouts you have created will have button. When you click this, a window will open allowing you to modify the permissions to the layout. You can modification you require to the field and its attributes at this point.

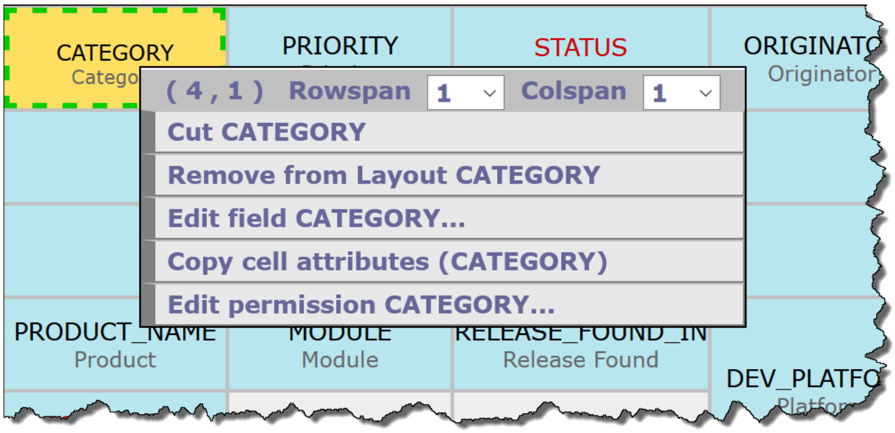


24. **Insert column to left** button - Insert a new column to the left of the button
25. **Modify column attributes** - Add, modify or delete attributes for this entire column
26. **Delete column** button - Delete the entire column
27. **Insert column to right** button - Insert a new column to the right of the button
28. **Insert row above** button - Insert a new row above the button
29. **Modify row attributes** - Add, modify or delete attributes for this entire row
30. **Delete row** button - Delete the row
31. **Insert row below** button - Insert a new row below the button
32. **Cell attributes** area - This is the area where all the layout cell attributes are managed. Click on a cell in the mai as shown in the screenshot below, and the cell details panel will display all the information about the cell
33. **Cell Permissions** - modify the field permissions for the cell
34. **New layout cell attribute** button - Click this button to add a new layout cell attribute. See the section on layout information on managing these
35. **Minimize layout cell attributes** button - this button toggles the layout cell attributes information, to reduce its single row on the screen
36. The layout cell attributes that are configured for the selected field in the main grid. Note the buttons to delete an layout cell attributes
37. **Layout Attributes** area - this area will display information on any selected embedded layout within the main gr
38. **Minimize Layout Attributes** - this button allows you to open and close the layout attributes section
39. The **Advance By** option is a layout attribute that allows you to set a direction to advance the placement of a fiel these on the layout, to column or row.
40. **Tab Order By** layout attribute allows you to set the order for tab control by end users entering data into the forr column or by row. The **Title Position** attribute allows you to place the field labels either to the **TOP** or to the **L** field value on the rednered layout
41. The **Title Position** option allows you to place the field titles to the left or to the top of the field values when the rendered. Note that the field titles for Related Issue Display layouts and Repeating Row layouts will always be of the field values
42. **Context Menu** - When this is set to Yes, a context menu is placed over each field within the layout. When the u context button, a popup menu allows them to perform various options on the field, according to their permissior they may look at the history for the field or see the details of the field on the layout if they are an administrator. may be overridden at the field level on the layout with an attribute also named **Context Menu**.

Field Manipulation on the Main Grid

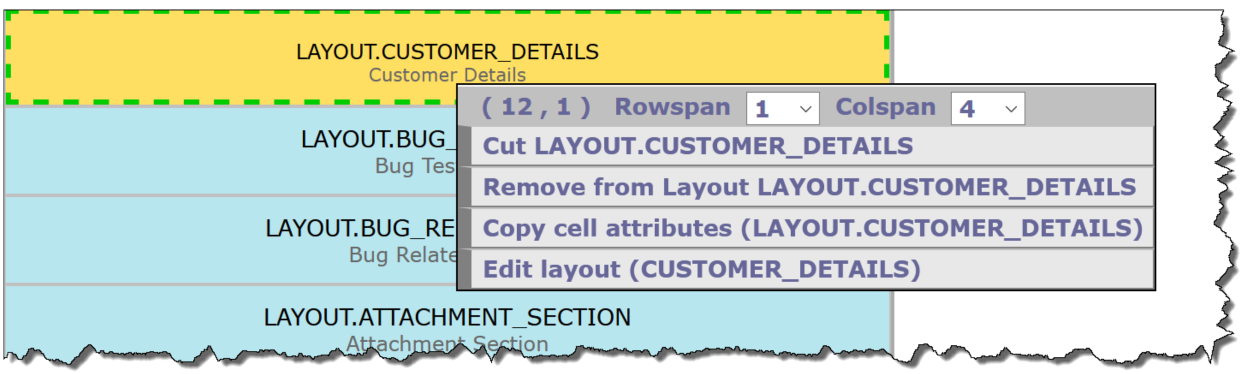
- Selecting a field - click on the background to the cell

- Either Ctrl-Click or Double-Click on the cell and the text is highlighted
- Ctrl-C to copy the text within the cell to the clipboard
- You may then paste the text anywhere else you require.



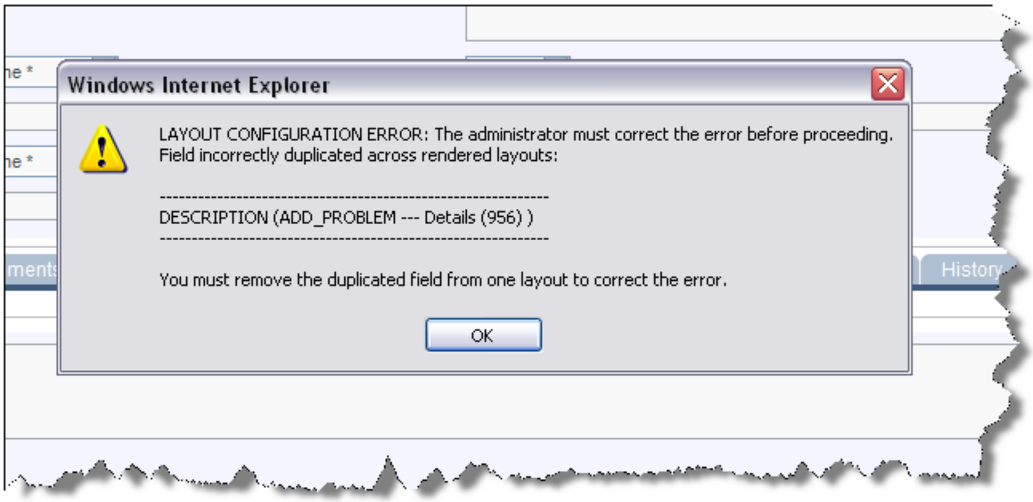
Embedded Layout Manipulation on the Main Grid

If you right-click on an embedded layout within the Design Center you have options to remove the layout, to copy its (and then paste these to another layout) and to edit the embedded layout. Choosing to edit the embedded layout will o browser tab where you can edit and save changes to the embedded layout before returning to the current layout.



Duplicate Fields on Layouts

It is not permitted to have the same field included on the same layout or different layouts that are grouped together by layout within another. ExtraView catches a field duplicated within a single layout within the design center, but the des catch the situation when a field is duplicated by virtue of being contained in an embedded layout. The reason for this i create an embedded layout, it may be included in any one of a number of other layouts, and each of these may or may duplicated. The error of duplicated fields can therefore only be caught at runtime. When testing your installation, you message similar to the following screenshot:



The above example shows that the field named **DESCRIPTION** is duplicated. First it is included on the **ADD_PROI** and then on the embedded **Details** layout. Further, the ID of the **Details** layout is displayed. You must resolve the dup removing one of the fields from one of the layouts before your installation will function correctly.

Using the Layout Description as the Title to *Add* and *Edit* Screens

The **Description** field on *Add* and *Edit* layouts has a special property. It may be used as the title to these screens, allov administrator to provide different titles for each *Add* and *Edit* screen. For example, you might give the *Add* and *Edit* s titles in different Business Areas. The standard behavior is that the title of the data dictionary field for the screen is us title. If you give a title of **$$LAYOUT.TITLE$$** to any of the following fields, then the layout description will be use the screen as it is rendered.

- ADD_PROBLEM - The *Add* Issue screen
- ADD_PROBLEM_SUMMARY - The *Add* Issue Verification screen
- EDIT_ISSUE_SUMMARY - The *Edit* Issue screen

Layout Rendering and Ajax

The layouts are rendered by the user's browser when they navigate to the appropriate function for the layout. There ar when ExtraView uses Ajax calls to the server from the browser to handle the updating and refreshing of information o example, the layout cell attributes **Visible If** and **Read-Only If** use Ajax calls to refresh only the part of the screen tha the logic.

The biggest upside of this is vastly improved performance, compared to refreshing the whole screen, but there are a fe that should be understood.

- If ExtraView sees that an entire row of cells on your layout is empty, i.e. there are no values with write permissi no values to render with read-only permissions, then the entire row is suppressed and is not rendered. This is m desired effect as there is not "empty" space on the screen
- The fields that are suppressed in this way do not exist within the browser's memory (what is known as the DOM that the fields are not available to be processed using JavaScript. You might therefore try to manipulate a field v row, and find that your logic does not work as expected. The solution is to always have a visible field on the ro field is just a placeholder. Alternatively, use a layout cell attribute of STYLE, and place a CSS style on the fielc **display:none**. This places the field into the browser's DOM, but it is made invisble with the CSS style.

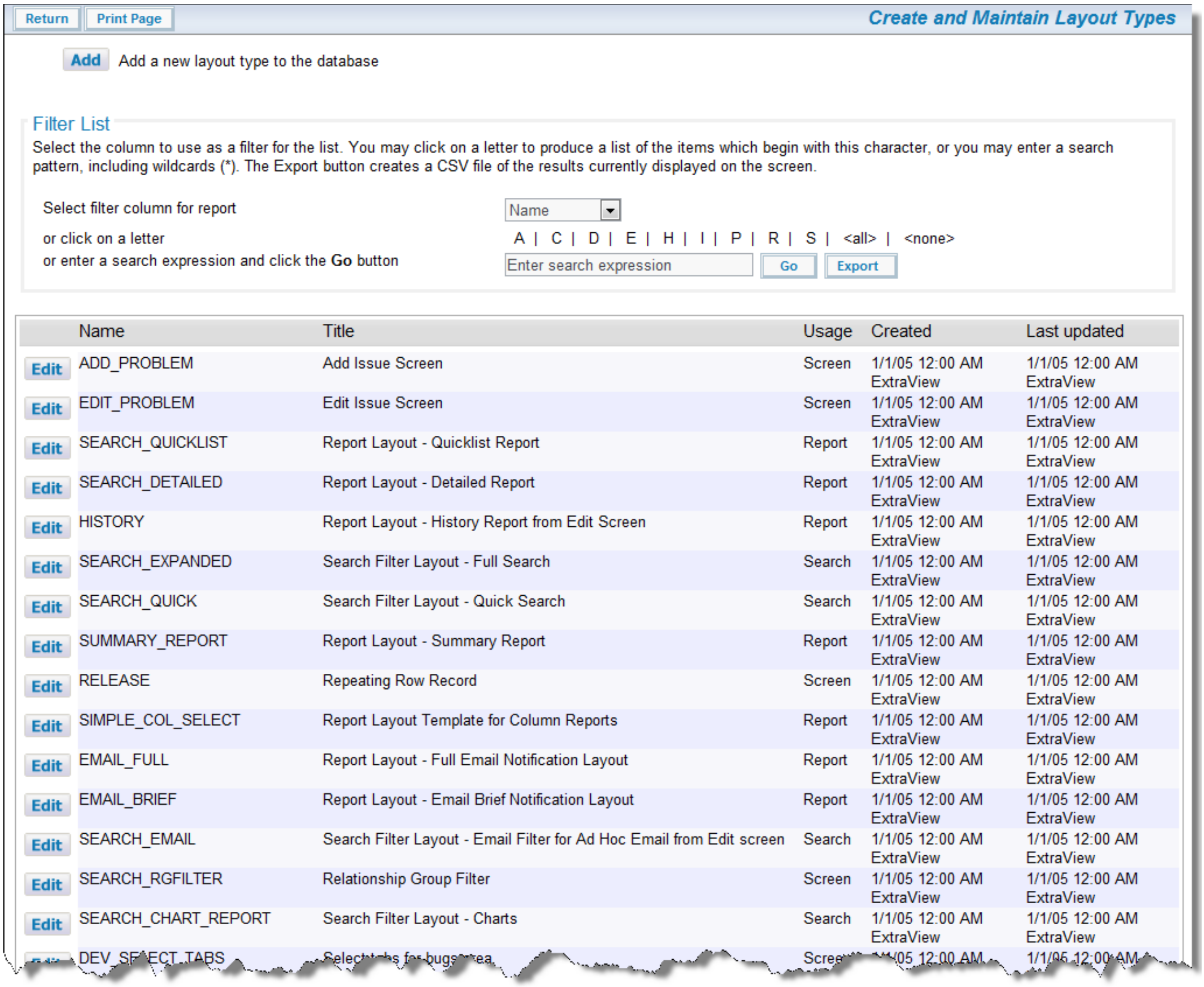
hardware issues can be displayed. The following built in layout types exist in a new ExtraView installation. You typica
additional new layout types if you want to create layouts that you will embed within other standard layouts.

- ADD_PROBLEM - the add issue layout
- ADD_CONFIRMATION - the confirmation/verification screen displayed after a new issue is added
- ATTACHMENT_HISTORY - the layout for the history of attachments
- ATTACHMENT_SECTION - the layout for file attachment data
- EDIT_PROBLEM - the edit issue layout
- EMAIL_BRIEF - the layout for brief email mode
- EMAIL_FULL - the layout for standard email notifications
- EMBEDDED_REPORT, EMBEDDED_REPORT_1, EMBEDDED_REPORT_2, EMBEDDED_REPORT_3 - l contain embedded reoprts
- HISTORY - the layout for history audit trails
- MASS_UPDATE_REPORT - this is a layout used to control the content of mass update screens
- MENUBAR_BUTTON - layouts that contain buttons can be placed on a layout of this type and placed within *a* screens. These produce popup style menus
- MENUBAR_LAYOUT_ADD - this layout type defines which buttons are seen on *add* screens
- MENUBAR_LAYOUT_EDIT - this layout type defines which buttons are seen on *edit screens*
- NOTIFICATION_SECTION - this layout contains all the fields related to notification of issues when they are u
- POST_EDIT_UPDATE - the layout that is triggered following the update of an issue with related issues
- RELATED_ISSUE_DISPLAY - the layout for displaying related issues
- RELEASE - the layout for repeating rows
- SEARCH_AGING_REPORT - an internally used layout used to create aging reports
- SEARCH_CHART_REPORT - an internally used layout used to create charts
- SEARCH_DETAILED - the layout for the detailed report
- SEARCH_EMAIL - the layout used as a filter when creating ad hoc email notifications
- SEARCH_EXPANDED - the layout used to created filter screens within reports
- SEARCH_QUICK - the layout used on the Query screen
- SEARCH_QUICKLIST - the layout used to produce Quicklists
- SEARCH_RGFILTER - the layout used as a filter for relationship groups
- SIMPLE_COL_SELECT - an internally used layout for the preparation of column reports
- SUMMARY_REPORT - an internally used layout for the preparation of summary reports

Creating New Layout Types

To create a new layout type, click the administrative tab named Create and Maintain Layout Types. You can also acces
from within the Design Center, by clicking the **New** button within the **Layouts** Panel

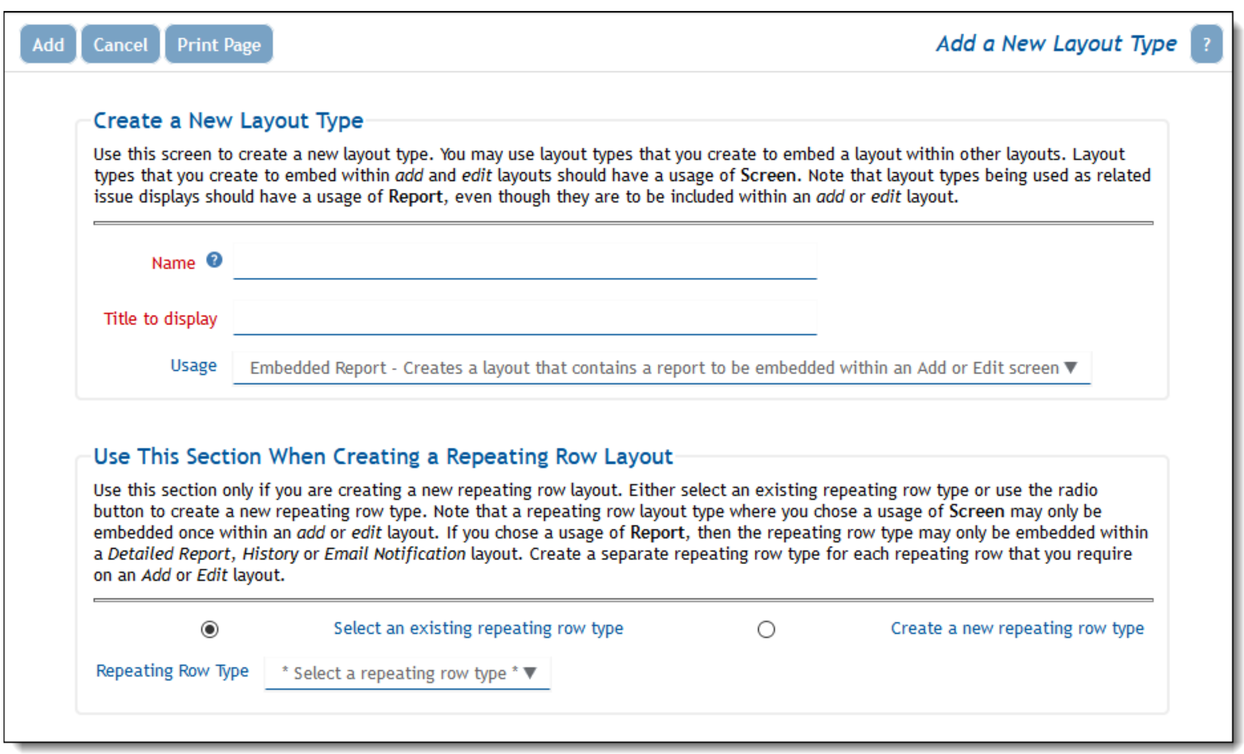
The following screen appears:



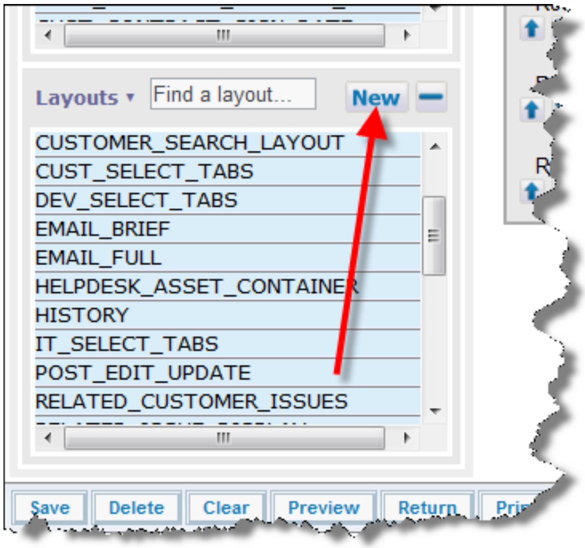
	Name	Title	Usage	Created	Last updated
Edit	ADD_PROBLEM	Add Issue Screen	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	EDIT_PROBLEM	Edit Issue Screen	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_QUICKLIST	Report Layout - Quicklist Report	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_DETAILED	Report Layout - Detailed Report	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	HISTORY	Report Layout - History Report from Edit Screen	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_EXPANDED	Search Filter Layout - Full Search	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_QUICK	Search Filter Layout - Quick Search	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SUMMARY_REPORT	Report Layout - Summary Report	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	RELEASE	Repeating Row Record	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SIMPLE_COL_SELECT	Report Layout Template for Column Reports	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	EMAIL_FULL	Report Layout - Full Email Notification Layout	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	EMAIL_BRIEF	Report Layout - Email Brief Notification Layout	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_EMAIL	Search Filter Layout - Email Filter for Ad Hoc Email from Edit screen	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_RGFILTER	Relationship Group Filter	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_CHART_REPORT	Search Filter Layout - Charts	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	DEV_SELECT_TABS	Select tabs for bugs area	Screen	1/1/05 12:00 AM	1/1/05 12:00 AM

Maintaining Layout Types

To add a new layout type, press the Add button and use the following screen:



Maintaining Layout Types



Adding a New Layout Type from the Design Center

Layout types must have a name, a title and a usage. The usages are:

Layout Type	Purpose
EMBEDDED_REPORT	Embedded Report - Creates a layout that contains a report to be embedded within an *Add*
MENUBAR	Menubar - Layouts that are used to contain the menubar buttons that are displayed at the t of *Add* and *Edit* screens
MENUBAR_BUTTON	Menubar Buttons - used to create layouts that contain buttons embedded within an Add or They can be single buttons or a layout containing multiple buttons. Mainly used for creat menus placed witihn *Add* and *Edit* screens
REPORT	Report - Detailed Report, Quicklist and Related Issue Display layouts
SCREEN	Screen - Embedded layouts within *Add* and *Edit* screens
SEARCH	Search - Query layouts and search layouts embedded within *Add* and *Edit* screens
USER_REPORT	User Report - Used when creating reports that contain user information

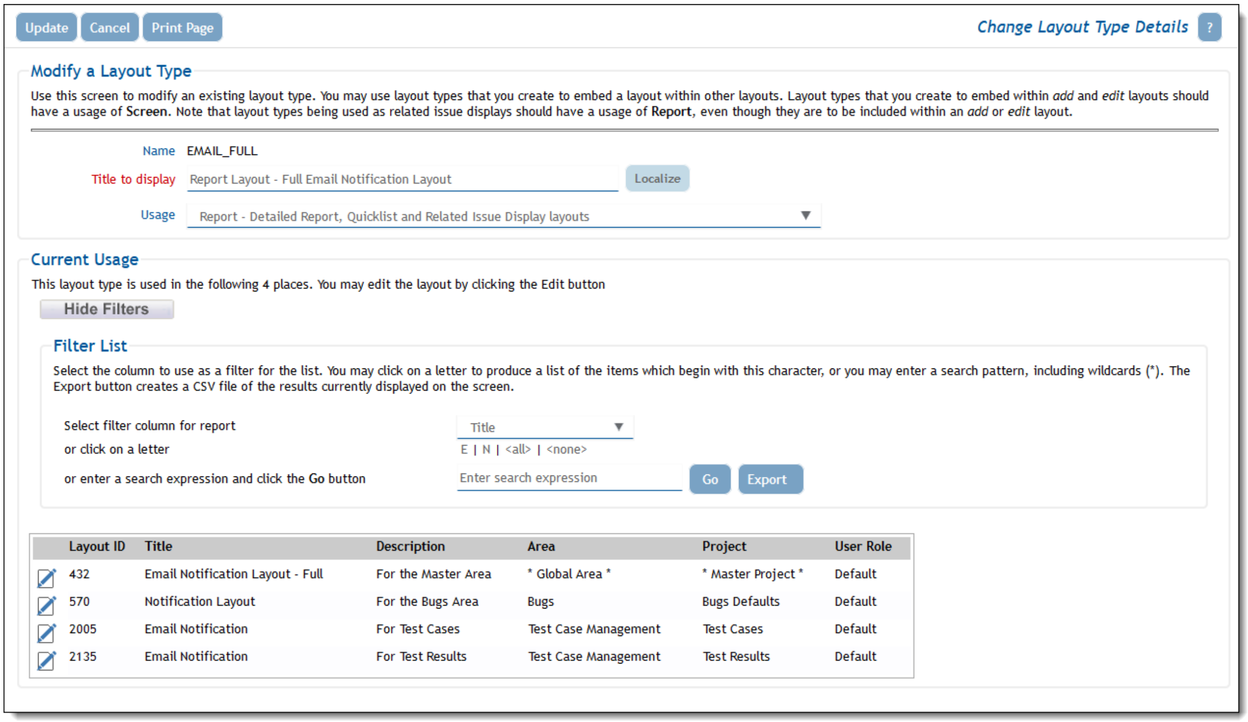
When you edit a layout type, you will see a list of all the places where the layout type is used as a layout within your i you can click the **Edit** button by each usage, to take you to the Design Center where that layout is used.

If, and only if, you are creating a new layout type to be used as a repeating row, then complete the bottom section of tl are creating a new repeating row layout type, then you also give this a name and a title. When you press the radio butt **new repeating row type** these fields are shown. You can create a new layout type using an existing repeating row typ you choose the option to **Select an existing repeating row type**. In this case you select the repeating row type from tl

Note: The edit function allows you to delete layout types, whether they were created by yourself as an administrator, c ExtraView. **You should not delete an ExtraView created layout type**. ExtraView will not function correctly if you d

Modifying Layout Types

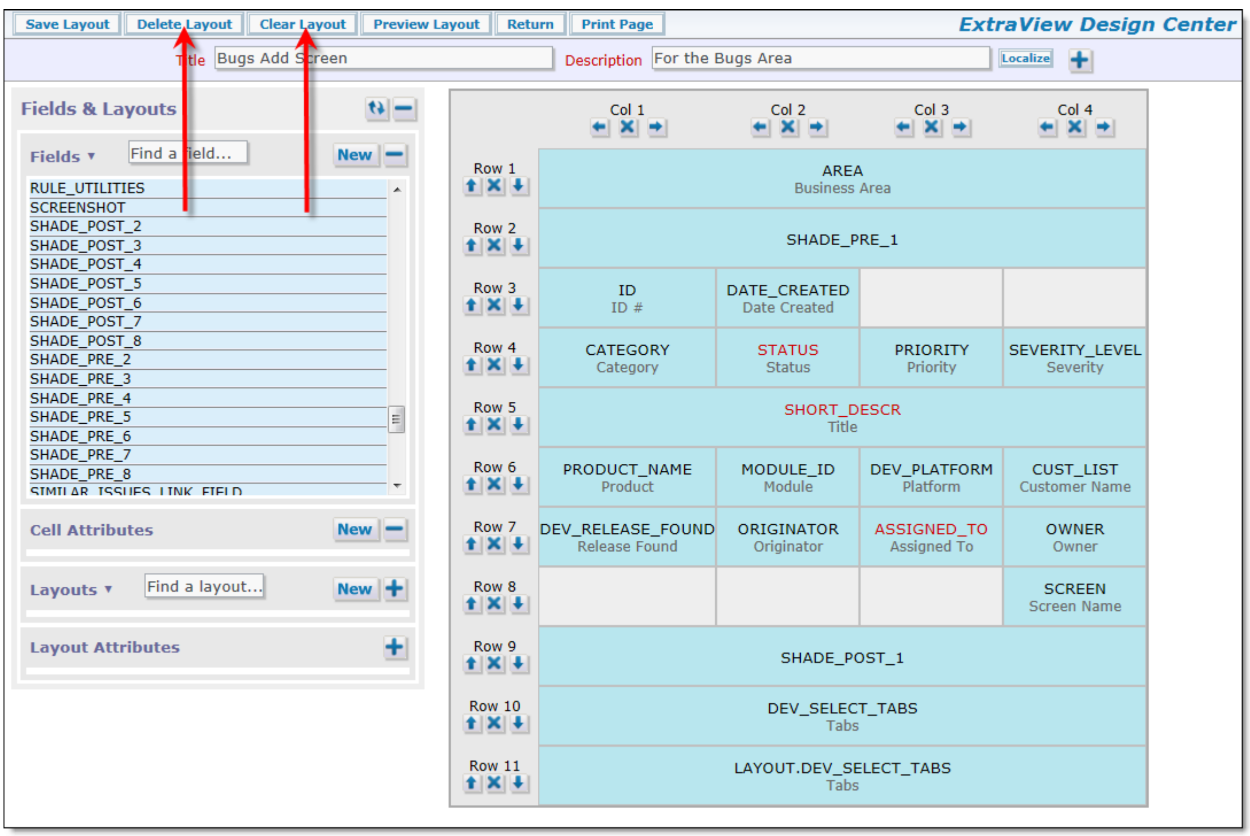
You may modify the title of a layout, and its usage from the Edit screen of layout types.



Modifying Layout Types

If you click on the Edit button with the utility, you are taken directly to the Design Center where you can modify the l

Clearing and Deleting Layouts



1. To clear a layout, press the **Clear Layout** button.
2. Follow the directions found on the alert message than will then appear.
3. Press **Save Layout**.

You will be left in the current layout, but all fields are deleted from the layout.

Deleting Layouts

1. Press the **Delete Layout** button.
2. Follow the directions found on the alert message that appears.
3. Press **Save Layout**.

Note that you cannot delete the following layouts from the Global Area:

- ADD_PROBLEM
- ATTACHMENT_HISTORY
- EDIT_PROBLEM
- EMAIL_BRIEF
- EMAIL_FULL
- HISTORY
- SEARCH_CHART_REPORT
- SEARCH_DETAILED
- SEARCH_EMAIL
- SEARCH_EXPANDED
- SEARCH_QUICK
- SEARCH_QUICKLIST

After confirming that it is OK to delete the layout, it is permanently deleted from the database and is unrecoverable.

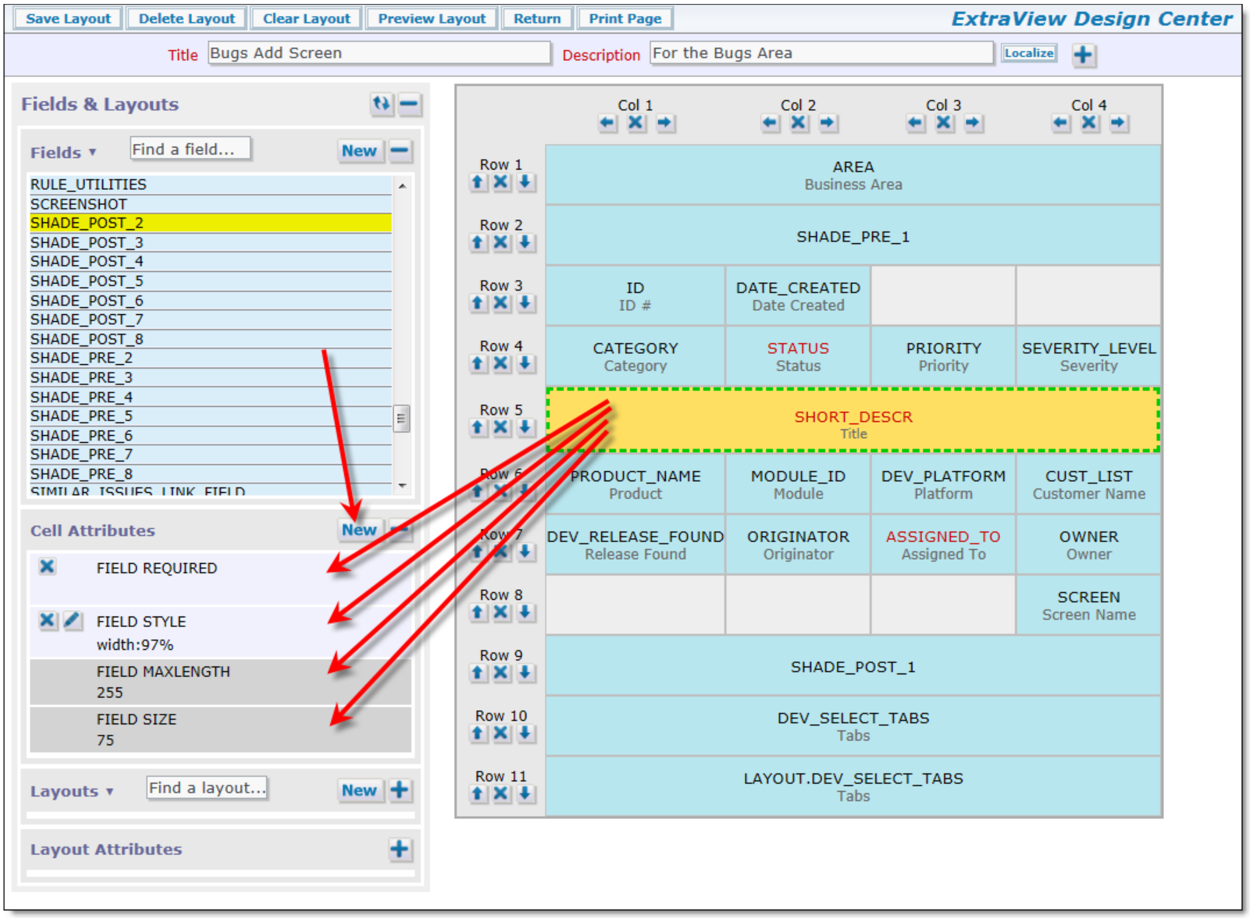
Performing a "Save As" Operation

It is often useful to be able to duplicate a layout in a different area, project or role, or to simply save one layout type as
For example, after composing an *add* layout, you may want to save it as an *edit* layout. This operation is easily accom
opening up the layout you want to copy, clicking on the button to the right of the layout description then changing the
Project, Type or User Role.

You may also change the Title and Description. Once you have done this, simply save the layout. Note that if you are
or *edit* layout to a report style of layout, any field whose data dictionary entry for the attribute of ***Select for Reports*** is
be removed, as these are not supported on report layouts. Similarly, any embedded layout whose usage is not set to eq
be removed.

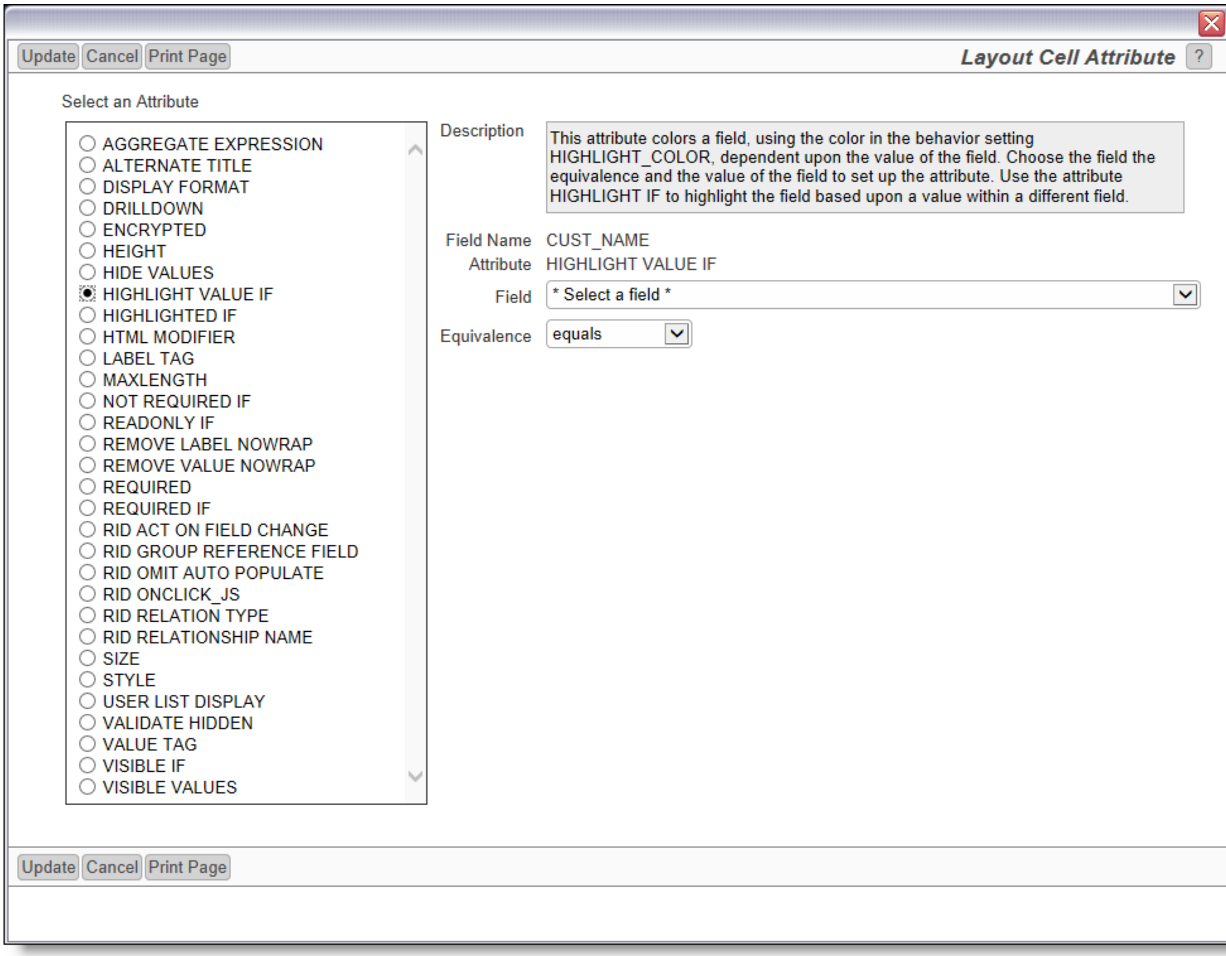
Layout Cell Attributes

Layout cell attributes allow you to modify the appearance or function of a field or an embedded layout within a layout
creating dependencies between fields and controlling related issue displays.



Layout cell attributes

Note the section on the screenshot that displays the Cell Attributes. This displays the attributes that have been set for t attributes that were set for the field in the data dictionary as global field attributes. The global attributes are displayed background. You may either use the global attribute inherited from the field definition, or override the global attribute layout cell atrtibute. If you add a new attribute, a screen similar to the following is displayed:



Adding a layout cell attribute

As you click on a button beside an attribute, a help tip appears to give guidance on how to use the attribute; also, you s you need to make to configure the attribute. Not all attributes require selections. For example, the VALIDATE HIDD not need any additional configuration.

Note that the field within the list named LAYOUT_TYPE is a special field and does not exist as a field on the layout i it takes either the value ADD_PROBLEM or EDIT_PROBLEM. These refer to the *add* screen and the *edit* screens. ` create a layout cell attribute such as FIELD REQUIRED IF LAYOUT_TYPE = ADD_PROBLEM or FIELD VISIBL LAYOUT_TYPE = EDIT_PROBLEM.

Note that you will only see a subset of the complete number of layout cell attributes for a given field or layout selectic ones that are valid for the field display type or layout type that you have selected in the main grid. If a layout cell attril appear when you are editing the attributes, it is because that attribute is not valid for that field or embedded layout. Th are the different class of modifiers that can be applied to each cell. These are:

Attribute	Purpose
ACT ON FIELD CHANGE	This attribute triggers relationship group actions when the field value upon which this attribut changes. This is used when you set up a search layout to bring back results, on an ADD_PRO EDIT_PROBLEM layout. This configuration relies on an intermediate field, the RID LINK F You place this attribute on that field, so that when it receives your selection, it uses the inforn

	If the behavior setting named AUTO_POPULATE_ALLOWED_VALUES is set to YES, the value relationship is created automatically when the user adds a new value, and the parent val been selected on the *add* or *edit* screen. See the section titled End-User List Management for more information on setting up this featu
ADMIN NOTES	This attribute has no functionality, except to allow the administrator to document the field attr reference. Any text may be entered into the value of the attribute and it will be displayed witl Center and when editing the attribute.
AGGREGATE EXPRESSION	This layout cell attribute implements a method to compute an aggregate expression on a per-r Related Issue Display. The actual calculation is performed in a user custom exit, so this attribu accompanied with Java code. This layout cell attribute only works when used with expression fields placed on a Related Issue Display and has no effect in other locations. See the page Fie Expressions for more information.
AGGREGATE EXPRESSION TITLE	This layout cell attribute provides a title to the aggregate expression. Please see the page Field Expressions for more information.
ALTERNATE TITLE	This will rename the screen title in the Data Dictionary to the value in the Field value, for the Field entry. Note that if this is used in a screen layout, you can include HTML in the alternate is included within the alternate title, then the behavior setting of LABEL_WRAP_POSITION allows total control of the formatting of the label within the layout. However, if you access th the API or CLI then the HTML will be passed through to the output. As the text for the altern placed within double quote marks (“) in the HTML generated when the form is rendered, you these within the alternate field title. You may use single quote marks (‘) however, and these ar interchangeable. It is a best practice to create a title for all field without any HTML within the data dictionary, HTML within individual layouts. This makes the fields easier to view under most circumstan report editors and report output. You should restrict the use of HTML tags within Related Issue Display layouts as they r off at the bottom of the title. The titles within a Related Issue Display are sized exactly to a si that they may be frozen in position when a long list of related issues is scrolled. **Example**: Within an organization, you may label issues as *Defects*, but you may want to label for your customers. On the new attribute form, you would set *Alternate field name* equals *Issu* **Example**: A field on the form has the particularly long title of *“Target Software Release”* tha ugly way on the screen using the system-wide default you have set with the behavior setting, LABEL_WRAP_POSITION. You can control where the line breaks occur by using somethin *“Target Software Release”* **Example**: You want to remove the title to a field on a layout. It is not valid to use a blank title to use an alternate field title of * *. This inserts the character set value of a space into the
ALTERNATE TITLE IF	This is similar to ALTERNATE TITLE, but allows the alternate title to be conditionally place
ATTACH REPORT	This attribute is only available with notification layouts and may have one of three values. W embedded report can be embedded within the email body, attached to the email, or both. The attribute is not set is that the report will be embedded within the body of the email at the point where the embedded report is placed. See here for more information on embedded reports
ATTACHMENT	This layout cell attribute is applied to TEXTAREA, HTMLAREA and LOGAREA fields on a

- **Target Business Area** - This defines the Business Area that will be used for the *add* sc when the button is pressed
- **Target Project** - This defines the Project that will be used for the *add* screen displayed is pressed
- **Check Required Fields** - If you check this option, then all required fields on the paren checked for their presence before the child window is displayed. This can be extremely are going to push down field values from the parent to the child issue, and you want to child window is always initiated with a value within a field
- **Push Selected Attachments** - When the user clicks the button, any selected attachmen to the child issue being created
- **Presentation** - You may allow the user to create the child issue within a modal popup v an inline operation, where a new row opens up within the related issue display, and the data for the new child issue within this new row
- **After Submitting the Child Issue** - This option allows you to select the action after th created. This applies to the modal popup option of the Presentation setting only. You ca only the related issue display that contains the newly added issue updated, or you can h issue updated and the entire screen updated. The latter is only required when there are s rules that triggered changes to the parent issue when the child issue was submitted.

	allows you to generate the JavaScript that is close to what you require. You can then co JavaScript into the **ONCLICK_JS** attribute, and modify it for your requirement. You s the **BUTTON ACTION** if you are using **ONCLICK_JS** and vice versa.
COLLAPSE REPEATING ROWS	This attribute should only be used on an embedded repeating row layout with a type of report is used when you are rendering fields from different repeating row layouts within the emedde you want the values to align as far as possible, to the top of the embedded layout. As the valu different fields are likely to have originated in different records in the database, they would nc rendered on different rows. This attribute shifts the values to be aligned from the top of the di embedded repeating row
DATE TIME CATEGORY	This attribute is used to define date time categories as either COMPONENT or DURATION
DISPLAY FORMAT	This will modify the display of the value of the item according to a user-defined format. The f include text as well as the values of other fields. There are specific rules for using this attribut • The target field for this attribute must be a field with a display type of *text* • All the fields names referenced in the format must exist on the layout • The field should be read-only to users • There is no checking of field dependencies. For this reason, the value on the rendered s become stale during the edit process, for example if one of the referenced fields change course, this is not a problem on a report layout. **Example**: You can set up a new field on a layout, modifying the *ID* field for display to be of a such as PROJECT + '.' + *ID*. The *ID* will be the standard sequence, but will show a value suc *MyProj.12345*.
DO NOT CLONE	This setting is primarily used in conjunction with mapping fields within one ExtraView instal ExtraView installation, via the peer integration daemon. If an issue that is mapped is subsequ the mapping identity field should not be propagated to the cloned issue. The reason for this is establish a mapping from one peer issue to two issues (i.e. the original issue and its clone). T error, but the behavior produces an ambiguous result, causing updates to the peer issue for eac either the original issue or the cloned issue. To handle this behavior, the data dictionary attribute named DO NOT CLONE prevents the cl field value for specific fields. This attribute is set when the field is used as a mapping field in daemon. Setting the DO NOT CLONE data dictionary attribute for a field means that the cont value will not be propagated to any clone of an issue - its value will be null in the cloned issu
DRILLDOWN	You should only add this attribute to a field when it is to contain an issue ID. Adding the attri the ability to click on the field value in order to be able to drill down into that issue and open screen
DRILLDOWN TARGET	This attribute is used in conjunction with the DRILLDOWN TARGET REPORT attribute. To define how to handle drilldowns from the embedded report presented on the *add* or *edit* scree drilldown target defines the name of the layout embedded on the screen which will contain th displays the drilldown results. If this is not defined, a new browser tab is targetted for the dril within the standard interface. Within a workspace interface, a new workspace panel is genera the drilldown results. The drilldown target layout must be a layout that was created with a usage of **Embedded Rep layout that contains a report to be embedded within an Add or Edit screen**. There are fo predefined, but you may create as many of these as you need. The four predefined layouts ar EMBEDDED_REPORT - Embedded Report EMBEDDED_REPORT_1 - Embedded Report (1)

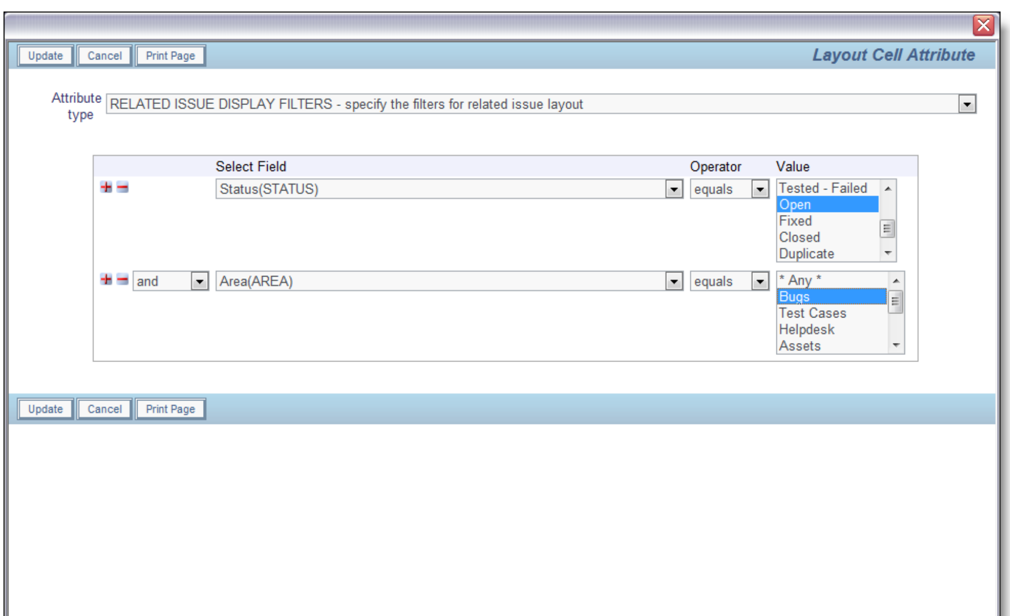
	on a cell in the embedded report which identifies a value for a specific STATUS and PRIORI fields are used as runtime filters in the drilldown target report, then the values from the embec used as filters for the drilldown report
EDIT RID PARENT ID	This layout cell attribute nominates the name of the field to be used to contain the parent ID t EDIT RID is connected
EDITOR TOOLBAR	This behavior setting allows the overriding of the behavior setting named EDITOR_TOOLB to provide an alternative toolbar to any HTML Area field as opposed to the one nominated in setting. It may have a value of BASIC, STANDARD, FULL or CUSTOM
EMBEDDED REPORT NAME	This allows for the selection of a report to embed within an *add* or *edit* screen. This attribute on layout types of **Embedded Report** and only selects shared reports and reports saved for u here for more information on embedded reports
ENCRYPT	Encrypt the values within the field
EXPRESSION TEXT	This is used to add a calculated expression to a user defined report field.
GEO ADMIN BOUNDARY LEVEL	A geospatial attribute. Administrative boundaries range from large groups of nation states do administrative districts and suburbs specfied by this value, which takes a value of 2(a single C State or Province) or 4(a County).
GEO GROUP	A geospatial attribute to group LATITUDE, LONGITUDE and MAP_RELIABILITY_LEVE geospatial data dictionary fields and used in geospatial reports.
GEO LATITUDE	A geospatial attribute to indicate the latitude field.
GEO LONGITUDE	A geospatial attribute to indicate the longitude field.
GEO RELIABILITY LEVEL	A geospatial attribute to indicate the reliability field.
GRIDEDIT BUTTON	This attribute provides a button with the title **Gridedit**, on the preheader of the Related Issue clicked, this button renders all the issues on a Related Issue Display in Quickedit mode withi The user is required to click the **Update** button on any issue before it is saved in the database alter the title on the button, it is controlled with the data dictionary field named GRIDEDIT_
HEIGHT	This applies to text area, log area, print text fields and embedded relaetd issue display layouts the approximate number of characters high that the field is displayed with when the user first *add* or *edit* layout. **Example**: To create a text area field where the initial display height is 20 characters, add a H with a value of 20. Note that RELATED_ISSUE_DISPLAY layouts are automatically sized i according to the number of issues they contain, and the FIELD HEIGHT is the maximum hei issue display will occupy, before a vertical scroll bar is added.
HELP TEXT	This applies to *add* and *edit* screens and their embedded layouts. When added to a fields, the overrides the help text from the data dictionary, and presents the help text defined within the l allows you to define different help for different screens within your application.
HIDE VALUES	This attribute allows you to hide individual values within a field which contains a list of valu select this attribute, you are presented with a list of all the values within the field, and you sel you want to hide unconditionally. This may be used with great effect on fields such as AREA layout, to constrain a user to only be able to add new issues into specific business areas, and t out from other business areas. Note that if you configure this attribute, you may not then conf VISIBLE VALUES attribute on the same field. This attribute is only supported on fields with a display type of List (including multi-value lis lists), Radio Button and Tab.
HIDDEN VALUES IF	This attribute is similar to HIDE VALUES, except that you can conditionally hide the values according to a logical expression based on other fields within the form,

	Example: We want to highlight the title of the ID of an issue, if the issue is a Customer issue. this, set the element attribute of HIGHLIGHTED IF on the ID field, if the field named Custor
HOVER VIEW DEFINITION	This attribute is used to define hover text that appears over buttons, when the user holds the n over the button. The administrator can configure which fields are displayed in the hover popu layout cell attribute. When you select the attribute, you will see two field lists. The left-hand f all the available fields. Double click on the fields you wish to add to the hover text and they a right-hand panel. Alternatively, drag the field to the right-hand panel from the left-hand pane out of the right-hand panel into the left-hand panel to remove it from the hover text popup. Typically this is used to bring up the full description, plus any other fields, of an issue for vie shortcut to the user having to drill down into the issue to see the key information. The definition of the popup is valid on various, but not all buttons. It works on VIEW_BUTT EDIT_BUTTON, DELETE_BUTTON, HISTORY_BUTTON and QUICKEDiT_BUTTON, report and related issue display layouts.
HTML MODIFIER	This allows the user to provide values for additional attributes within an HTML tag on an *add* You may have any number of HTML modifier attributes on a cell. It is likely that you will ne understanding of HTML tags and attributes to use this layout cell attribute. **Example**: A *DISABLED* HTML modifier to the attribute will disable the field. Most browser show this field as "grayed-out". ExtraView has a special HTML modifier value that provides rendering for fields that you want to disable. If you enter the value as **evClass=readonly** the function is extended to work with all fields, not just input and list fields. In addition a disable appear when the user places their mouse cursor over a field with this attribute. The **evClass=** must be entered exactly as shown, with no spaces or other characters within the entry. **Example**: Use the HTML modifier to call a user-defined JavaScript function or to call a pre-c JavaScript function within ExtraView. The function resides on the server and is automatically HTML that is generated for the layout. The syntax specified within the HTML modifier to cal JavaScript function will be similar to: *onclick='myFunction(param1, param2)';* For a more detailed explanation of custom building JavaScript functions, please see the Extra Custom Programming Guide. If you want to add a style attribute to a layout element, you should use the **style** (rather than t attribute) otherwise your cell element may have multiple style attributes, which is invalid HT reference providing a list of all valid CSS styles may be found at http://www.w3schools.com/css/css_reference.asp. Note that this layout cell attribute only works when used within a layo rendered as an *add* or *edit* screen.
HTML MODIFIER IF	This attribute works in the same fashion as HTML MODIFIER, but allows for a logical condi to its definition as opposed to always taking effect
IS RANK	This defines the field to be a rank field on the layout. Only apply this attribute to numeric fie
LABEL STYLE	This attribute allows you to add a CSS style to the label of field on a layout
LABEL STYLE IF	This attribute works in a similar fashion to LABEL STYLE, but with the added support for lo so that the style can be applied with an expression you define
LABEL TAG	This allows the administrator to add a new attribute to the HTML <TD … tag that surrounds t cell. This can be used to provide a different style for the label, or to inject any other valid HT label tag. It is likely that you will need a reasonable understanding of HTML tags and attribut layout cell attribute.
LAYOUT SEARCH	The attribute may only be added to layouts that have a type of *search* and are used to provide

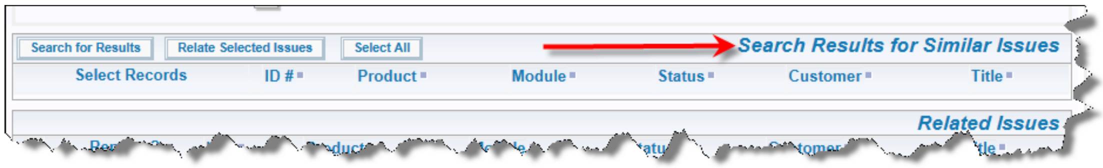
	Note: If you are creating layouts which are selected according to a list or tab value, it is highl set a default value for the list or tab field. If you do not do so, and the field does not have a va embedded layout will be selected. The precise steps necessary to implement embedded layouts are documented in a following s **Adding Embedded Layouts**.
LIST BGCOLOR	This attribute sets the background color of the non-selected list values when the display form set to **Box** or **Checkbox** within the data dictionary definition of the field. Enter a hexadecima HTML color name.
LIST BORDER COLOR	This attribute sets the color of the border surrounding list values when the display format of t **Box** within the data dictionary definition of the field. Enter a hexadecimal color or an HTML
LIST IMAGE DISPLAY	This attribute allows the display of enumerated list fields which have images associated with alternatively display just the image, just the title, or both the image and the title. Valid entries attribute are TEXT_ONLY, IMAGE_ONLY and IMAGE_PLUS_TEXT (this is the default)
LIST SELECTED BGCOLOR	This attribute sets the background color of the selected list value(s) when the display format o to **Box** or **Checkbox** within the data dictionary definition of the field. Enter a hexadecimal co color name.
LIST TEXT COLOR	This attribute sets the color of the text of the list values when the display format of the field is **Checkbox** within the data dictionary definition of the field. Enter a hexadecimal color or an H name.
LIST TEXT SIZE	This attribute sets the font size of the text of the list values when the display format of the fiel or **Checkbox** within the data dictionary definition of the field. You should include the measu such as pt, px or em following the size you enter.
LIST WIDTH	This attribute sets the width of the of the field on the screen when the display format of the fi or **Checkbox** within the data dictionary definition of the field. You should enter a width as th pixels, followed by px. Note that there is a 10px padding around the text of all the labels wit containing the value, so the overall width of the cell is 20px greater than the number you ente
MAX FRACTION DIGITS	This attribute only applies within numeric type input fields on ADD_PROBLEM and EDIT_ layout types. This provides an integer number that represents the number of digits to display, decimal point
MAXLENGTH	This will add a *MAXLENGTH=nnn* attribute to the HTML display tag for the field, controllin number of characters that can be typed into the field. The default if no attribute is set is 255 c in this way, the attribute works when used within a layout that is rendered as an *add* or *edit* fo characters is the maximum length of any user defined text field that you create **Example**: Setting an attribute of MAXLENGTH equal to 25 on a field will restrict the amou that can be entered into a field to 25 characters.
MENUBAR ITEM ACTION	This attribute controls the action triggered when clicking the menu button to which the attribu
MENUBAR ITEM CLASS	This attribute controls the CSS class used when rendering the menu button. If you are defini CSS class, the entry for the style can be put in the **user_stylesheets/user_stylesheet.css** file.
MENUBAR ITEM CLASS IF	This attribute is applied to the selected field on this layout only. The value you provide is the when rendering this menu button.
MENUBAR ITEM ICON	This property is used to select the icon that is rendered when viewing this menu button on *Ad* screens. You must select an Icon Display that uses icons. Use the **Browse the Icon Library** screen to view and select an apppropriate icon from the library.
MENUBAR ITEM ICON DISPLAY	This is used to control the rendering of this menu button on *Add* and *Edit* screens - Choose fr Text and Icon or Icon only.
MODAL WINDOW	This layout cell attribute only has an effect if used on an EDIT_BUTTON within a Related Is

PHONE NUMER	Use this layout cell attribute on text fields to activate the international phone number masking
READONLY IF	This attribute indicates that the field value is to be displayed on the layout in a read only mod the value of another field. You may have more than one FIELD READONLY IF attribute on a obvious reasons, this attribute only works when used within a layout that is rendered as an *ad* Note that if you use the *greater than* or *less than* operators, they only work with numeric com **Example**: We want to display the Customer name within the field named Customer on an *edi* Customer has already been added, but make the field read / write if there is no value so the us Customer name. To achieve this, add an attribute of FIELD READONLY IF Customer is not place a FIELD READONLY IF attribute on a layout cell that contains an embedded layout as field, then all the fields on the embedded layout will be made read only, according to the conc the logic of the attribute.
REMOVE ANY	Removes the * **Any** * entry from list and user fields. This attribute will cause the * Any * ent not to be rendered when the layout is used as query filter screen. This can be used to ensure th always picks a value from a list before performing a search. Note that this is similar behavior field required on a layout.
REMOVE LABEL NOWRAP	By default, ExtraView does not allow the label of a field to wrap within the user's browser. In behavior setting named LABEL_WRAP_POSITION that allows the administrator to define a position where it will wrap. This gives a more consistent result as the user resizes their windo browser. If you set this attribute, then ExtraView will allow the browser to control the wrappi
REMOVE NONE	Remove the * **None** * entry from list and user fields. This attribute causes the * None * entry on an *add* or *edit* layout to be removed, ensuring that the end user always selects at least one means that the field will become required, as a value is always selected.
REMOVE SELECT ALL	This attribute only works with multi-valued list fields. When set, the * **Select All** * option is cannot be selected from the list of values.
REMOVE VALUE NOWRAP	By default, ExtraView does not allow the value of a field to wrap within the user's browser. If attribute, then ExtraView will allow the browser to control the wrapping for the field. This is an issue for read-only text type fields.
REPORT FONT SIZE	This attribute can be used to modify the size of the font used to generate the embedded report typically used to set a smaller font size than theremainder of the *add* or *edit* screen as reports voluminous. You can either set a specific font size such as 8pt, 0.8em or 10px or use an HTM name from the following table medium — Sets the font-size to a medium size xx-small — Sets the font-size to an xx-small size x-small — Sets the font-size to an extra small siz small — Sets the font-size to a small size large — Sets the font-size to a large size x-large — Sets the font-size to an extra-large siz xx-large — Sets the font-size to an xx-large size

	on embedded reports
REPORT MAX FRACTION DIGITS	This attribute may be set to define how many digits will appear in the rendering of a field witl of *Number*, *Decimal* or *Currency*, when the field is displayed as part of a report. It also contrc value of the field is rounded on reports and when displayed on the *add* or *edit* screen. Note th display types generally have the number of decimal digits defined by the currency type. For e Dollar has two decimal digits.
REPORT OPTIONS	This allows for the settings of embedded reports within an *add* or *edit* screen. This attribute i on layout types of **Embedded Report** and only selects shared reports and reports saved for u: mainly allows for the inclusion or exclusion of buttons such as refresh and drilldown, that int report. See here for more information
REQUIRED	This attribute is used to make a field required unconditionally on an *add* or *edit* layout. Contr FIELD REQUIRED IF attribute which makes a field required conditionally. Note that fields u attribute are immediately flagged in with a highlighted color on the grid of the layout
REQUIRED IF	This is for indicating if a field value is required depending on the value of another field. Note Required If dependencies only work on fields with a display type of *List*. Further, they do not field has been set in the data dictionary to be a multi-valued list, or if the field is a pop-up list more than one FIELD REQUIRED IF attribute on a field. For obvious reasons, this attribute c when used within a layout that is rendered as an *add* or *edit* form. Note that if you use the *gre than* operators, they only work with numeric comparisons. **Example**: The field on a form named CUSTOMER_NAME may become required if another CUSTOMER_ISSUE has a value of Yes. To achieve this, add a layout element attribute to the CUSTOMER_NAME. The value will be *Yes*, the field will be CUSTOMER_ISSUE and the e be *equals*.
RID AUTOLOAD	This attribute may only be applied to related issue layouts that are connected to search layout: attribute is set, the search layout will be populated as soon as the *add* or *edit* form that contair Primarily, the contents will use the filters in the setting RID FILTERS to populate the search r avoids the need for users to click the Search button to see results when the form is first render this feature if you expect to see a large number of results returned from the search. Typically, then set additional filters on the search layout to refine the results.
RID FILTERS	This attribute may only be used on a cell containing a related issue display. It allows the admi one or more filters on the related issue display. For example, you might want to filter the relat only display the *Open* issues, or you may want a much more complex filter. When you select you will a dialog similar to the following. Use the query filters to compose the expression req update the attribute. Note that you cannot filter on the KEYWORDS field:

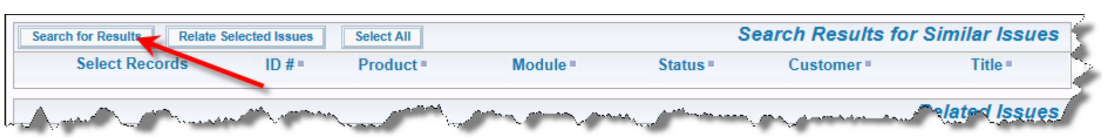


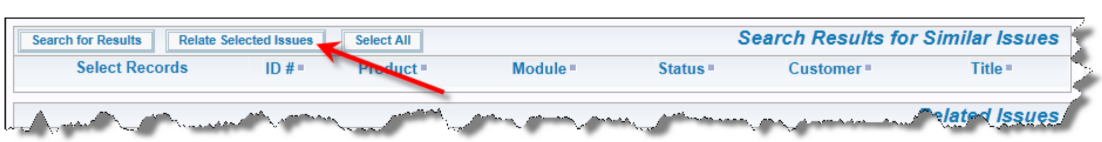
	filter will use the value that the user sets into the field when they are entering data. Consider t dynamic filter. This special value appears for fields with display types of *List*, *User* and *Popu* use this feature for other data types, you can enter **$$<ddName>$$** in the field.
RID FILTER RESULTS	This attribute is typically used in conjunction with the RID AUTOLOAD attribute on a relate that is connected to a search layout. When this is set, the rendering of the search results is mc a search field above the fields on the layouts that contain text information. The user can enter search field and the results within the related issue display will be filtered according to the tex There are some limitations on the layout that this is used with: • The layout may only be formed with a single row of fields • The Quickedit button is not supported on the layout • Only text contained within the cells on the display is filtered. Date fields, number field are treated as text • The layout does not support inline add • The layout does not support repeating row fields • When using a SIZE layout cell attribute in conjunction with this attribute, the sizes are pixels, not characters • The following layout cell attributes are not supported on the layout when this attribute i AGGREGATE EXPRESSION TITLE, ALTERNATE TITLE, COLLAPSE REPEATIN GRIDEDIT BUTTON, RID FIX TITLES, RID PAGE SIZE, RID THRESHOLD, RID LAYOUT • If a user clicks on a field column title to resort the report by that field, the entire results
RID FIX TITLES	This attribute may only be set on Related Issue Display layouts within *Add*, *Edit* layouts, or su these. When this attribute is used in conjunction with the HEIGHT attribute, and a scroll bar issues have been added, the title to the Related Issue Display is fixed as the user scrolls. It is not recommended that you place SIZE layout cell attributes on the fields contained withi Issue Display layout when you use this attribute. The best results are obtained when the brow columns and column titles.
RID GROUP REFERENCE FIELD	If you do not use this cell attribute on the cell in a layout containing the LAYOUT.RELATED_ISSUE_DISPLAY (or other related issue layout), then ExtraView assu linking issues based upon the value in the ID field. If you have altered the behavior setting na ITEM_ID_DISPLAY to point to ALT_ID rather than ID, then issues will be related on the AI rather than the ID field. However, you can use this entry to provide a link based upon the valu field on the layout. This is a very flexible feature, allowing arbitrary groups of issues to be lin upon any field.
RID LINK FIELD NAME	This attribute is used when linking selected search results on an ADD_PROBLEM or EDIT_I layout to a related issue display which will contain the selected records. This field is an intern which will contain the ID's of the selected records. For most purposes, this field can be hidde the layout, using the following two attributes: • FIELD STYLE: Visible if ID = -99 • LABEL TAG: style=display:none See the example here for use of this attribute.
RID OMIT AUTO POPULATE	Bypasses the automatic population of related issue ID's for the field
RID ONCLICK_JS	This attribute is used on a related issue display to define JavaScript to execute when the user RID PREHEADER ADD BUTTON. This can either be JavaScript itself, or a call to a JavaSc the UserJavaScript.js file.

<table>
<tr><td></td><td>

Creating a title for related issue displays</td></tr>
<tr><td>RID PREHEADER ADD BUTTON</td><td>Use this attribute to place an "add" button on a related issue display layout. The button must a before you can use this on the related issue display. The button is created within the data dicti attributes:

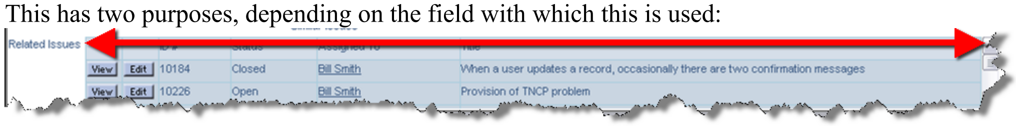
Create the field from the Label tab of the data dictionary
Provide a fixed name for the button
Provide a title for the button - this is used to define the text that appears on the button w part of the related issue display
The display type must be Button
Other field attributes can be defined such as permissions, according to your requiremen

Add button on a related issue display</td></tr>
<tr><td>RID PREHEADER REFRESH BUTTON</td><td>See the example here for use of this attribute. This provides a "Refresh" button on a related is contains search results. The user can select new search filters with this button to refresh the re attribute does not require a data dictionary field. Simply enter the title for the button that you value to this attribute.


Refresh button on a related issue display</td></tr>
<tr><td>RID PREHEADER SUBMIT BUTTON</td><td>See the examples here and here for use of this attribute. This provides the "Submit" button on display that contains search results. The user moves the currently selected issue(s) from the re display to either fill fields on the current parent issue, or to relate the selected records to the cu record. This attribute does not require a data dictionary field. Simply enter the title for the but require as the value to this attribute.


Submit button on a related issue display</td></tr>
<tr><td>RID RELATION</td><td>This cell attribute defines how the related records will be displayed within the RELATED ISS</td></tr>
</table>

	issue. Note that in the ExtraView data model it is possible to define more than one pare specific issue. See the section on Relationship Groups for more information 4. RELATED – In this instance ExtraView will display the parents and the children of the within the specified group(s), within the RELATED_ISSUE_DISPLAY. The parents an these related issues will not be displayed. You may create and use related issue display as the name begins with RELATED. 5. SIBLINGS - ExtraView will display all the issues at the same level in the hierarchy. Fo parent record has five children, and you create a related issue display with all the childr relationship group relation type of SBLING, then you will see the four siblings to the cı 6. LINKED - This type does not use a relationship type per se, but relies on the Related Is filters to retrieve the associated issues. For example, you might have a filter that selects issues for a particular product, and display these on a related issue display of each issue up.
RID RELATIONSHIP NAME	This attribute may only be used on a cell containing one of the following: • the layout named LAYOUT.RELATED_ISSUE_DISPLAY or any other layout where tl with RELATED. For example, LAYOUT.RELATED_CUSTOMERS is a valid name fo group name • the field named RELATIONSHIP_GROUP_PARENT, or • the field named RELATIONSHIP_GROUP_CHILD. It will be ignored on other cells. It refers to the name of the relationship group that is to be us In case a), it defines the relationship group(s) to search for the related issues; in cases b) and c relationship group in which the new relation is inserted. In case a), the relationship group nan wild-card “*”, which signifies ALL relationship groups. If you do not provide the attribute on will search ALL relationship groups (as if the value were “*”); for b) and c), ExtraView will s relationship group name stored in the behavior setting named RELATION_GROUP_DEFAU Workflow Settings screen. In any case, non-wild-card relationship group names must denote a relationship group.
RID SEARCH FILTER LAYOUT	This contains the name of the search filter layout that is used to determine the filters for an en of type *Search*. This is used as an attribute on the layout that will contain the results of the sea linking the search filters and search results together. This example shows how this attribute is
RID SINGLE_SELECT	This attribute is used on a search results layout. It is used to constrain the number of results th by the user to a single one, so that the fields on the selected result are returned directly into fi current issue. Business rules transfer the results into the fields on the current issue. The examp how this is configured. Note the use of the inbuilt field named RELATIONSHIP_GROUP_CI field to provide a radio-button-like function to allow the user to select the result they want to attribute is not set then the RELATIONSHIP_GROUP_CHOOSE_BTN field allows multiple the use case is likely to be that the entire set of results will be used to create a group of related
RID SORT ORDER	In this attribute, you specify the sort order of the records presented on the RELATED_ISSUE Specifically, you can set up: 1. The field name to order by 2. The rank of this field in sort order (relative to other sort orders in this attribute) 3. The direction (ascending or descending) of the sort order To specify ordering by more than one field, insert multiple Relationship Group Sort Order att specify where a sort order field appears in the sort priority, use the rank number. For example may be: Field Name | Rank / Direction STATUS | 1/ASC

RID THRESHOLD	This overrides the setting within the behavior setting named RID_PAGING_DEFAULTS. Th setting defines the number of issues that must exist within the related issue display before pag is performed.
RID TRANSPOSE LAYOUT	This attribute only works in conjunction with a related issue display. When this is applied to a display, it causes a transposition of the rows and columns on the related issue display.
SIZE	This has two purposes, depending on the field with which this is used:  • Most commonly, this will add a *SIZE=nnn* attribute to the HTML display tag for the fie is 11 characters if no attribute is set. **Example**: You may want to alter the width of a tex screen to be narrow. You would achieve this with an element attribute of *SIZE=30* or si • If this attribute is added to the layout named LAYOUT.RELATED_ISSUE_DISPLAY o where the name begins with RELATED, and this is embedded on an *add* or *edit* form, t represents the width of the embedded related issue display. Again, this is measured in c default width of a RELATED_ISSUE_DISPLAY is 125 characters. **Example**: The scre where the SIZE attribute is used on the related issue display • When adding this attribute to a layout RELATED_ISSUE_DISPLAY layout which also cell attribute of RID FILTER RESULTS configured, the measurement is in pixels, not i • Note that as the SIZE attribute generates an HTML tag of the same name, it cannot be u which use dynamic HTML for their generation. This most significantly affects list fiel an image associated with each value. For these fields, use the layout cell attribute, or a set in the data dictionary of STYLE with a value of width:*nnn*px where *nnn* is the widtl field.
SPELL CHECK	Use this layout cell attribute to activate the ExtraView inbuilt spell checker for the field.
STYLE	This sets the style of the value component of a field (not the style of the field label). This attri supported within *add* and *edit* layouts only. It is supported with the field in both read and writ It is recommended that you add a style attribute to a field, rather than use the HTML MODIFI with a STYLE tag. This prevents the possibility of the field having two style attributes, which HTML syntax. Only one of these attributes will be recognized in the user's browser. It is hel have a reasonable understanding of HTML tags, attributes and CSS to use this layout cell attr **Example**: You may want to display a field on a report with a background color of light blue a achieve this, add a STYLE cell attribute of: background-color:#ddddff;font-weight:bold
STYLE IF	This attribute works similarly to the STYLE attribute, but allows a logical expression to be us style only in specific circumstances that you define
SUPPRESS ALLOWED VALUES	This only applies to fields placed upon a search filter layout, such as the Quick Search, Full S filter layouts. When this layout cell attribute is set, and the field is a child in an allowed value then the child list will not be filtered by its parent, and all possible values will be displayed. F attribute to work, the parent field of the relationship must also be on the layout.
TEXT SEARCH OPERATOR	This attribute only applies to fields placed upon search filter layouts, such as the Quick Searc Chart filter layouts. It allows the administrator to define whether a user is required to enter a within a text field when it is used for a query operation, or whether the user's query is automa a *contains* operator. For example, consider a field named **Diagnosis** being placed on a search values stored in issues within the database may contain a significant amount of text, and the w *hypertension* may appear in a subset of the issues. When the TEXT SEARCH OPERATOR is the issues that contain the word *hypertension* will be returned, but when the operator is set to

	need is to validate the existence of values within fields across the entire record, not just the fi under the currently displayed tab. This implies that the user will most probably be making ent several tabs on a screen, before they submit the record. To set the attribute for the entire layou layout that embeds the subsidiary (embedded) layouts. Select the field named LAYOUT.embedded_layout_name. Add the Validate Hidden layout cell attribute to this field, within the layout will be checked. To set the attribute for any individual field(s) within the embedded layout, simply add the attr within the layout. If you place a VALIDATE_HIDDEN attribute on a layout cell that contains layout as opposed to a field, then all the fields on the embedded layout will be subject to the VALIDATE_HIDDEN logic. **Note**: There is an important interaction between Validate Hidden and fields that have a Visibl a layout element has a VISIBLE_IF condition, and if the element has the VALIDATE_HIDDI validation between tabs must be performed. ExtraView will automatically perform this check. **Note**: If the Required If attribute is used within the same field as the Validate Hidden attribut specified after the Validate Hidden attribute, so that ExtraView processes the attributes in the sequence.
VALUE TAG	This allows the administrator to add a new attribute to the HTML <TD … tag that surrounds t cell. This can be used to provide a different style for the value, or to inject any other valid HT value tag. It is likely that you will need a reasonable understanding of HTML tags and attribu layout cell attribute. This tag is supported on *add*, *edit*, detailed report and Quicklist layouts.
VISIBLE IF	This is for indicating whether or not a field or embedded layout is seen depending on the valu element, including itself. You may have more than one VISIBLE IF attribute on a field. If a fi hierarchy of VISIBLE IF dependencies, and it becomes invisible, all the fields below it in the tree will also become invisible according to their conditions. Note that VISIBLE IF dependen on fields with a display type of List. Further, they do not work if the field has been set in the c to be a multi-valued list, or if the field is a pop-up list. The VISIBLE IF attribute is only supp that are rendered within *add* or *edit* forms. Note that if you use the *greater than* or *less than* operators, they only work with numeric com place a VISIBLE IF attribute on a layout cell that contains an embedded layout as opposed to the fields on the embedded layout will be made visible or not visible, according to the conditi logic of the attribute. This is the simplest method to create several embedded layouts which a visible or invisible according to the selected value in a driver field. Conditional attributes suc REQUIRED and VISIBLE IF can be applied multiple times to a single field. When you use t the validation uses 'OR' logic. For example, you may set two VISIBLE IF rules, such as: 1. The field named action is visible if Status equals pending 2. The field named action is visible if Status equals fixed With this rule, the action field will be visible if (a) or (b) is true. When you use a VISIBLE IF layout cell attribute within a Related Issue Display layout, or a r field referred to as the condition for visibility must also be present on the same layout. Furth VISIBLE_IF layout cell attribute only works on the EDIT_BUTTON, VIEW_BUTTON, DELETE_BUTTON and HISTORY_BUTTON within these layouts.
VISIBLE VALUES	This attribute allows you to display individual values within a field which contains a list of va others. When you select this attribute, you are presented with a list of all the values within the select the values you want to make visible. This may be used with great effect on fields such a

UPDATE MAIN ISSUE	This attribute only affects the behavior of an EDIT_BUTTON field when it is placed on a rela display. It has no function or purpose outside of this and will be ignored as an attribute on all layouts. The purpose of this attribute is to allow control of updates of the current issue on an you edit a related issue by clicking on an EDIT_BUTTON in the related issue display. In such there may be business rules or other logic that triggers when you update the related issue; this update the current issue. Under normal circumstances this would lead to a concurrency error w tries to update the current issue after completing the update to the related issue. In such an eve behavior is often to allow the related issue to update the current issue, and allow the user to th current issue, but without a warning or error. To support this, there are three possible values fo attribute. These are applied in the following order: • When the user clicks on the EDIT_BUTTON on the related issue, the edit session for th is set up in the current window, replacing the *edit* screen of the current issue. To achiev layout cell attribute to a value of **UPDATE_MAIN_ISSUE** • When the user clicks on the EDIT_BUTTON on the related issue, the edit session for th is set up in a modal window on top of the *edit* screen of the current issue. To achieve th cell attribute named EDIT_ISSUES_IN_MODAL_WINDOW must be set to a value of layout cell attribute should be set to a value of **UPDATE MAIN ISSUE** • There is no layout cell attribute of **UPDATE MAIN ISSUE** set. This is the default beh check for concurrency errors is made. The *edit* screen for the related issue appears in a Use this default setting if there is no interaction of rules on the related issue with the cu

Note: When comparing attributes, there are rules on how the tests are made. This affects the layout cell attributes tha of their name, e.g. VISIBLE IF and REQUIRED IF. The rules are:

1. For **equals** and **not equals** comparators, you can compare strings or numeric values
2. For > and < comparators, only numeric field display types can be compared, i.e. NUMBER, DECIMAL, and CU

Note: When adding a layout cell attribute of the types VISIBLE IF, REQUIRED IF, NOT REQUIRED IF and similar, operating on a field with a display type of *Checkbox*, and you want to act upon the unchecked value, use a setting such *field_name* NOT EQUAL *Y*.

Special Pseudo-Fields for "IF" Layout Cell Attributes

There are two special fields within the select list for "IF" type layout cell attributes. These are:

- SCREEN (Screen Name) - This allows you to select the values of **ADD** or **EDIT.** This allows you to determine attribute is to be applied to only the *Add* or the *Edit* screen. If not used, the attribute is applied to both screens
- IS_WORKSPACE (Is Workspace) - This allows you to determine whether the attribute is to be applied within a not used, the layout cell attribute is applied to both the standard and the workspace interface.

- Add new comment

Layout Cell Attribute Usage

Layout cell attributes are only able to be configured where they will have an impact and have a specific function. Thi usage of the various layout cell attributes.

COLLAPSE REPEATING ROWS	X	X						
DISPLAY FORMAT	X	X	X	X	X	X		
DO NOT CLONE		X						
DO NOT USE ALLOWED VALUES				X				
DRILLDOWN			X					
EDITOR TOOLBAR	X	X						
EMBEDDED REPORT NAME	X	X				X		
ENCRYPTED								
EXPRESSION TEXT			X					
FIELD AGGREGATE EXPRESSION								
FIELD AGGREGATE EXPRESSION TITLE	X	X	X					
GRIDEDIT BUTTON								
HEIGHT	X	X	X					
HELP TEXT	X	X						
HIDE VALUES	X	X						
HIDDEN VALUES IF	X	X						
HIGHLIGHT VALUE IF		X	X					
HIGHLIGHTED IF	X	X	X					
HOVER VIEW DEFINITION	X	X	X					
HTML MODIFIER	X	X	X					
HTML MODIFIER IF	X	X	X					
LABEL TAG	X	X	X	X	X	X		
LABEL TAG IF	X	X	X	X				
LAYOUT SEARCH EXPANDED MODE	X	X						
MAXIMUM FRACTION DIGITS	X	X						
MAXLENGTH	X	X		X				
MENUBAR ITEM ACTION							X	
MENUBAR ITEM CLASS							X	
MENUBAR ITEM CLASS IF							X	
MENUBAR ITEM ICON							X	
MENUBAR ITEM ICON DISPLAY							X	
MODAL WINDOW								
NOT REQUIRED IF	X	X						
RANK								
READONLY IF	X	X						

REPORT MAXIMUM FRACTION DIGITS			X					
REQUIRED	X	X						
REQUIRED IF	X	X						
SELECTED	X	X						
SIZE	X	X	X	X				
STYLE	X	X	X	X				
STYLE IF	X	X	X	X				
TRANSPOSE LAYOUT								
USER LIST DISPLAY	X	X		X				
VALIDATE HIDDEN	X	X						
VALUE TAG	X	X	X					
VISIBLE IF	X	X	X					
VISIBLE VALUES	X	X						
VISIBLE VALUES IF	X	X						
VIEW ISSUE HOVER LAYOUT			X					
UPDATE MAIN ISSUE								
RID ACT ON CHANGE	X	X						
RID RELATIONSHIP NAME	X	X						
RID GROUP REFERENCE FIELD	X	X						
RID RELATION TYPE	X	X						
RID SORT ORDER	X	X						
RID FILTERS	X	X						
RID PAGE SIZE	X	X						
RID PREHEADER	X	X						
RID PREHEADER ADD BUTTON	X	X						
RID PREHEADER REFRESH BUTTON	X	X						
RID PREHEADER SUBMIT BUTTON	X	X						
RID LINK FIELD NAME	X	X						
RID SINGLE SELECT	X	X						
RID SEARCH FILTER LAYOUT	X	X						
RID THRESHOLD	X	X						
RID TRANSPOSE LAYOUT	X		X					
OMIT RG AUTO POPULATION	X							

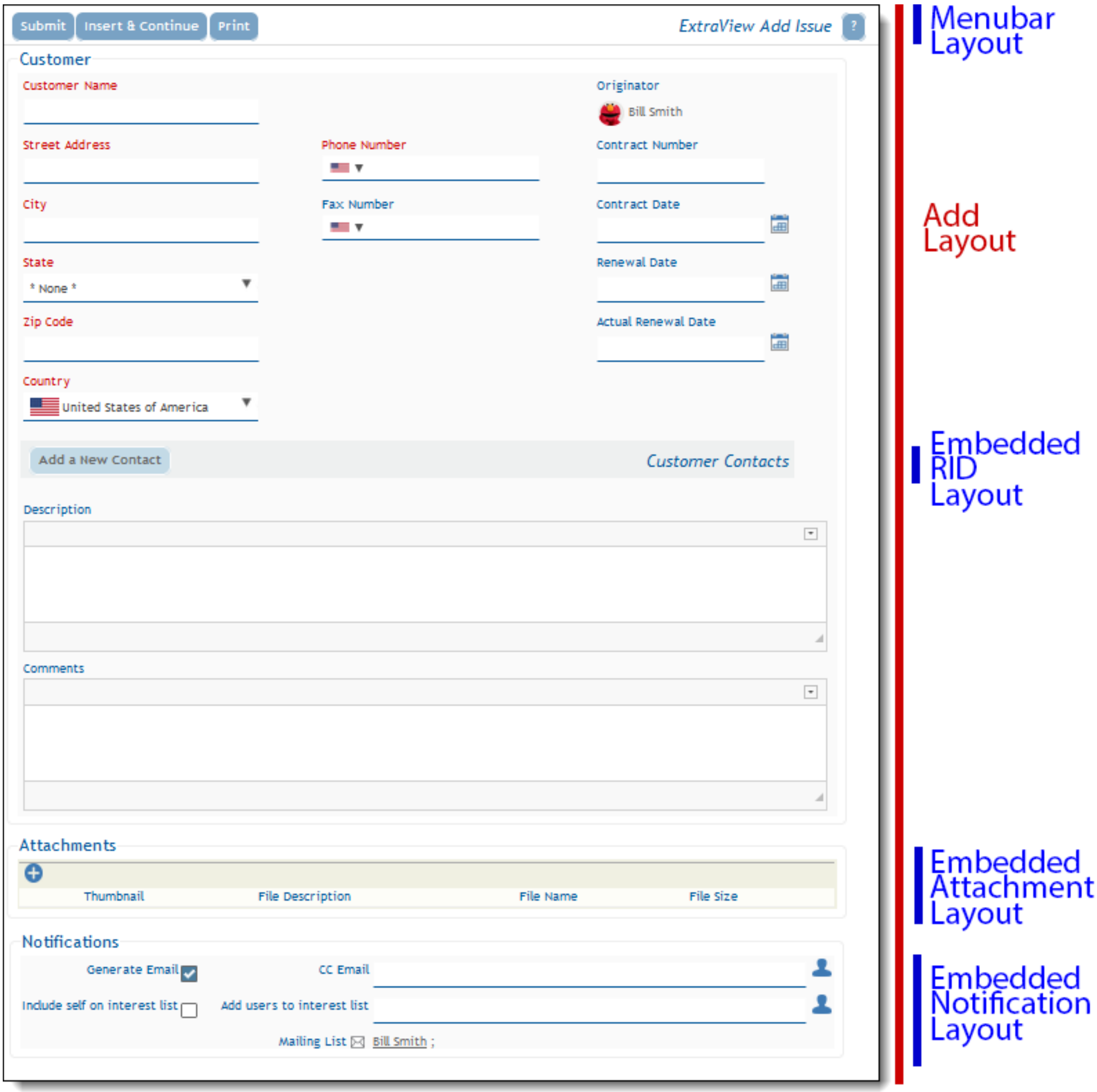
The following attributes may only be defined within the data dictionary:

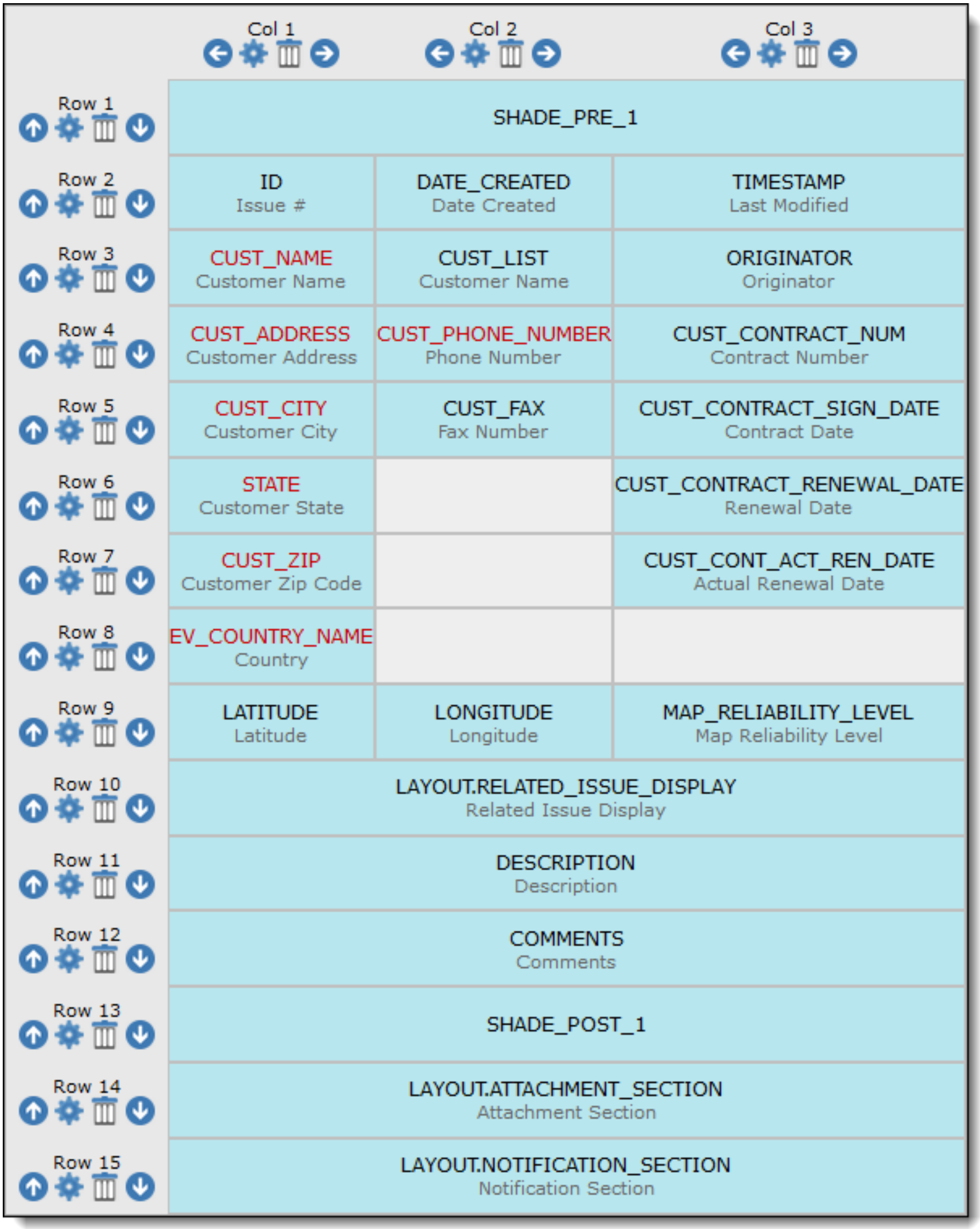
USED IN USER PROFILE

Add & Edit Layouts

Add and *Edit* layouts are configured in every site within every Business Area. These layouts may be configured identi significantly different. It is often a strategy to begin your site development for any Business Area by creating your *Ad* changing its type to be an *Edit* layout and saving that. From that point they are separately maintained layouts.

A typical *Add* or *Edit* screen layout is composed of these elements:





Note that the MENUBAR layout is not embedded within the layout and is defined externally. You can see the embedc the amount of work to configure your site. As well as embedding a layout within another layout, you can define altern are rendered at run-time, according to a value of a field on the main layout. For example, you may want to embed diff fields relevant to the collection of data about hardware and software, according to the user's choice of *Hardware, Soft Documentation*, in a field on the main layout. When the user selects this field, the screen is refreshed, and the appropri layout will be generated. There are two methods for doing this. First there is the method to embed layouts using the "I technique. Second there is the "Selected By Layout" method. It is recommended that you use the first technique. The s is provided for backwards compatibility. Some general rules need to be observed with embedding layouts within one a

- You must not place the same field on a layout, and within any layout that is embedded within it. Doing so would unpredictable results and errors. As embedded layouts can be created independently of layouts, and they are inte condition cannot be checked by ExtraView prior to execution of the rendering of the screens. When rendering th ExtraView detects that a field is used more than once over all the screen (including the embedded layouts), then generated
- You should not place the same field on different embedded layouts of the same type. Fields on embedded layout across the layout type being used
- It is recommended that any embedded layout that you place on a layout should span all columns of the layout. A layout should never start in any but the first column of a layout. Other placement may work, but there is no guar layout will render correctly. This is due to limitations of HTML and how different browsers will render complex should always test your embedded layouts in all the target browsers that your organization uses
- All the layouts of a single type must be contained within the same Business Area and Project for which the temp embedded layout is created. For example, if you create a series of embedded layouts all dependent upon the sam selection, these embedded layouts must all reside in the same Business Area and Project
- An embedded layout should not contain the parent field of an allowed value relationship, if the child field is con outer layout. Both parent and child fields can be in the same layout or the parent can be in the outermost layout the embedded layout
- With the exception of Related Issue Display layouts, you cannot embed a layout within a *Quicklist* layout
- You cannot embed a layout within a *Related Issue Display* layout
- As a general rule, you should never embed a layout within itself, causing recursion or a condition which will be ExtraView cannot detect this condition until runtime, and this can cause significant system and behavior problem restart of the application server.

Embedded Layout Types

- **Simple embedded layouts** - In this instance a layout type that you create is embedded inline within another lay
- **"Visible If" layouts** - Layout types that you create are all embedded within a layout. Each layout is initially hid VISIBLE IF layout cell attribute. This attribute references a driving field, usually a tab or list field such that eac embedded layouts is made visible one by one, according to the value of the tab or list field
- **"Readonly If" layouts** - These are embedded layouts that are only visible conditionally. Their dependency is b of a field in the parent layout
- **Repeating row layouts** - These layout types must be embedded within another layout. You cannot embed anoth repeating row layout
- **Related issue layouts** - These layout types must be embedded within another layout. You cannot embed anothe related issue display layout
- **Embedded Report layouts** - Embedded Report layouts allow you to create an empty layout and then point this
- **Embedded Menus** - Embedded Menu layouts allow for the creation of horizontal or vertical menus that contain buttons with actions.

"Visible If" Layouts

As an example, you may want three cells on a layout to be displayed according to the value selected in a list box. You with embedded layouts, or with the layout cell attribute named VISIBLE IF on each of the three cells. A guide to impl most effective method is to consider the following:

- If you have several or many fields to make visible, embedded layouts are processed a little faster, resulting in hi

- Place the fields onto this new layout within the Design Center. This will become the embedded layout. Save yo
- Edit the layout (or layouts) within which you wish to embed the layout. If necessary create space for the layout embed, by creating a blank row. Typically you will also place the layout beneath its driver field. The driver fiel will be used to select and make visible, the embedded layout, dependent upon its value
- From the list of layouts in the Design Center, locate the layout you are going to embed, and drag it to its positio layout. Extend its width across the main layout, as required
- Now, add a layout cell attribute to the embedded layout. This will be an attribute of the form **VISIBLE IF**. Sele its value which will be used to trigger the visibility of the embedded layout
- If you want to embed further layouts, each triggered off a different value in the driver field, you can create a lay of the values of the driver field, embed the layout within the main layout and then use the **VISIBLE IF** attribut visbibility based on different values of the driver field.

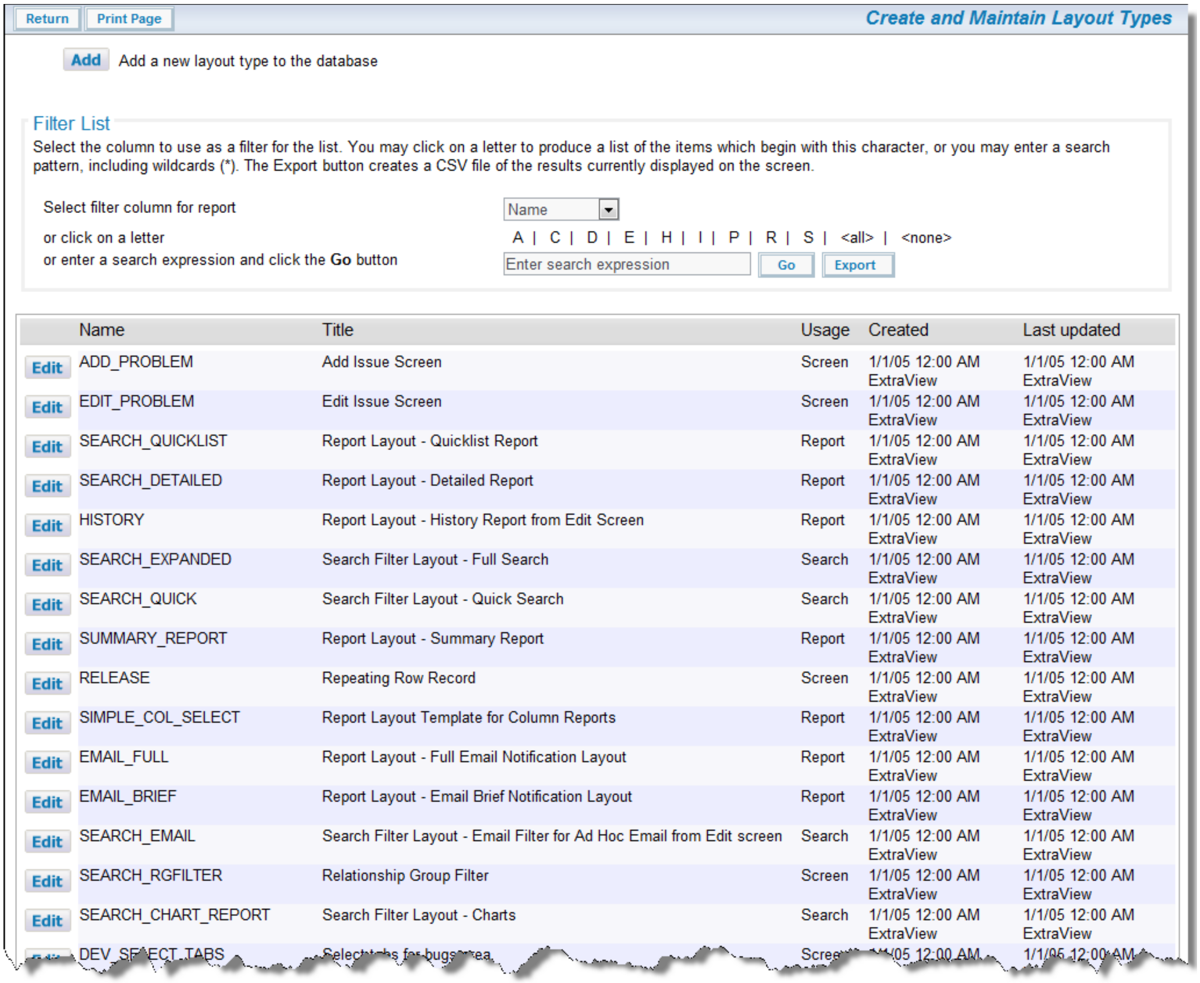
"Readonly If" Layouts

Somewhat similar to Visible If layouts, these are embedded layouts that are configured to display all of their fields in dependent upon the value of a field in the layout. The field that sets the dependency may not be within the embedded the procedure in the preceding section to configure your **READONLY IF** layout, but use the layout cell attribute nam **IF**.

"Selected By" Layouts

This feature allows the administrator to design a series of layouts, which are generated within a global layout such as *Issue* screen. Each of these layouts is based upon the value of a trigger field. For example, you may want to generate a within a layout, dependent on the category of issue you are adding. Thus, if you want to render a different embedded l *Software, Hardware* and *Documentation*, which are different values of UDF named **ISSUE_TYPE**, with a title of **Iss** will choose the **Issue Type** field. When the user selects the value of Issue Type, the embedded layout is refreshed, dis that is tied to the value of the trigger field. One usability feature is that if you have a form within a browser window th the height of the window, and you choose a different value for the trigger field, ExtraView will place the new embedd display at the top of the screen, thereby preventing the situation where the new layout may be hidden beneath the bott window. The sequence of administrative operations required to create selectable embedded layouts is as follows:

1. First, decide on the field that is to be used to trigger the rendering of the different embedded layouts. For examp render a different embedded layout for each of *Software, Hardware* and *Documentation*, which are different val **Type** field, then you will choose the **Issue Type** field.
2. From the Administration Site Configuration tab, select **Create and Maintain Layout Types** feature. The follov appears:



	Name	Title	Usage	Created	Last updated
Edit	ADD_PROBLEM	Add Issue Screen	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	EDIT_PROBLEM	Edit Issue Screen	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_QUICKLIST	Report Layout - Quicklist Report	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_DETAILED	Report Layout - Detailed Report	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	HISTORY	Report Layout - History Report from Edit Screen	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_EXPANDED	Search Filter Layout - Full Search	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_QUICK	Search Filter Layout - Quick Search	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SUMMARY_REPORT	Report Layout - Summary Report	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	RELEASE	Repeating Row Record	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SIMPLE_COL_SELECT	Report Layout Template for Column Reports	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	EMAIL_FULL	Report Layout - Full Email Notification Layout	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	EMAIL_BRIEF	Report Layout - Email Brief Notification Layout	Report	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_EMAIL	Search Filter Layout - Email Filter for Ad Hoc Email from Edit screen	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_RGFILTER	Relationship Group Filter	Screen	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	SEARCH_CHART_REPORT	Search Filter Layout - Charts	Search	1/1/05 12:00 AM ExtraView	1/1/05 12:00 AM ExtraView
Edit	DEV_SELECT_TABS	Select tabs for bugs area	Screen	1/1/05 12:00 AM	1/1/05 12:00 AM

Layout Types

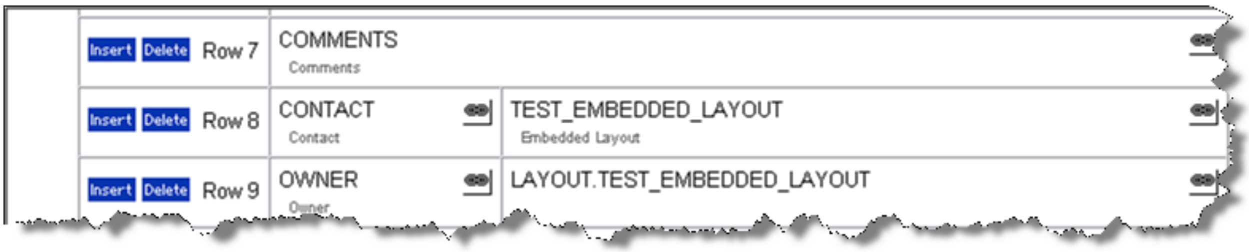
3. Press the button to add a new layout type to ExtraView. You must name this layout with the fixed name of the tr example, this is **ISSUE_TYPE**. The title should be **Issue Type** and the type must be **Screen**
4. Now navigate to the **Design Center**
5. Navigate to the Business Area and if appropriate, the Project within which you want to use the embedded layou
6. Next, select the layout type you just created from the **Add a new layout for the entire system** select list. Once example, this is named **Issue Type**
7. Give this new layout a title and a description. This layout is only used as a reference to create the different embe You do not need to add any fields to this layout. Simply **Save** this layout. This now serves as a template for eacl layout you create. Any fields that are contained in this layout will be propagated to the selectable embedded lay the remaining steps of this procedure
8. **Return** to the initial **Design Center** screen
9. If you are adding the embedded layouts to the Add screen, edit the appropriate *add* screen. Place the **Issue Type** maing grid of the layout, if it is not already there
10. Now place the embedded layout on the main grid, by dragging it from the list of Layouts. In our example, the la **LAYOUT.ISSUE_TYPE**. You should be sure to give the embedded layout a suitable *colspan* within the layout suggest that it can do this for you at this step, creating an embedded layout that will span the width of the entire
11. Step 12 will be repeated for each value of the **Issue Type** field (in our example, *Software, Hardware* and *Docun* will be creating and saving an embedded layout for each of these values, from the template created in step 7
12. Make sure the embedded layout is selected on the main grid and click on the **New** layout cell attribute button. A

layout created in step 7, or you will not be able to add new selectable embedded layouts of that type.

Positioning Embedded Layouts

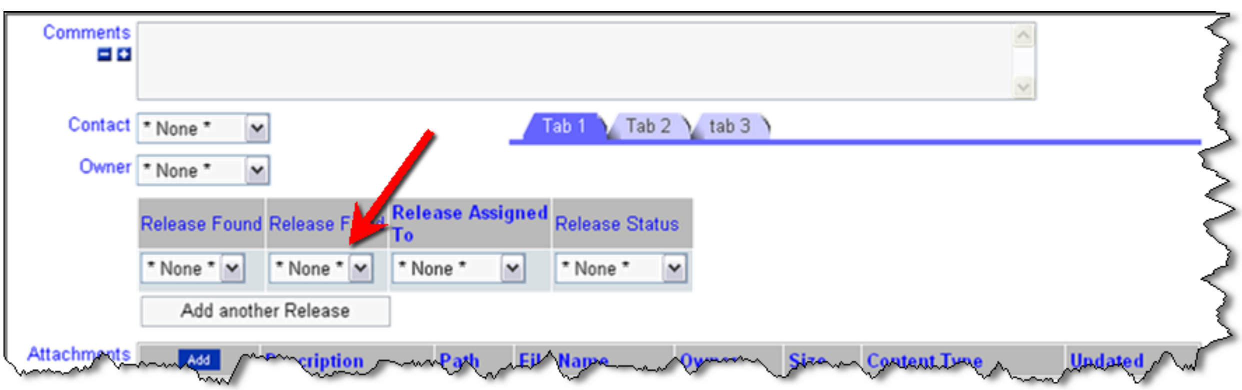
Within ExtraView, a design decision was made to always align the columns of an embedded layout with the columns c embeds it. This provides the most pleasing presentation of fields to a user. However, the limitations of HTML are sucl precisely when an embedded layout is defined to start in the first column of the layout within which it is created. If the layout has multiple rows (and most do), then the second and subsequent rows will always be rendered from the first cc second and subsequent row, which may cause a misalignment. To prevent this, set a *rowspan* on the field at the left of layout, such that it spans one row greater than the number of rows in the embedded layout. To see this effect, see the f layouts and the differing rendering of the results:

Layout 1



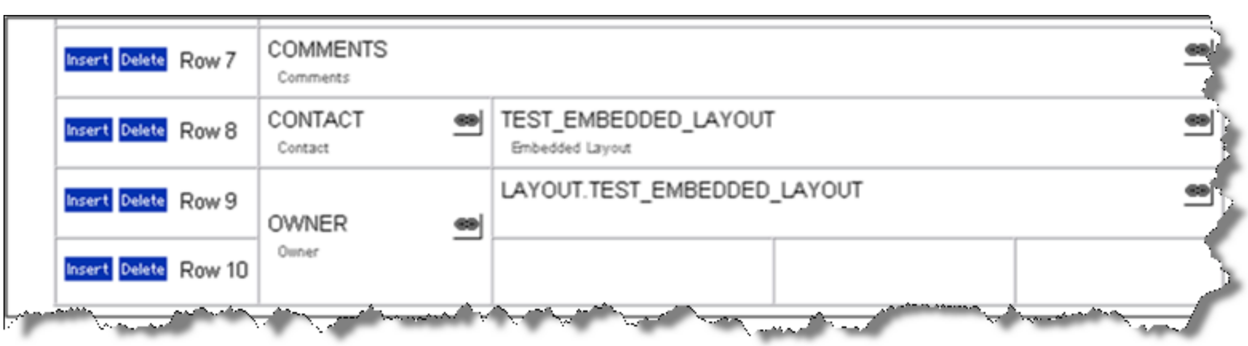
Layout definition with embedded layout

Note that this layout leads to the wrong rendering of the embedded layout, where the embedded layout titles appear cc data rows are offset to the leftmost column.



Rendering of layout

Layout 2



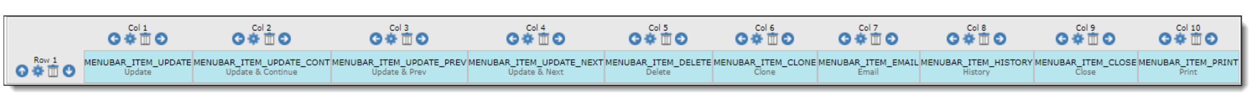
Rendering of layout

Menubar Layouts & Drop-Down Menus

Menubar layouts achieve two purposes. First, they provide the action buttons on the menubar of *add* and *edit* screens. allow the creation of a drop-down menu stored within a single cell within an *add* or *edit* screen. Each installation has menubar layout for the *add* layout - the MENUBAR_LAYOUT_ADD layout, and for the *edit* layout - the MENUBAR_LAYOUT_EDIT layout. In the normal way, you can either inherit these layouts for different Busine Projects, or you can create these layouts within any Business Area or Project. You create your own layout for drop-dc creating a layout type and then embedding this in the *add* or *edit* layouts.

The above image shows the inbuilt layout for the standard interface. If you move into a workspace, this menubar is re

The menubar buttons are placed on a layout, in exactly the same manner as for all other layouts. For the above menut looks like the following image. Note that menubar layouts are automatically placed at the top of the *add* and *edit* scre need to be embedded within the *add* and *edit* layouts:



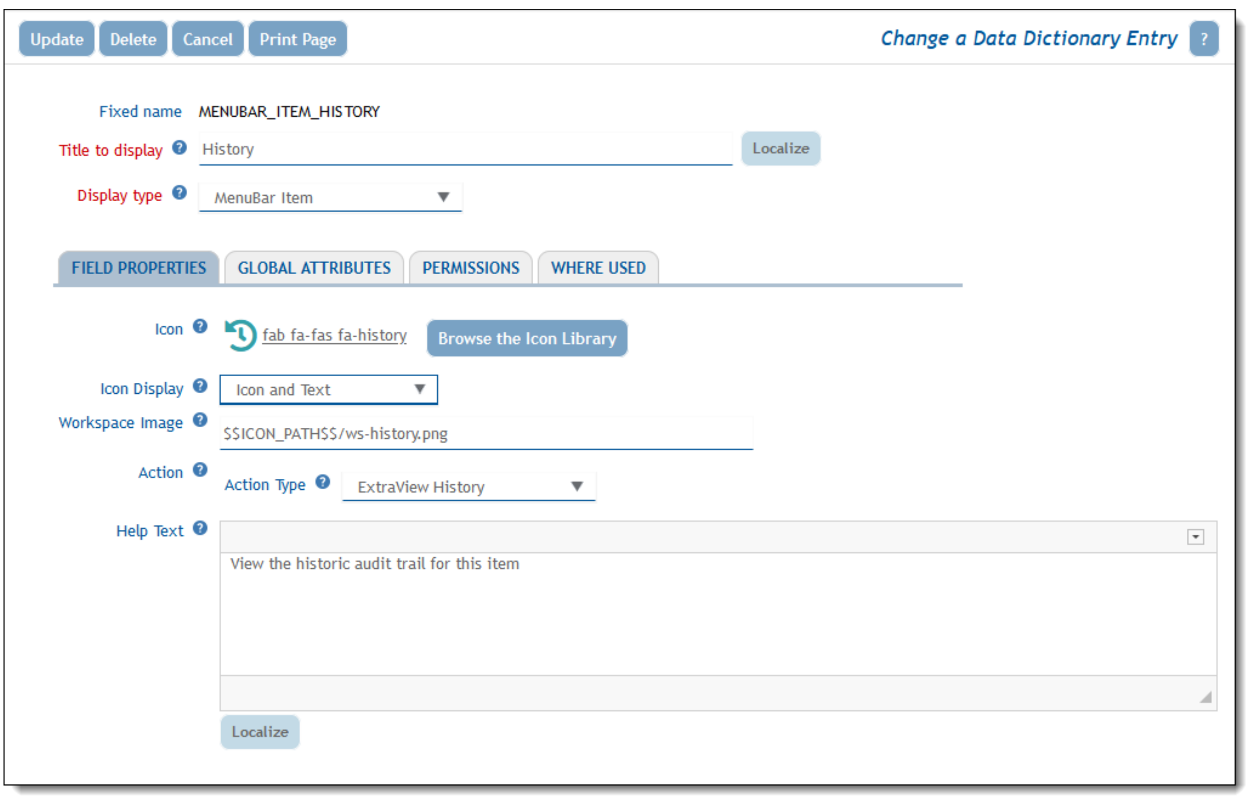
Like all other layouts, button fields may be rearranged, deleted and added to the menubar layouts. Layout cell attribut applied to the buttons. The inbuilt buttons available, and defined in the data dictionary are:

MENUBAR_ITEM_HISTORY	History	PR_RESOLUTION. HISTORY_BUTTON	View the historic a item
MENUBAR_ITEM_INSERT_CONT	Insert & Continue	PR_ADD_PROBLEM. SAVE_AND_CONT_BUTTON	Add this item and
MENUBAR_ITEM_PRINT	Print		Print the current pa
MENUBAR_ITEM_SUBMIT	Submit	MENU.ADD_PROBLEM	Add to database
MENUBAR_ITEM_UPDATE	Update	PR_RESOLUTION. EDIT_BUTTON	Update this item ar screen
MENUBAR_ITEM_UPDATE_CONT	Update & Continue	PR_RESOLUTION. SAVE_AND_CONT_BUTTON	Update this item ar editing
MENUBAR_ITEM_UPDATE_NEXT	Update & Next	PR_RESOLUTION. ALLOW_EDIT_NEXT_PREVIOUS	Update this item ar one for editing
MENUBAR_ITEM_UPDATE_PREV	Update & Prev	PR_RESOLUTION. ALLOW_EDIT_NEXT_PREVIOUS	Update this item ar previous one for ec

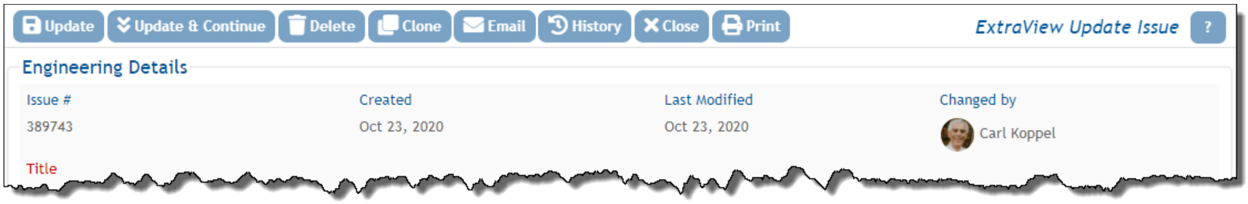
Each menubar button created may have an optional icon that is displayed within the button. These are selected within dictionary edit screen for the button. You may elect to display the text only, the text plus icon or the icon only.

Note that most of these buttons also have permission keys, allowing you to turn them on and off on any layout, on a ro

You may not alter the purpose and action of any of the inbuilt buttons, although you can apply any of the available lay attributes. However, you may create additional buttons within the data dictionary and place these on their menubar la any one of a large number of actions. These are created as fields within the **Buttons** tab of the data dictionary, and are type of **Menubar Item**.



To choose the icon to display with a menu button, click the **Browse the Icon Library** button, and select from the libr



Layout Cell Attributes

Many layout cell attributes may be applied to menubar buttons, to style and control their functionality. The most likel use are:

Attribute	Global Use	Purpose
ALT TITLE IF		You can use this attribute to alter the title on the button according to you
MENUBAR ITEM CLASS	Y	This attribute allows you to define your own CSS class to style the butto useful if you want to style many buttons the same, and to define the styl CSS class name you use may be defined within the user_stylesheet.css fi
STYLE	Y	This allows you to define the CSS styling for the button
STYLE IF		This attribute allows you to alter the styling of the button according to y
VISIBLE IF		This attribute allows you to alter the visibility of the button according to
WS IMAGE		This attribute allows you to define a workspace image for the button

Menubar Buttons within *Add* & *Edit* Screens

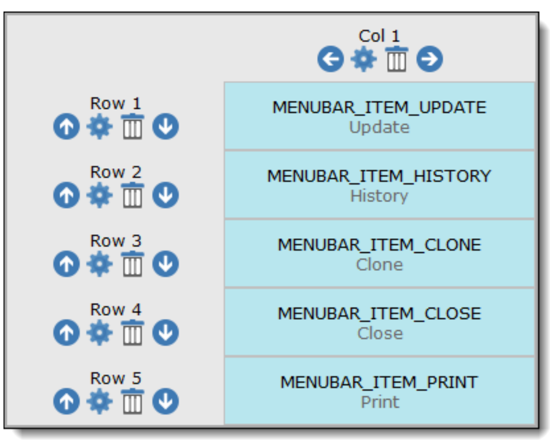
There is no requirement to place a menubar button on the menubar. You can place any of the buttons at any location v and *Edit* layouts. However, the buttons should then be removed from the menubar, to avoid the duplication of a menu

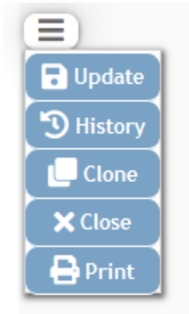
Creating Drop-Down Menus

The examples in this section all use CSS styles applied on top of the **Light grey color navigation bar with blue tone interface theme.** The CSS will vary for other themes. It is suggested that the administrator be familiar with CSS or t to the ExtraView Customer Support team for assistance.

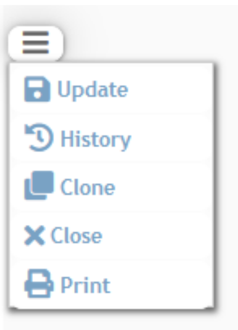
Drop-down menus appear as a single button on the screen. The buttons within the drop-down menu can be any of the with the **Menubar Item** display type. A drop-down menu appears like this, once the button is clicked, and the user ca the items in the menu with a single click:

The principles of creating a drop-down menu are to first create a layout, using the administration utility **Create and M Types**. The layout type that you use to create drop-down menus is named **Layout Buttons.** This layout is embedded or *edit* layout, or an embedded layout within either of these. In the normal manner, you place the menu item fields wi embedded layout you created with the layout type of **Layout Buttons**. This layout used in the following example is:





After applying a layout element attribute of STYLE with a value of **color:#79a2c4 !important; background-color: #**
width:125px; text-align:left to each button, the drop-down menu may look like this:

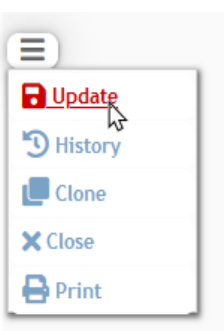


Note the use of the CSS **!important** attribute to override the built-in color and background color.

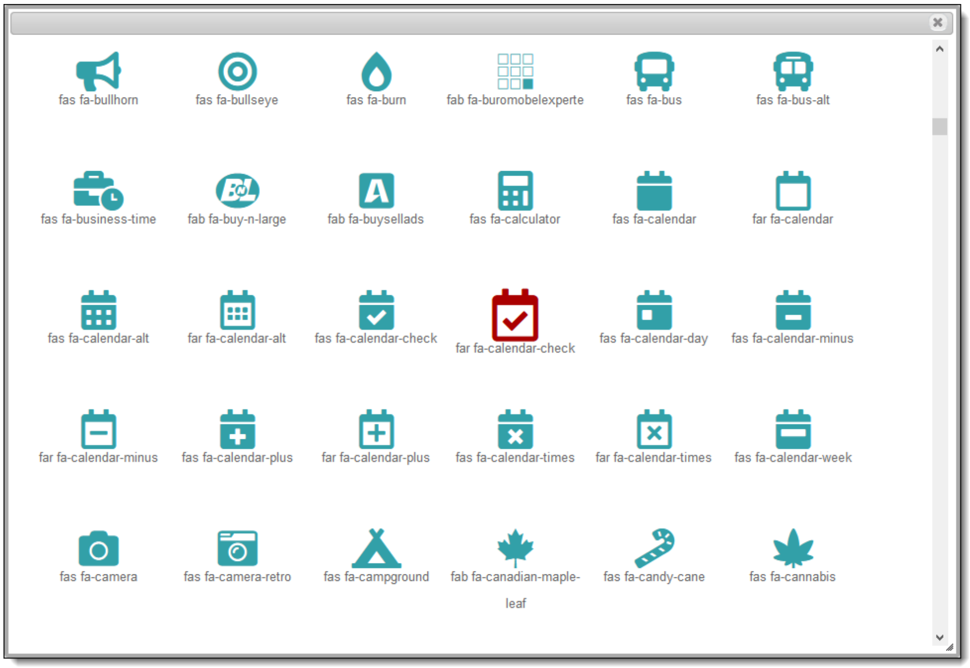
Given that you have a number of buttons to style identically, and that you may want to go further with mouse hover ef
useful to create a CSS class and enter this into the user_stylesheet file as an alternative to using the STYLE layout cel
see the underlying CSS that you want to modify / override, look in the stylesheets folder of your installation and then
that corresponds to your existing theme. The CSS class you are modifying / overriding is named menuButton and the
menuButton:hover entry. For example, for each menu item, add a class of MyMenuButtons. Within the user_styleshe
CSS:

```
.MyMenuButtons {
  color: #79a2c4 !important;
  background-color: #fff !important;
  width: 125px;
  text-align: left;
}
.MyMenuButtons:hover {
  text-decoration: underline;
  color: #cc0000 !important;
  box-shadow: none !important;
}
```

When you add a MENU_ITEM_CLASS with a value of MyMenuButtons to each of the button fields, this renders a m
following, with the text turning a red color when the user mouses over the entry.



the Icon Library button to select from the library of about 1,500 icon images. As described below, you may want to icon for workspaces.



The action for any menubar icon that you create allows you to invoke any of the standard built-in button functions, or own action. The actions you define leads to additional prompts to gather the information needed to complete the actic button is clicked.

Action	Purpose
Open URL	This action requires the entry of a URL plus any parameters required to complete the action. target a new browser tab for its output
Run Report	You can select the report to run from any shared report previously saved. You can select the the page size for browser output. Again, the action will target a new browser tab
Custom Action	Custom actions allow you to execute or to call a JavaScript function. This allows for any fu to take place, either within the JavaScript or by calling the server with the `userSubmitChan`
ExtraView Clone	The ExtraView Clone function is emulated with this action
ExtraView Close	The ExtraView Close function is emulated with this action
ExtraView Delete	The ExtraView Delete function is emulated with this action
ExtraView Email	The ExtraView ad-hoc Email function is emulated with this action
ExtraView History	The ExtraView History function is emulated with this action
ExtraView Insert & Continue	The ExtraView Insert & Continue function is emulated with this action
ExtraView Print Page	The ExtraView Print function is emulated with this action
ExtraView Submit	The ExtraView Submit function is emulated with this action
ExtraView Update & Prev	The ExtraView Update & Prev function is emulated with this action
ExtraView Update	The ExtraView Update function is emulated with this action
ExtraView Update & Continue	The ExtraView Update & Continue function is emulated with this action
ExtraView Update &	The ExtraView Update & Next function is emulated with this action

MY_BUTTON. You do not need to select an **Action Type**
- Add the field to a layout
- Create a Business Rule within the Area where the layout resides. This will look like:

```
<== onchange ==>
if (MY_BUTTON.{changed}) {
  PRODUCT_NAME = 'Tracker';
  MODULE = 'API';
}
```

- When the user clicks the button, the two fields will have their values set to those in the rule.

Another use case might be that when a user clicks the **Update** button on the menubar, that they want to execute some validation before the issue is updated:

- Create the button in the data dictionary. For this example, the button is named MY_BUTTON. You do not nee an **Action Type**
- Add the field to a layout
- Create a Business Rule within the Area where the layout resides. This will look like:

```
<== preupdate ==>
if (MENUBAR_ITEM_UPDATE.{changed} and PRODUCT_NAME != 'Tracker') {
  {STOP: Ouch! You have selected the wrong product}
}
```

- If the product name is not **Tracker** when the user updates the issue, they will see the error message and the upd

Business Rules on button fields only work within `onchange` and `preupdate` directives.

Menu Buttons that Run Reports

Menu buttons that use **Run Report** as an Action Type have some special properties. First and foremost, you can use a **at Runtime *** to pass into the report filters from field values on the current *add* / *edit* screen. For example, if you set a **PRIORITY = * Ask at Runtime *** within the report then, when the value of the **PRIORITY** field on the current scre user clicks the button, the report to be run will use the value of **P 3**. At the same time, the properties of the button can output type of the report. Note that not all output types are valid for all report types.

Menu Buttons with Custom Actions

Custom actions are used to trigger code. This can be custom code in Java or JavaScript. The entry is always to a Java and this JavaScript function may execute an Ajax call to the server.

- JavaScript can be contained within the data dictionary by entering the code into the **Custom Action** field after s Action Type of **Custom Action**. For example, to simply set an alert when the button is clicked, you might ente this:

```
javascript:alert('You clicked the custom button');
```

- To execute a custom JavaScript function within the UserJavaScript.js file, you might enter something like this:

```
javascript:MyFunction(MyParameters)
```

Workspace Considerations

The inbuilt workspace already utilizes icons (without text). These icons are defined in the data dictionary edit screen the Workspace Image entry on the screen. A path pointing to $$ICON_PATH$$ allows ExtraView to select the appro icons from the appropriate user interface theme. Icons are not provided for new menubar buttons that you create, but created. The specifications for large workspace icons is that they should be 23 pixels wide and 20 pixels high. For sn

The basic principal of the repeating row layout is that it provides a repeating block of fields, where each row in the blo by the user at runtime, or added by business rules, to add additional field values on the screen. For example, you may row of fields that refer to a sub-issue, assigning part of the issue to an individual. You can create as many rows as need different parts of the issue to different people. Each of these may have a field named RELEASE_STATUS, which can the workflow you create.

Note: All layout types to be used as repeating row layouts within screen forms must be created as a repeating row layo fields placed on repeating row layouts must have been created in the data dictionary with the **Field Belongs To** and m attribute of *Repeating Row records.*

You may embed repeating row layouts within an ADD_PROBLEM, EDIT_PROBLEM, DETAILED_REPORT, EMA HISTORY layout. You may also embed a repeating row layout within another layout which is itself to be embedded w layouts.

You can also create UDF’s that are attached to the repeating records, as opposed to being added to the main issue reco be taken when doing this. For example, it is problematic for users and for reporting to add field display types such as l line of a repeating record. Log Area fields are therefore not supported on repeating record layouts. The section on the describes how to set up UDF’s, including UDF’s attached to repeating records.

Note: There is also an important limitation in that you may not place the same field on multiple repeating row layouts cannot differentiate between these fields and incorrect data would be stored if you configured a system that had the sa within different repeating row layouts. The design center cannot distinguish this when you are building each repeating take care to only use repeating row fields within a single repeating row layout.

At the same time as this limitation, note that if you move a field defined as a repeating row field from within one repe to a different layout, the data entered by end users does not follow the field. The data is stored with a connection to the layout as well as a connection to the field. You may move the field, but data previously associated with the field will n a better practice on a system that already contains data, to create a new field for the new layout, and remove the field f layout. In this way any historic values accumulated for the field will still be available.

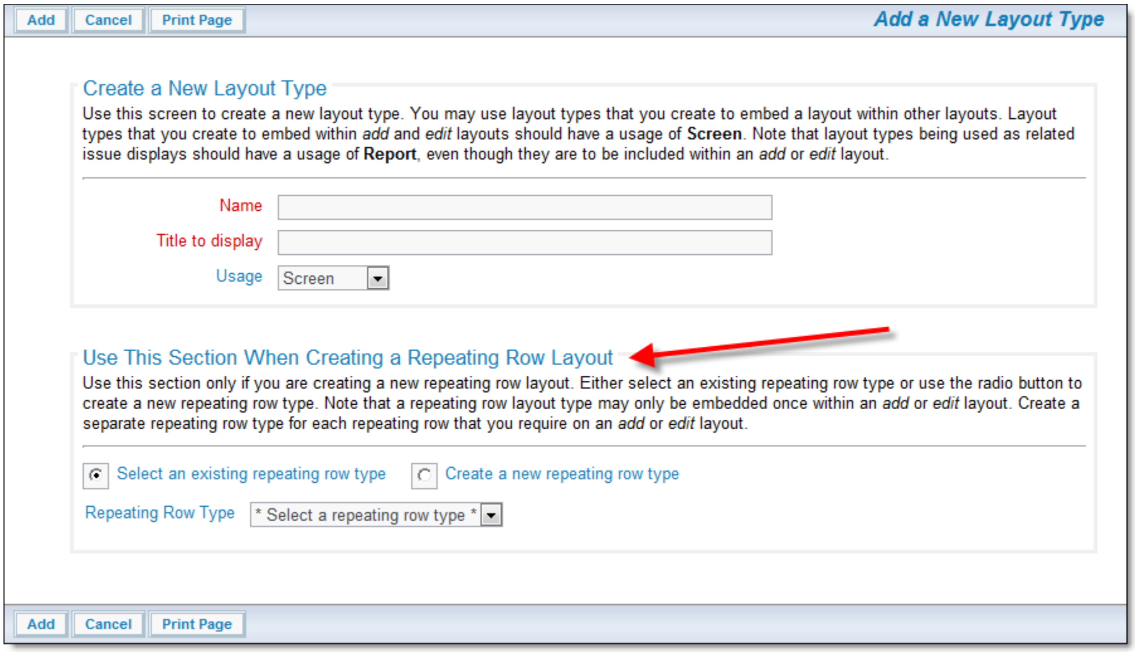
Permission Keys

The following keys exist for both **PR_ADD_PROBLEM** and **PR_RESOLUTION**, having their effect on the *Add* scr screen respectively.

Key	Purpose
RELEASE	This permission key controls access to all the repeating row layouts that ap *Add* screen and the *Edit* screens. Giving this key read and write permission enables all the repeating row layouts that appear
ALLOW_ADD_REPEAT_RECORDS	This controls the visibility of the *Add Another* ***xxx*** button on the screen. Th determined by the title to the data dictionary field named **RELEASE**

Creating and Using a Repeating Row Layout

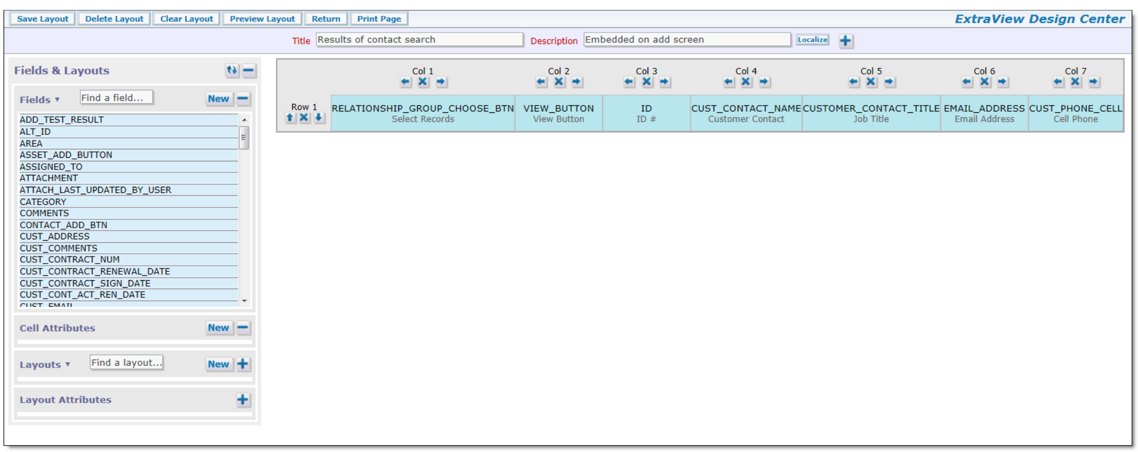
1. Each repeating row that appears on a screen to an end user must have a layout type defined, and then the defined completed with fields. Finally, the defined layout is embedded on the layout which appears to the end user
2. Define the Layout type
    1. First, create the layout type for the repeating row. Click on **Create and Maintain Layout Types** from th menu, under the **Site Configuration** tab
    2. Complete the information required for the layout type, including the repeating row section. When creatin row type, it is usually convenient to choose the same name and title as the main layout type



Creating a Repeating Row Layout

Note that when you create a layout type, a field with the same name is created within the **Label** of the dat you need to alter the title of the repeating row display that appears on **Report** usage layouts, update this v dictionary

3. Place fields onto the layout type
    1. You may either create a new repeating row using the layout you just created, or utilize an existing one. U **layout for the entire system** entry within the Design Center to add the new layout type to your current bı project and role
    2. Add fields to the layout, using the layout editor features. An example might be:

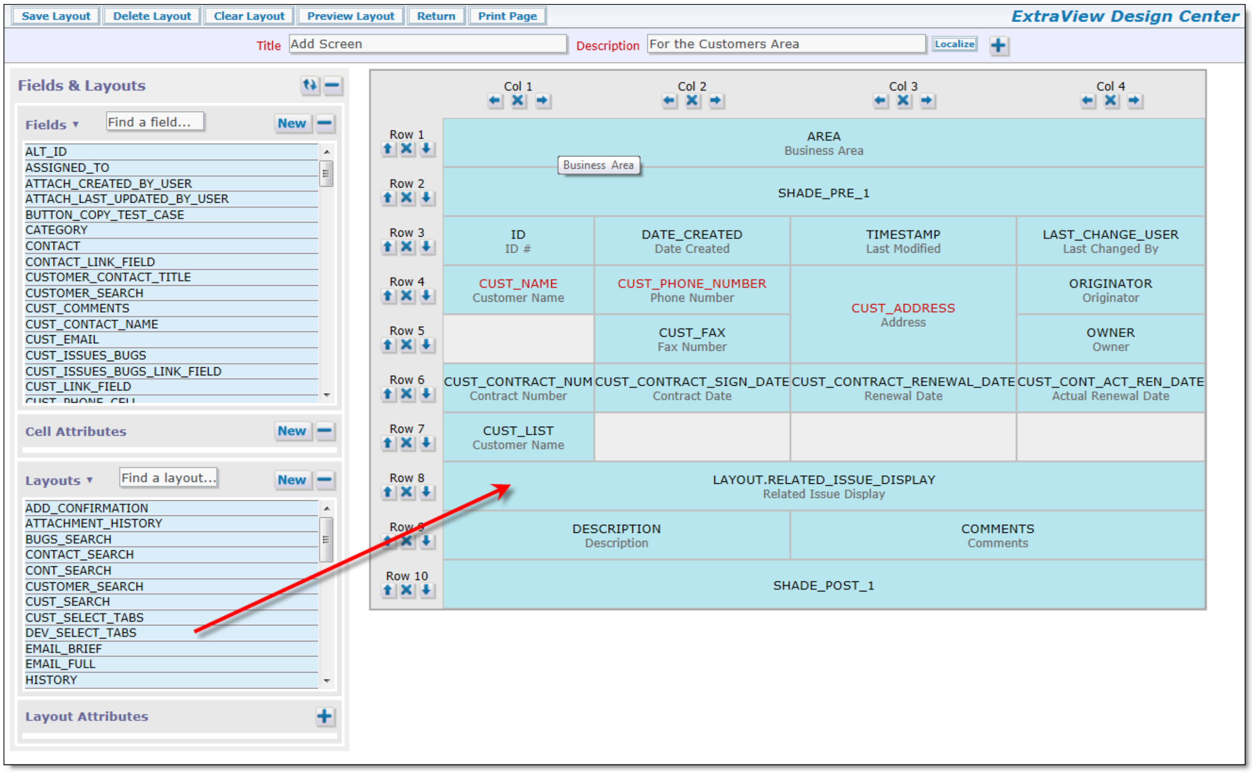


Add Release Layout

The inbuilt fields that can be added are taken from the following list. Note that these fields may only be p repeating row layout.

a. RELEASE_FOUND
b. RELEASE_FIXED
c. RELEASE_ASSIGNED_TO

3. Drag the layout to the place within the layout where you would like to see the fields
4. Save your changes and view your results (the repeating row layout is embedded within a layout).



Design Center screen

The Inbuilt RELEASE Repeating Record

Repeating records such as the inbuilt *Release* layout are not designed to be rendered as individual screens, but designe within other layouts. This allows you to create a system that either allows you to have issues that can, for example, ha release records within each issue. Different layouts can be designed that can be embedded within both the Add and Ed desired.

You should be aware that you should not create recursion by embedding a layout within itself. Note that if you require you require a single repeating row record (e.g. there is only one release found and one release fixed for each issue) the use a repeating row record.

The inbuilt repeating record named **RELEASE** contains fields with the following names and default screen titles:

RELEASE_FOUND	Version Found
RELEASE_FIXED	Version Fixed
RELEASE_SEVERITY_LEVEL	Severity Level
RELEASE_PRIORITY	Priority
RELEASE_STATUS	Status
RELEASE_OWNER	Owner
RELEASE_ASSIGNED_TO	Assigned To
RELEASE_RESOLUTION	Resolution

Note: There are two security permission keys named PR_ADD_PROBLEM.ALLOW_ADD_REPEAT_RECORDS ar
PR_RESOLUTION.ALLOW_ADD_REPEAT_RECORDS that control the visibility of the **Add another xxxxxx** butt
repeating rows on *add* and *edit* screen layouts. You can remove the button to stop users in some roles being able to add
repeating rows, but have users in different roles being allowed to add the repeating rows. The **xxxxxx** is the title of the
field named RELEASE. For example, if you provide a title of **issue** to the field, then the button is named **Add anothe**

Unique and non-Unique Repeating Rows

Differing purposes may require you to implement repeating row records which either have or do not have a unique ke
two parts to configuring this capability. First, in the Workflow behavior setting screen, use the ENFORCE_UNIQUE_
setting to switch on the capability of enforcing a unique key field. Second, you must place the field named RELEASE
repeating row record. This normally has a display type of LIST, although TAB and POPUP are also supported. You ca
in the data dictionary to any suitable title you require for your installation. Also, note that the RELEASE_FOUND and
RELEASE_FIXED fields are the child fields where the PRODUCT_NAME field is the parent. This means that if you
RELEASE_FOUND or RELEASE_FIXED fields on a repeating row record, then you must have the parent PRODUC
on the add and edit screens that contain the repeating row record.

Repeating Rows & Workflow Status Change Rules

The ExtraView Status Change Rules features work with the inbuilt RELEASE_STATUS field. The RELEASE_STATU
the same as the inbuilt STATUS field with Status Change Rules. One aspect of this is that you may have configured th
to use Status Change Rules, but you are not placing the RELEASE_STATUS field on the RELEASE layout described
this case, ExtraView still needs to be able to handle the *** None *** value for the missing RELEASE_STATUS field. To
this, configure the Status Change Rules to accept a *** None *** value, i.e. it is a legitimate update to allow the status of t
changed to a null value, for the appropriate range of Business Areas, Projects and Roles that are configured.

Repeating Rows & Custom Code

There are occasions when working with repeating rows that it is useful to know which row you are targeting with an e
example, you may have a popup field that returns a value to a specific field on a repeating row. You will need to know
target with the return value. To make this task simpler, there is a JavaScript function available on *add* and *edit* layouts
from an HTML modifier to any cell. This function is named getRowNumber and is used in this way:

var rowNum = getRowNumber(this, this.form);

This function returns the following in rowNum:

-1 if the field is a singleton repeating row
0 – nn if the field is in a repeating row with 2 or more rows, where nn indicates which row the field is in.

Field Limitations on Repeating Row Layouts

Repeating row layouts do not support –

- Log Area display type fields
- Multi-value display type fields
- Any data dictionary field that does not have the **Field belongs to** value set to **Repeating Records**
- Any one field cannot be placed on multiple repeating row layouts, whether it is an inbuilt or user defined field. '
  configuring your layouts as no error can be detected at design time
- HTML Area display type fields are not supported on repeating rows.

A Note on how Repeating Rows are Managed

As far as possible, repeating rows are added and updated on an *add* or *edit* screen using Ajax. This provides the best p just a single row:

- The repeating row layout is placed under an embedded layout as the first row in the embedded layout. In this ca row with the ID of the repeating row in the browser DOM when ExtraView renders the upper-level sublayout. F complete repeating row layout must be rendered.
- The Ajax refresh causes a column to be added or removed from the display. For example, suppose you have a **V** condition on FIELD_A and you have 2 rows on the repeating row layout and FIELD_A is visible on both rows. column by itself within the repeating row layout. Change the Parent value on row 1 to make FIELD_A invisible takes place and makes the field invisible. Change the Parent value on row 2 to make FIELD_A invisible on row will force the rendering of the entire repeating row. ExtraView does this because the column for FIELD_A will FIELD_A is invisible on all rows.

Relationship Layouts

Relationship groups allow the users of ExtraView to associate individual issues with each other. You may want to crea between issues for several reasons, for example, because you want to consider them together when making updates, pı or because you want to implement a workflow which mandates that you update issues as a group, or because you wan where the parent issue cannot be closed until all the child issues are handled.

Relationship groups are configured with a layout type that is then embedded within an *add*, *edit*, *report* layout or anotl layout. This layout is configured with layout cell attributes to identify the basic characteristics of the related issue disp need to provide some business rules to control the interaction of the related issues. For reporting with related issues yc define the reporting hierarchy. Examples of relationship groups:

- A project may be composed of many tasks. The project can be stored in an issue, and each of the tasks may be s issues
- A product release may be supported by many individual features. The product release may be stored in an issue features may be stored in related issues
- A reported incident may have a number of corrective actions that must be applied. The incident may be stored iı and the corrective actions may be stored in related issues.

Relationship groups can be built with many different types of behavior. Examples of how to build installations with re their core is described later in this section of this guide. There are several types of inbuilt relationship groups that can

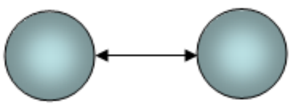
Relationship Group Type	Purpose
Bi-Level	This is a simple relationship group where a single issue acts as a parent issue to any number of child largely been superseded by the One-to-Many type, but its use will be continued for backwards comp are designing a new ExtraView application, or adding relationship groups to an existing installation, recommended that you do not use the bi-level groups. To continue using this type of relationship grc ensure that bi-level groups are updated, the behavior setting named RG_UPDATE_BILEVEL_ONL' to a value of YES. To remove the ability to create new relationship groups with the type of bi-level, setting named ALLOW_BILEVEL_GROUPS to a value of NO. Bi-level relationship groups will no correctly unless this setting has a value of YES.
One-to-Many	This type also has a single parent issue with multiple child issues, but with some differences and enh the bi-level type of group. This type of relationship group should be used in preference to the bi-leve all new applications. If you want the capability to update all related issues when performing the upd: you must set the behavior setting named RG_UPDATE_BILEVEL_ONLY to NO.
One-to-Many Cascade	This type is similar to the One-to-Many relationship group type. The difference is that when a user d which is the parent of one or more child issues, then the child issues are also deleted, as opposed to l orphaned child issues in the database, once the parent is deleted.
Many-to-Many	In the many-to-many relationship group type, an issue can belong to more than one relationship grou issues can be connected in many ways. If you want the capability to update all related issues when

member of the group is updated
- Users may remove items from groups via the *add* or *edit* screens. Again, the administrator may also perform thi **Relationship Group Maintenance** screen
- You may view all the items in the relationship group, from the *add*, the *edit* screen or from reports such as a Qu Detailed report. From any of these places and with permission, you may drill down and view or edit the issues
- With permission, when you update an issue that is a member of a relationship group you may apply updates to t of the group
- When issues are cloned, rules can be used to place these issues in a relationship group.

Relationship Types

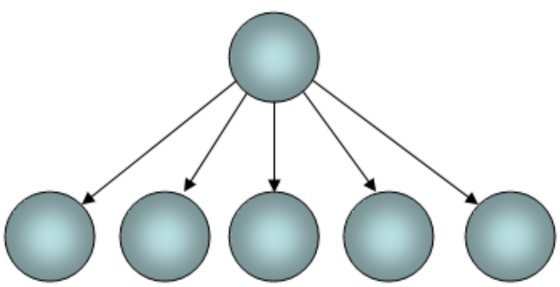
Simple Relationship

The simplest relationship may be that you want to connect two issues together, for example because they exhibit simil because they were reported by the same customer. This can be represented by the following diagram:



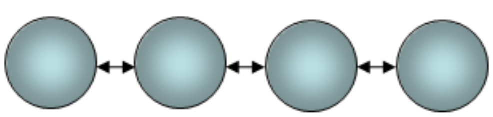
One-to-Many or Parent-Child Relationship

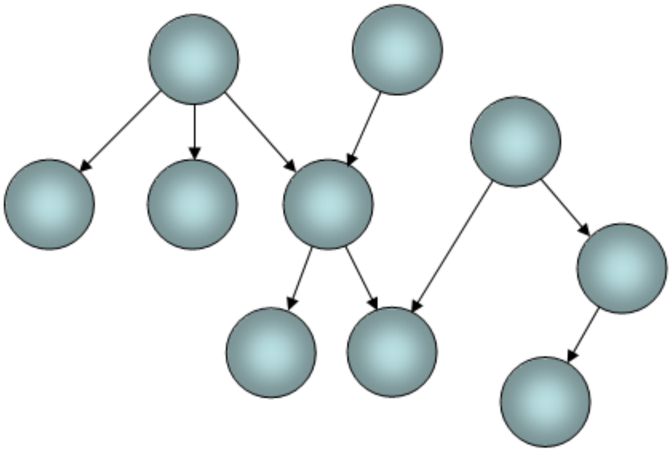
Typically, a parent – child relationship group will be implemented with the One-to-Many group type. The most comm where you want a single issue to control the behavior of the child issues, for example, several customer-reported issue closed until the engineering issue that controls the fix to the problem has been solved and closed. In this case the engi would be the controlling parent issue.



Sibling Relationships

Sibling relationships link issues at the same level in a hierarchy. Typically sibling issues will have a single parent to w linked. Each of the siblings may in turn have child issues. A common use case is where you want to perform an action issue, when all siblings have a common value in a field and you want to reflect this within the parent issue. For examp want to automatically set the status of the STATUS field within a parent issue to **Approved** when each of the child iss button that indicates approval of that child issue. A SIBLINGS relationship allows you to compose a rule that would t parent when all the siblings have the same value indicating that approval is given for that individual sibling.





Security Keys for Relationship Groups

Key	Purpose
CF_RELATIONSHIP_GROUP_VIEW_ PROBLEM_BUTTON	Controls the appearance of the View button on the Related Only used for BI-LEVEL relationship groups.
PR_ADD_PROBLEM.RELATIONSHIP_GROUP	Controls access to the RELATIONSHIP_GROUP button o screen.
PR_RESOLUTION.RELATIONSHIP_GROUP	Controls access to the Related Issues (the button beside ID screen) for BI-LEVEL groups, and to see the RELATIONS field on the *edit* screen
PR_RESOLUTION.RELATIONSHIP_ GRP_ADMIN	Controls the visibility of the Manage Relationship Group b screen for BI-LEVEL relationship groups.
CF_RELATIONSHIP_GROUP	Controls the visibility of the Group Issues button on report the Refresh button at the top and bottom of column, summ and Detailed reports

Behavior Settings for Relationship Groups

Key	Purpose
CLONE_RELATION_GROUP	Relationship group name for clone relationships. When an issue is c automatically be placed into the relationship group named in this set
MORE_HISTORY_NUMBER_ROWS	This setting defines the number of rows of related issues to display, prompt appears within the history record. This is to prevent the situa may have hundreds of related issues, and many updates. In this case mainly see history of the related issues, as opposed to seeing the hist itself.
RELATION_GROUP_DEFAULT	The name of the relationship group that will be used for any issue be a relationship group. This default can be overridden by using a layou on the RELATED_ISSUE_DISPLAY, or by using the field RELATIONSHIP_GROUP on the *add* or *edit* layout to offer the use relationship groups
RELATIONSHIP_GROUP_EMAIL_LIMIT	When you update the status of an issue within a relationship group, be subject to the standard notification process. When there are more RELATIONSHIP_GROUP_EMAIL_LIMIT entries in the group, no only made to the users in the parent issue, and a comment is insertec with this information

	the setting
RELATIONSHIP_LINK_DISPLAY	If the data dictionary entry RELATIONSHIP_GROUP_ LINK is pla screen layout then either a link or list will appear beside the title. Th field is controlled by the behavior setting named RELATIONSHIP_LINK_DISPLAY. This can have a value of either LINK. The RELATIONSHIP_GROUP_LINK entry should not be p screen. If the value is LINK then the field will appear on the edit scr specifying the number of issues in the group. If this link is clicked o redirected to the Related Issues screen. If the value is SELECT, then appear as a select list. The user can then select the issue they want tc list and then press the link button to go to an edit screen for that issu more entries in the list than the POPUP_LIST_SIZE behavior setting additional entry of * More * will appear in the list. If the user selects clicks on the link button, then they will be redirected to the Related a full list of the grouped issues.
RG_UPDATE_BILEVEL_ONLY	This behavior setting is for backwards compatibility with ExtraView you set the value to YES, then related issue updates are only triggere change to the STATUS field takes place. If this is set to NO then upc issues may be triggered on different events and many updates to diff possible.
RID_PAGING_DEFAULTS	Related issue displays may be paged. Currently, an entire RID is sho and *edit* screens. Page size and threshold values determine how man shown simultaneously in the related issue display, with other pages r through via **Next** and **Previous** buttons at the bottom of the display
SHOW_CLOSED_REL_GROUPS_PERIOD	The list of items on a relationship group will be displayed until all is closed for a minimum number of days specified by this value. Valid numbers equal to or greater than 0. 0 means that as soon as all items relationship group are of the status specified by STATUS_CLOSED will not be displayed on the list of relationship groups.

Data Dictionary Fields for Relationship Groups

Field	Purpose
NO_RELATED_ITEMS_MESSAGE	This is the message that is provided within a related issue display wh performed to return related issues, but none exist. The default is **Th search results**. This message is a label field within the data dictiona altered and it may localized
RELATED_ISSUE_DISPLAY	This label field provides a means of being able to alter the title to the relationship issue display. Note that when you create a new relationsl type, then a new field is automatically created as a label field in the c also allowing you to provide a title to the related issue display you cr
RELATIONSHIP_GROUP_CHILD	When this field is placed on a layout, and the user enters an ID into t the issue whose ID is entered becomes a child to the current issue wh issue is updated. If there is an error, such as a non-existent child ID, a generated and displayed to the user. If the current issue is already a p child issue ID entered, no error is indicated and no change to the rela When the user next views the issue, the related issue display will sho issue, assuming the relationship group relation type is either MEMBI RELATED
RELATIONSHIP_GROUP_LINK	A general purpose label to provide the title for relationship group lin
RELATIONSHIP_GROUP_PARENT	When this field is placed on a layout, and the user enters an ID into t the issue whose ID is entered becomes a parent of the current issue w

	placed on related issue display layouts, it will only appear when the l rendered within an *edit* screen. It is ignored on add screens, report la POST_EDIT_UPDATE layout. There is a security permission key na PR_RESOLUTION.RELATIONSHIP_GROUP_REMOVE_BTN to appearance of the Remove? checkboxes on the edit screens. The user number of related issues and the checked issues will be removed from relationship when the current issue is updated
RELATIONSHIP_GROUP_TITLE	A general purpose label to provide titles for relationship group
RELATIONSHIP_GROUP_TYPE	A general purpose label to provide the titles for relationship group ty
RELATIONSHIP_GRP_PARENT_ID	A field that stores the parent ID of a relationship group
RELATIONSHIP_GROUP_ID	A field that contains the internal ID of a relationship group
RELATIONSHIP_GROUP_PARENT	A field that contains the parent of a relationship group
RELATIONSHIP_GROUP_CHILD	A field that contains the child of a relationship group
RELATIONSHIP_GROUP_TXNS	A field that contains the historic transactions of a relationship group. only valid on a layout of type HISTORY.

Related Issue Layouts

Related issues are displayed with layouts that use the naming convention **RELATED_XXXXX**. To create a new relat you first create a layout type where the name begins with **RELATED_** Note that the usage of related issue displays m the normal way for layouts, these may be inherited by any Business Area or Project which will use them. These are us related records within *add, edit* and report layouts. The layout contains the fields you want to display when viewing th There is a single default related issue display layout within a new ExtraView installation, named **RELATED_ISSUE_** default fields on this layout are VIEW_BUTTON, QUICKEDIT_BUTTON, EDIT_BUTTON, RELATIONSHIP_GROUP_REMOVE_BTN, ID, STATUS, ASSIGNED_TO and SHORT_DESCR. You may change fields to meet your requirements.

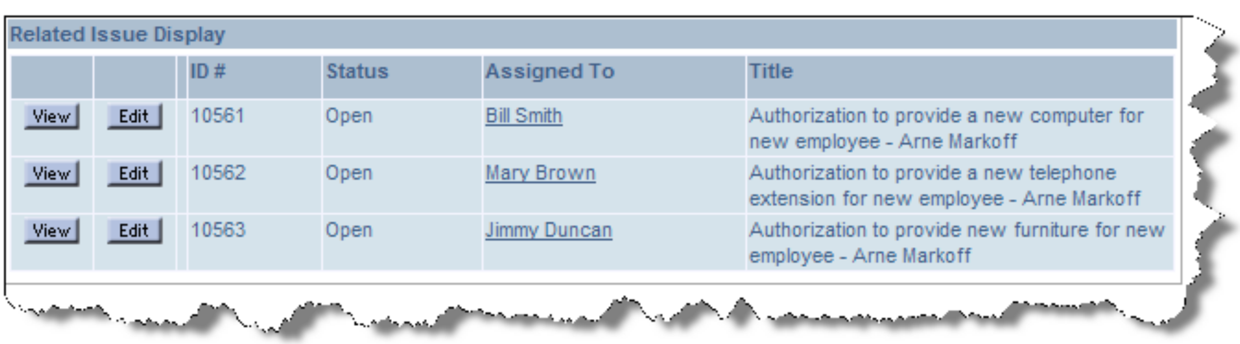
When you configure a related issue display layout to allow the creation of new related issues, you are able to place a b to the display. This button may have any text, and when pressed will open a modal window where you can add the issu creating into the relationship with the current issue on the screen. On reports all related issues are displayed, allowing results clearly.

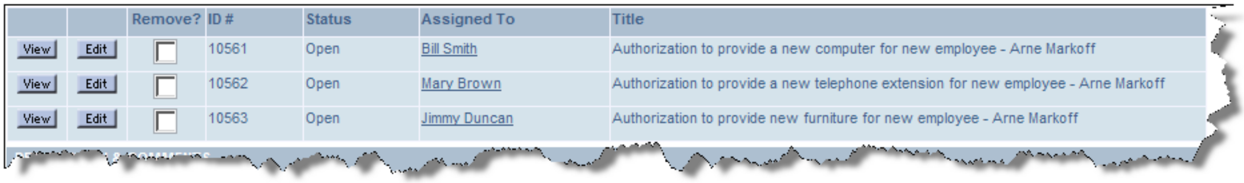
On *add* and *edit* screens, the related issues are placed within a scroll box whose dimensions are controlled by the layou named SIZE and HEIGHT. If you do not provide a layout cell attribute for SIZE, then the default is 125 characters. W you can also use a SIZE layout cell attribute on the individual fields to control their width. If you do not use a SIZE at individual fields, then the width of each field floats and the user's browser will decide on the optimal width. The heigh issue display is calculated automatically, to display all the records in the group unless a HEIGHT layout cell attribute related issue display, to provide a maximum height.

You can fix the position of the column titles of the related issue display with the layout cell attribute named RID FIX you set this attribute it is not recommended that you use the SIZE attribute on fields within the related issue display la

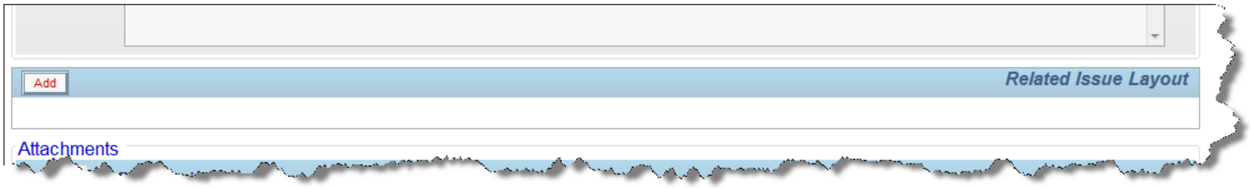
Sample Rendering of Related Issue Display Layouts

Some sample layouts rendered on *Add* and *Edit* screens are:

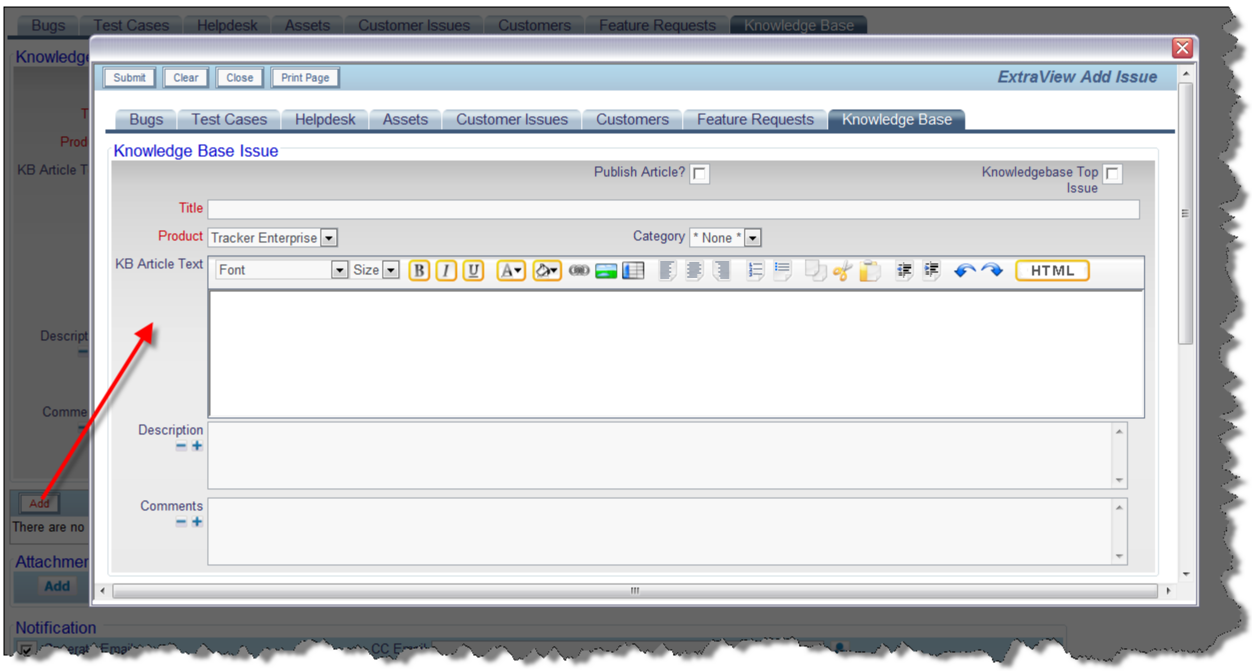




Editing related issues on an add or edit screen



Adding new related issues on an add or edit screen



The modal popup to add a related issue

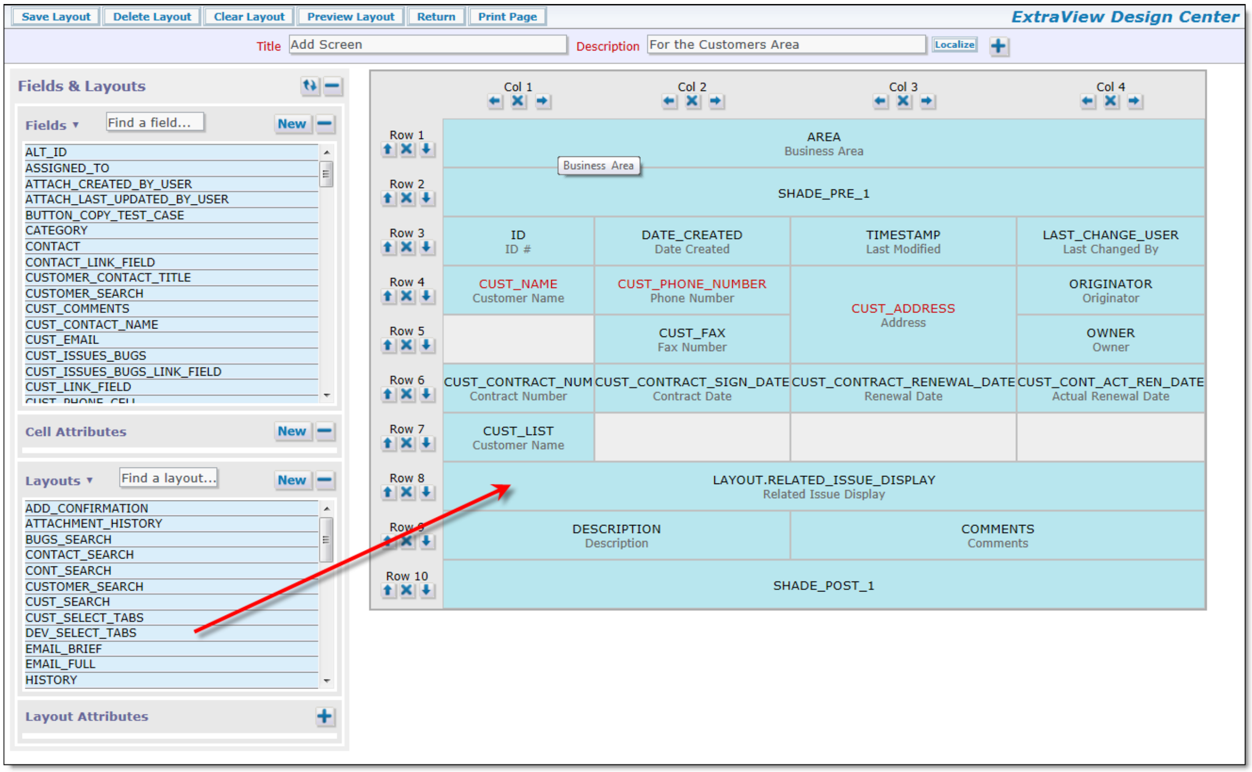
Related Issue Display Layouts

You may create any number of additional related issue display layouts, but you must begin the name of the layouts yo RELATED_. For example, as well as RELATED_ISSUE_DISPLAY, and as an example, you may create another relat named RELATED_SUPPLIERS. All the layouts to be used as related issue displays must be created with a display ty even if they are to be embedded within an *Add* or *Edit* layout. Once you have created the layout type, you then includ *Add*, *Edit* or Detailed Report layouts.

For the above example, you would include LAYOUT.RELATED_SUPPLIERS on the layout. When you create a relat new field is created automatically in the data dictionary, with the same name as your layout. In our example, the field RELATED_SUPPLIERS is created. The field has the usual PR_ADD_PROBLEM and PR_RESOLUTION permissio

Embedding Related Issue Display Layouts Within a Layout

As stated above, related issue display layouts are designed to be embedded within *add, edit*, report and other layouts v embedded within *add, edit* and report layouts. This screenshot shows a related issue display layout embedded within a



Buttons on Related Issue Display Layouts

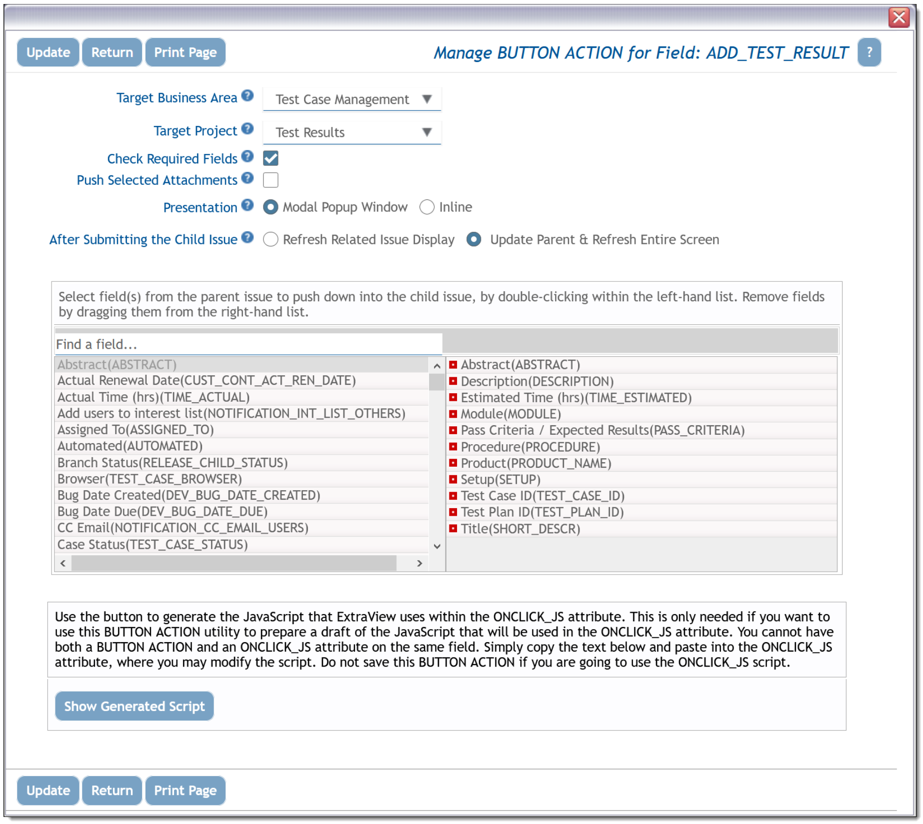
The following buttons may be placed on Related Issue Displays. Note that within both *Add* and *Edit* screens the PR_I permission keys are used to control the presence of the buttons, as the information within the displays is always read-(

- Edit Button - EDIT_BUTTON
- Quickedit Button - QUICKEDIT_BUTTON
- View Button - VIEW_BUTTON

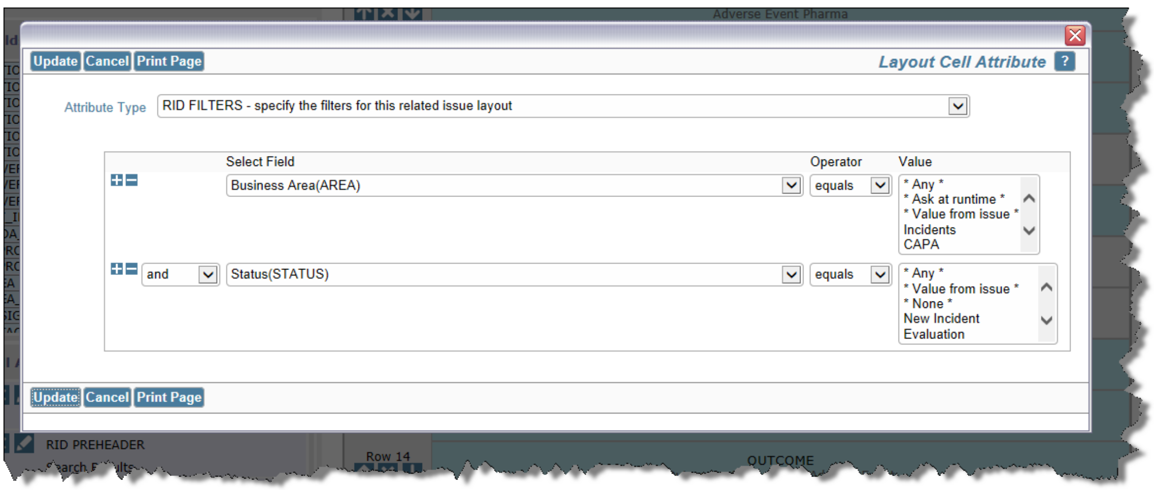
Layout Cell Attributes for Related Issue Display Layouts

Over and above the standard layout cell attributes that can be applied to all cells on layouts, the following attributes al of embedded related issue display layouts.

Cell Attribute	Purpose
BUTTON ACTION	The **RID BUTTON ACTION** attribute is applied as a cell attribute to the **RID PREHEADER BUTTON**. The action defines what happens when the user presses the add button. This attribute directly to the field's global attributes, defined within the data dictionary, as opposed to being se attribute on the related issue display layout.



- **Target Business Area** - This defines the Business Area that will be used for the *add* scree when the button is pressed
- **Target Project** - This defines the Project that will be used for the *add* screen displayed wl pressed
- **Check Required Fields** - If you check this option, then all required fields on the parent is required by the child issue, are checked that values are filled in, before the child window i This can be extremely useful if you are going to push down field values from the parent tc and you want to ensure that the child window is always initiated with a value within a fiel
- **Push Selected Attachments** - When the button is pressed, attachments already selected w the new child issue being created
- **Action after Submitting the Child Issue** - This option allows you to select the action aft issue is created. You can either have only the related issue display that contains the newly updated, or you can have the parent issue updated and the entire screen updated. The latte required when there are some business rules that triggered changes to the parent issue whe issue was submitted
- **Push Down Field List** - Double click on the fields whose values you want to push down issue to the child issue. The selected fields are displayed in the right-hand list
- **Map a Push Down Field** - There are some occasions when you want to push down a fielc parent issue to a different field on the child issue. This can be accomplished by first selec push down, as described in the previous step and then right-clicking on the red button on t field. This brings up a window where you can type in the name of the child field to which map the parent field value
- **Show Generate Script** - This button is provided for advanced usage. It is possible to con actions that are more complex than can be done with the **BUTTON ACTION** utility. This you to generate the JavaScript that is close to what you require. You can then copy this Ja

	issues is less than this value, then the related issue display is resized to only take the height requ height required is more than this value, a vertical scroll bar is placed on the related issue display the fields are always fixed in position, so that when the user scrolls the list of related issues, the visible. The setting has no effect on reports where the entire contents of the related issue display will be
RID ACT ON FIELD CHANGE	This attribute is not applied to a relationship layout, but is applied to the field (the RID LINK FI above) that is used to link the result set from a search to a relationship issue display. When this a present on the RID LINK FIELD NAME, along with an HTML modifier to trigger the action, a display is refreshed, creating links from each issue ID within the RID LINK FIELD NAME, anc these issues in the related issue display. A full example of the use of this feature is provided in E This attribute is triggered only upon an *onchange* event within a screen, and is not triggered whe *edit* screen is submitted for an update. A consequence of this is that you should not expect this a within API calls nor within the File Import process which do not respond to screen events.
RID FILTERS	This cell attribute allows the administrator to specify a set of filters to apply to the selection of tl to display. This filter is applied to only the related issue records so the user will only see a subse issues. For example, this screenshot shows the administrator about to select values for filters for **Area** and **Status** fields:  Note that beyond the selection of specific values to use for filters, there are several other possibi • *** Any *** - This value is not used. Setting it is the same as not using the filter • *** Ask at runtime *** - The user will be prompted when the related issue display is being ge provide a value for the filter • *** Value from issue * -** The value to be used within the filter for the related issue display v from the current value within the field of the same name, that is displayed to the the user c • **$$SYSDAY$$ or $$SYSDATE$$** - These may be used within day or date display type fi the current day or date. It is not too practical to filter on aa field being equal to $$SYSDA date includes time to the millisecond, and it's unlikely that issues will match this. Using o than or greater than with date type fields is more useful.
RID FIX TITLES	This attribute may only be set on Related Issue Display layouts within *Add*, *Edit* layouts, or subl When this attribute is used in conjunction with the HEIGHT attribute, and a scroll bar appears a been added, the title to the Related Issue Display is fixed as the user scrolls

RID LINK FIELD NAME	This attribute is used when you are using a search layout on an *add* or *edit* layout to return one c relate them to the current issue. RID LINK FIELD NAME must be a field with a display type of *area* and the field is typically hidden within the *add* or *edit* layout and is used to transition the li the search results into the list of issues to be related. The list is a series of issue ID values, delim colons. If the RID SINGLE SELECT attribute in this table is set, then there can only ever be a s the list. *Text fields* are capable of storing 255 characters. The link field stores the ID's of all issue within the results, plus an extra character as a separator between each ID. They therefore store a - 60 ID's. If you are likely to link more than this number of issues, make sure the RID LINK FIE a display type of *text area*. These are highly scalable for this purpose. **Linking a Single Result to Populate Fields within the Current Issue** If you are using the RID LINK FIELD NAME to link the search results to a single issue and you take fields within that issue and place their values within the current issue, you are likely to also and a *refresh* business rule to retrieve the field values you require from the search result. See Ex **Linking Multiple Search Results to Populate a Related Issue Display** If you are using the RID LINK FIELD NAME to link the search results to multiple issues that y to the current issue, and place these issues within a related issue display on the current layout, yo also configure RID LINK FIELD NAME with these attributes: • **RID ACT ON FIELD CHANGE** - This attribute indicates that an action will be taken w updated as a result of being linked to search results • **RID RELATIONSHIP NAME** - This is the name of the relationhip group into which the the search results are to be placed • **RID RELATION TYPE** - This is the type of the relationship. Usually this will be CHILI PARENTS may also be appropriate See Example 4 for details on how to configure this.
RID ONCLICK_JS	**RID ONCLICK_JS** is the JavaScript that is executed when the **RID PREHEADER ADD BU** clicked. For most purposes, the script that is executed is created by the **RID BUTTON ACTIO** and you do not require to use the **RID ONCLICK_JS** attribute. The **RID ONCLICK_JS** attrib for advanced configurations where the administrator wants to create JavaScript that goes beyond of the **RID BUTTON ACTION** attribute. You must not configure both the **RID BUTTON AC** **RID ONCLICK_JS** attributes on the same button, as they will conflict with each other. The Jav **ONCLICK_JS** should be carefully constructed, and there may be differences when wanting to JavaScript to initiate a popup to add a new issue when on the *add* and on the *edit* screens. If you related issues on both the *add* and *edit* screens, you may need to configure a different **INCLUD BUTTON** in the data dictionary for each screen, each with the appropriate **RID ONCLICK_JS** possible to configure and place multiple buttons to add different types of issues on a single relat **Basic Syntax** Substitutable values are possible in this string value. To create a modal popup window the basic use will be: `doEditAEActions(window.parent.extraview_app_home_url , '__SESSION_ID__',` `new Array('POPUP_MODAL_ADD', 'add_confirm_page=NO' + rgParameters(),` `'RELATIONSHIP_GROUP_REFRESH', '__LAYOUT_TYPE_ID__' ));` Note the two substitutable variables SESSION_ID and LAYOUT_TYPE_ID. They must be surr double underlines. This provides the mechanism for ExtraView to substitute the variable at runti value of YES or NO to the add_confirm_page parameter, depending on whether you want to dis

There are use cases where you might want to update and refresh the parent *Add* or *Edit* screen, a
child issue. For example, while adding a child issue, Business Rules might execute that update t
If you want this behavior, there is an **UPDATE_MAIN** parameter. The workflow might be to go
Edit screen, add a child record in a modal popup window, submit the child issue within the moda
executes Business Rules that update the parent issue), then close the modal popup and finally re
updated parent issue, you will include the **UPDATE_MAIN** parameter as follows:

doEditAEActions(window.parent.extraview_app_home_url , '__SESSION_ID__',
new Array('UPDATE_MAIN','POPUP_MODAL_ADD', 'add_confirm_page=NO
&p_rg_relate_this_to=' + getValueFromParent('p_id') + rgParameters(),
'REFRESH_ID', getValueFromParent('p_id')));

Note that you do not require the **RELATIONSHIP_GROUP_REFRESH** and accompanying **LAYOUT_TYPE_ID** parameters, as the **REFRESH_ID** takes care of refreshing the entire pare
is executed from an *Add* screen, the parent issue is displayed within an *Edit* screen, as the underl
Rules submitted the parent issue to the database, thus meaning it is no longer in the add state, bu
state where it can be updated. The p_rg_relate_this_to parameter and its value are used on the *A*
identify the parent issue to which you want to relate the child issue you are adding, when you ar
UPDATE_MAIN parameter. It has no effect otherwise on *Add* screens, or *Edit* screens and may
these cases.

Setting Additional Parameters to Push Values from the Parent to the New Iss

Other parameters may be added to the array value immediately following the POPUP_MODAL_
example is to set the Business Area and Project of the issue to be added. With rgParameters(), a
becomes:

doEditAEActions(window.parent.extraview_app_home_url, '__SESSION_ID__',
new Array('POPUP_MODAL_ADD', 'p_area=$$MY_AREA$$&p_project=$$MY_PROJECT$
add_confirm_page=NO
&p_rg_relate_this_to=' + getValueFromParent('p_id') + rgParameters(),
'RELATIONSHIP_GROUP_REFRESH', '__LAYOUT_TYPE_ID__'));

Note that the values for the p_area and the p_project parameters must correspond to the AREA_
PROJECT_ID into which you will add the related issue. Another possibility is that you might w
values of one or more fields from the parent issue to the child issue you are creating. To achieve
use either the pushDownFields('p_fld1;p_fld2;p_fld3;...') function to pass several fields at once
getValueFromParent() function to pass individual fields. For example, let's say that you want to
FIRST_NAME and LAST_NAME fields from the parent to the child. The string then becomes

doEditAEActions(window.parent.extraview_app_home_url , '__SESSION_ID__',
new Array('POPUP_MODAL_ADD', 'p_area=$$MY_AREA$$&p_project=$$MY_PROJECT$
&p_rg_relate_this_to=' + getValueFromParent('p_id') +
pushDownFields('p_first_name;p_last_name') + '&add_confirm_page=NO' +
rgParameters(), 'RELATIONSHIP_GROUP_REFRESH', '__LAYOUT_TYPE_ID__'));

or using individual parameters:

```
doEditAEActions(window.parent.extraview_app_home_url , '__SESSION_ID__',
new Array('POPUP_MODAL_ADD', 'p_area=$$MY_AREA$$&p_project=$$MY_PROJECT$$
&p_rg_relate_this_to=' + getValueFromParent('p_id') +
'&p_first_name=' + getValueFromParent('p_first_name') +
'&p_last_name=' + getValueFromParent('p_last_name') +
```

recommended as hard-coded actual values may change within a metadata migration but the hard
these expressions do not change in a metadata migration exercise.

Other assignment examples:

`p_area=$$MY_AREA$$`	The `AREA` field is assigned the value of the current Busi
`p_area=HELPDESK`	The `AREA` field is assigned the value of the Business Ar name of `HELPDESK`
`p_area=$$Helpdesk$$`	The `AREA` field is assigned the value of the Business Ar title of `Helpdesk`
`p_list_field=$$'Ben & Jerry'$$`	In this example, a list field with the name `LIST_FIELD` value of Ben&Jerry. The single quote marks are used w contains special characters such as &, # or spaces

Opening the Modal Popup Window in Edit Mode

There is a feature within ExtraView that allows the user to open up a new issue in Edit mode, as Add mode. This configuration assigns an ID and / or an ALT_ID and saves the initial issue with before then placing the user within Edit mode on the screen. This can be configured within the window, by altering the `POPUP_MODAL_ADD` parameter to `POPUP_MODAL_OPEN_IN_EDIT`.

Repeating Rows Fields

The function getValueFromParent may be modified to access repeating row field values. Repeat indexed, beginning with zero, therefore to access the first repeating row, the call will look like:

getValueFromParent('p_fieldname', 0)

To access the third repeating row, the call will look like:

getValueFromParent('p_fieldname', 2)

Although you may target any repeating row to obtain a value from a field, the value will always field on the first row of the child record. The following technique will allow you to get values fr repeating row fields, and populate these into successive repeating rows within child records:

getValueFromParent('p_fieldname', 2); getValueFromParent('p_fieldname', 3)

This example gets the field value from the third repeating row and places the result in the first re child record, and then gets the value in the fourth repeating row field and places its value in the s row child record

Multiple Add Buttons

Multiple Add buttons on the preheader are supported. Under rare circumstances, you might war specific sort order for these buttons. There is not a place on the user interface to define the sort buttons, but please contact ExtraView Support who will guide you through the process.

RID PREHEADER

This attribute adds a title to a related issue display header to contain an **Add** or other buttons. No to the related issue display if this attribute is not defined. There is one special property of this fie the value of **TITLE** in the value then the description of the related issue display layout will be u in the pre-header. The reason why you might want to do this is solely if you need to provide a lo equivalent for the title in languages other than the base language of your system. The related issu

RID PREHEADER ADD BUTTON	This attribute adds a button to the pre-header. This button is used to add new issues to a relations is a field that must already be created in the data dictionary. The button must be created on the *L* the data dictionary and must have a display type of *Button*. The title to the field will be used as t button when it appears on the pre-header of the related issue display. You may add any number c to a single Related Issue Display
RID PREHEADER REFRESH BUTTON	This attribute is used when you are using a search layout on an *add* or *edit* layout to return one c relate them to the current issue. This places a button onto the related issue display pre-header ba user to refresh the list of results from the current set of search filters. The button has a default tit **Filtered Results**, but you can optionally provide a value to the attribute which will then appear a the button
RID PREHEADER SUBMIT BUTTON	This attribute is used when you are using a search layout on an *add* or *edit* layout to return one c relate them to the current issue. This places a button onto the related issue display pre-header ba user to submit the list of results from the current set of search filters. The button has a default tit **Selected Record(s)**, but you can optionally provide a value to the attribute which will then appe on the button. **Multiple Submit Buttons** Multiple Submit buttons on the preheader are supported, typically to allow different types of issu Under rare circumstances, you might want to create a specific sort order for these buttons. Ther on the user interface to define the sort order of these buttons, but please contact ExtraView Supp guide you through the process.
RID RELATIONSHIP NAME	This is the name of the relationship group to which the related issues will be added. The relation be created before you add the name to the cell attribute. If you do not set a value for this attribut in the behavior setting named RELATION_GROUP_DEFAULT will be used
RID RELATION TYPE	This should be set to one of the following values: • **MEMBERS** - This is the default value for this attribute if you do not override it with one values. In this case the related issue displaywill show all the members of the group(s), cor reference issue, i.e. the reference issues parents, children, and other issues not directly rela reference issues in the group(s). • **CHILDREN** - The related issue display will only contain issues that are the children of th issue • **PARENTS** - The related issue display will only contain issues that are the parents of the r Note that in the ExtraView data model it is possible to define more than one parent issue f issue. See the section on Relationship Groups for more information. • **RELATED** - In this instance ExtraView will display the parents and the children of the re within the specified group(s), within the related issue display. The parents and children of issues will not be displayed. • **SIBLINGS** - ExtraView will display all the issues at the same level in the hierarchy. For e parent record has five children, and you create a related issue display with all the children relationship group relation type of SIBLINGS, then you will see the four siblings to the cu • **GRANDPARENTS** - This allows the display of the grand-parents to the current level in t • **GREATGRANDPARENTS** - This allows the display of the parents of the grand-parents • **GREATGREATGRANDPARENTS** - This allows the display of the parents of the great- in the hierarchy • **GRANDCHILDREN** - This allows the display of the grand-children to the current level • **GREATGRANDCHILDREN** - This allows the display of the children of the grand-child hierarchy • **GREATGREATGRANDCHILDREN** - This allows the display of the children of the gr children in the hierarchy • **LINKED** - This type does not use a relationship type per se, but relies on the Related Issu

LAYOUT	same layout as the related issue display. Typically you will embed this search layout just above t display layout
RID SEARCH ON NO FILTERS	The layout element attribute RID SEARCH ON NO FILTERS allows an embedded search repor even when there are no filters added in the embedded layout. Normally, at least one such filter must be present for the search to occur to prevent the potential numbers of issues. By putting this attribute on a Related layout element that references a RID SI FILTER LAYOUT a search may be done even when no filters are set.
RID SINGLE SELECT	This attribute is used when you are using a search layout on an *add* or *edit* layout to return one c relate them to the current issue. The default is that the search will allow you to return all the issu selects from the results. If you set this attribute, then the user will only allow a single issue to be return the results into the related issue display
RID SORT ORDER	This attribute determines a sort order, based on a field that is displayed on the related issue displ the value to ASCENDING or DESCENDING
RID TRANSPOSE LAYOUT	The default is that the related issues will be presented on the display by row. If you select this at issues will be presented by column
SIZE	This controls the width of the related issue display on *add* and *edit* screens. The size is an estima number of characters to be displayed. If you do not provide a layout cell attribute for SIZE, then 125 characters. Beginning with version 10, you can no longer use a SIZE layout cell attribute on the individual related issue display to control their width. This allows the enabling of a new feature, to freeze t related issue display. This is very beneficial when you have a significant number of related issu display, as the titles always remain visible.
VISIBLE IF	This allows you to make the entire related issue display visible or not visible depending on the v field on the layout within which the related issue display is embedded

Refresh Button on a Related Issue Display

There are occasions when it is useful to have a refresh button on the related issue display preheader. This can be acco following steps:

1. Within the Labels tab of the the data dictionary create a field with a suitable name, e.g. **MY_REFRESH,** with a **Button** and a title of **Refresh**
2. Edit the field you have just created within the data dictionary, and add a Global Attribute of **RID ONCLICK_J** have a value of:

```
doMyRGRefresh(__LAYOUT_TYPE_ID__);return false;
```

3. Navigate to the layout that contains the related issue display where you want the button
4. Add a new layout cell attribute of **RID PREHEADER ADD BUTTON**, and select the **MY_REFRESH** button
5. Save the layout.

Order of Precedence on Related Issue Display Operations

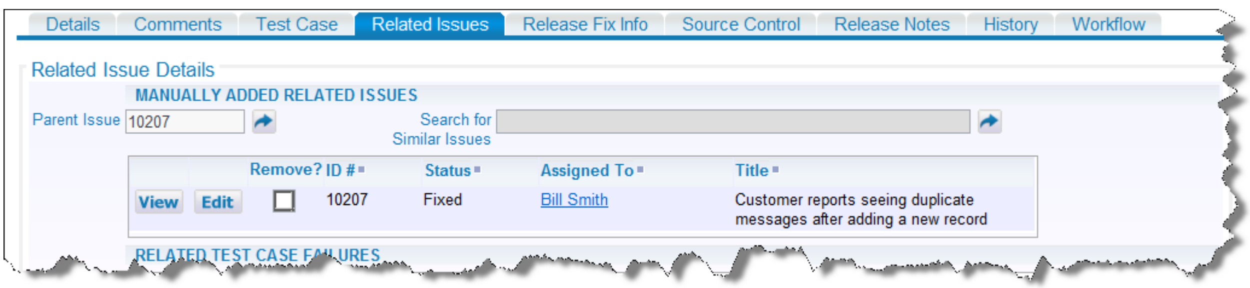
Given that the end user may carry out a combination of operations on several, and sometimes independent, related issu an *add* or *edit* screen, there might be some conflict in these operations, with records that might appear in more than a s issue display. For example, what happens if you update an issue in one relationship, but remove the same issue in anot The RELATIONSHIP_GROUP_REMOVE_BTN is given precedence over other transactions. Transactions are proces following order: removes, inserts, deletes (where the deletes are relationship group remove button transactions) have an issue which has some elements in common with another issue and you want to treat them together. For customers may report the same fundamental issue, and you want to group these together. You require a mechani to the common group, and to display the related issue when you are looking at any one of the issues. This forms

- **Structured addition of child records to a parent record** - Add any number of new issues as children to the cu typical use case might be that you want to add a number of contacts to a customer's definition as you might find system. The customer record is the parent issue, and each of the contacts is a child record to the customer recor Example 2
- **Search for a single record and populate the current record with fields from the result** - Create an *add* or *ec* allows the end-user to search for results that are returned, and then insert values from the result into fields withi issue. A use case may be to have a layout that creates customer complaints, but before entering the specifics of t user is able to search for the appropriate customer and return all the details required into the current complaint. Example 3
- **Search for multiple records matching specific criteria and relate the results to the current record** - Examp you might search a large set of test cases for a subset, and relate this subset to a current record, forming a test pl records added as children form the test cases for the test plan.

Example 1

This example describes how to set up a relationship group that enables an issue to be related to a parent issue in an ad simply by entering an issue ID into a text field on an *add* or *edit* screen of the child issue. Each issue will then display in an embedded layout, where you have the option to remove each related issue, or to drill down and edit the related is

Here is a screenshot of the *edit* screen of the parent issue after setting up this example:

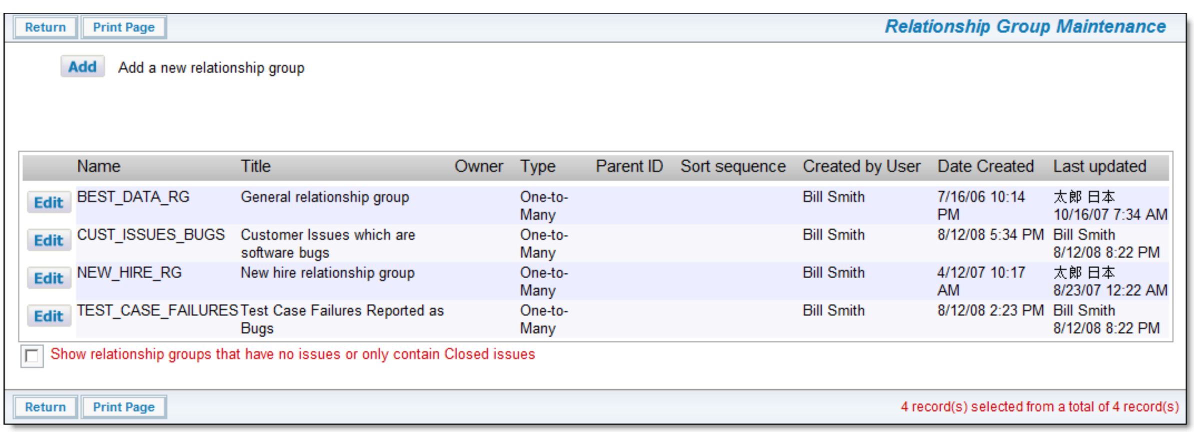


Example related issue display with its connecting parent issue ID

Step 1 – Setting up The Relationship Group

In this example, we will set up a relationship group that named BEST_DATA_RG. This will be a One-to-Many type o group and uses a Parent / Child structure for the related issues.

1. Go to **Administration** ➧ **Site Configuration** ➧ **Relationship Group Maintenance** and ensure the BEST_DAT exists – you may need to check the box next to **"Show relationship groups that have no issues or only contai**

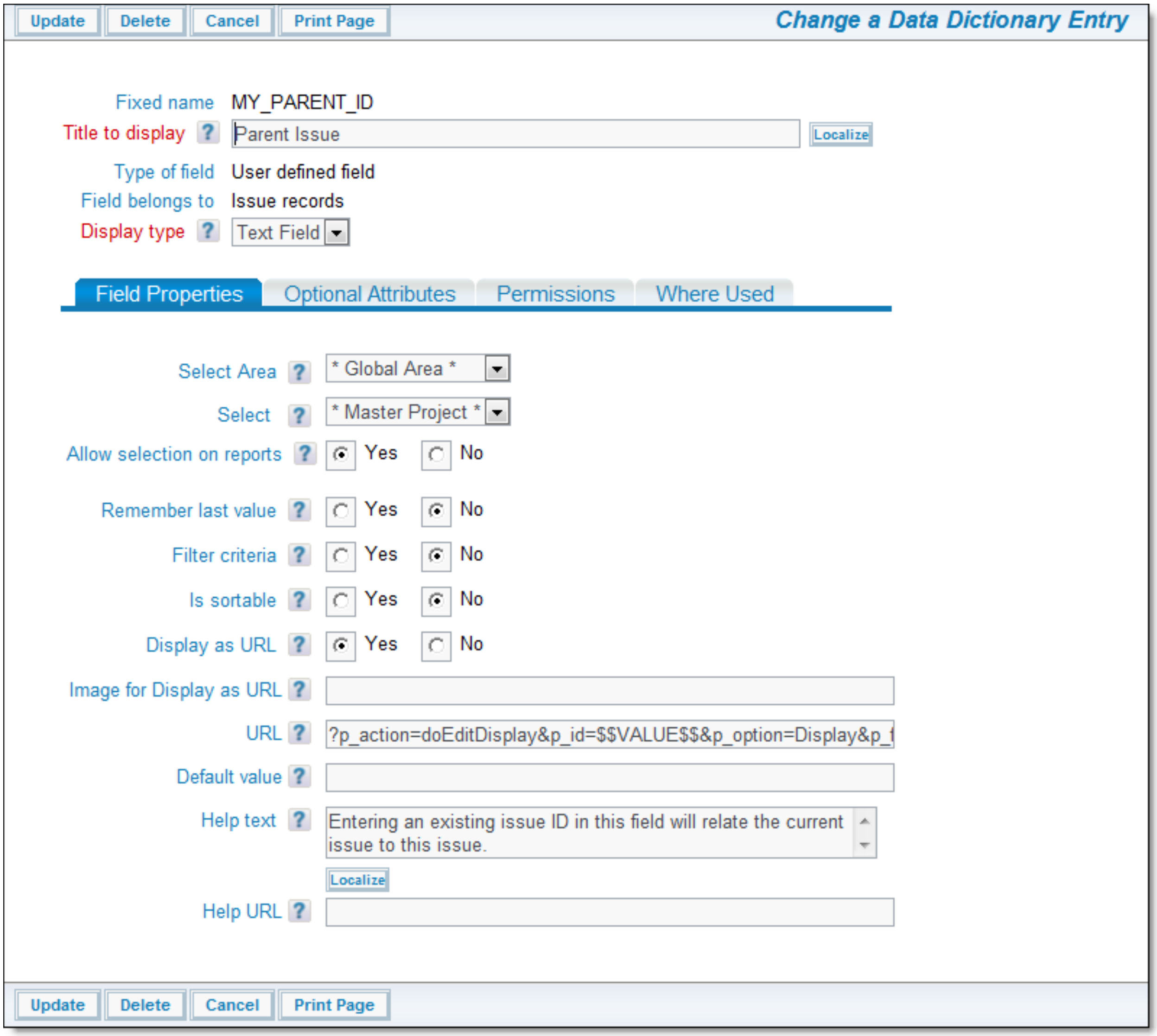


	Name	Title	Owner	Type	Parent ID	Sort sequence	Created by User	Date Created	Last updated
Edit	BEST_DATA_RG	General relationship group		One-to-Many			Bill Smith	7/16/06 10:14 PM	太郎 日本 10/16/07 7:34 AM
Edit	CUST_ISSUES_BUGS	Customer Issues which are software bugs		One-to-Many			Bill Smith	8/12/08 5:34 PM	Bill Smith 8/12/08 8:22 PM
Edit	NEW_HIRE_RG	New hire relationship group		One-to-Many			Bill Smith	4/12/07 10:17 AM	太郎 日本 8/23/07 12:22 AM
Edit	TEST_CASE_FAILURES	Test Case Failures Reported as Bugs		One-to-Many			Bill Smith	8/12/08 2:23 PM	Bill Smith 8/12/08 8:22 PM

“Type” drop-down list. Click Add to complete the operation. You may use a different name for the relationship remember this as you will need it later.

Step 2 – Create a Field in the Data Dictionary

Now that the relationship group is defined, we will create a field in the Data Dictionary that will handle any related iss entered by the user.



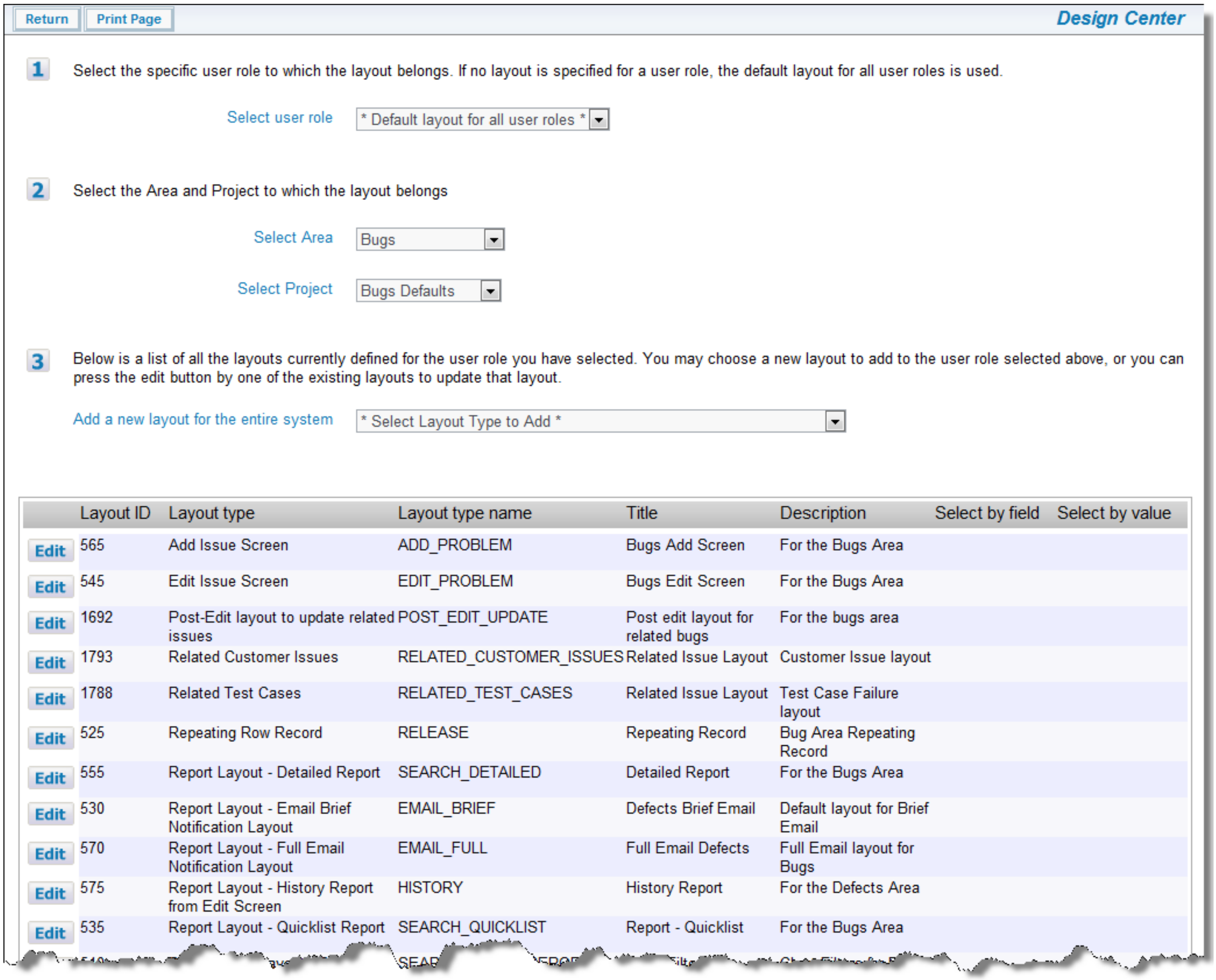
The new field

We also turned on **Display as URL** for the field, and set the **URL** to:

?p_action=doEditDisplay&p_id=$$VALUE$$&p_option=Display&p_from_action=search
&p_from_option=search

This provides a drilldown button by the field so we can see the parent issue by clicking on the button.

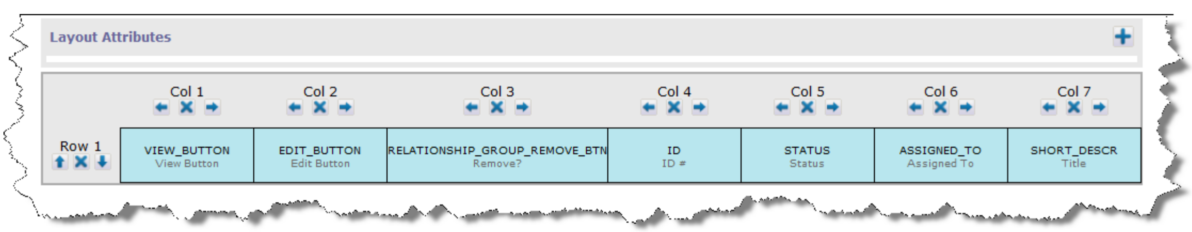
Now we need to place these fields on a layout so they are accessible.



	Layout ID	Layout type	Layout type name	Title	Description	Select by field	Select by value
Edit	565	Add Issue Screen	ADD_PROBLEM	Bugs Add Screen	For the Bugs Area		
Edit	545	Edit Issue Screen	EDIT_PROBLEM	Bugs Edit Screen	For the Bugs Area		
Edit	1692	Post-Edit layout to update related issues	POST_EDIT_UPDATE	Post edit layout for related bugs	For the bugs area		
Edit	1793	Related Customer Issues	RELATED_CUSTOMER_ISSUES	Related Issue Layout	Customer Issue layout		
Edit	1788	Related Test Cases	RELATED_TEST_CASES	Related Issue Layout	Test Case Failure layout		
Edit	525	Repeating Row Record	RELEASE	Repeating Record	Bug Area Repeating Record		
Edit	555	Report Layout - Detailed Report	SEARCH_DETAILED	Detailed Report	For the Bugs Area		
Edit	530	Report Layout - Email Brief Notification Layout	EMAIL_BRIEF	Defects Brief Email	Default layout for Brief Email		
Edit	570	Report Layout - Full Email Notification Layout	EMAIL_FULL	Full Email Defects	Full Email layout for Bugs		
Edit	575	Report Layout - History Report from Edit Screen	HISTORY	History Report	For the Defects Area		
Edit	535	Report Layout - Quicklist Report	SEARCH_QUICKLIST	Report - Quicklist	For the Bugs Area		

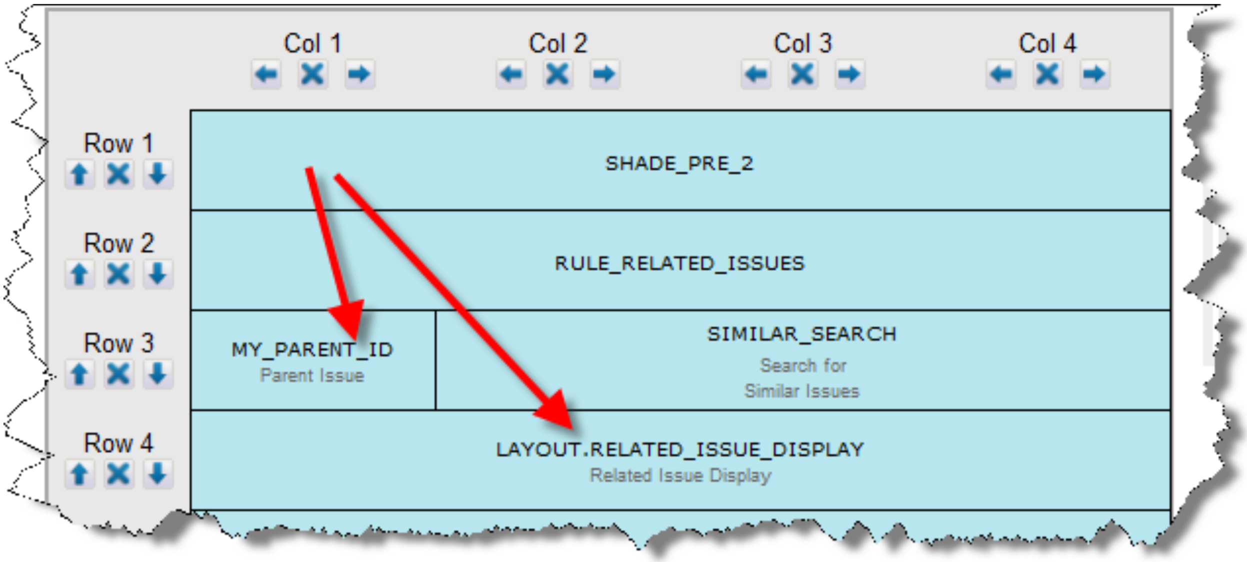
Ensure the Related Issue Display is available

- If the layout does not exist, or you want to override the one that is present in the Global Area, create this layout:
  1. Select **Related Issue Display** from the * **Select Layout Type to Add** * list
  2. Add the desired fields you want displayed in this layout. This is an example of a related issue display layo



Related Issue Display layout example

- After saving the Related Issue Display layout, edit the *Edit Issue* screen for this business area



The fields and related_issue_display on the Edit Issue Layout

- Add the following layout cell attributes to the MY_PARENT_ID field by clicking on the link button next to the

Attribute	Value
RID RELATIONSHIP NAME	BEST_DATA_RG
RID RELATIONSHIP TYPE	Related

- Add the following layout cell attributes to the RELATED_ISSUE_DISPLAY by clicking on the link button nex name:

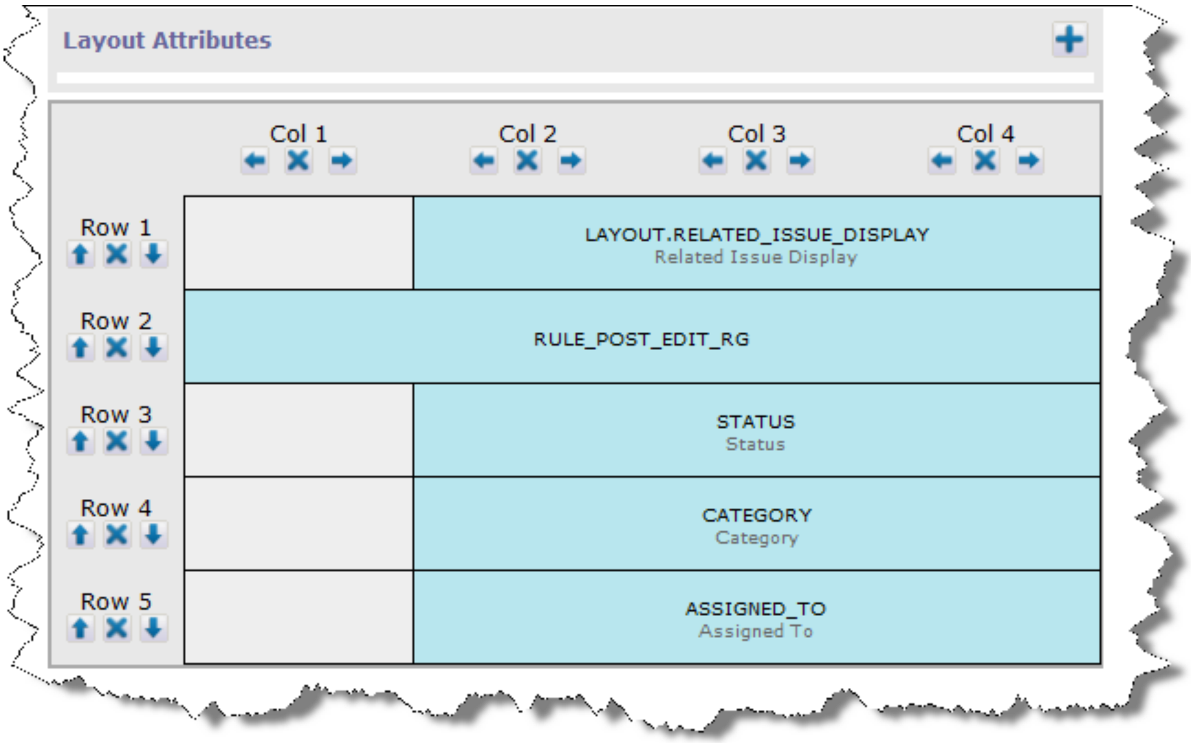
Attribute	Value
RID RELATIONSHIP NAME	BEST_DATA_RG
RID RELATIONSHIP TYPE	Related
VISIBLE IF	ID is not null
HEIGHT	30

- Save the layout.

Step 5 – Updating Related Issues when Updating the Parent Issue

If you want the capability to update all related issues when performing the update of an issue, continue with the follow Otherwise, ad hoc related issues are now configured on your site.

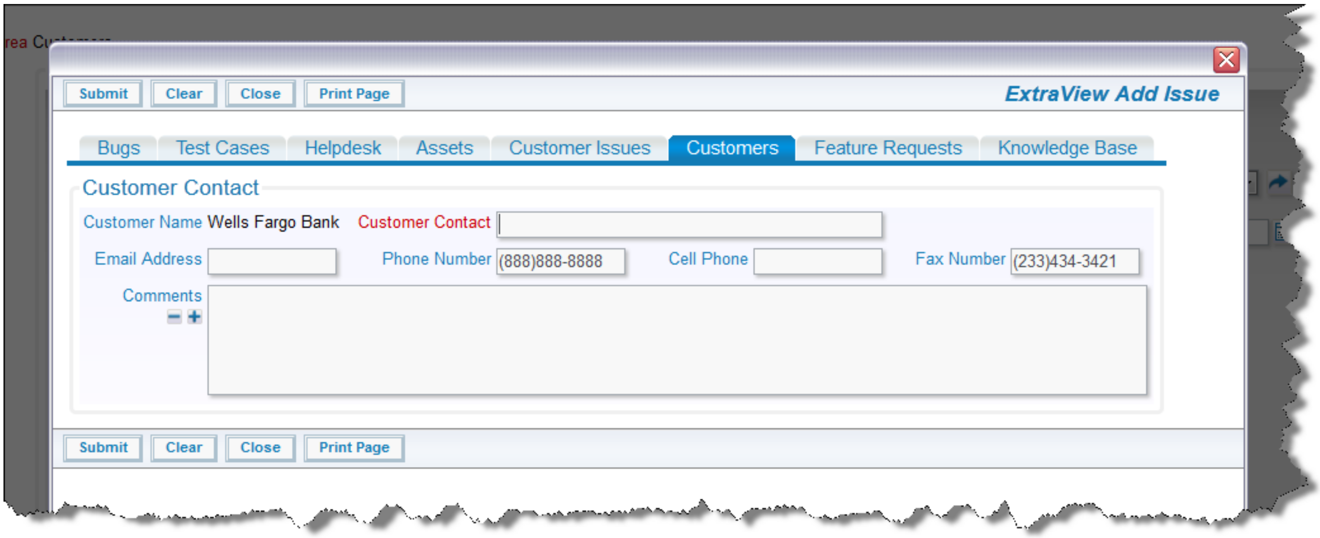
1. Go to **Administration** ➧ **Site Configuration** ➧ **Behavior Settings** and make sure the behavior setting named RG_UPDATE_BILEVEL_ONLY is set to a value of NO
2. Go to **Administration** ➧ **Site Configuration** ➧ **Design Center**. Ensure that you have a layout with a type of POST_EDIT_UPDATE defined. If your installation does not have a layout of this type defined, use the Create a Layout Types entry on the Fields & Layouts administration menu to define this
3. Add the layout with the POST_EDIT_UPDATE type to your current business area and project, or in a location f be inherited
4. Place the fields on the layout that you want to be available during the update process for related issues. It shoulc like the following screenshot.



Note that the fields named STATUS, RESOLUTION and ASSIGNED_TO are the fields that will be updated in
It is essential that you place the embedded layout, LAYOUT.RELATED_ISSUE_DISPLAY on this layout. Also
field named RULE_POST_UPDATE_RG is defined as a custom field and has its help text defined as **4 - Check list below that you want to update to the same values in the issue being updated.** The new value is shown. I
you may need to set the RID RELATIONSHIP NAME, RID GROUP REFERENCE FIELD and the RID RELA
layout cell attributes for the LAYOUT.RELATED_ISSUE_DISPLAY. When you edit the parent issue, the user v
option to update the related issues at the same time.

Example 2

A common requirement is to have one issue (the parent issue) create related issues as children. For example, you migh
that spins off an arbitrary number of actions to employees around your organization, and for each of these employees t
before the parent issue can be closed. You want to have an **Add** button on the parent issue to add the child issues one-l
example shows how a parent customer screen can add any number of contact records to different people as child recor
time, some fields from the parent issue are "pushed down" into the child record, to pre-populate the child record with
required.

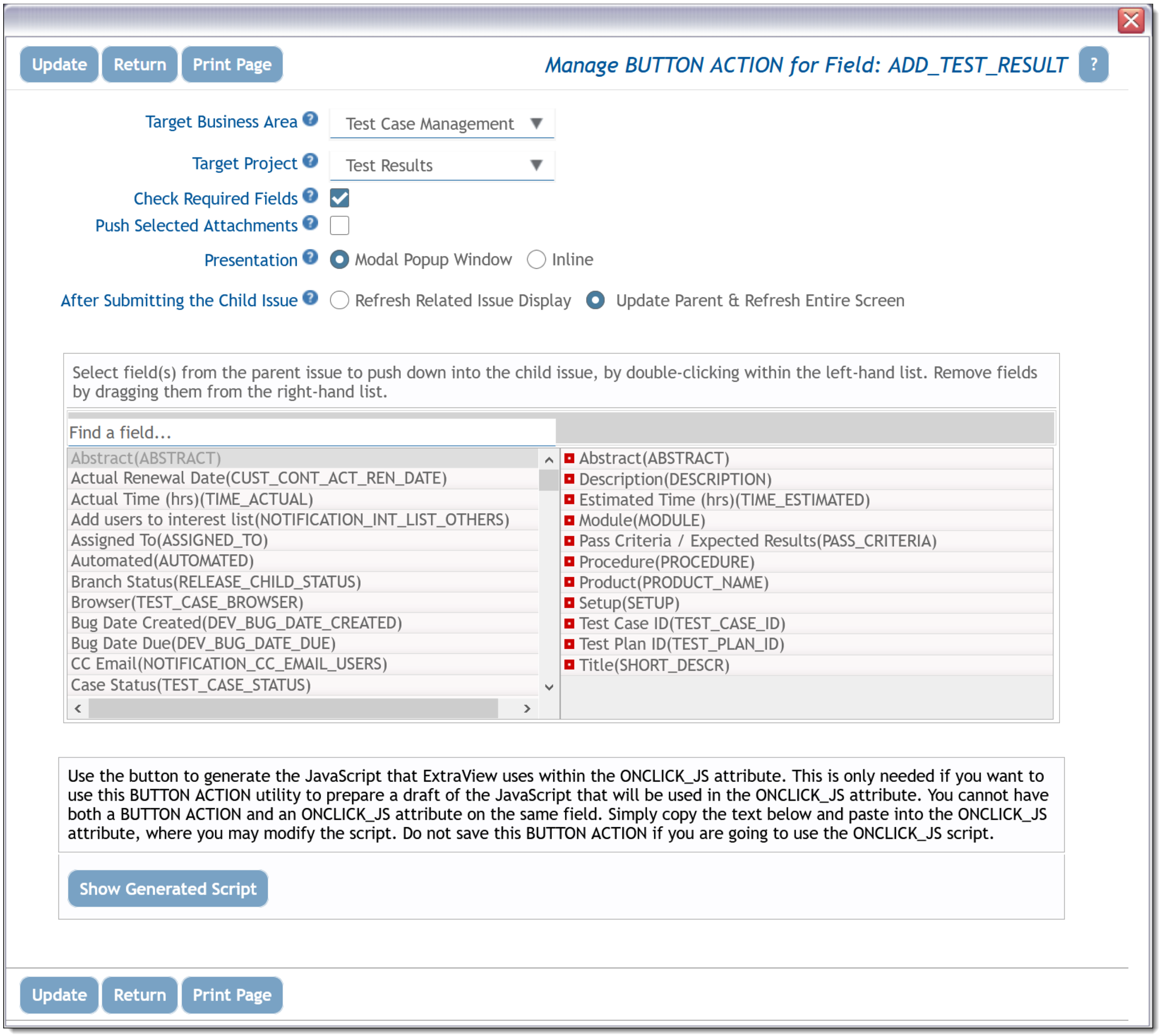


The popup Add window where you add the child record

To setup this feature, use the following sequence as a guide:

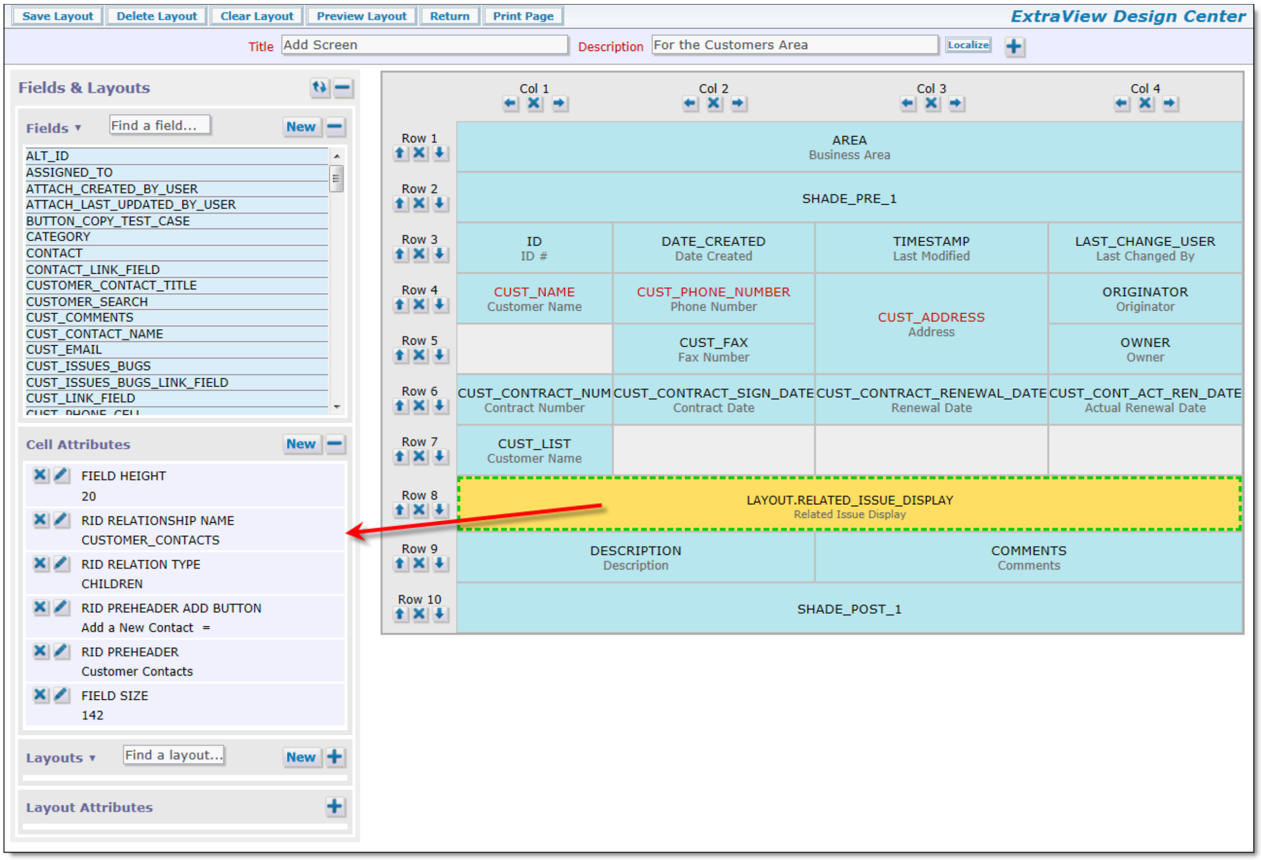
- This feature presently only works when your installation uses the ID field, as opposed to the ALT_ID field, as tl identifier for all issues
- Definitions and screens for parent issues to which you want to add the children. For this example let's say this p Business Area titled **Customers** and the data is stored in the Project titled **Customer Information**. The name fo Area is **CUSTOMERS** and the Project is named **CUSTOMERS_DATA**
- Definitions and screens for child issues to be added to the parent. For this example let's say the child issues are i Business Area titled **Customers** but the data is stored in a separate Project titled **Customer Contact**. The Proje **CUSTOMERS_CONTACT**
- Have a one-to-many relationship group defined for the link. For our example, we will name this **CUSTOMER_**
- You need a button defined as a field in the data dictionary, which is used to add the child records. This must be o on the **Label** tab and can have any name. Its display type must be **Button**. The title of the field is used as the te on the screen. In our example, the field is named **CONTACT_ADD_BUTTON**. There is an attribute that you c button field, which controls a number of elements:
  - Which Business Area and Project into which you want to add the child record
  - The behavior when you submit the child issue, for example, whether to just refresh the parent window wi from the new child record, or whether update the parent record with information from the new child recor
  - To define a set of fields from the parent record that you want to "push down" to the child record, so the va fields can automatically be assigned to fields in the child record

  This attribute is the RID BUTTON ACTION attribute and should be configured under the Global Attributes tab Dictionary. The configured attribute will look like this:



Configuring the Button Action

- Create a layout type to hold the related issues or use the inbuilt related issue display layout named RELATED_ISSUE_DISPLAY. If you create your own layout type, the name must start with **RELATED_**, follc characters. For example, name the layout type **RELATED_CONTACTS** and make sure that its usage is **Repor** we will just use the inbuilt RELATED_ISSUE_DISPLAY
- Add the layout you are using into the **Customers** Business Area and the **Customer Information** project. In our the **RELATED_ISSUE_DISPLAY**. Onto this layout, add the fields from the child issue that you want to displa issue display on the parent issue. This might look like this:



The Related Issue Display

The layout cell attributes that you see are used as follows:

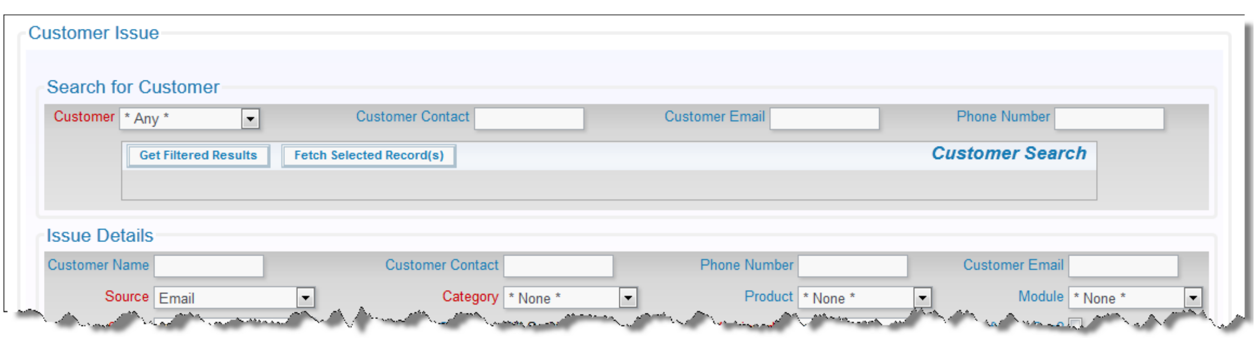
- **FIELD HEIGHT** - This provides a maximum height before the child issues will be displayed with a scro approximately the number of rows of data
- **RID RELATIONSHIP NAME** - This should be **CUSTOMER_CONTACTS** for our example
- **RID RELATION TYPE** - This should be **CHILDREN** for our example
- **RID PREHEADER ADD BUTTON** - The name of the button you created in the data dictionary
- **RID PREHEADER** - The title you want to place at the top of the related issue display, to the right of the
- **FIELD SIZE** - The width of the related issue display, approximately in characters

- Test the configuration by adding the essential fields to the parent record, then clicking the *add* button and addin

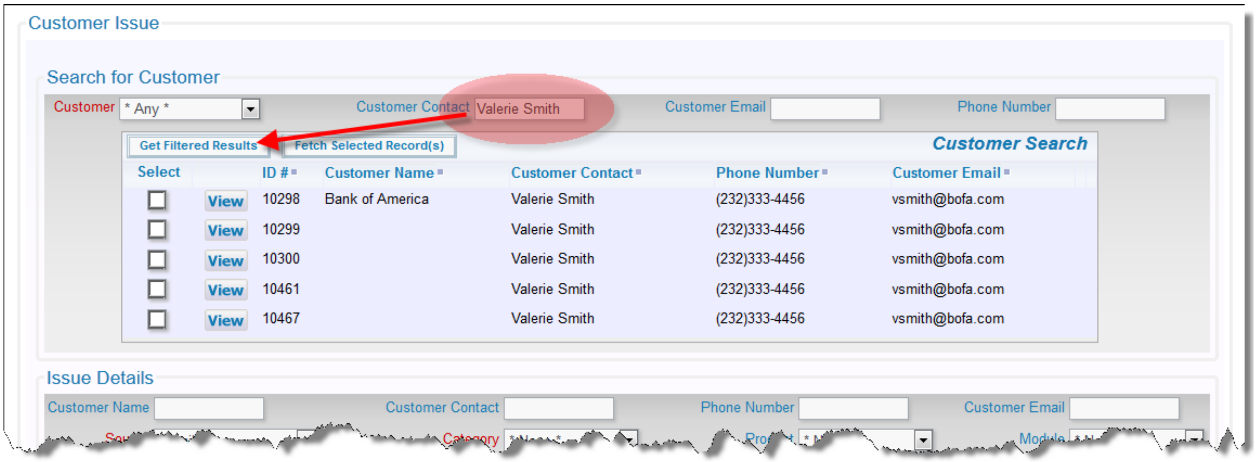
- Add new comment

Example 3

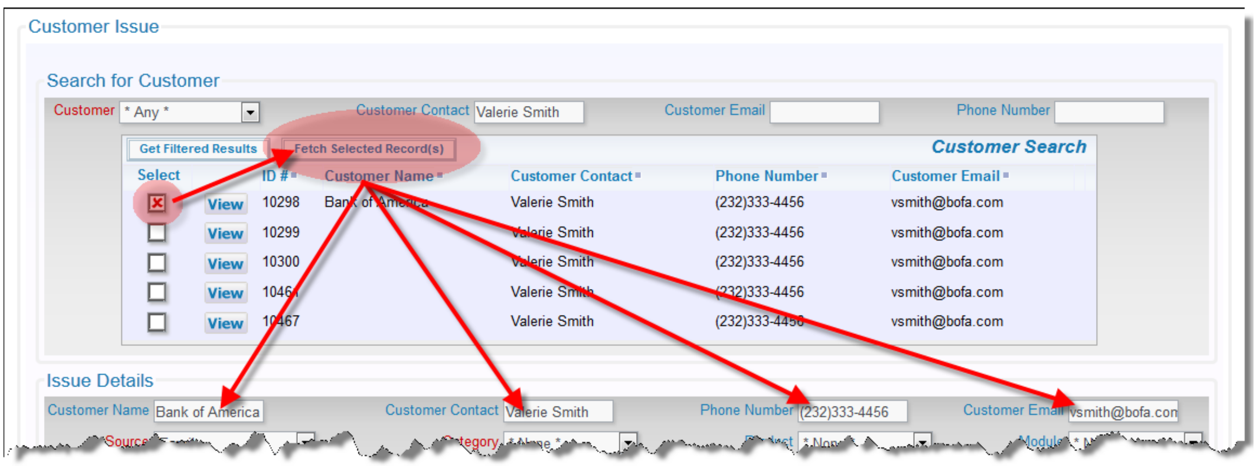
It is often useful to search for related issues in order to identify information that you want to copy into the current issu you might have a business area that contains all your customers, and another business area where you want to create is customer might report. This feature allows you to enter some key identifying information about a customer, such as th address or telephone number, bring back all matching records, and then select the specific customer that you want to a customer issue with.



Initial customer search



Entering the search criteria and seeing the results



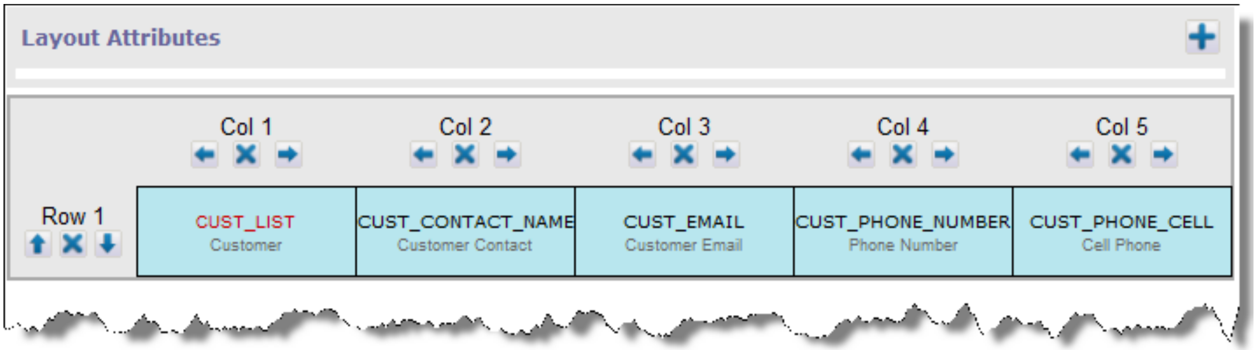
Selecting the result and populating the issue

When you look at the above screenshot, you will see that you have a search capability, a search results area, and the ui screen into which you want the selected record to appear. The basic configuration is this:

- Start by creating the *add* or *edit* screen in the normal way
- Create a search layout to be used as the available filters for the search
- Create a related issue display to hold the results of the search
- Assembling the search layout and related issue display layout on the *add* or *edit* screen
- Associate the fields on the underlying *add* or *edit* screen with the fields to be populated from the search results

The Search Layout

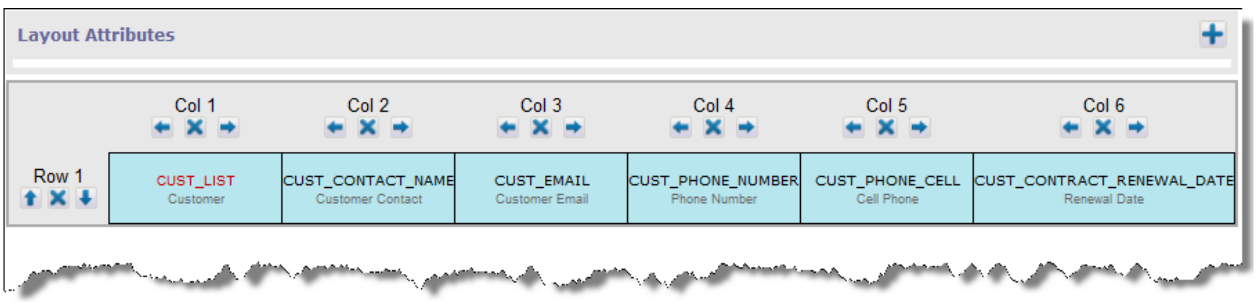
First, create a new layout type. This may have any name and any title, but it must have a usage type of **Search**. This is the search filters that will be displayed to the user. For our example, we will use the name CUSTOMER_SEARCH. N layout to the area and project where it is needed, creating a new layout. Onto this layout, you will place the fields to be No special layout cell attributes are required, but you may use whatever attributes help you provide an aesthetically pl Save this layout.



The search layout

The Related Issue Display Layout

This is used to contain the results of the search. Note that the fields displayed do not need to match the fields within th although it is common to see several fields in common. Create a new layout type to contain the related issue display. E begin the name of the new layout type with **RELATED_** and followed by remaining characters that provide an uniqu layout. The usage type of this layout must be **Report**. For our example, we name this layout type RELATED_CUSTO Now, add the new layout to the area and project where it is needed, creating a new layout. In the first column of the la inbuilt field with the name **RELATIONSHIP_GROUP_CHOOSE_BTN**. This is used as the selector for the record(you want to place into the *add* or *edit* screen. It is recommended that you only place the **VIEW_BUTTON** as any oth layout. You should not place other buttons such as **EDIT_BUTTON** or **QUICKEDIT_BUTTON** on this layout. Plac fields that you want to display on the related issue display on the layout, and save the layout.



The related issue display layout

Configuring the *Add* or *Edit* Screen to Use the Search and Related Issue Display Layouts

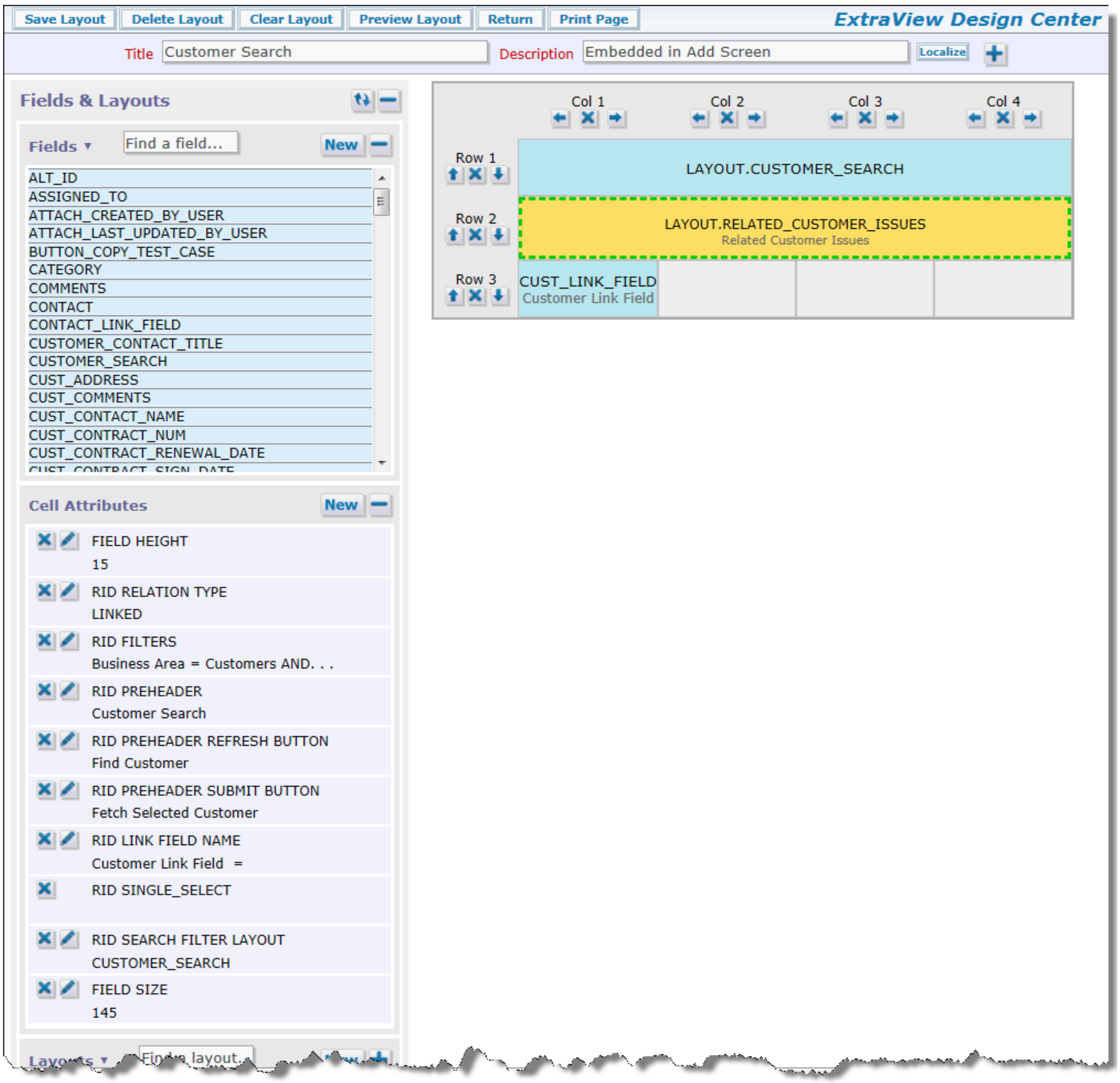
A link field is required to pass the results from the selection made on the Related Issue Display layout, so begin by cre with a display type of text. Give this field read / write permissions for the roles that will be adding customers. This fie on the *add* or *edit* screen, but it need not be visible. For example, you might provide this field with two layout cell attr Set a FIELD STYLE of **display:none** and a FIELD LABEL TAG of **display:none** as layout cell attributes, thus ensur never be seen on the screen by any user. Note that you cannot use the FIELD/LAYOUT VISIBLE IF layout cell attrib because this attribute only places the field into the HTML form when it becomes visible. We need the field on the forr invisible to be used as the link field. In our example, we use the name CUST_LINK_FIELD.

Place your search layout on the *add* or *edit* screen. This layout does not require any layout cell attributes, but you migl it using FIELD/LAYOUT VISIBLE IF, once you have made your selection from the results of the search.

Place your related issue display layout on the *add* or *edit* screen. This is the place where you configure several layout link that bind all the elements together:

default title of **Search**, but you can optionally provide a value to the attribute which will then appear as the labe
You must define a RID PREHEADER for this button to be visible

- RID PREHEADER SUBMIT BUTTON - This places a button onto the related issue display pre-header bar that to update ID's for the selected values within the display into the FIELD NAME. The button has a default title of you can optionally provide a value to the attribute which will then appear as the label on the button You must de PREHEADER for this button to be visible
- RID LINK FIELD NAME - This is the name of the link field that receives the ID's of the selected issues from tl display. Simply select the field name from the list presented to you when you add the attribute
- RID SINGLE SELECT - Select this attribute if you want to restrict the user to only make a single selection fron results. You will typically select this if you want the destination of the search result selection to be fields within or *edit* screen. If it is your intent to allow the user to add an arbitrary number of related issues, then do not add t thereby allowing multiple search results to be selected.



In this case the CUST_LINK_FIELD will contain a single value which is the ID of the record we will associate with t
This is done with business rules similar to the following:

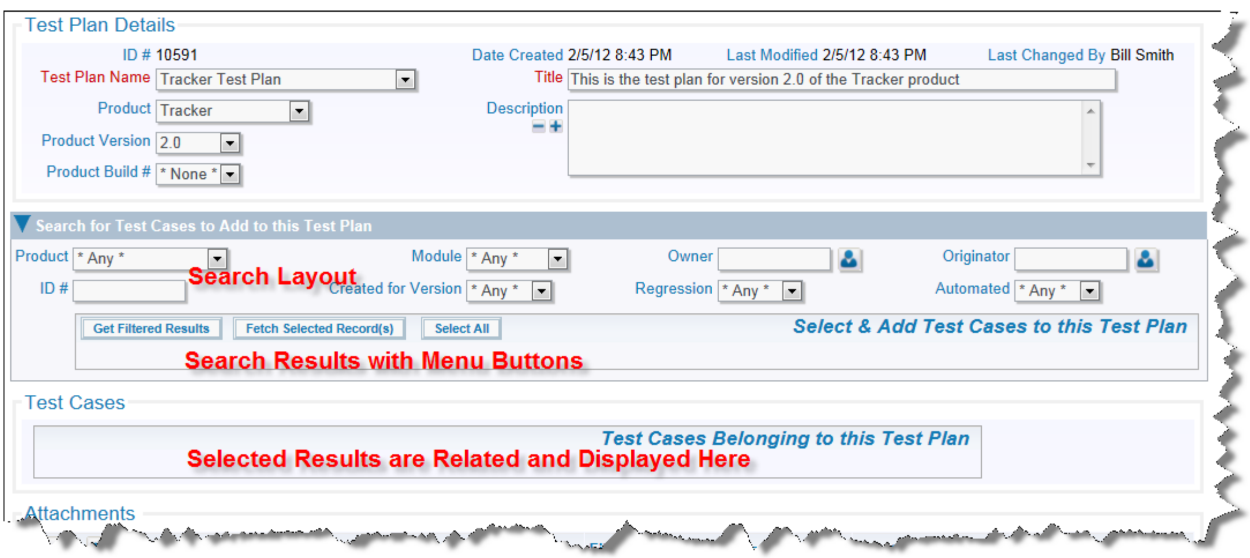
```
<== link customerSearchLink ==> AREA='Customers', ID=CUST_LINK_FIELD

<== refresh ==>
if (CUST_LINK_FIELD.{changed}) {
  CUST_NAME          = (customerSearchLink).CUST_NAME;
  CUST_CONTACT_NAME  = (customerSearchLink).CUST_CONTACT_NAME;
  CUST_PHONE_NUMBER  = (customerSearchLink).CUST_PHONE_NUMBER;
  CUST_EMAIL         = (customerSearchLink).CUST_EMAIL;
}
```

The link directive establishes a link based on the ID of the issue we want to retrieve being equal to the value containec
CUST_LINK_FIELD field we created.

The commands within the refresh directive establish the assignments to be made when the CUST_LINK_FIELD is po
search results.

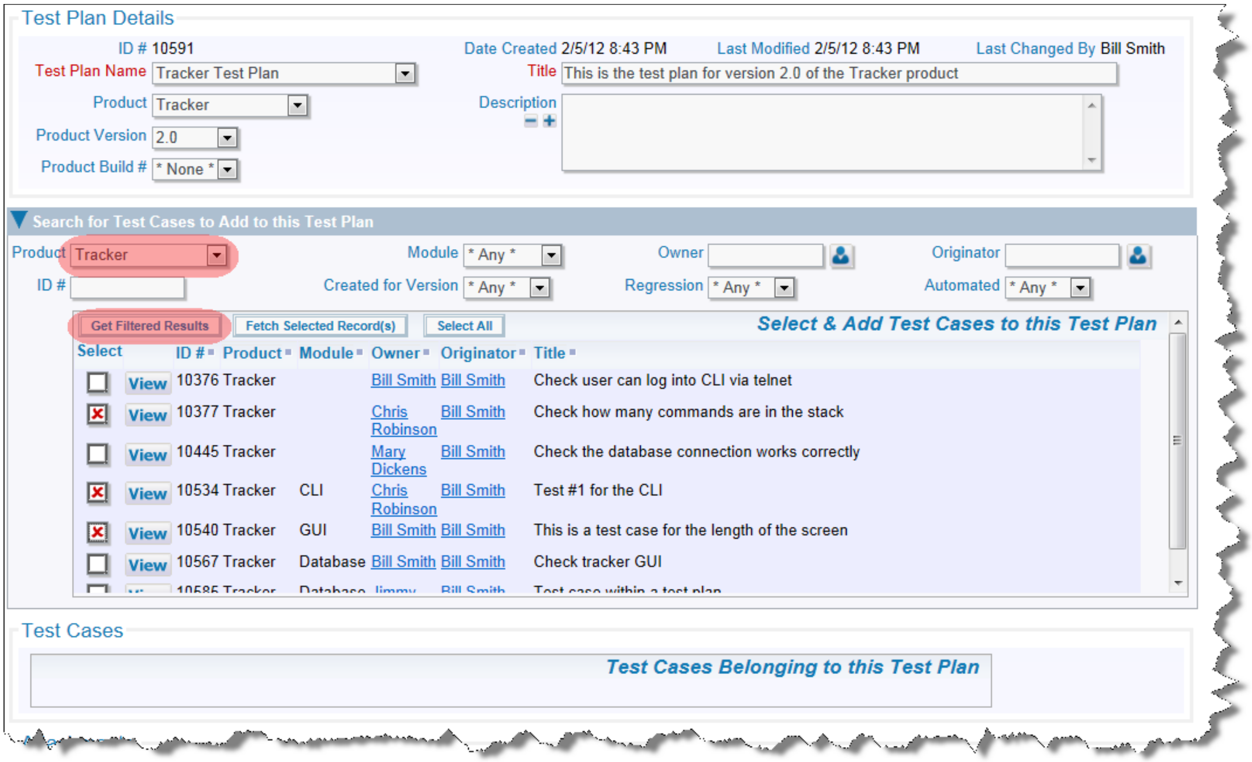
Example 4

It is often useful to search for issues in order to make a selection from the result set, and relate this selection to the cur
selection may be a subset of the result set. For example, you might have a business area that contains a library of test c
want to create any number of test plans from this library. Each test plan might have a different subset of records chose
library.



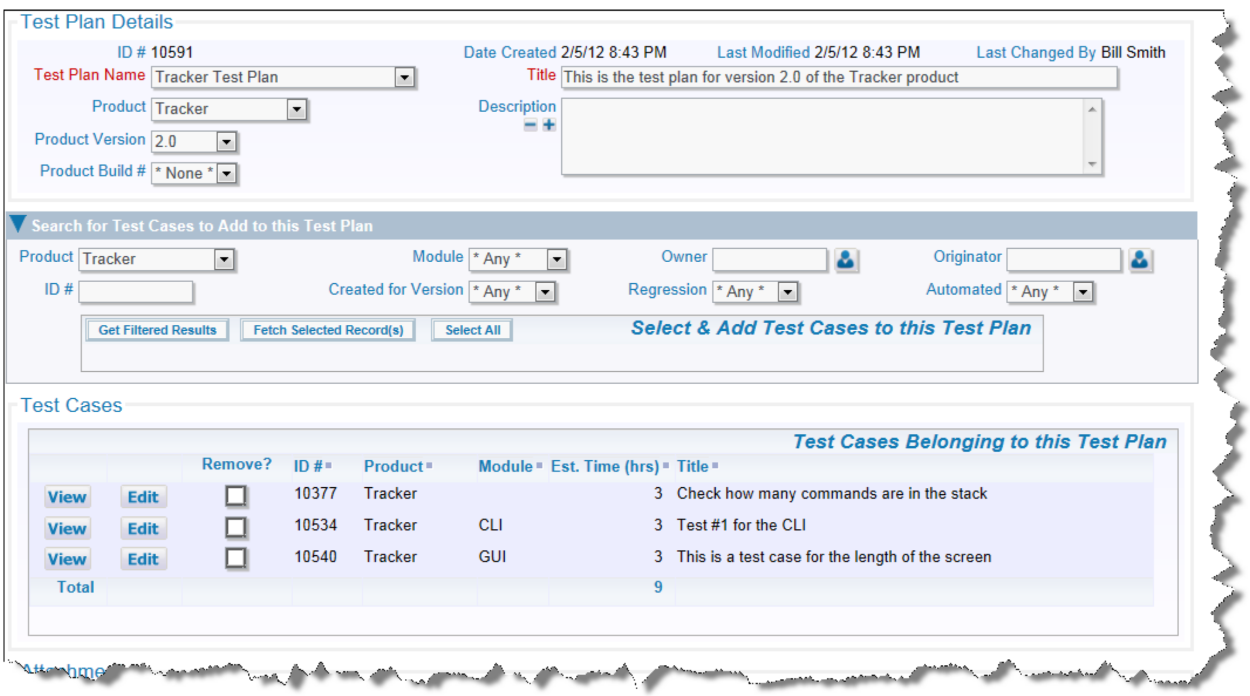
Initial presentation of screen

In the above screen, you will observe a search layout; this is used to provide a filtered set of search results within a rel
display. Note the buttons in the header of the related issue display.



Entering the search criteria and seeing the results

Once you have selected filters, use the **Get Filtered Results** button to display the results in the related issue display. V you can click on any of the results to select that record. There is also a button to **Check All** the results at one time.



The selected results now related to the parent issue

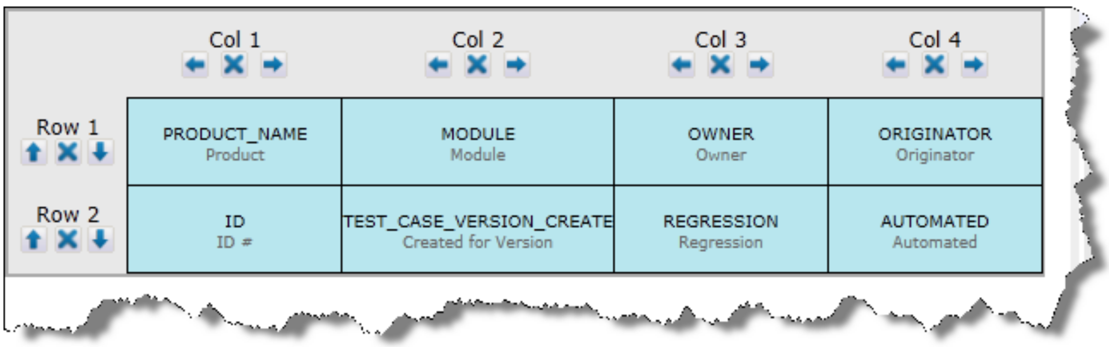
- Create a related issue display to hold the final selected records as children to the parent issue
- Assemble the search layout and related issue display layout on the *add* or *edit* screen
- Create and place a link field on the *add* or *edit* screen to act as a transition of the record ID's from the search res related issue display

The Relationship Group

This is created within the Administration utility, **Relationship Group Maintenance**. This should be of the type **One-t** example, we named this **TEST_CASES_TEST_PLANS** and gave it a title of **Test Cases / Test Plans**.

The Search Layout

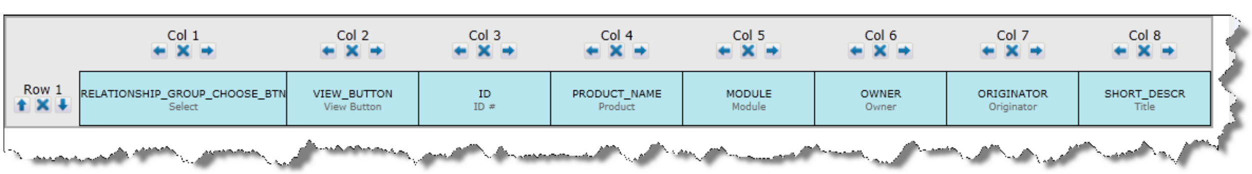
A prerequisite to making the search layout operate is to configure the Quickfind feature. Once this has been done, crea type. This may have any name and any title, but it must have a usage type of **Search**. This is used to contain the searcl be displayed to the user. For our example, we will use the name TEST_CASE_SEARCH. Next, add the new layout to project where it is needed, creating a new layout. Onto this layout, you will place the fields to be used as filters. No sp attributes are required, but you may use whatever attributes help you provide an aesthetically pleasing display. Save th



The search layout

The Related Issue Display Layout Containing the Search Results

This is used to contain the results of the search. Note that the fields displayed do not need to match the fields within th although it is common to see several fields in common. Create a new layout type to contain the related issue display. E begin the name of the new layout type with **RELATED_** and followed by remaining characters that provide an uniqu layout. The usage type of this layout must be **Report**. For our example, we name this layout type RELATED_TEST_CASE_RESULTS. Now, add the new layout to the area and project where it is needed, creating a r first column of the layout, place the inbuilt field with the name **RELATIONSHIP_GROUP_CHOOSE_BTN**. This i selector for the record(s) whose results you want to place into the *add* or *edit* screen. It is recommended that you only **VIEW_BUTTON** as any other button on this layout. You should not place other buttons such as **EDIT_BUTTON** or **QUICKEDIT_BUTTON** on this layout as this layout only displays search results. Place the remaining fields that you on the related issue display on the layout, and save the layout.



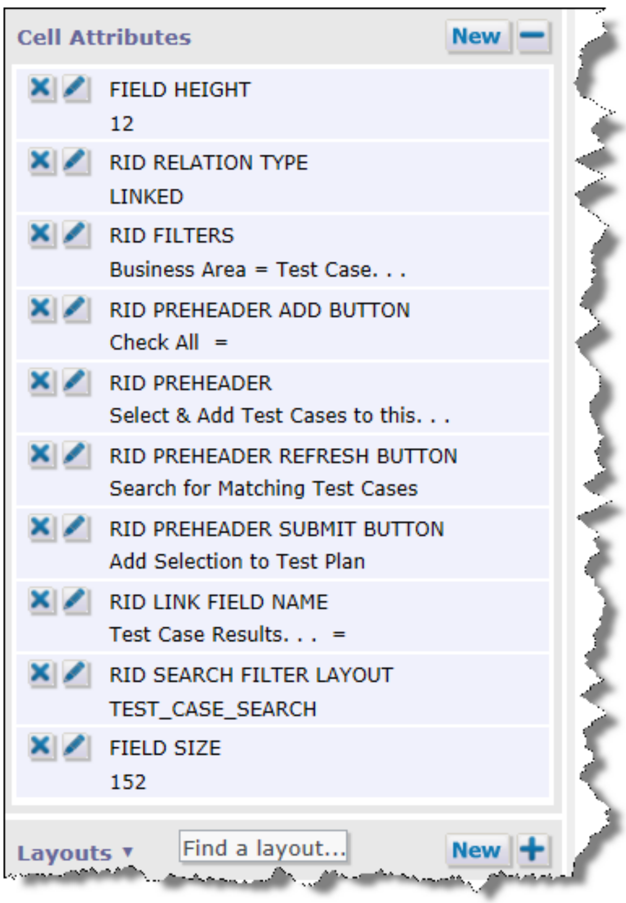
The related issue display layout with the results

The Related Issue Display Holding the Selected Records

Configuring the *Add* or *Edit* Screen to Use the Search and Related Issue Display Layouts

A link field is required to pass the results from the selection made on the Related Issue Display layout with these char

- Create the link field, with a display type of *text area*. In our example, we use the name TEST_CASE_RESULTS Give this field read / write permissions for the roles that will be adding the test cases
- This field must be placed on the *add* or *edit* layout you are configuring, but it need not be visible - normally you this. The following layout cell attrbutes are recommended:
  - STYLE - set to **style=display:none** to hide the field. Note that you cannot use the VISIBLE IF layout cel because this attribute only places the field into the HTML form when it becomes visible. ExtraView need form even when it is invisible to be used as the link field
  - LABEL TAG - set to **style=display:none**
  - RID ACT ON FIELD CHANGE - This ensures that the link field updates the final layout with the selecte triggering a refresh of the related issue display with the selected results
  - RID RELATIONSHIP NAME - This is the relationship that you created in the earlier step. In our exampl **TEST_CASES_TEST_PLANS** with the title of **Test Cases / Test Plans**
  - RID RELATIONSHIP TYPE - Set this to a value of **Children**
  - RID OMIT AUTO POPULATE - This ensures that when you delete an item from the relationship that any original link field is not used, thereby re-populating the child issue back into the relationship.
  - Place your TEST_CASE_SEARCH layout on the *add* or *edit* screen layout. This layout does not require attributes, but you might decide to hide it using FIELD/LAYOUT VISIBLE IF, once you have made your the results of the search. Place your RELATED_TEST_CASE_RESULTS related issue display layout for on the *add* or *edit* screen layout. This is the place where you configure several layout cell attributes that li the elements together:

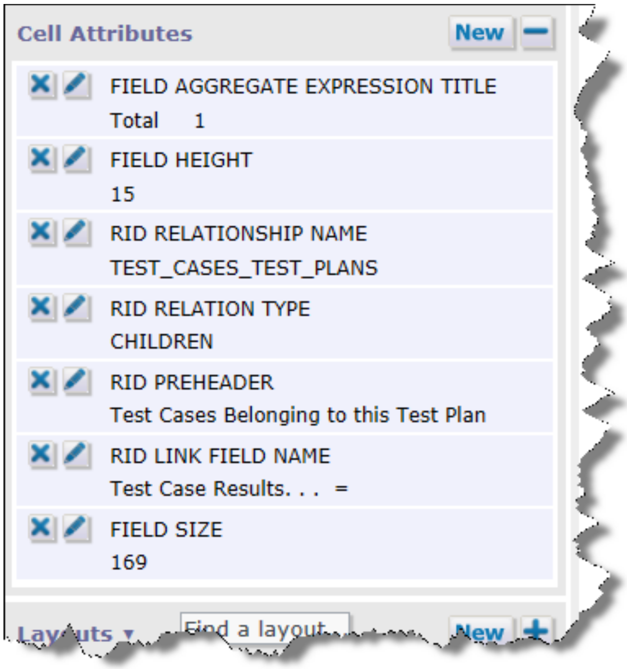


display. This functionality is not required on search results, so we use this button to provide an alternative *Check All* and *Uncheck All* records in the search result. This field is available in the Data Dictionary on th has a name of **SELECT_ALL_BTN**, and a title of **Check All** in the English locale. It also has a **Global** ONCLICK_JS with a value of toggleRIDSelectButtons();. This provides the JavaScript that allows all the selected or deselected. You must define a RID PREHEADER for this button to be visible
  - RID PREHEADER - This attribute provides an area above the related issue display that contains the func well as providing a title to the related issue display. The value you provide with this attribute becomes the define a RID PREHEADER attribute, the RID PREHEADER ADD BUTTON, the RID PREHEADER R BUTTON and the RID PREHEADER SUBMIT BUTTON will not appear, as the RID PREHEADER is u container for these buttons
  - RID PREHEADER REFRESH BUTTON - This places a button onto the related issue display pre-header the user to get the results from the current set of filters, and to refresh the results if the user changes the fi has a default title of **Get Filtered Results**, but you can optionally provide a value to the attribute which w the label on the button. You must define a RID PREHEADER for this button to be visible
  - RID PREHEADER SUBMIT BUTTON - This places a button onto the related issue display pre-header b user to update ID's for the selected values within the display into the FIELD NAME. The button has a def **Selected Record(s)**, but you can optionally provide a value to the attribute which will then appear as the button. You must define a RID PREHEADER for this button to be visible
  - RID LINK FIELD NAME - This is the name of the link field that receives the ID's of the selected issues issue display. Simply select the field name from the list presented to you when you add the attribute
  - RID SEARCH FILTER LAYOUT - This identifies the Search Layout you created above. Simply select its list of values
  - SIZE - This is an optional attribute with the width, in characters, of the display of the related issue display
  - Use the RID AUTOLOAD layout cell attribute, if you want the search results to be populated with results FILTERS, when the screen is first rendered.

The Related Issue Display with the Related Records from the Results

Here, you place layout cell attributes on the layout named **LAYOUT.RELATED_TEST_CASE_RESULTS**. T displays the records you selected within the search results. The attributes this layout needs are:

  - AGGREGATE EXPRESSION - This is an optional attribute that, in our example, is used to provide a tota the related issue display
  - HEIGHT - This is an optional attribute. It provides an approximate row count that is displayed, before a v is introduced onto the related issue display
  - RID RELATIONSHIP NAME - This is the relationship that is being updated. This was created in an earli example, this is **TEST_CASES_TEST_PLANS** with the title of **Test Cases / Test Plans**
  - RID RELATIONSHIP TYPE - This attribute defines the type of relationship. This should be **Children**
  - RID LINK FIELD NAME - This is the name of the link field that receives the ID's of the selected issues issue display. Simply select the field name from the list presented to you when you add the attribute
  - SIZE - This optional attribute provides a width, in characters, of the related issue display.



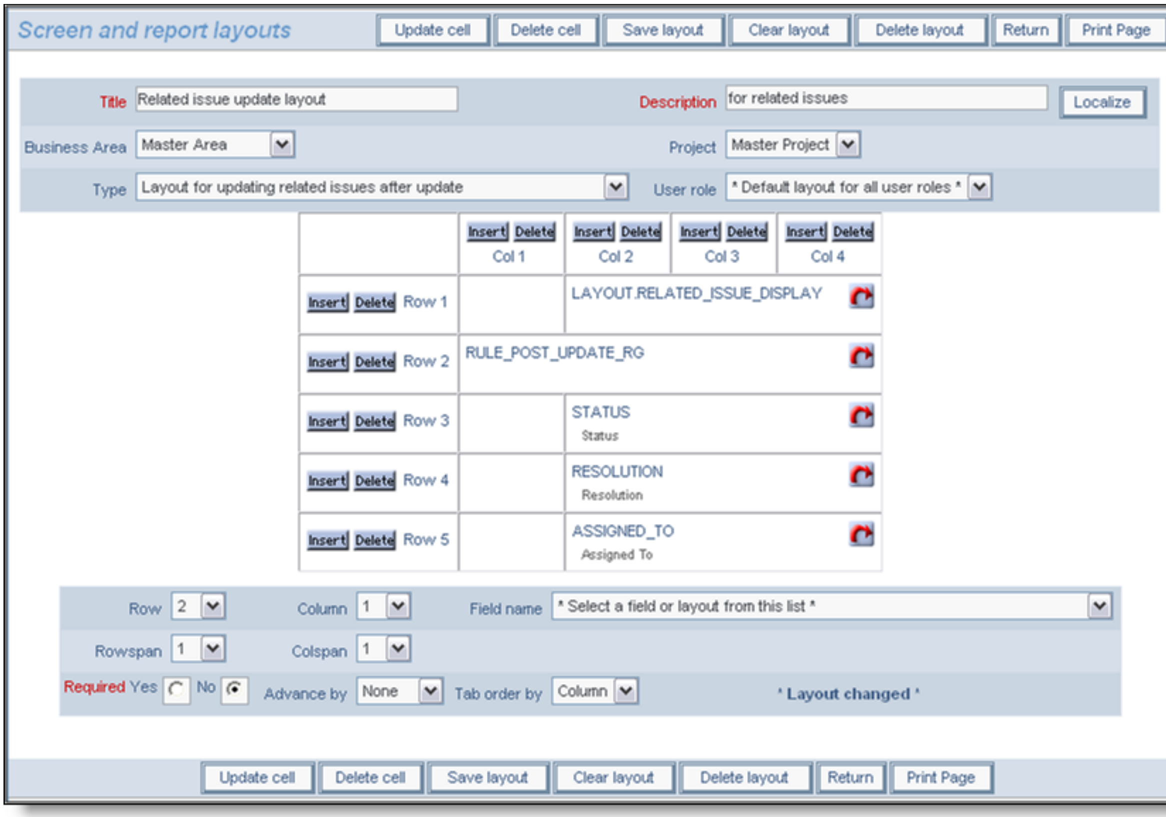
Cell attributes on the child record layout

Updating Related Issues as a Group

The feature on this page is being deprecated from version 9.0 onwards. The functionality will continue to work, but sl configured on new sites. In due course, support for the feature will be removed entirely. The functionality has been s the ability to handle related issues upon issue updates within Business Rules.

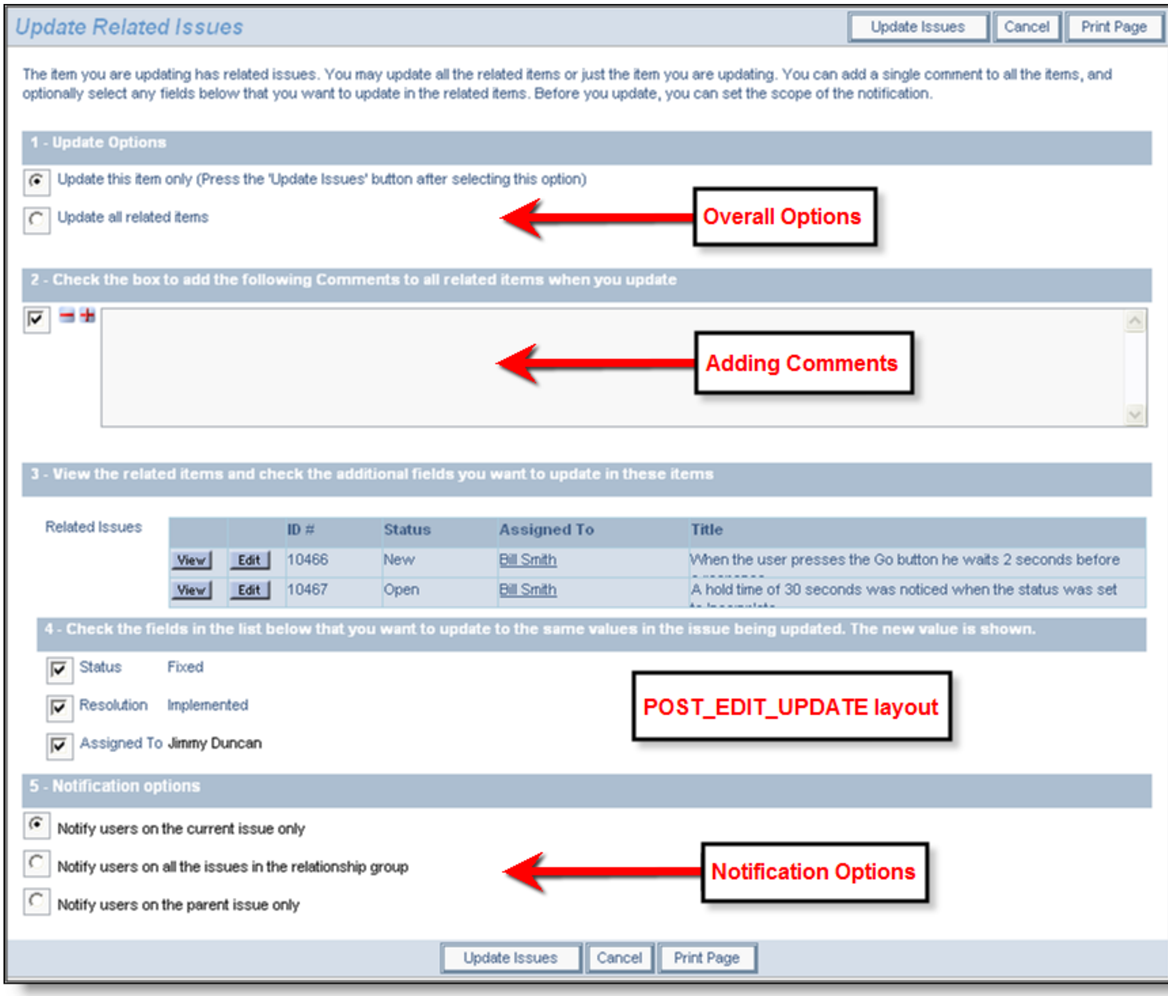
This feature allows you to apply updates to all issues related to the current issue, after you complete the updates to the The updates can be applied to a set of fields you place on a layout. You may optionally add a comment to each of the r part of the updates. The setup for this involves a number of steps.

1. If you are using BI-LEVEL relationship groups, set the RG_UPDATE_BILEVEL_ONLY behavior setting to Y types of relationship groups, set the value of this behavior setting to NO
2. Ensure that you have a layout with a type of POST_EDIT_UPDATE defined. If your installation does not have type defined, use the **Create and Maintain Layout Types** entry on the **Fields & Layouts** administration menu
3. Add a layout with the POST_EDIT_UPDATE type to your system, either in the business area and project you re location from which it will be inherited
4. Place the fields on the layout that you want to be available during the update process for related issues. It shoulc like the following screenshot. Note that the fields named STATUS, RESOLUTION and ASSIGNED_TO are the be updated in the related issues. It is mandatory that you place the embedded layout, LAYOUT.RELATED_ISS this layout. Also note that the field named RULE_POST_UPDATE_RG is defined as a custom field and has its as 4 - **Check the fields in the list below that you want to update to the same values in the issue being upda value is shown.** Remember that you may need to set the RID RELATIONSHIP NAME, RID GROUP REFERE the RID RELATIONSHIP TYPE layout cell attributes for the LAYOUT.RELATED_ISSUE_DISPLAY.



Layout to update related issues

5. When the user updates an issue that is a member of a relationship group, based on the above layout, the followi



Rendered layout when updating related issues

The user will first choose whether to update just the single issue or all the related issues. A comment may optio this time that will be applied to all the related issue updates. The user will see all the related issues and can chec fields to update in the related issues. Lastly, notification options may be set, to notify only the users on the curre users on all the related issues or notify only the users on the parent issue.

Mass Updates and Audit Trails

Related Issues and Mass Updates

When a user performs a mass update and some of the records are part of relationship groups, no attempt is made to up issues to any single item. The reason for this is that there could well be thousands of issues in the mass update, and ea may in some way be related to other issues, causing ExtraView to ask the questions for each issue as to whether the re should be updated.

Related Issues and Audit Trails

You may add an embedded layout prepared to display related issues to a History Layout. As explained in the previous

When a report contains a related issue display, it is treated as follows for the various report output types. The reason fo
some output types are deliberately formatted to make it easy to use the data as input to other processes or programs. H
number of items of data from the related issues within these reports will make these operations impossible.

Report Output Type	Constraint
Browser	No constraints, all fields are displayed
Microsoft Excel	Fields from the related issue display are suppressed
Microsoft Word	Similar to other data presented on Microsoft Word reports, buttons such as the View and Edit butt suppressed, but all alphanumeric information is displayed.
Text	Fields from the related issue display are suppressed

Calculations on Related Issue Layouts

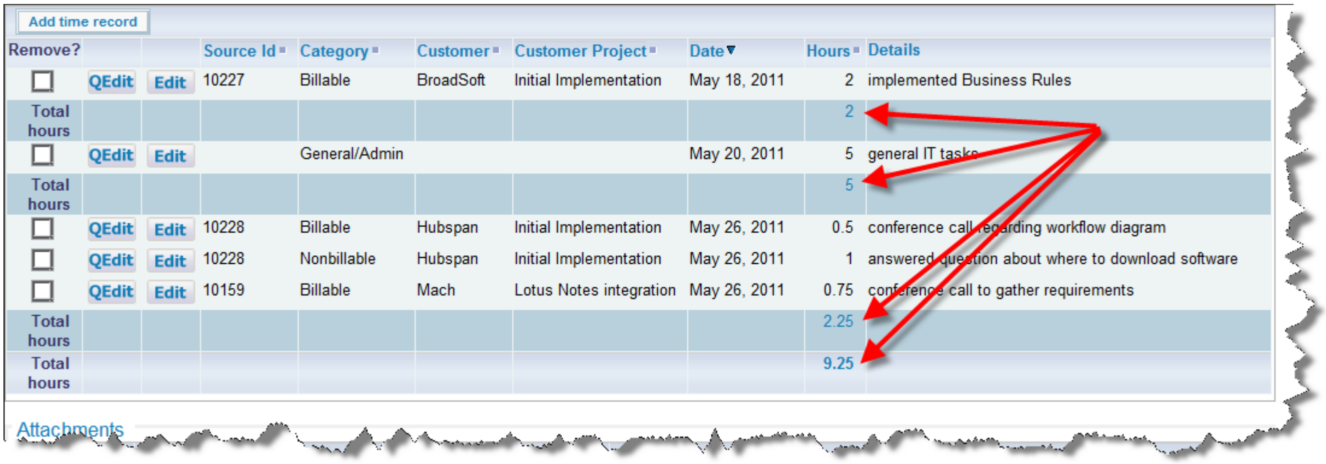
Field Aggregate Expressions (FAE's) permit calculations to be performed on a per-row basis on Related Issue Display
added to fields within a Related Issue Display as layout cell attributes with a type of FIELD AGGREGATE EXPRESS
also custom user exits for retrieval of data, accumulation of results, and the display of results. The display of the accu
generated at the end of each group or collection of rows in a Related Issue Display, as an additional row with a user-de
title is added as a layout cell attribute of type FIELD AGGREGATE EXPRESSION TITLE.

Creating and Using a FIELD AGGREGATE EXPRESSION

The following are the steps for creating and using a FAE:

Example

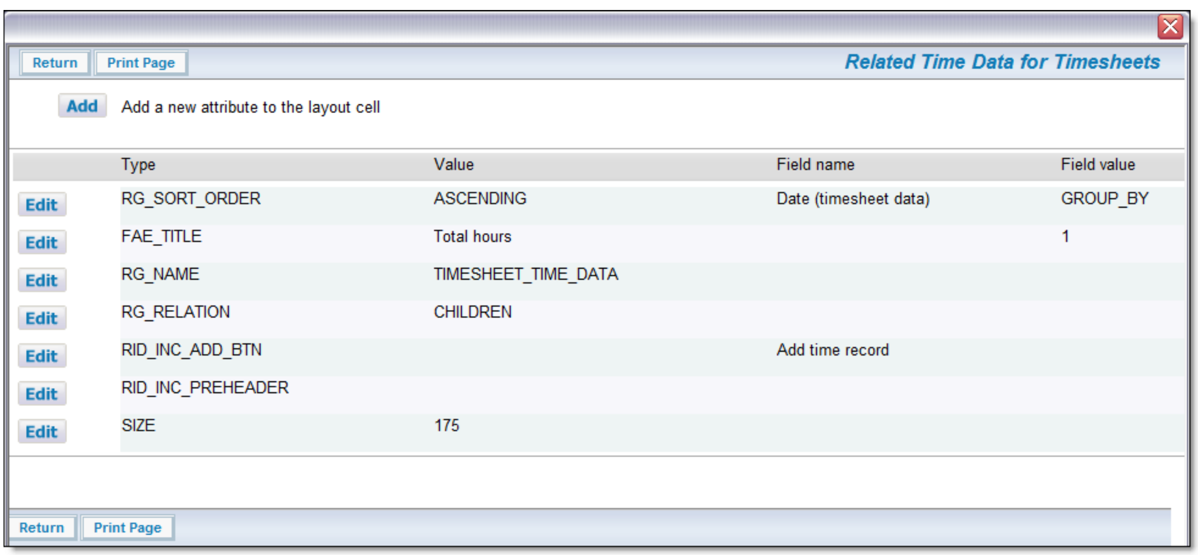
1. Create your Related Issue Display layout and save this in the usual way
2. Edit the Related Issue Display layout and select a column to which you want to apply an aggregate function. Cli button to add a new layout cell attribute
3. Choose the **FIELD AGGREGATE EXPRESSION - generate an aggregate value for this row** entry. Select t Value for your function from the list - *Count, Sum, Minimum, Maximum* or *Average*. The *Use User Custom Cod* valid if you have user custom code in place that will populate the results of the Field Aggregate Expression. See page for details
4. The **Field value** should be set to a number - this will be tied to the FIELD AGGREGATE EXPRESSION TITL Issue Display, as well as to the order in which multiple FIELD AGGREGATE EXPRESSION rows should be d recommended you start with 1 for the first entry, and increment from there. The number you set must match the in step 7
5. Save your changes to the Related Issue Display layout
6. Navigate to a parent issue that contains the Related Issue Display and verify the correctness of the results of the expression you created. It will not have any title or grouping at this moment, but you should see the results of th
7. To create a title on the Related Issue Display, navigate to the *add* or *edit* layout that embeds the Related Issue D that contains the Related Issue Display, you create an attribute of type FIELD AGGREGATE EXPRESSION TI **Value** is the Title of the row to be displayed, and the **Field value** should be a number (start with 1). If you have FIELD AGGREGATE EXPRESSION defined on the Related Issue Display, this number is the order in which tl The **Field value** should map to the **Field value** you selected in step 4
8. You can also optionally aggregate values while grouping together values within a field, and providing sub-totals attributes for each group. On the *add* or *edit* layout that contains the Related Issue Display, add a layout cell attr Related Issue Display within the layout, of the type RID SORT ORDER. Select the field in the related issue dis to group by, and select **Group by** equal to *Yes*. Now you will generate subtotals as well as a grand total. Clickin at the top of the related issue display will cause a refresh of the display, change the sort order and the sub-totals
9. Again navigate to your parent issue that contains the Related Issue Display and verify that you now see the title grouping



Totalling a field on a Related Issue Display

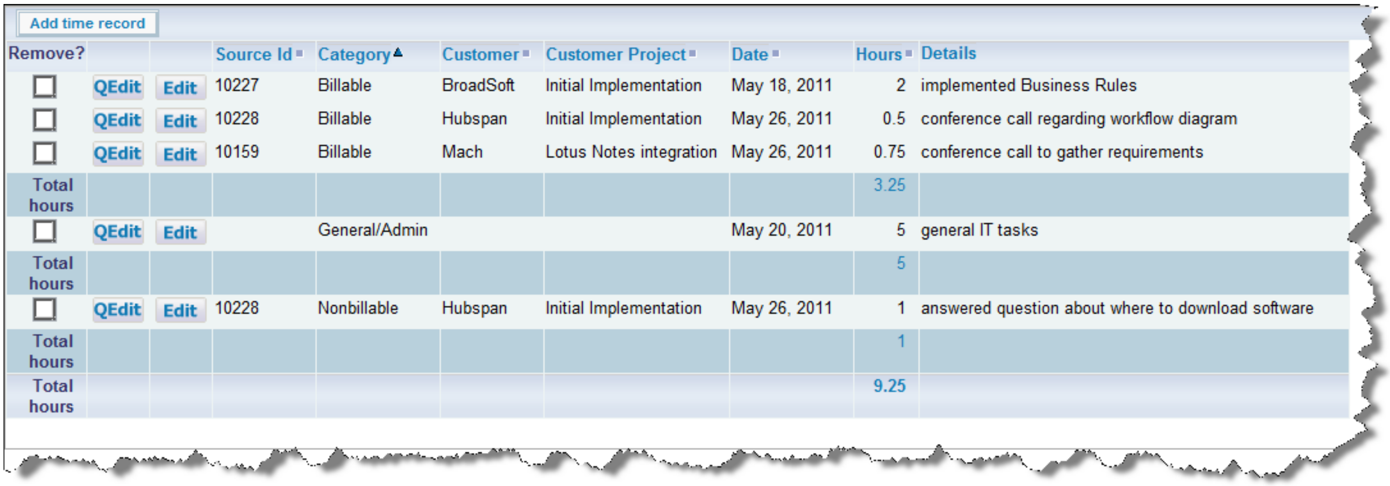
The key steps are as follows:

1. On the Related Issue Display, add the following Layout Cell Attributes to the field that you want to total (*HOURS_INCURRED* in the example). Add a **FIELD AGGREGATE EXPRESSION** with a Value of **S** **value** of **1**. Save the changes
2. On the *edit* layout that contains the Related Issue Display, add two additional Layout Cell Attributes. The to other attributes that most probably exist to provide the RID RELATIONSHIP NAME and other factors
   - RID SORT ORDER - This provides the initial sort order for the display
   - FIELD AGGREGATE EXPRESSION TITLE - This provides the title for the expression. Note that same value as set in the FIELD AGGREGATE EXPRESSION. The screen for the Layout Cell Attr something similar to the following. Note that only the RID SORT ORDER and the FAE_TITLE pe calculations. The other entries have their own purpose and function.



Layout Cell Attributes for the FAE

This gives the result shown in the screen shot above. Note the initial sort order. Also note that if you click on another the Related Issue Display, there is a re-sort, and the totals for the field are automatically recalculated. This is shown be display is now sorted on the *Category* field.



Add time record

Remove?			Source Id	Category	Customer	Customer Project	Date	Hours	Details
☐	QEdit	Edit	10227	Billable	BroadSoft	Initial Implementation	May 18, 2011	2	implemented Business Rules
☐	QEdit	Edit	10228	Billable	Hubspan	Initial Implementation	May 26, 2011	0.5	conference call regarding workflow diagram
☐	QEdit	Edit	10159	Billable	Mach	Lotus Notes integration	May 26, 2011	0.75	conference call to gather requirements
Total hours								3.25	
☐	QEdit	Edit		General/Admin			May 20, 2011	5	general IT tasks
Total hours								5	
☐	QEdit	Edit	10228	Nonbillable	Hubspan	Initial Implementation	May 26, 2011	1	answered question about where to download software
Total hours								1	
Total hours								9.25	

Resorting the display

Implementation Notes

- Expressions will only work with Related Issue Displays that contain 1,000 rows or less, if you implement grour aggregate functions
- The *Count* function works on all field types
- The *Sum, Average, Minimum and Maximum* functions work only on numeric display type fields - Number, Deci Currency
- The User Custom function requires custom code before it will achieve anything
- You can only group by one column in the related issue display RID SORT ORDER layout cell attribute
- You will get incorrect results if you group on a multi-valued field, or on a repeating record field, for calculation:

Utilizing the User Custom Code Exits

This is an advanced topic and it is assumed the administrator is thoroughly familiar with programming within the Use environment of ExtraView. Please contact ExtraView Support for additional details on how to implement this feature.

Setting up field aggregate expressions is similar to the above, but there are a few additional steps.

The key step is that the aggregate expression performed in user custom code must be linked to a field on the Related I: This is achieved by creating a user defined field within the data dictionary, of type **Expression**. This may have any va and will correspond with the returned value from the custom code. This provides your environment with a field name, security permissions and other attributes. You may have more than one custom aggregate function, with each being lir user defined **Expression** field.

To implement, you provide Java code for the 3 user custom exits for data selection, accumulated value computation ar value display, and compile the code into the user custom class used in the installation.

The presence of FIELD AGGREGATE EXPRESSION layout cell attribute in the Related Issue Display layout directs logic to invoke three FAE-specific custom exits: data selection, value computation, and value display. In addition, the rows are added to the end of the report rows i.e. on the right for transposed Related Issue Displays and on the bottom 1 transposed Related Issue Displays.

Each FAE is associated with a specific field in the Related Issue Display, as part of the attributes on the Related Issue this defines the row on a transposed Related Issue Display, or the column on a non-transposed Related Issue Display c display at the end of the report. There may be more than one FAE associated with a field, resulting in additional colun Related Issue Displays or rows on non-transposed Related Issue Displays.

```
                 HashMap distinctTables,
                 String[] locParts,
                 EVHierarchyLevel ehl,
                 HashMap dataAlias,
                 String itemTableAlias,
                 String itemIdKey
)  throws Exception
```

2. ucFAEAggregate: called for each row in the Related Issue Display to permit aggregation of the values in the rep include summation, averaging, or special operations as required. **Signature:**

```
public void ucFAEAggregate (
                 SesameSession session,
                 Connection conn,
                 String faeName,
                 String ddName,
                 HashMap row,
                 ResultSet resultSet
) throws Exception
```

3. ucFAEDisplay: called once at the end of the report for each FAE in the Related Issue Display, to allow custom g display values for the FAE. **Signature:**

```
public String ucFAEDisplay (
                 SesameSession session,
                 Connection conn,
                 String faeName,
                 String ddName
) throws Exception
```

Mass Update Report Layouts

There is a special report layout type named MASS_UPDATE_REPORT. This layout controls the fields that are visible have permission to use the Mass Update utility. This layout does not exist by default within an ExtraView installation, more of these layouts are created with a layout type of this name, they will display the fields you place on the layout(s the fields which appear as these defaults:

- VIEW_BUTTON - View Button
- ID - The issue ID
- SHORT_DESCR - The title to the issue
- The specific fields chosen by the user to update
- AREA - The Business Area
- PROJECT - The Project

If you have not already created a MASS_UPDATE_REPORT layout type, begin by creating this layout type using the named **Create and Maintain Layout Types**. It should have a type of *Report*. Then, add a layout using this type, into business area and/or project where you want users to see different fields on the mass update screen. You use the *Desig* purpose. If you add the layout into the Global Area / Master Project, then the layout is used system-wide.

It is recommended that you place the ID field as the field in the first column of your MASS_UPDATE_REPORT layo appear along with the VIEW_BUTTON at the left. Following this will be the field(s) on your layout.

At the right-hand of your layout, the fields that you are updating will appear. If you do not place the ID field on your l appear, but to the right-hand of the layout, along with the VIEW_BUTTON. Following this will be the fields that you

Search Layouts Within Add & Edit Layouts

There are two use cases in searching for records within an *add* or *edit* screen. Typically you are searching for records t the current issue

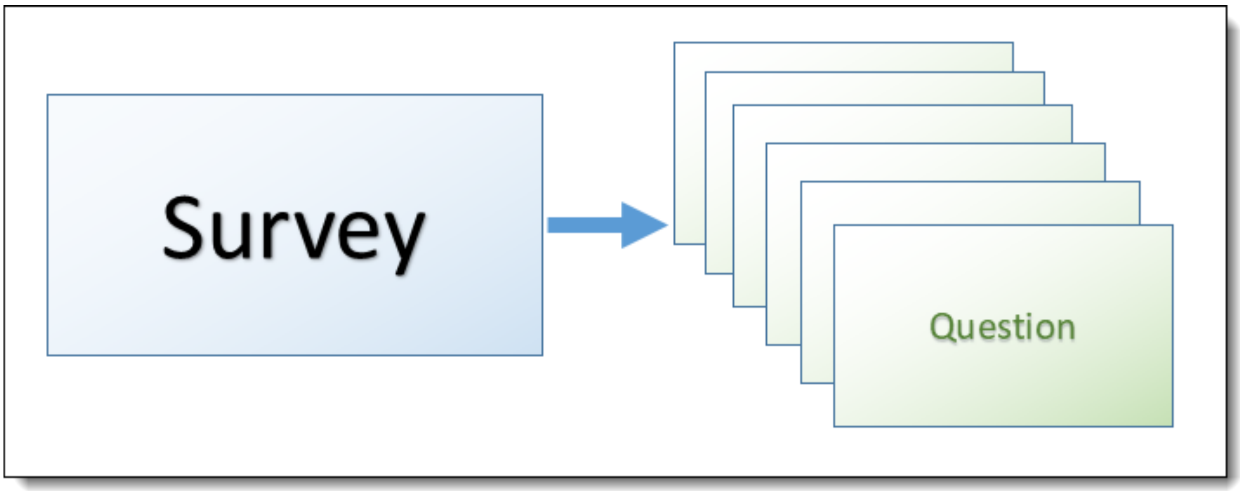
- [This page](#) gives assistance on how to configure this feature so that you can set up the results from one or more s related issues to the current issue.

Survey / Questionnaire Layouts

A common use of ExtraView implementations is to use its functionality to perform surveys; creating screen forms, cap reporting. Surveys have a number of characteristics in common. Typically there are a significant number of questions user, data is captured in a variety of forms, such as Yes/No, selecting values from a list, entering comments, etc.

There may be hundreds of questions posed in a survey and it would be tedious to create fields for each question and ea Individual fields have another drawback in that reporting and summarizing the results can be difficult.

Survey layouts provide an elegant answer to this.



Each Survey is the parent issue within a parent-child relationship. Each Question is the child.

The Questions are typically small layouts with a field for the question and one or more fields for the response. The fie configured with attributes such as Visible If, Requred If, etc., providing a huge amount of flexibility in designing your making a question's visibility dependent upon the response to another question.

The advantages of this approach are that configuration only requires a small number of fields, and that reporting, inclu calculation of metrics on the results are much simpler to configure and display.

The parent Survey is composed of *add* and *edit* layouts with their standard characteristics. The Questions are includec embedded layout within the parent Survey layout. The embedded layouts are similar to related issue layouts, but with characteristics. The following layout cell attributes may be configured on the survey layout within the *add* and *edit* la the presentation and behavior of the questions.

- RID RELATIONSHIP NAME
- --RID GROUP REFERENCE FIELD
- RID SORT ORDER
- RID RELATION TYPE
- RID FILTERS
- RID LINK FIELD NAME
- RID ACT ON FIELD CHANGE

1	Create a new Layout Type	Using the Create and Maintain Layout Types utility, create a layout type with the name **EDIT_RID_QUESTIONS**, the title of **Questions Layout** and a usage of **Screen.** The name r the characters **EDIT_RID_**
2	Create a new Business Area	Within the Data Dictionary, create a Business Area which will hold all the Survey data. Name t Area as **Survey**
3	Manage Projects	Choose the **Survey** Business Area. Retitle the **SURVEY_DATA** Project as **Survey Data**. Ad Project to the Area named **SURVEY_QUESTIONS** and titled **Survey Questions**
4	Manage Navigation Bar	Assuming you are using a navigation bar configured for your installation, add entries for **Add** a **Add a Question**
5	Create the Questions layout	Within the Design Center, create an embedded layout for the **Questions Layout** within the **Su** Area and **Survey Questions** Project. Create other layouts that you may also want for the Busi Project, such as Detailed Report. This layout will be embedded within the Surveys *add* and *ed*
6	Create the Surveys layout	

Field Properties within Layouts

Not every field can be added successfully to every layout, and there are limitations regarding the placement of many f record layouts. The following table gives an indication of all inbuilt fields and their restrictions in use. Note that User are capable of being placed on all layouts, subject to the field belonging to the correct type of *issue records* or *repeatin* the layout, and as long as the data dictionary entry for the field is defined correctly. Note that there are limitations with attributes between fields of different types. You may not have a layout cell attribute where a field of type *issue record* upon a field of type *repeating row*. The renderer, in this case, would not know which repeating row to use for its logic

Data dictionary field name- DATABASE field types	Notes
ALT_ID	Any layout except repeating record layouts
AREA	All *Add* and *Edit* layouts belong to a specific Business Area. If the Al placed on the layout, then the field and its values will be presented in If the AREA field is not placed on the layout, then ExtraView process if the value of the Business Area is set to the same value to which the This helps the usability for many applications where there is more tha Area, but you want to restrict the user to only working within a single at a point in time, for example, when you have a popup window to en which will be placed within a specific Business Area. If you want to r to only being able to address a subset of the available Business Areas installation, you may use the FIELD HIDE VALUES and the FIELD VALUES to restrict the displayed values.
ASSIGNED_TO	Any layout except repeating record layouts
ATTACHMENT_ID	Internal use only
ATTACH_CONTENT_TYPE	Will be placed automatically on the layout as part of the attachment r Controlled by security permissions
ATTACH_CREATED_BY_USER	Will be placed automatically on the layout as part of the attachment r Controlled by security permissions
ATTACH_DATE_CREATED	Will be placed automatically on the layout as part of the attachment r Controlled by security permissions
ATTACH_FILE_DESC	Will be placed automatically on the layout as part of the attachment r Controlled by security permissions

CATEGORY	Any layout except repeating record layouts
CONTACT	Any layout except repeating record layouts
DATE_CLOSED	Read-only on the *edit* screen only
DATE_CLOSED_SINCE	Reporting filters only
DATE_CODE_FREEZE	Not available for any layout
DATE_CREATED	Read-only on *add* and *edit* screens. Not to be used on repeating recor
DATE_CREATED_DAY	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
DATE_CREATED_MONTH	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
DATE_CREATED_SINCE	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
DATE_CREATED_TRUNC	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
DATE_CREATED_WEEK	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
DATE_CREATED_YEAR	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
DATE_FIRST_CUSTOMER_SHIP	Not available for any layout
DATE_LAST_STATUS_CHANGE	Read-only on *edit* screen. Not used on *add* screen. Not to be used on records
DATE_LAST_STATUS_CHANGE_SINCE	Reporting filters only
DATE_RELEASE_TO_QA	Not available for any layout
DAYS_IN_STATUS	Reports only
DAYS_OPEN	Reports only
HIST_RANGE_END	May only be used as a filter on a search layout
HIST_RANGE_START	May not be used on any layout. Only used in the CLI
ID	Read-only on *add* and *edit* screens. Not to be used on repeating recor
ITEM_ID	Should not be used on any layout
LAST_CHANGE_USER	Read-only on *edit* screen. Not used on *add* screen. Not to be used on records
LAYOUT	Not available for any layout
LAYOUT_TYPE	Not available for any layout
MODULE_ASSIGNED	This field is deprecated and should not be used
MODULE_DATE_CREATED	This field is deprecated and should not be used
MODULE_ID	Not to be used on repeating records
MODULE_NAME	Should not be used on layouts
MODULE_PRODUCT	This field is deprecated and should not be used
MODULE_STATUS	This field is deprecated and should not be used
MODULE_TIMESTAMP	This field is deprecated and should not be used
MODULE_TITLE	Should not be used on layouts
MODULE_TYPE	This field is deprecated and should not be used
MODULE_VERSION	This field is deprecated and should not be used
MONTHS_IN_STATUS	Reports only
MONTHS_OPEN	Reports only
ORIGINATOR	Any layout except repeating record layouts
OWNER	Any layout except repeating record layouts

	processes the layout as if the value of the Business Area is set to the s which the layout belongs. This helps the usability for many applicatic is more than one Project within a Business Area, but you want to rest only working within a single Project at a point in time. If you want to to only being able to address a subset of the available Projects within Areas, you may use the FIELD HIDE VALUES and the FIELD VISII to restrict the displayed values.
RELATIONSHIP_GROUP_ID	Should not be used on any layout
RELATIONSHIP_GROUP_OWNER	Should not be used on any layout
RELATIONSHIP_GROUP_TITLE	Should not be used on any layout
RELATIONSHIP_GROUP_TXNS	This field is only valid on a layout of type HISTORY.
RELATIONSHIP_GROUP_TYPE	Should not be used on any layout
RELATIONSHIP_GRP_PARENT_ID	Should not be used on any layout
RELEASE	Should not be used on any layout. The LAYOUT.RELEASE field ma on the *add* and *edit* screens to support repeating records
RELEASE_ASSIGNED_TO	Repeating records and reports only
RELEASE_DATE_CREATED	Repeating records and reports only
RELEASE_DIRECTORY	Should not be used on any layout
RELEASE_FIXED	Repeating records and reports only
RELEASE_FOUND	Repeating records and reports only
RELEASE_FOUND_HIST	Should not be used on any layout
RELEASE_OWNER	Repeating records and reports only
RELEASE_PRIORITY	Repeating records and reports only
RELEASE_PRODUCT	Repeating records and reports only
RELEASE_RESOLUTION	Repeating records and reports only
RELEASE_SEVERITY	Repeating records and reports only
RELEASE_STATUS	Repeating records and reports only
RELEASE_TIMESTAMP	Read only on repeating records and reports
RELEASE_TYPE	Deprecated – do not use
REL_GRP_DATE_CREATED	Should not be used on any layout
REL_GRP_TIMESTAMP	Should not be used on any layout
RESOLUTION	Any layout except repeating record layouts
SEVERITY_LEVEL	Any layout except repeating record layouts
SHORT_DESCR	Any layout except repeating record layouts
START_DATE	Reports only. Note that the data dictionary setting **"Filter criteria"** n for this field to work
START_UPDATE	Reports only. Note that the data dictionary setting , **"Filter criteria"** **Yes** for this field to work
STATUS	Any layout except repeating record layouts
STATUS_HIST	Should not be used on any layout
STOP_DATE	Reports only. Note that the data dictionary setting **"Filter criteria"** n for this field to work
STOP_UPDATE	Reports only. Note that the data dictionary setting **"Filter criteria"** n for this field to work
TIMESTAMP	Read-only on *add* and *edit* screens. Not to be used on repeating recor
TIMESTAMP_DAY	Not used on *add* screens, *edit* screens or repeating records. Only used purposes
TIMESTAMP_MONTH	Not used on *add* screens, *edit* screens or repeating records. Only used

WEEKS_IN_STATUS	Reports only
WEEKS_OPEN	Reports only

Data dictionary field name- LABEL field types	Notes
CC_EMAIL	Should not be used on any layout. This field is automatically added to t layouts with the notification fields
DELETE_BUTTON	Reports only
EDIT_BUTTON	Reports only. Note that this field is automatically added to any custom
EMAIL	Should not be used on any layout
FILTER_CHILD_VALUES	Should not be used on any layout
GENERATE_EMAIL	Should not be used on any layout. This field is automatically added to t layouts with the notification fields
HISTORY_BUTTON	Reports only
KEYWORD	Report filters only
PROBLEM	Should not be used on any layout
RELATIONSHIP_GROUP_LINK	Should not be used on any layout
REPORT	Should not be used on any layout
REPORT_BY	Should not be used on any layout
REPORT_NAME	Should not be used on any layout
REPORT_OUTPUT	Should not be used on any layout
REPORT_TYPE	Should not be used on any layout
SORT	Should not be used on any layout
VIEW_BUTTON	Reports only. Note that this field is automatically added to any custom

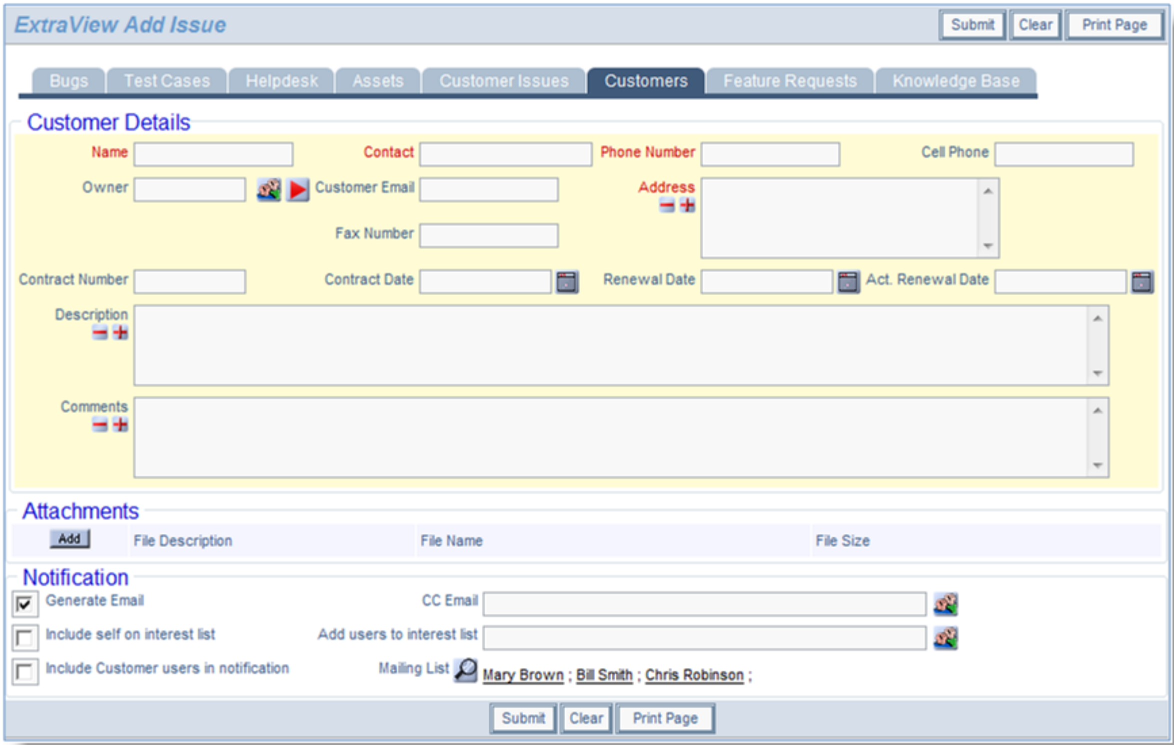
Data dictionary field name- SCREEN field types	Notes
ADD_PROBLEM	Should not be used on any layout
ADD_PROBLEM_SUMMARY	Should not be used on any layout
ADMINISTRATION	Should not be used on any layout
ATTACHMENT	This is the field that places attachment records on *add* and *edit* screens. It ca on detailed reports and Quicklists, but not on report filter layouts. Security p should be set for the individual fields such as ATTACH_FILE_NAME and ATTACH_FILE_SIZE to control their visibility
BATCH_COMMANDS	Should not be used on any layout
COMPANY_NAME	Should not be used on any layout
CUSTOM_EMAIL	Should not be used on any layout
HOME_PAGE	Should not be used on any layout
PAGE_SIZE	Should not be used on any layout
PROBLEM_RELEASE_DELETE	Should not be used on any layout
PROBLEM_SUMMARY_EDIT	Should not be used on any layout
QUICK_LIST	Should not be used on any layout
RELATIONSHIP_GROUP	Should not be used on any layout
SEARCH_REPORT	Should not be used on any layout

Data dictionary field name- SESSION and SPECIAL field types	Notes
USER	Should not be used on any layout
SYSDATE	Should not be used on any layout

Adding Shaded Regions to Layouts

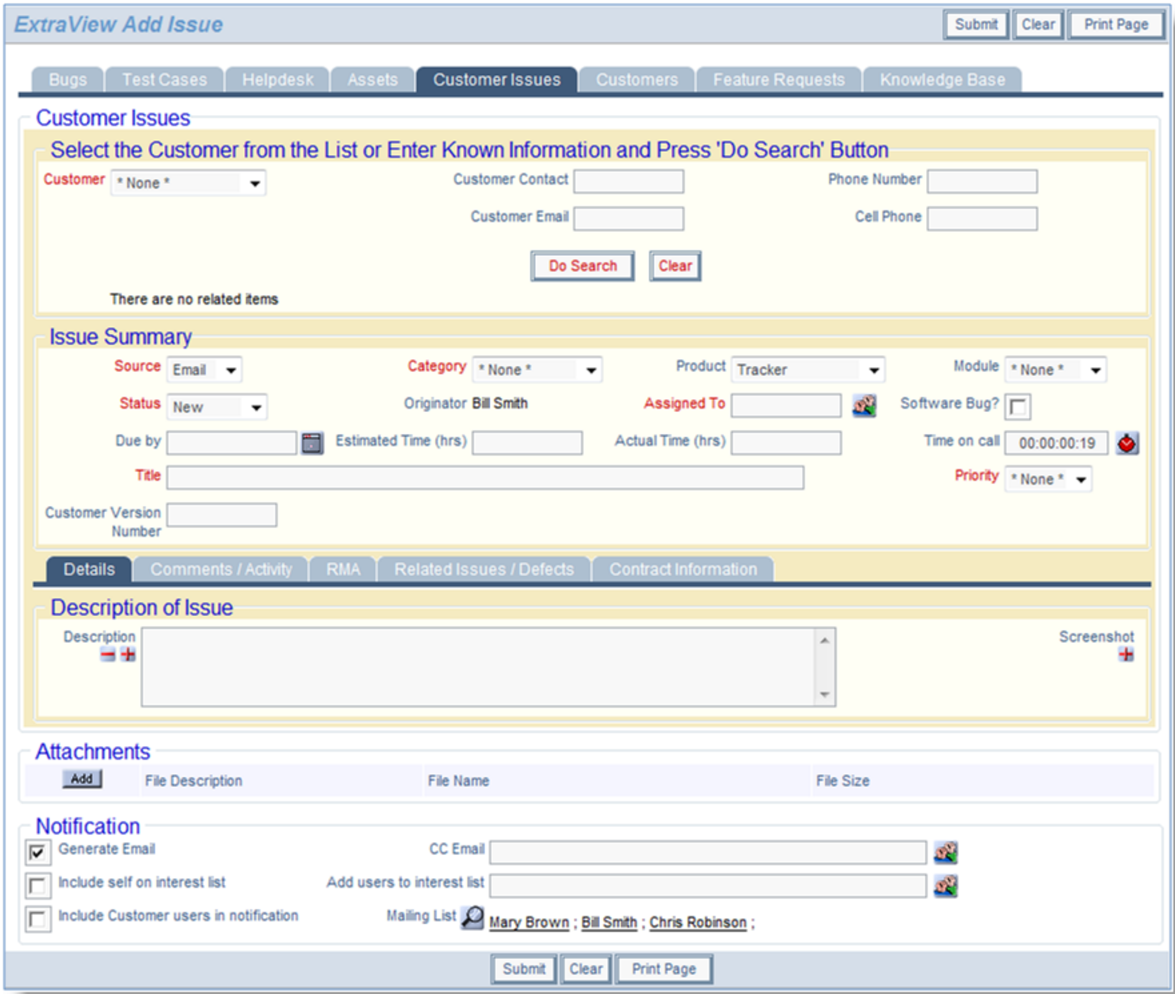
Layouts with a plain background can look bland. You can improve the look of *add* and *edit* layouts by using shaded re regions allow you to set a background color or a background image to a contiguous group of rows within a layout. Th can also be given a legend. To set up a shaded region on an *add* and *edit* layout, use the following procedure:

- Create two fields in the data dictionary.
  - The first field is used to mark the beginning of the shaded region on the layout. The field must use a nami beginning with the characters SHADE_PRE_. For example, SHADE_PRE_1 is a valid name for the field be a single space character and the display type should be **Custom**. Give the field read-only permission fo will use the shaded region
  - The second field is used to mark the end of the shaded region on the layout. The field must use a naming beginning with the characters SHADE_POST_. For example, SHADE_POST_1 is a valid name for the fi should be a single space character and the display type should be **Custom**. Give the field read-only permi role that will use the shaded region
- Place the SHADE_PRE_ and the SHADE_POST_ fields on the layout, giving each a colspan that extends the en layout. Obviously, the SHADE_PRE_ field is placed at the beginning of the region and the SHADE_POST_ fie end of the region
- To provide a legend for the shaded region, add an FIELD HTML MODIFIER layout cell attribute to the SHAD This attribute should be of the form **LEGEND:Title to the Region**
- If you require to add a legend in a language other than English, add an attribute in the form **LEGEND_ALT:Ti** If the user's locale is not English, this legend will be used rather than the title defined in LEGEND. However, if than English is used within the LEGEND attribute, and no LEGEND_ALT attribute is defined, then this is used shaded regions. Unlike most of ExtraView's localization capability, this does not provide the flexibility to add an localized language legends to the legend, and is limited to a single language beyond the default language
- To provide a background color to the shaded region, add a FIELD HTML MODIFIER layout cell attribute to th field. This attribute should be of the form **BGCOLOR:#nnnnnn** where **#nnnnnn** is a valid hexadecimal color
- To provide a background image or other CSS style for the shaded region, add an FIELD HTML MODIFIER lay to the SHADE_PRE_ field. This attribute should be of the form **STYLE:'background-image:url(../locales/en_ /images_light_blue/TableBg.png)'**
- To add a CSS style to the legend, add a FIELD HTML MODIFIER layout cell attribute to the SHADE_PRE_ fi should be of the form **CSSCLASS:classname**. There are two inbuilt CSS styles named *legendSmall* and *legend* used for the **classname**.
- This will have the following effect on a layout. Note the legend **Customer Details** and the light yellow backgro fields:



Shading a region on a layout

- You may style the border of the shaded region with the FIELD HTML MODIFIER layout cell attribute of the fc **BORDER_STYLE:*style***. For example **BORDER_STYLE:border:2px solid #cc0000** will add a thin red borc shaded region
- You may nest SHADE_PRE_ and SHADE_POST_ fields to create multiple shaded regions within each other or an example:



Multiple shaded regions on a layout

Layout Cell Attribute Summary of HTML MODIFIERs

LEGEND:*title*	This HTML MODIFIER provides the title to the shaded region
LEGEND_ALT:*title*	This is an alternative title which is used if the user's locale is not English. This allows for title to be set for the layout
CSSCLASS:*classname*	This is a CSS class name that is applied to LEGEND and LEGEND_ALT. The recommer **legendLarge**
BGCOLOR:*color*	BGCOLOR is added as an HTML MODIFIER to provide the background shading color f The *color* may be an HTML color name or a hex value such as #123456
STYLE:*style*	This HTML MODIFIER is used as an alternative to BGCOLOR. You should not use botl STYLE attribute adds a CSS style to the background of the shaded region. Any valid CSS entered
BORDER_STYLE:*style*	This HTML MODIFIER is used to alter the default style of the border of the shaded regio style is a light grey 3 pixel border. For example, you might want to highlight the border a the screen with a thin red line. A value of BORDER_STYLE:2px solid #cc0000 will achi

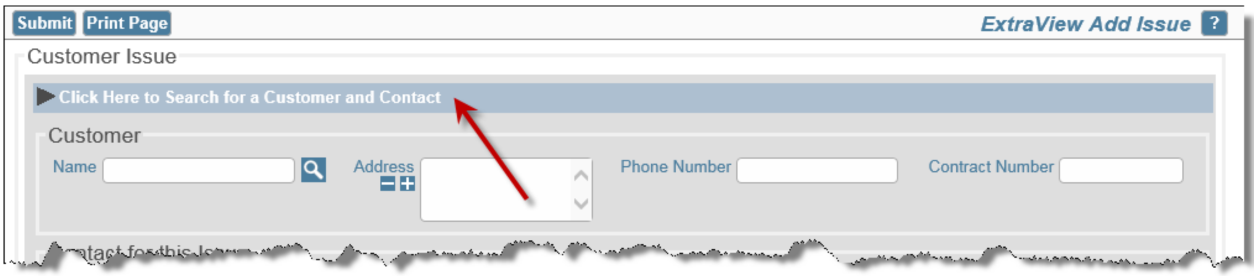
Combining Shaded Regions with Folds / Pages and HTML Pre / Post Fields

Adding Accordion Folds to Layouts

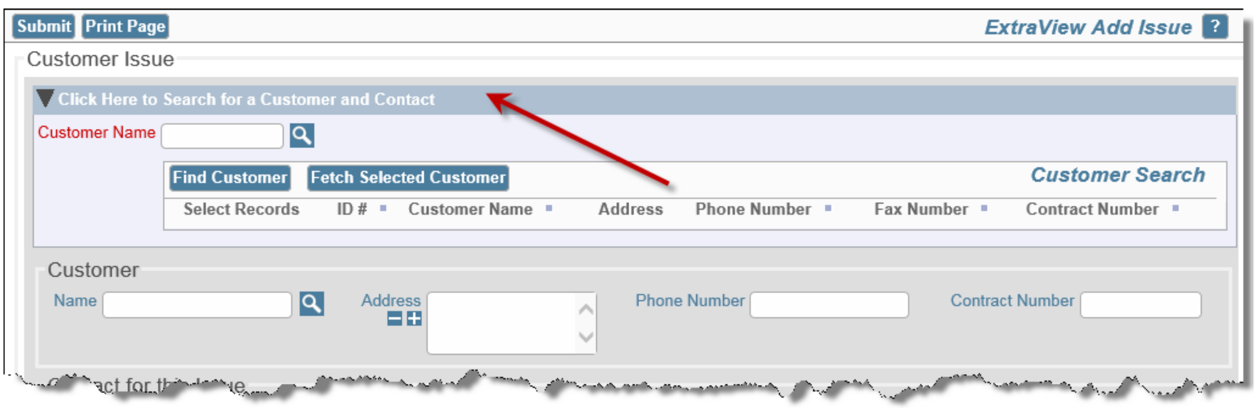
Accordion Folds on *Add* & *Edit* Layouts

Accordion folds may be added to your *Add* and *Edit* layouts to provide a flexible user interface, where sections will o[p] the click of a button. The accordion folds may be decorated with titles and themed to your own choice. You may also [c] they render on the initial layout in a closed or an open state. You can include any number of accordion folds within a l[ayout] the use of accordion folds with [paged layouts](). Accordion folds allow multiple sections within a form to be open and c[losed] the end user, whereas paged layouts have multiple sections, only one of which may be visible at any one time. Note t[hat] accordion folds are placed on layouts, they have no effect on the requiredness of fields they contain. A required field i[s] whether the accordion fold is expanded or collapsed.

The following screenshots show s traditional rendering of accordion folds. For alternative presentations see the sectio[n] of this page.



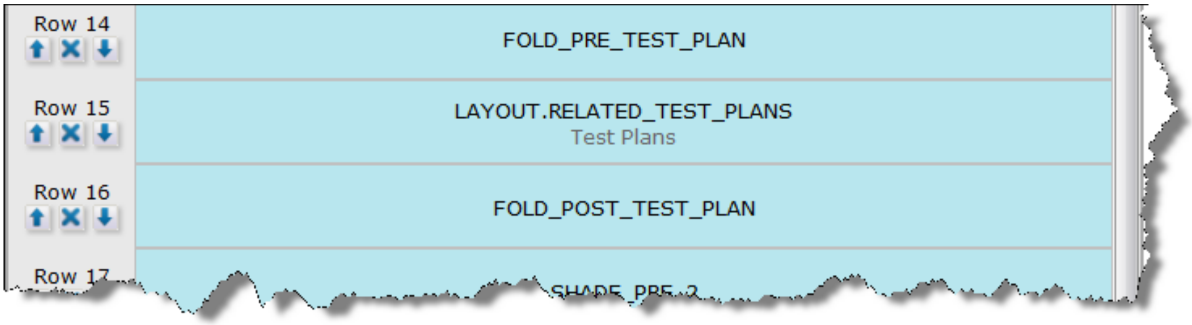
Closed Accordion Fold



Open Accordion Fold

To set up an accordion fold on an *Add* or *Edit* layout, use the following procedure:

- Create two fields in the data dictionary.
    - The first field is used to mark the beginning of the accordion fold on the layout. The field must use a nam[e] beginning with the characters FOLD_PRE_. For example, FOLD_PRE_1 is a valid name for the field. Th[e] single space character and the display type should be **Custom**. To provide a legend for the accordion fold Text field. Providing the legend for the fold works best if defined in this manner, if you intend to use the s[ame] several places throughout the installation. You may alternatively define the title within a layout cell attrib[ute] that uses the fold. This provides the flexibility of being able to reuse the same FOLD_PRE_ and FOLD_[POST_] many layouts, defining the title for each within the layout, and not in the data dictionary. If no HTML mo[difier] syntax **LEGEND:fold title** is defined, the title in the data dictionary is used. Give the field read-only pe[rmission to the] role that will use the shaded region



- The advantage here is that if you have many fields within many embedded layouts it may take a considerable ar render the screen to the end user. Using this technique will save the rendering time when the *add* or *edit* screen but will incur a small amount of time for the end user as they open each fold. The overall performance to the en much improved by breaking down the initial delay into several much smaller delays.

Fold Configuration Options

The following layout cell attributes may be applied as HTML MODIFIERs to the FOLD_PRE_ field, to provide stylir positioning of the fold as it is rendered on *add* or *edit* screens.

BGCOLOR:*color*	Provides a background color to the accordion fold. To implement, add an HTML layout cell attribute to the FOLD_PRE_ field. This attribute should be of the forn BGCOLOR:#nnnnnn where #nnnnnn is a valid hexadecimal color or HTML colo
BORDER_COLOR:*color*	To provide a border color to the accordion fold, add an HTML MODIFIER layou the FOLD_PRE_ field. This attribute should be of the form BORDER_COLOR:# #nnnnnn is a valid hexadecimal color or HTML color name
COLLAPSE	By default, the accordion fold will be expanded when rendered on the layout, unl an HTML MODIFIER with a value of COLLAPSE, which will collapse the relev fold upon rendering and upon screen refreshes. Ajax and JavaScript refreshes wil collapsed or expanded state of the accordion fold. Note that rules may be used to or closed state of the fold
FOLD_DISPLAY:*value*	This sets the fold's display type. The value must be one of TRADITIONAL, SIM THIN_LINE or BORDER. If no attribute is defined the default value of TRADI used, unless the FOLD_DISPLAY has been set at the PROJECT level of the ARI the layout
FOLD_USER_IMG_PATH:*path*	By default the standard **dn-arrow.png** and **rt-arrow.png** images from the approp folder set in the IMG_HOME behavior setting are used on the accordion fold, de whether the fold is collapsed or expanded. If you wish to use your own images, c folder called **user_images** in the images directory and place your images within t the same manner. Then, include an HTML MODIFIER with a value of FOLD_USER_IMG_PATH, and the files in that folder will be used instead of the
HDR_BGCOLOR:*color*	To color the background to the text on the accordion fold, add an HTML MODIF attribute to the FOLD_PRE_ field. This attribute should be of the form HDR_BGCOLOR:#nnnnnn where #nnnnnn is a valid hexadecimal color. This se supported with the THIN_LINE alternative presentation of accordion folds. Sim BGCOLOR layout cell attribute
HDR_TXT_COLOR:*color*	To color the text provided as the title to the accordion fold, add an HTML MODI attribute to the FOLD_PRE_ field. This attribute should be of the form HDR_TXT_COLOR:#nnnnnn where #nnnnnn is a valid hexadecimal color
HIGHLIGHT_COLOR:*color*	Modifies the color of the text on the fold when the user's mouse is placed over th attribute should be of the form HIGHLIGHT_COLOR:#nnnnnn where #nnnnnn i

NO_INDENT	By default, the accordion fold will be indented to line up with the column of the f layout, as opposed to the column of the first field's label. If you include an HTMI with a value of NO_INDENT, the accordion fold will not be indented
SIZE:*nn*	Note, this is the standard layout cell attribute of the type SIZE, and not an HTML By default, the width of the accordion fold is determined by the rendering of the r but you may manually set its width with the SIZE layout cell attribute. The is an i which will be converted to a pixel width for the Fold Section. Note that by overri width handling, the Administrator is responsible to ensure that the fields within tl fold fit within the rendered section. This factor is also affected by a user's person setting, so be sure to check the look of your layouts with the **small**, **medium** and

Controlling Fold States with Business Rules

As stated above, the initial state of the contents of an accordion fold is that all the contents are visible, unless you have cell attribute of the type HTML MODIFIER and a value of **COLLAPSE** on the **FOLD_PRE_xxxx** field. It is often u initial state of the contents programmatically to open or closed, based upon one or more values within the issue you ar updating. This is accomplished with four components:

- The entire contents of the fold must be placed within an embedded layout placed on the *add* or *edit* layout
- The **FOLD_PRE_xxxx** and **FOLD_POST_xxxx** fields must be placed on the *add* or *edit* layout surrounding th layout.

Rules may also be used to open and close folds, depending on conditions you set. For example, when a user opens on close other open folds. In this way you might configure a screen so that only a single fold is open at any one point in page on Rules & Accordion Folds for details.

Accordion Folds & Required Fields

When you first generate an *add* or *edit* screen that contains accordion folds in the closed state, the fields within the fol rendered to the browser immediately, but are only rendered when the user opens the fold. This is for performance reas that you might have dozens of folds containing hundreds of fields on a large, complex layout. In this instance the initia optimized to only send the folds themselves and not their content to the browser. Upon opening an individual fold, an server gets the data for just that fold, typically fetching a modest number of fields in a short time. However, some clos contain required fields and the user might never open these folds. Even if these fields are not in the initial load of the s ExtraView will check for any required fields within these folds when the user submits the issue and ensure they are en

Accordion Folds & Paged Layouts

It is not recommended to nest Accordion Fold fields within Paged layouts, or vice versa. This does not provide a very interface, and you might encounter some unexpected behavior.

Accordion Folds on Detailed Report & History Layouts

Accordion folds may be added to Detailed report and History layouts. They differ in their configuration from folds in *add* and *edit* layouts. There are several reasons for this:

1. When the user creates a Detailed report, it might contain different issues from different Business Areas, each wi layouts
2. On both Detailed reports and History output, you do not want to open the same fold in each issue / section of th you click on a fold within a single issue / section

Further, for technical reason, the folds must be inserted as the reports are being rendered to the browser, long after the processed. At this time, there is no access to layout cell attributes to provide the same configuration options as the fol and give the field read-only permission for each role that will use the shaded region

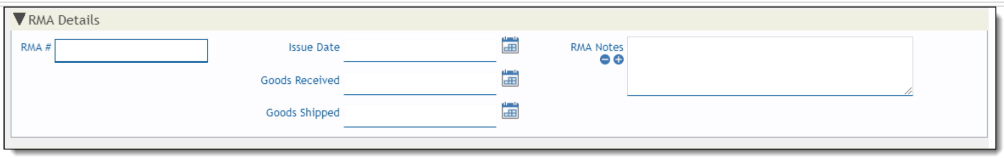
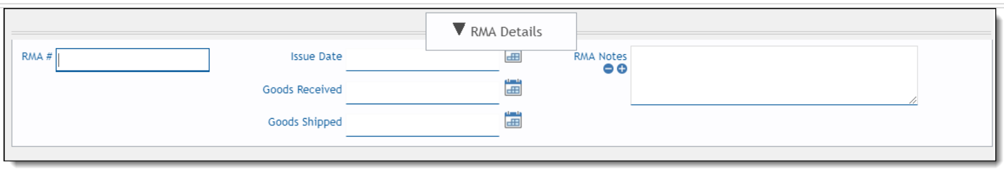
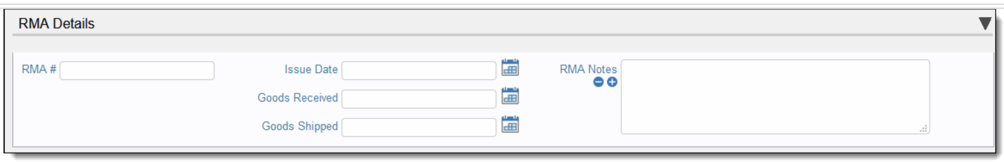
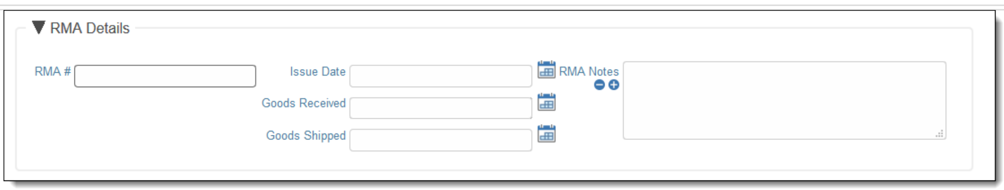
- Place the REPORT_FOLD_PRE_ and the REPORT_FOLD_POST_ fields on the Detailed report layout, giving that extends the entire width of the layout. Obviously, the REPORT_FOLD_PRE_ field is placed at the beginni and the REPORT_FOLD_POST_ field is placed at the end of the region
- The folds are always initialized in the open state
- No layout cell attributes are used on the layouts for these fields and will be ignored if set.
- Business rules cannot be used to control the folds

Alternative Presentations of Accordion Folds

Accordion folds may be set globally throughout the site, set for the entire scope of any combination of Area and Proje normal inheritance rules being obeyed., or set with a layout cell attribute on any fold within a layout on an *add* or *edit*

The global setting is controlled by the behavior setting named FOLD_DISPLAY. To set a different presentation for fo Areas and Projects, go to the list management utility for the PROJECT field and set the style of folds within that scree

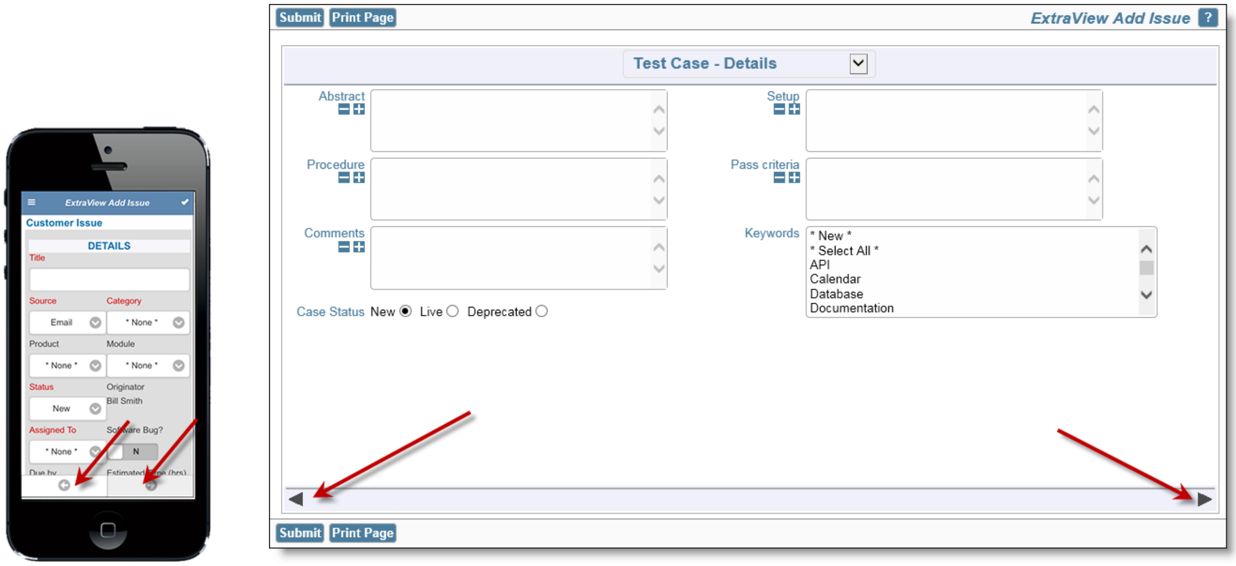
To set an alternative presentation for an individual fold on an *add* or *edit* screen use a layout cell attribute of type HTM and a value of FOLD_DISPLAY:<type> where <type> is one of TRADITIONAL, THIN_LINE, SIMPLE or BORDE

<table>
<tr><td>FOLD_DISPLAY value</td><td>Appearance</td></tr>
<tr><td>TRADITIONAL</td><td>
</td></tr>
<tr><td>THIN_LINE</td><td>
</td></tr>
<tr><td>SIMPLE</td><td>
</td></tr>
<tr><td>BORDER</td><td>
</td></tr>
</table>

- Add new comment

Adding Paged Layouts

Paged layouts are ideal when you have a very large number of fields on a layout and wish to separate them into logica the user can page forward and back through, using forward and backwards buttons. Compare this to the use by users,



Page layouts on mobile and desktop clients

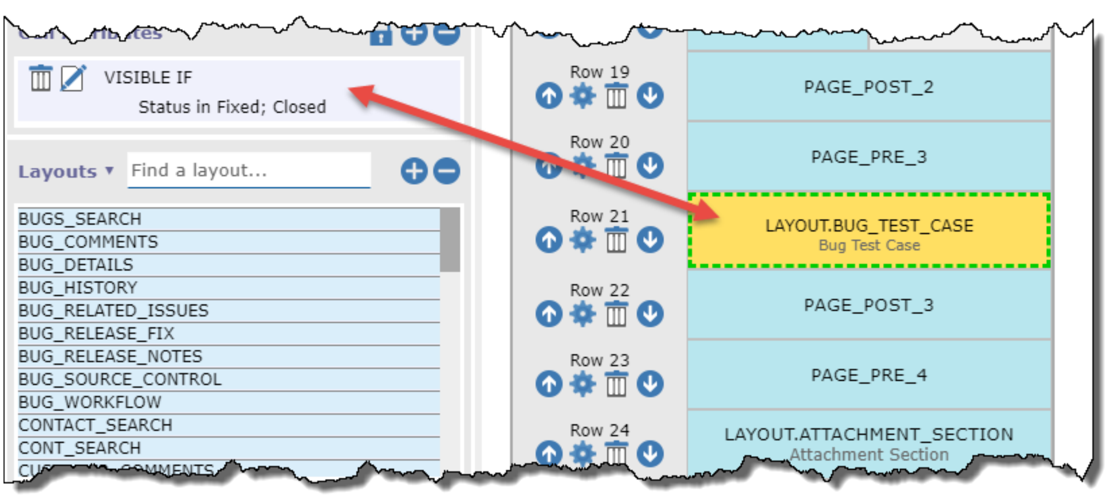
Paged layouts have several important criteria associated with their use:

- Only one page within a sequence may be visible at any one time. This is termed the **active page**.
- Each page is defined with two fields, one beginning with the characters PAGE_PRE_ and one beginning with th PAGE_POST_. For example, fields defining a page might be named PAGE_PRE_ORDER_INFO and PAGE_POST_ORDER_INFO. An obvious point is that each *add* or *edit* layout that contains pages, should hav pages defined. The two fields surround all the fields or embedded layouts that compose each page
- Each page within the sequence may optionally have a title. This is defined within the field's data dictionary entı Text. If no title is defined, pages will be titled **Page 1**, **Page 2**, etc. The title is displayed at the top of the page v
- The PAGE_PRE_ and the PAGE_POST_ fields must extend the complete width of the layout that uses them
- Each page may contain any number of fields or may contain an embedded layout. Note that you might have son after the last page you have defined. If you configure the layout in this way, then the fields before the first PAG after the last PAGE_POST_ fields will always be visible to the end user
- A complete page, within a sequence of pages, may have a *visible if* layout cell attribute associated with it, allow skipped upon data entry, dependent on the values controlling the *visible if* attribute chosen by the end user
- The order of the pages defined within the *add* or *edit* layout is significant. The order defines the sequence with will be presented to the end user
- When an *add* or *edit* screen is first opened by an end user, the first visible page is opened. All other pages will l visible page is one where at least a single field is visible - fields are subject to the usual constraints such as secu
- Care should be taken when using allowed value type relationships, to ensure the parent field is set on the same p page to the child field. It would be difficult for the end user to navigate back up the pages to enter a child value
- If the current page which a user is viewing becomes invisible, due to workflow constraints, the first, visible prev becomes the active page and is made visible
- Care should also be taken with required fields within pages. These fields will still be required when the user sul even if they are not on the current active page
- Nested pages are not supported. This implies that each PAGE_PRE_ field must be followed by its correspondir field, before another PAGE_PRE_ field is encountered
- You cannot create pages within "Selected By" layouts. This is not a supported configuration
- You cannot create pages nested within accordion folds. This is not a supported configuration
- You cannot create pages nested within shaded regions. This is not a supported configuration
- You can style the pages with the use of layout cell attributes on the PAGE_PRE_ field within the layout. The pc cell attributes are implemented as HTML Modifier attributes, that begin with the following characters and end v appropriate value:

HIGHLIGHT_COLOR:*color*	The color of the text of the title in the header of the page, when the user pla over the page title. The default color is the value of the behavior setting na TAB_FONT_ON_COLOR
PAGE_BACK_IMG:*image-name*	The default image is named left-*arrow.png* and is a standard image within t folder that your installation is using - the path in the IMG_HOME director where the image is stored. You may place any image in the value to the lay attribute, but you should use the full path to the image, wherever it is store
PAGE_FWD_IMG:*image-name*	The default image is named *rt-arrow.png* and is a standard image within th that your installation is using - the path in the IMG_HOME directory speci image is stored. You may place any image in the value to the layout cell at should use the full path to the image, wherever it is stored.
PAGE_HEIGHT:*nn*	Layouts within ExtraView are typically auto-sized. This attribute will size to the number of pixels in the value of the attribute. The greatest use of thi use the same value on each PAGE_PRE_ field you define in the layout, the all pages are rendered at exactly the same height, giving a pleasing effect f If the value you provide is less than the height required by the fields within page will render to the height required by the fields. **Tip:** Apply the layout cell attribute to the tallest page within your layout fi you have a suitable value. Then apply the same value to all the other pages
PAGE_WIDTH:*nn*	Layouts within ExtraView are typically auto-sized. This attribute will size width to the number of pixels in the value of the attribute. The greatest use is to use the same value on each PAGE_PRE_ field you define in the layou ensuring all pages are rendered at exactly the same width, giving a pleasing end user. If the value you provide is less than the width required by the fields within page will render to the width required by the fields. **Tip:** Apply the layout cell attribute to the widest page within your layout fi sure you have a suitable value. Then apply the same value to all the other p layout.

Configuring Individual Pages with "VISIBLE IF"

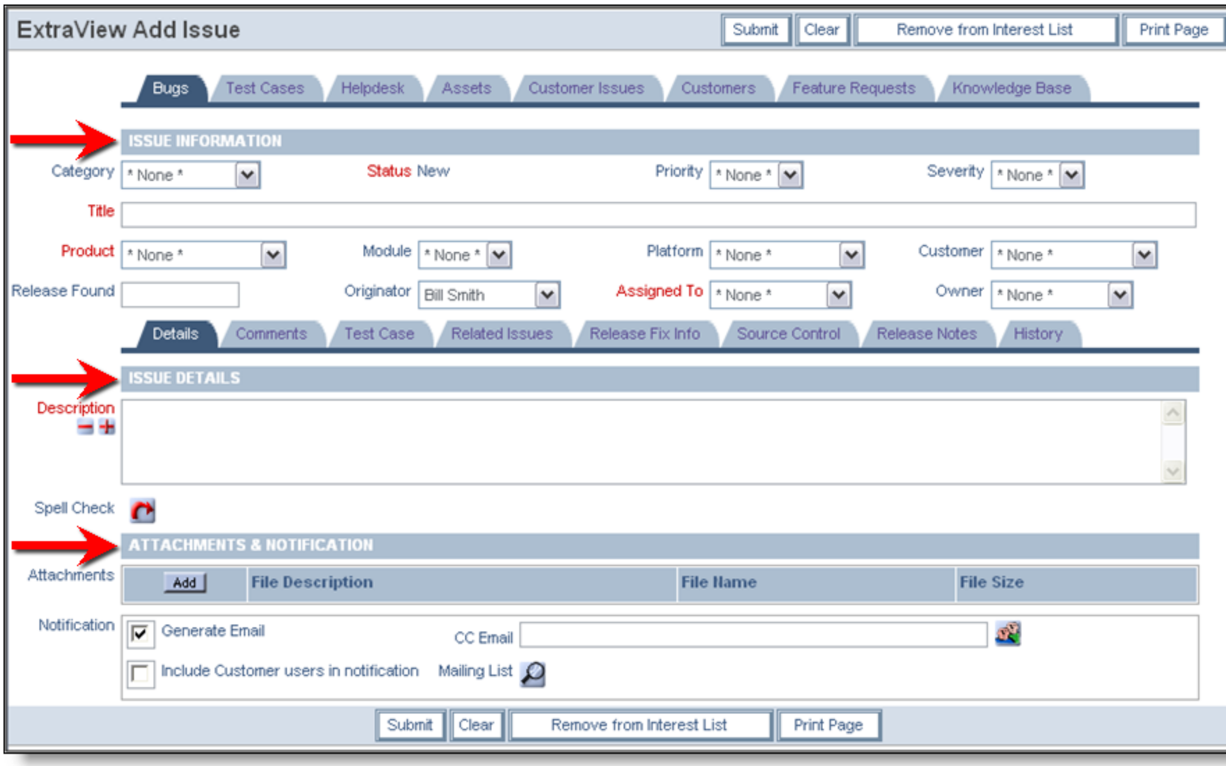
It is possible to configure individual pages to be conditionally visible, based on the value of a field within your layout. this all the fields that are to be hidden should be placed within an embedded layout, and this layout should be placed b PAGE_PRE_xxx and the PAGE_POST_xxx fields on the layout. Then you may apply a VISIBLE IF layout cell attrib as shown below.



It is not recommended to nest Accordion Fold fields within Paged layouts, or vice versa. This does not provide a very interface, and you might encounter some unexpected behavior.

Adding Ruler Areas to Layouts

Ruler areas or ruler fields are used to generate headings within the *add* and *edit* screens. Ruler fields provide spacing a opportunity to place text as assistance to the user.



Ruler fields on the add screen

Data dictionary field	Purpose
Name	This defines the name of the field. For example, a field named RULE_WORKFLOW is valid define any number of ruler fields, as long as the name for each one begins with the characters
Display Type	Must be **Custom**
Title	Typically this is a space character
Help Text	This is the text to place upon the ruler on the *add* or *edit* screen.

The standard distribution of ExtraView that ships with the user custom class named CustomCodeBase.java contains th

AJAX Techniques

With traditional web-based applications, it was often necessary to refresh entire screens to repopulate individual fields various triggering of business rules, such as populating a child list with values based upon a change in its parent value maintained a rich set of features in addition to the management of parent-child relationships, such as **visible if** and **rec**

- To process layout cell attributes such as FIELD VISIBLE IF and FIELD REQUIRED IF. This includes the use c control entire embedded layouts
- To process layouts controlled by a tab or list field using the LAYOUT SELECTED mechanism
- To execute business rules that result in changes to values within fields on forms based upon field selections or d

AJAX Limitations

The screen layout renderer in ExtraView always removes rows of fields where there is no visible content. This avoids the screen for your users. If you have a row that is entirely suppressed, and there are one or more fields on that row wl due to a visible if cell attribute, then the row is not generated at all when the field or fields do not meet the criteria to b

In this circumstance where the entire row is not rendered, there is insufficient information in the layout to use Ajax to when it becomes visible. As a result, ExtraView will revert to a full screen refresh. Thus the functionality is correct, bu cannot be used to make the field visible. If keeping the speed of the Ajax refresh is important to your application, cons layout to include a field which will be visible at all times on the row of your layout so that something is always visible be a label field with a blank value. Although there is no obvious effect from this, it is actually visible.

Detailed Report Layout Selection

Detailed reports are generated on a different basis, in that each individual issue on a detailed report will use the detaile associated with the issue's business area and project. The user's current role is also used in the selection. Inheritance is the net effect is that different issues may use different layouts, and will use the layout most associated with the issue.

Embedded Reports

You may embed a variety of reports within your *add*, *edit*, and *notification* layouts. The report types that may be emb

- Column reports
- Treegrid reports
- Summary reports
- Matrix reports
- Charts (not available to embed within *notification* layouts at this time)
- Geospatial reports (not interactive heat maps)

Only shared reports or reports shared with user groups may be embedded. Note that embedded reports are not suppor tablet layouts, as there is typically less screen space to display reports alongside the user's workflow data.

An important feature of embedded reports is that they can be linked real-time to the issue data being added or edited. by using the *** Ask at Runtime *** filter within the report definition. When the embedded report is displayed, it looks f the field displayed within the current issue on the layout when it is rendered, and uses this as the value for the *** Ask a** field. If and when the user alters this value within the rendered *add* or *edit* screen, the report is automatically regenera new value.

Any number of reports may be embedded within an *add* or *edit* screen, although care should be taken not to embed co that might take a significant amount of time to render, as this may detract from the user's experience.

The size and appearance of the embedded reports are controlled by layout cell attributes which are placed at the layou embedded layout). This is explained below in the Configuration section. The complete range of layout cell atrtibutes is as follows:

Attribute	Purpose
ADMIN NOTES	This is a placeholder for information purposes only. This can be used by the administrator to do

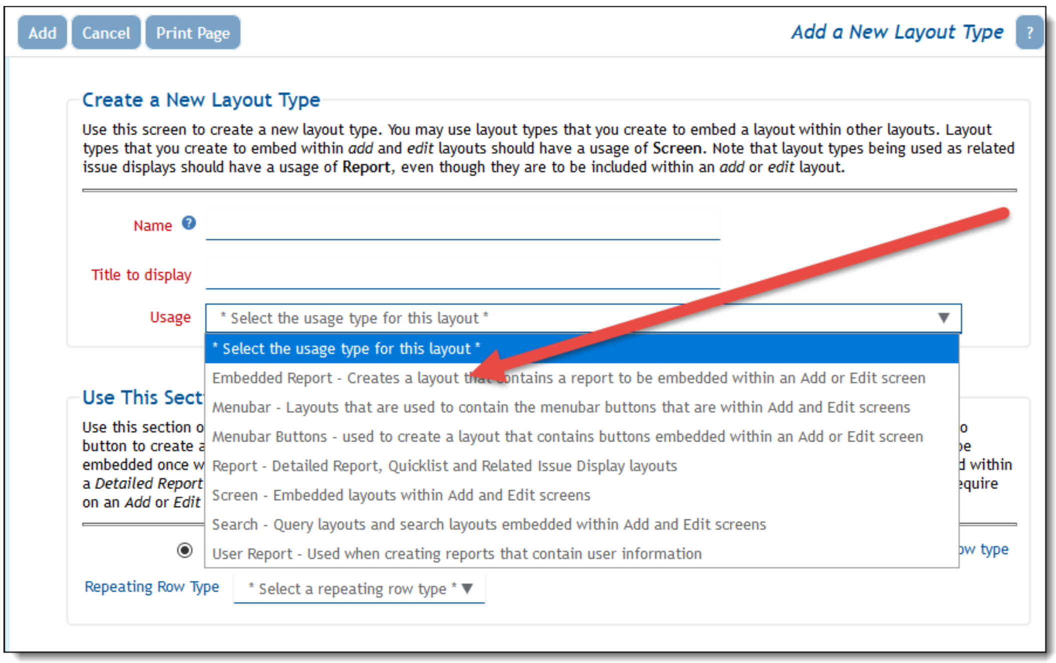
	layout that contains a report to be embedded within an Add or Edit screen. There are four s predefined, but you may create as many of these as you need. The four predefined layouts are: EMBEDDED_REPORT - Embedded Report EMBEDDED_REPORT_1 - Embedded Report (1) EMBEDDED_REPORT_2 - Embedded Report (2) EMBEDDED_REPORT_3 - Embedded Report (3) Note that you should edit any of these embedded layout types and make sure that you save an en that type.
DRILLDOWN TARGET REPORT	This attribute is used in conjunction with the DRILLDOWN TARGET attribute. Once you have specified, you use this attribute to nominate the specific report you want to generate. This must public report. You can use the *** Ask at Runtime *** filter within the report definition to pick up embedded report and use these while generating the drilldown report. For example, the user mig cell in the embedded report which identifies a value for a specific STATUS and PRIORITY. If tl are used as runtime filters in the drilldown target report, then the values from the embedded repo filters for the drilldown report.
EMBEDDED REPORT NAME	This is the most important attribute as this allows for the selection of the report to be embedded. reports and reports saved for user roles can be selected. A report must be selected with this attril embedded report to be displayed
HEIGHT	The height in pixels of the report, before a vertical scroll bar is displayed
REPORT FONT SIZE	This attribute can be used to modify the size of the font used to generate the embedded report. T used to set a smaller font size than theremainder of the *add* or *edit* screen as reports may be volu can either set a specific font size such as 8pt, 0.8em or 10px or use an HTML attribute name fro table

medium	Sets the font-size to a medium size
xx-small	Sets the font-size to an xx-small size
x-small	Sets the font-size to an extra small size
small	Sets the font-size to a small size
large	Sets the font-size to a large size
x-large	Sets the font-size to an extra-large size
xx-large	Sets the font-size to an xx-large size
smaller	Sets the font-size to a smaller size than element
larger	Sets the font-size to a larger size than t element

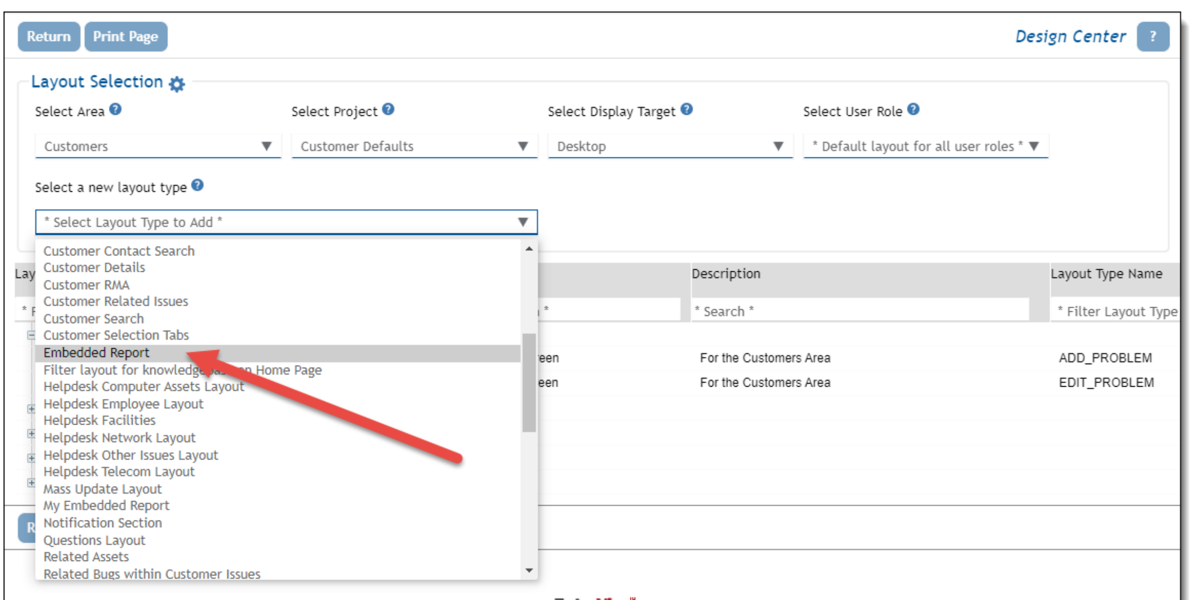
	• The placement of a Filter button which slides out upon a mouseover action. This displays report filters in a small popup • The ability to display or suppress the title of the embedded report as rendered on the *add* c • The ability to display a Mass Update button on the embedded report • An entry for the Page Size. This will override the value stored within the saved report
SIZE	The width in pixels of the report, before a horizontal scroll bar is displayed
VISIBLE IF	This allows for the typical conditions to conditionally display the entire report according to the l expression you define

Configuration

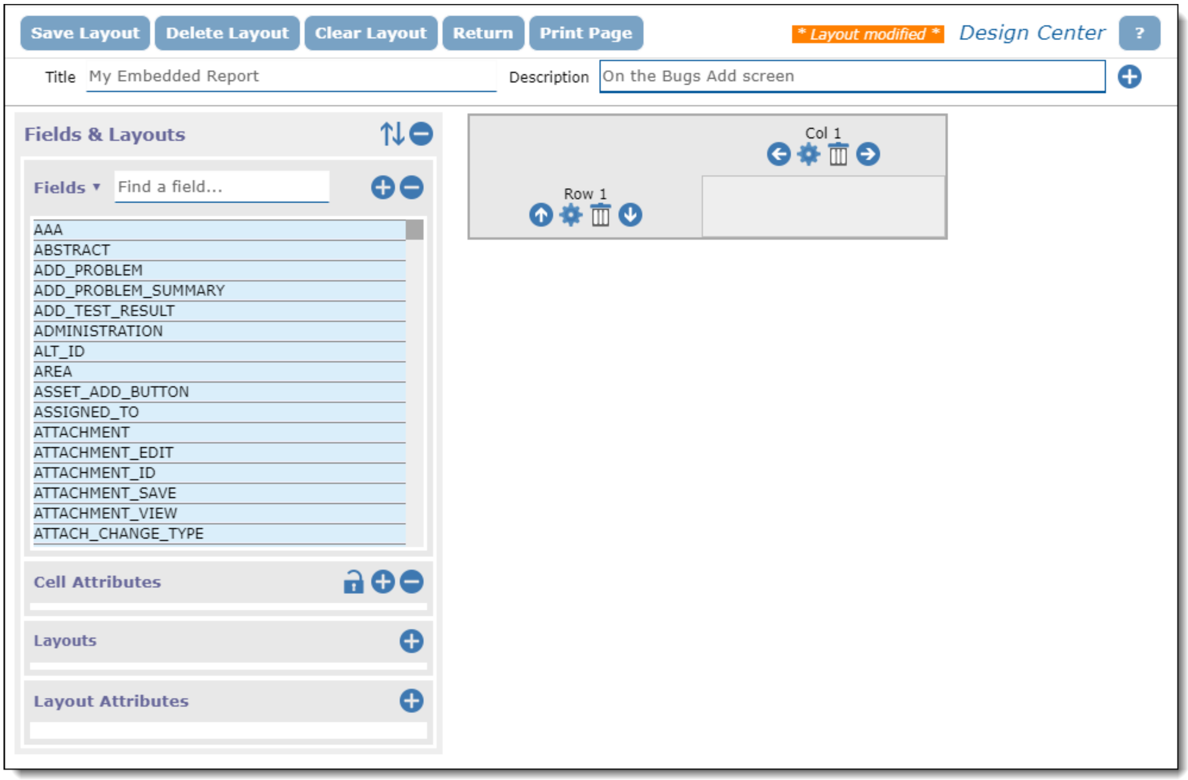
1. Note that there are four embedded report layouts named Embedded Report, Embedded Report (1), Embedded R Embedded Report (3) pre-created in the database. If you need to create a new layout type for embedded report. name and a title for the layout and choose the **Embedded Report** usage for the new layout type and then **Add** t type



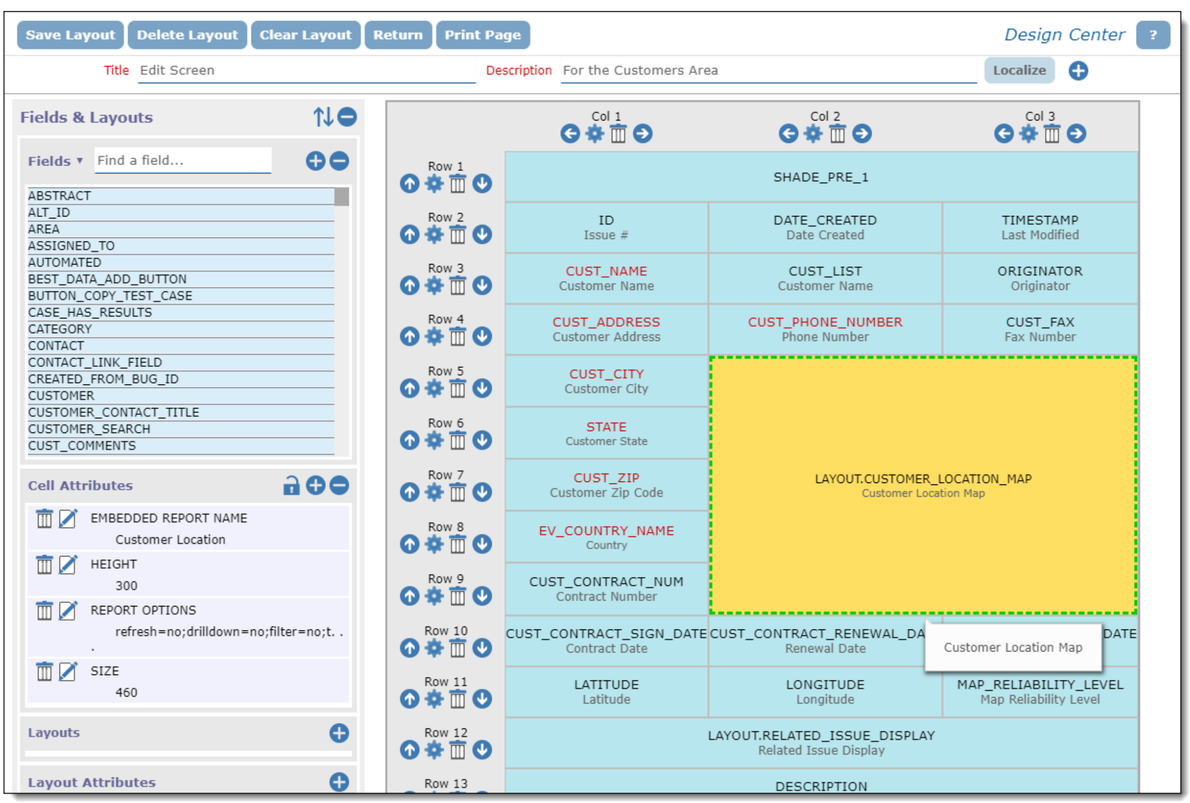
2. Navigate to the **Layout Selection** screen within the Design Center and add the layout type you just created into Area / Project and User Role where the report is to be displayed. Again, this feature is only supported on Deskt

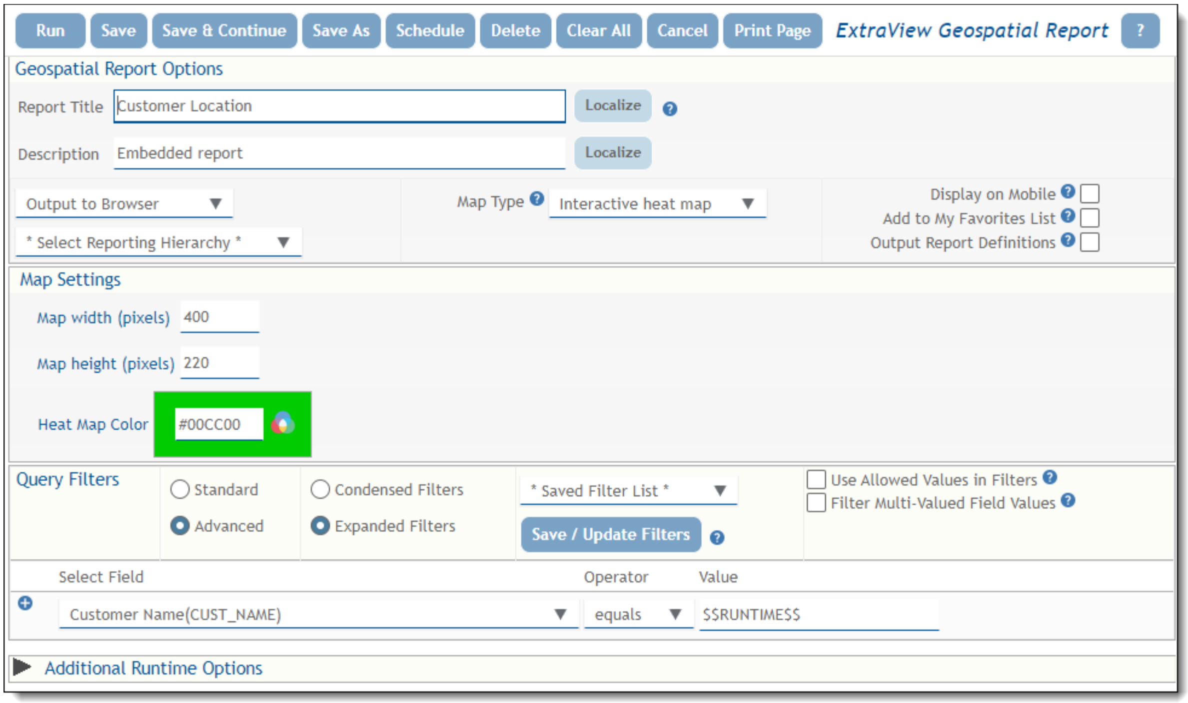


3. This layout must be empty. It is a placeholder only. Create and save a layout like this



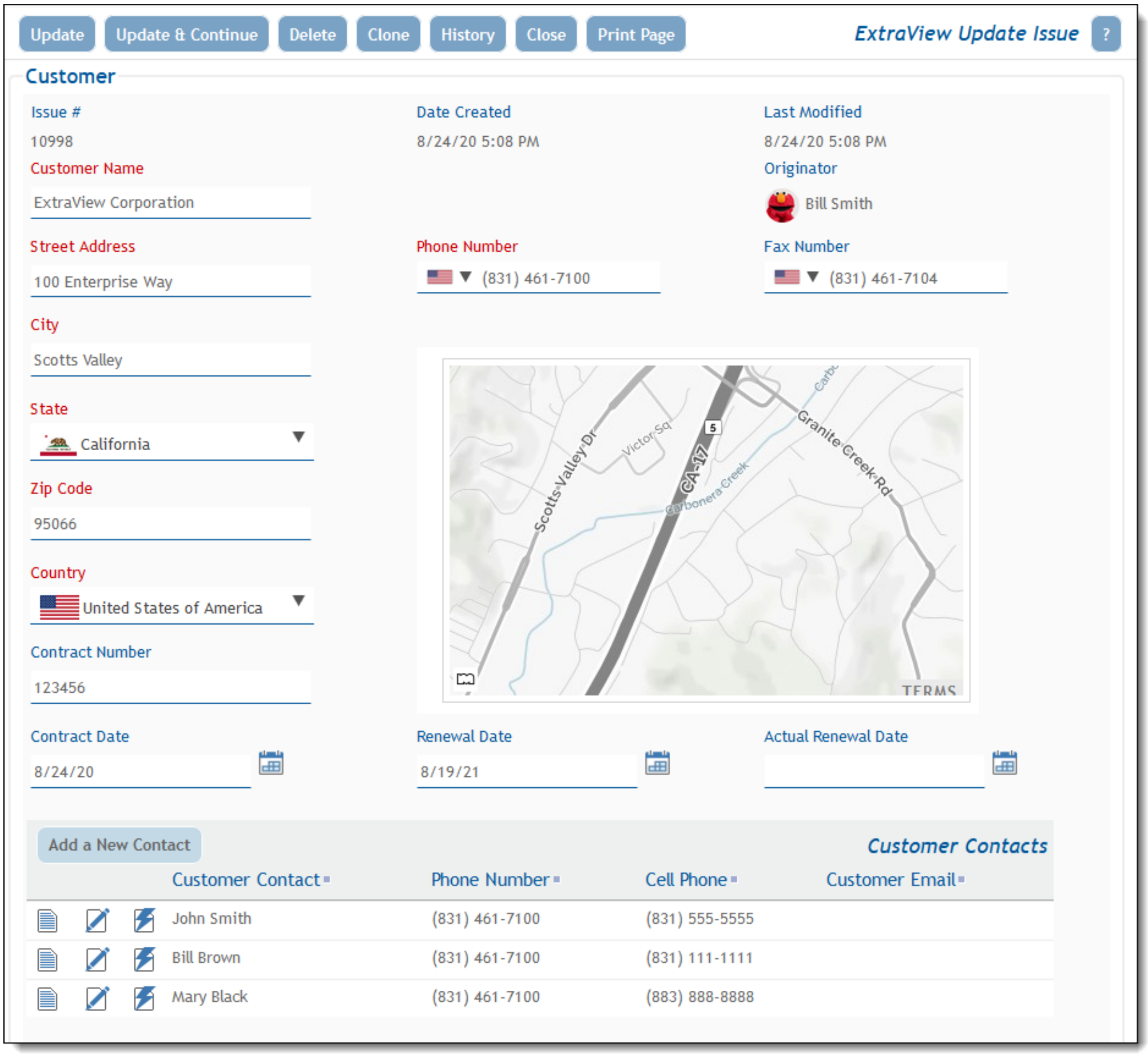
4. We will now place a report on the *Edit* screen of the Customer Business Area. Select the embedded report layo
from the Layouts section of the Design Center.





Note the use of the runtime filter for the report

6. When an end user edits a Customer issue, the geospatial information associated with the customer is used to ren showing the customer's location



Protecting Embedded Reports

As explained above, embedded reports must be shared or made public to the users who will view these on *add* and *edi* screens. However, it is typically important that these reports not be modified or accidentally deleted by users other tha administrator(s). Accidental modification of these reports may break a sites workflow.

To avoid this, use the Report Editor Privileges described [here] to restrict the ability to modify the report to the adminis manage the site's workflow.

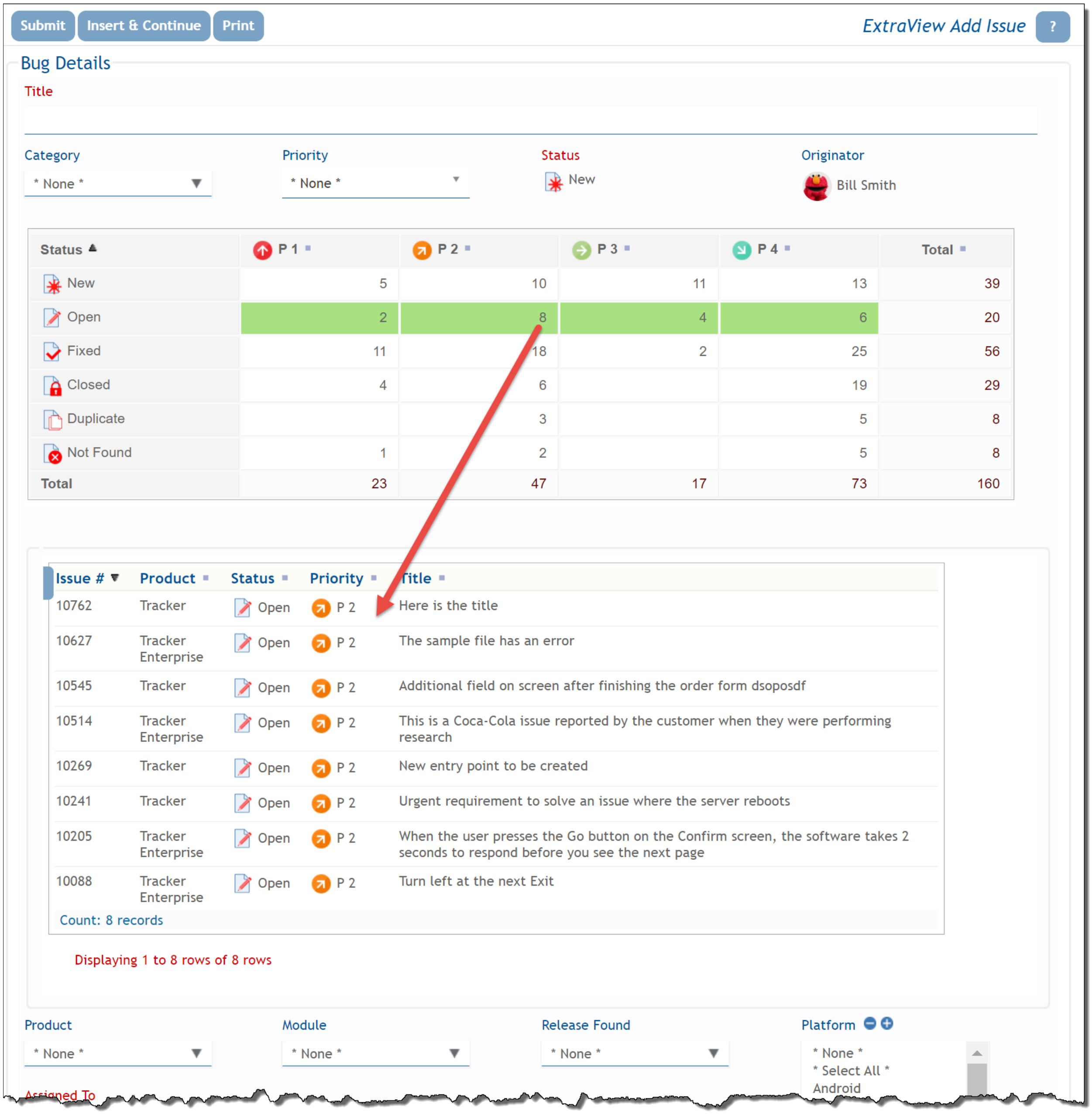
Multiple Embedded Reports on an Add or Edit Layout

You may embed multiple embedded reports on a single *add* or *edit* layout. These reports may be uconnected or can b together such that drilldowns from on report may generate the results for a second embedded report within the same *a* and not generate the results of the drilldown in a separate browser tab.

For example, you may have a summary or matrix report generate the drilldown results into a separate embedded layou

- For the first report, add these layout cell attributes as a minimum:
  - EMBEDDED REPORT NAME
  - DRILLDOWN TARGET
  - DRILLDOWN TARGET REPORT
- For the second report, no layout cell attributes are required, although you may want to add a SIZE, HEIGHT an OPTIONS to make the layout look correct and similarly styled to the first report.

This will lead to two embedded reports, where, after a drilldown, you will see something like this on your rendered la



Quicklist Report Layout Selection

with the user’s current business area and project is selected

Attachment Layouts

Click for end user documentation

Security Permission Keys

<table>
<tr><td>Field/Security permission key</td><td>Purpose</td></tr>
<tr><td>ATTACHMENT</td><td>This key controls the overall ability to create attachments. Write permission to t needed by the user role, for attachments to be able to be created or maintained. I read permission, the attachment layout is not visible. This field is the only field placed on reports where you want to display attachments, such as the detailed re remaining fields for the attachment will be placed onto the report by ExtraView. whether the field has read permission. When you have read permission to attach reports, a View attachment button is automatically placed on the report, allowin the contents of all attachments to an issue directly.</td></tr>
<tr><td>ATTACHMENT_ADD</td><td>This controls the Add button for attachments. Write access is needed to control</td></tr>
<tr><td>ATTACHMENT_DELETE</td><td>This is to enable and disable the delete attachment button.

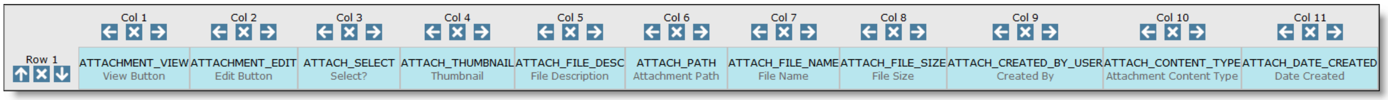
A Delete button is also placed at the top of the attachment layout, if attachment: ATTACH_SELECT button is placed on the layout and the user role has permiss This allows you to select multiple attachments and delete them with a single act</td></tr>
<tr><td>ATTACHMENT_EDIT</td><td>Controls whether a user role may edit the attachment description of a previously attachment. Write permission is needed for this</td></tr>
<tr><td>ATTACHMENT_HIST</td><td>Controls the presence of a History button on the edit screen within the attachme presents a window with a layout defined in the layout editor and named ATTACHMENT_HISTORY, which presents the historic records showing the up accesses to attachments. Normally, this layout is defined in the global area, and business areas and projects.</td></tr>
<tr><td>ATTACHMENT_VIEW</td><td>Controls whether a user role may view a previously uploaded attachment. Read permission is needed for this</td></tr>
<tr><td>ATTACHMENT_SAVE</td><td>Ths button invokes the browser's ability to download and save an attachment, as viewing the attachment with the ATTACHMENT_VIEW button. Note that this differently within different browsers:

<table>
<tr><td>Google Chrome</td><td>Downloads the attachment into the user's download directory</td></tr>
<tr><td>Mozilla FireFox</td><td>Displays a Save As dialog box from whic select the destination into which the attac saved</td></tr>
<tr><td>Microsoft Internet Explorer 11 running under Microsoft Windows 10</td><td>Displays a Save As dialog box from whic select the destination into which the attac saved</td></tr>
<tr><td>Microsoft Internet Explorer 11 running under Microsoft Windows 7</td><td>This is not supported by the browser</td></tr>
<tr><td>Microsoft Edge</td><td>Downloads the attachment into the user's download directory</td></tr>
</table></td></tr>
<tr><td>ATTACHMENT_ID</td><td>This is an internal ID used by ExtraView. It is not likely that you will give perm</td></tr>
</table>

ATTACH_FILE_DESC	This is the description of the attachment that the user enters. Both write and rea allowable on this field.
ATTACH_FILE_NAME	This is the name of the file that is attached to the issue. Once again, you cannot field, and its presence or absence is controlled with the read flag.
ATTACH_FILE_SIZE	This is the size, in bytes, of the attachment. Once again, you cannot write to this presence or absence is controlled with the read flag.
ATTACH_PATH	This is the path in which the file was originally stored on the local file system o computer. Once again, you cannot write to this field, and its presence or absenc with the read flag.
ATTACH_THUMBNAIL	This previews the attachments of image types (JPG, PNG and GIF) at a small si the user may see the image while they are inserting and updating issues, as well field on reports when they are looking at attachment records.

Fields

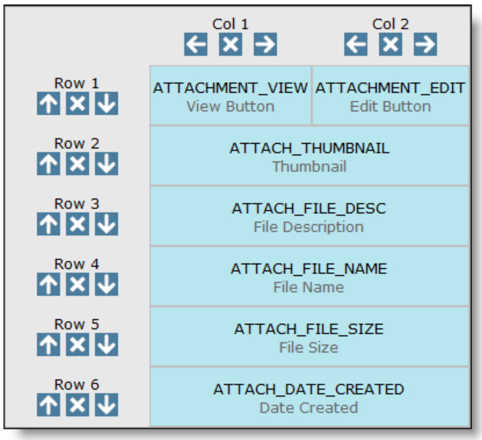
Field Name	Purpose
ATTACH_CHANGE_TYPE	Used within a fixed layout displayed when the user clicks the ATTACHI button to show the history of accesses to the attachment. This will show attachment was inserted, viewed or deleted
ATTACH_CONTENT_TYPE	Used to display the Mime type of the attachment
ATTACH_CREATED_BY_USER	The user who inserted the attachment
ATTACH_DATE_CREATED	The timestamp of when the attachment was created
ATTACH_FILE_DESC	The user supplied description of the attaachment
ATTACH_FILE_NAME	The file name of the attachment as it existed when it as uploaded
ATTACH_FILE_SIZE	The file size, in bytes, of the attachment
ATTACH_HIST_TIMESTAMP	Used within a fixed layout displayed when the user clicks the ATTACHI button to show the history of accesses to the attachment. This field sho change to the attachment occurred or the attachment was viewed
ATTACH_LAST_DATE_UPDATED	Used within a fixed layout displayed when the user clicks the ATTACHI button to show the history of accesses to the attachment. This field sho change to the attachment occurred
ATTACH_LAST_UPDATED_BY_USER	Used within a fixed layout displayed when the user clicks the ATTACHI button to show the history of accesses to the attachment. This shows wl the attachment
ATTACH_LAST_UPDT_COMPANY	Used within a fixed layout displayed when the user clicks the ATTACHI button to show the history of accesses to the attachment. This shows th name of the user who last viewed or updated the attachment
ATTACH_PATH	The path to the attachment from the computer that uploaded the attachm
ATTACH_SELECT	This field controls the presence of a checkbox by each attachment, allov select one or more attachments for further operations, such as deleting tl
ATTACH_THUMBNAIL	A thumbnail of attachments with an image type. A behavior setting nan `THUMBNAIL_MAX_SIZE` controls the maximum size of the thumnail image click on the thumbnail image to view / download the attachment
ATTACHMENT_ID	The internal ID of the attachment
ATTACHMENT_EDIT	A button that allows the user to edit / delete the attachment
ATTACHMENT_SAVE	Used within a fixed layout displayed when the user clicks the ATTACHI button to show the history of accesses to the attachment. This allows the their changes
ATTACHMENT_VIEW	This places a **View** button on the screen. When pressed, the user will ei attachment in a new window, or will be prompted to save the attachmen



The security permission keys PR_ADD_PROBLEM.ATTACHMENT and PR_RESOLUTION.ATTACHMENT contr visibility of the layout, and the following security permissions control the ability to place attachments from within the screen layouts. Security permission entries exist for both the PR_ADD_PROBLEM set of keys and the PR_RESOLU' except for ATTACHMENT_DELETE, ATTACHMENT_EDIT, ATTACHMENT_HIST, and ATTACHMENT_VIEW for the PR_RESOLUTION set of keys.

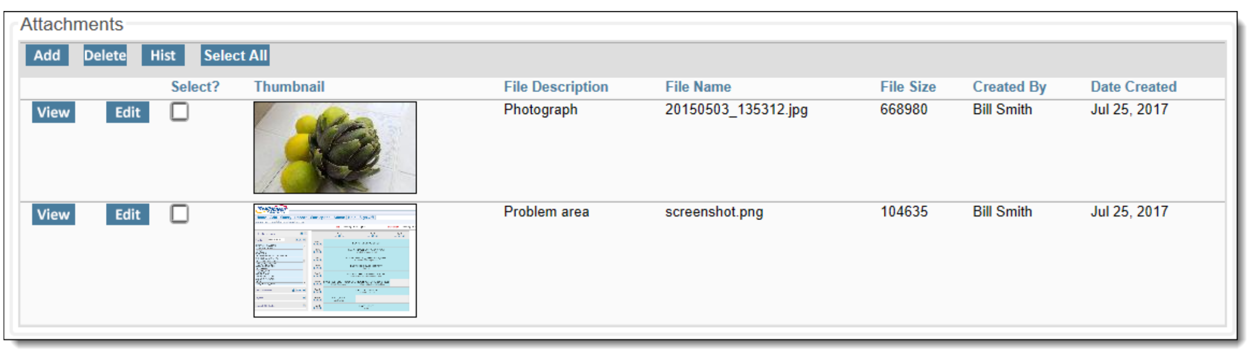
Recommendation

If you are configuring mobile layouts, consider saving the ATTACHMENT_SECTION layout as a mobile layout and : which are going to clutter up small screens, especially on phone targets. You can configure the fields on the layout ve opposed to horizontally, similar to this:

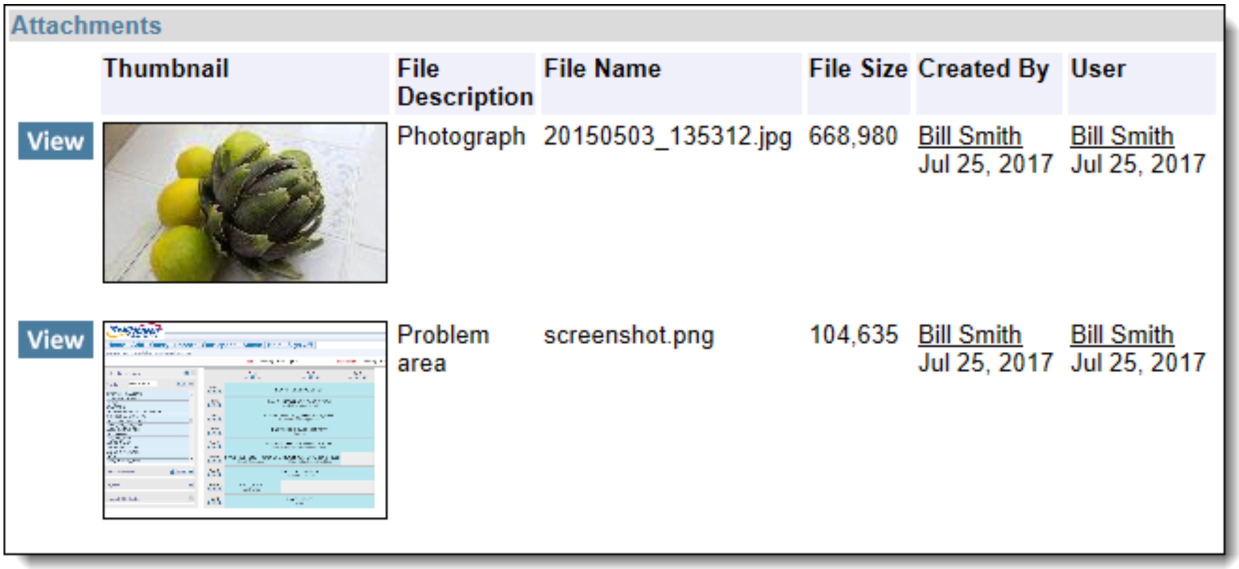


Multiple attachments can be added to issues, on both the *add* screen and the *edit* screen, if the user role has permissior **Select?** checkbox on *add* and *edit screens.* The presence of this is made by adding the ATTACH_SELECT field to the layout. With this configuration, a **Delete** button will also be displayed, and the user can select any of the attachments **Delete** button.

Note that if an attachment is added to an issue when you are updating an issue, the issue itself is immediately updated.



Portion of edit screen showing attachments



Attachments

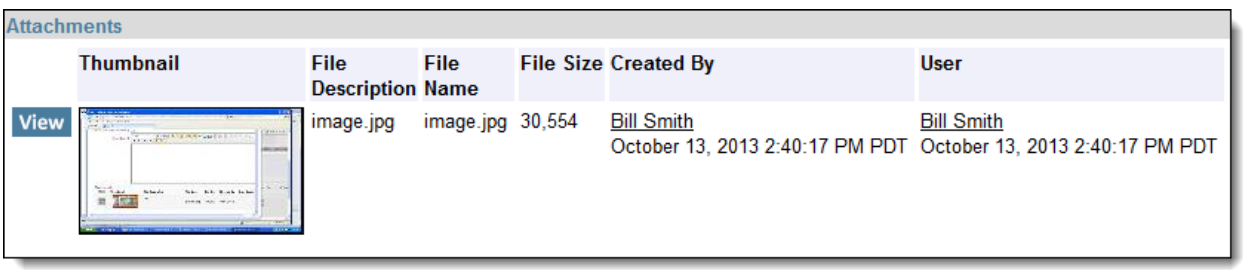
	Thumbnail	File Description	File Name	File Size	Created By	User
View		Photograph	20150503_135312.jpg	668,980	Bill Smith Jul 25, 2017	Bill Smith Jul 25, 2017
View		Problem area	screenshot.png	104,635	Bill Smith Jul 25, 2017	Bill Smith Jul 25, 2017

Portion of detailed report showing attachments

A behavior setting named THUMBNAIL_MAX_SIZE controls the size of the thumbnail. This is the maximum numb either the horizontal or vertical direction to which thumbnail images will be generated. The aspect ratio of the original retained. Thumbnail images are generated for file attachments and for fields with a display type of image. If you chan existing thumbnail images will remain at their original size and new thumbnails will be generated at the changed valu

Detailed Report Layouts

You should not embed the ATTACHMENT_SECTION layout within Detailed Report layouts. Instead, there is a field properties, named ATTACHMENT. This field should be placed on the Detailed Report layout. You then can control t absence of the individual fields that comprise the attachment information with their security permission key. This lea detailed reports that looks similar to this:



Attachments

	Thumbnail	File Description	File Name	File Size	Created By	User
View		image.jpg	image.jpg	30,554	Bill Smith October 13, 2013 2:40:17 PM PDT	Bill Smith October 13, 2013 2:40:17 PM PDT

Click for end user documentation

Associating Attachments with Fields

In some applications, users may add a significant number of attachments within a single issue. It can then be useful tc specific attachments with specific fields, or updates to a specific log area field entry. For example, this can provide a : viewing an attachment that was uploaded at the same time a specific comment was made.

The associated attachments are displayed correctly, and will be cleared from the user interface if the attachment is del trail of the changes to associated attachments are viewable in the History of the issues.

ExtraView provides two methods to achieve this configuration, through the user interface on *add* and *edit* screens, anc or updating an issue via EVMail.

Configuration for *Add* and *Edit* Screens

The feature may be configured on fields with these display types:

- Text Area
- HTML Area
- Log Area (including those with the **Present as HTML** option set in the Data Dictionary

To configure the option, edit the layout where you want to use the feature within the Design Center and add the layout named ATTACHMENT LINK. Alternatively if you want to use the feature throughout the installation on a field, set t ATTACHMENT LINK attribute as a global attribute from within the field inside the Data Dictionary.

You may set the attribute on any number of fields within *add*, *edit* or layouts embedded within these.

The following security permission keys control the behavior of attachments:

PR_ADD_PROBLEM.ATTACHMENT_LINK	Controls the presence of the Attachment Link buttc screens
PR_RESOLUTION.ATTACHMENT_LINK	Controls the presence of the Attachment Link buttc screens
PR_ADD_PROBLEM.ATTACHMENT_ADD	Controls the presence of the Add Attachment butto screens
PR_RESOLUTION.ATTACHMENT.ADD	Controls the presence of the Add Attachment butto screens
PR_RESOLUTION.ATTACHMENT_LINK_NOTIFICATION	Controls the presence or absence of the Attachmen outgoing emails. This is useful to allow users in sp see the text within the field associated with the atta to see or be able to download the attachment

Configuration for EVMail

Properties must be set within the EVMail task configuration. These will associate incoming file attachments with the contain the body of the incoming email.

If the field containing the body is plain text, set these options:

EVMAIL_BODY_UDF	This provides the field name that will contain the incoming email when creating new issues within
EVMAIL_BODY_UPDATE_UDF	This provides the field name that will contain the incoming email when updating existing issues
EVMAIL_BODY_UDF_ATTACHMENT_LINK	Set this option to a value of YES if you want Ext associate any attachments to the incoming email in EVMAIL_BODY_UDF
EVMAIL_BODY_UPDATE_UDF_ATTACHMENT_LINK	Set this option to a value of YES if you want Ext associate any attachments to the incoming email in EVMAIL_BODY_UPDATE_UDF

EVMAIL_BODY_HTML_UPDATE_UDF_ATTACHMENT_LINK	Set this option to a value of YES if you want associate any attachments to the incoming em set in EVMAIL_BODY_HTML_UPDATE_U

History Layouts

Before discussing history layouts, it is important to understand the behavior setting named HISTORY_DISPLAY. This to configure one, two or three different methods to display the historic audit trail of each issue. A value of ABBREVI setting will show changed fields only in history records and will not use the history layout to display the audit trail. A SIDE_BY_SIDE will display the same information as ABBREVIATED, but with the addition that you have a side-by of the current value at each point in time along with the previous value. The LAYOUT setting is designed to show all as the issue moves through its process. The Report – History layout will show the fields that you want to see as part of process. The following points are important with history layouts:

- The audit trail is kept on all fields, not just those on the layout. Thus you can add fields to the layout at any time fields will show the audit back to the creation of the issue.
- If you have a checkbox field on the *edit* layout, but not on the *add* layout, and do not make a change to its value occasion you update the issue, the field will still show a change to **N** or whatever the off title is in the data dictic for this is that ExtraView interprets the field as having moved from a null condition on the add screen to **N** on th You can prevent this by making the default value for the field **N** in the data dictionary
- Before a field can be displayed on a history layout, it must have the **Select for Reports** attribute set to **Yes** in th
- The field named RELEASE must have the **Select for Reports** attribute set to **Yes** in the data dictionary before y any repeating rows on the history layout
- You may not place any buttons on the history layout
- Use the behavior settings named HIGHLIGHT_COLOR, HIGHLIGHT_COLOR_ADD, HIGHLIGHT_COLOI HIGHLIGHT_COLOR_UPDATE to set the colors that indicate each of the conditions for a field within the hist

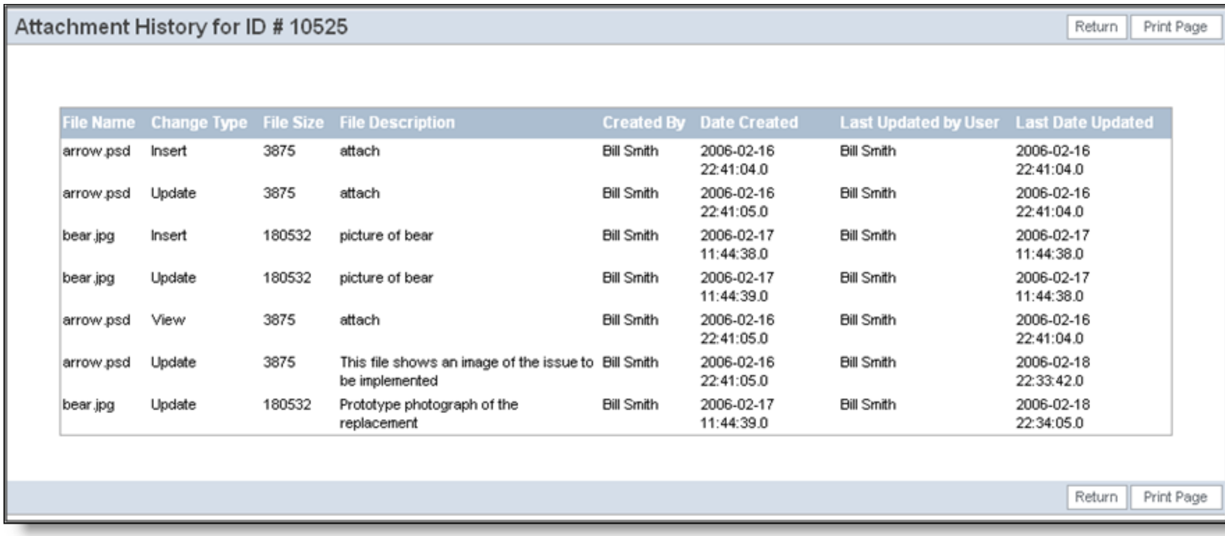
Placing the Audit Trail for Related Issues on the History Layout

You may add an embedded layout prepared to display related issues to a History Layout. As explained in the section a layouts for Related Issues, these layout types always begin with the character string RELATED_. This produces a rela at the point in time on the history record when the issue was updated, not at the current time.

Attachment History Layouts

The history button available on *edit* screens controls access to a pop up screen that shows the history of additions, upd to attachments. In addition, the screen shows a record of all users who have downloaded the attachment to their own c

The same ATTACHMENT_HISTORY LAYOUT is typically used throughout an installation, and can be defined in th area only. Other Business Areas and Projects will automatically inherit it from there. Of course, different ATTACHMI layouts may be defined in each Business Area and Project.



Attachment History for ID # 10525

Return Print Page

File Name	Change Type	File Size	File Description	Created By	Date Created	Last Updated by User	Last Date Updated
arrow.psd	Insert	3875	attach	Bill Smith	2006-02-16 22:41:04.0	Bill Smith	2006-02-16 22:41:04.0
arrow.psd	Update	3875	attach	Bill Smith	2006-02-16 22:41:05.0	Bill Smith	2006-02-16 22:41:04.0
bear.jpg	Insert	180532	picture of bear	Bill Smith	2006-02-17 11:44:38.0	Bill Smith	2006-02-17 11:44:38.0
bear.jpg	Update	180532	picture of bear	Bill Smith	2006-02-17 11:44:39.0	Bill Smith	2006-02-17 11:44:38.0
arrow.psd	View	3875	attach	Bill Smith	2006-02-16 22:41:05.0	Bill Smith	2006-02-16 22:41:04.0
arrow.psd	Update	3875	This file shows an image of the issue to be implemented	Bill Smith	2006-02-16 22:41:05.0	Bill Smith	2006-02-18 22:33:42.0
bear.jpg	Update	180532	Prototype photograph of the replacement	Bill Smith	2006-02-17 11:44:39.0	Bill Smith	2006-02-18 22:34:05.0

Return Print Page

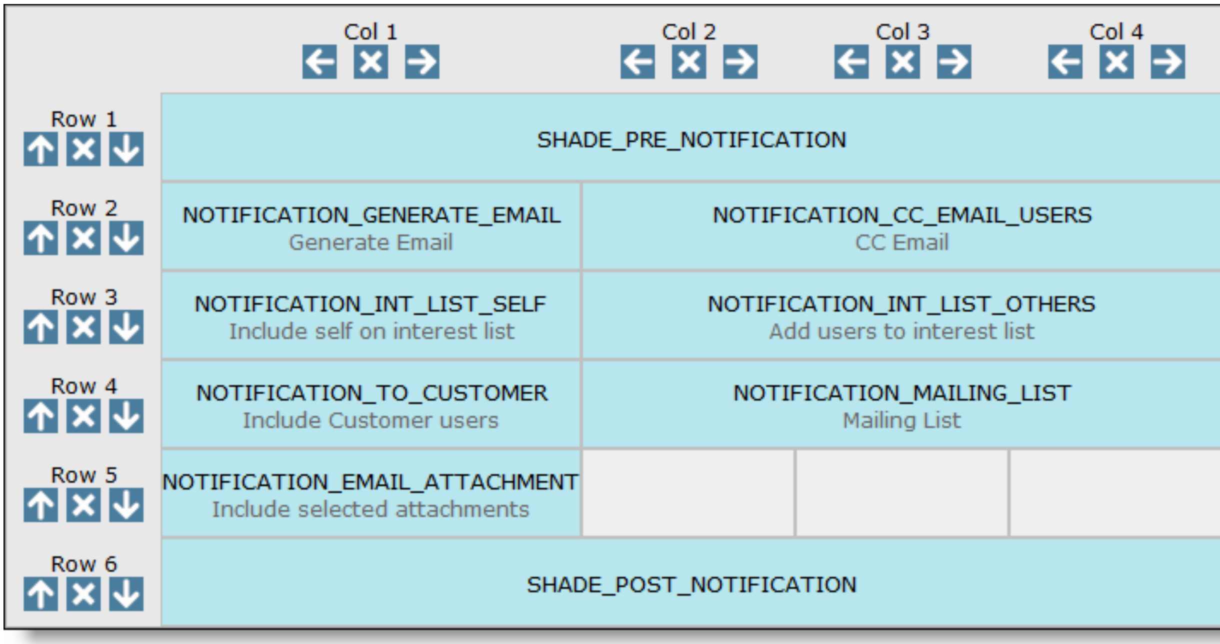
Attachment History Screen

The following fields may be placed on the layout, and they must have read permission to be viewable by the user role:

Field Name	Purpose
ATTACH_CHANGE_TYPE	The operation on the attachment. This is one of Delete, Insert, Update, \
ATTACH_CONTENT_TYPE	The content type of the attachment
ATTACH_CREATED_BY_USER	The name of the user who created the attachment
ATTACH_DATE_CREATED	The date the attachment was created
ATTACH_FILE_DESC	The description of the attachment
ATTACH_FILE_NAME	The filename of the attachment
ATTACH_FILE_SIZE	The size, in bytes, of the attachment
ATTACH_HIST_TIMESTAMP	The timestamp of the event, such as when a user views the attachment
ATTACH_LAST_DATE_UPDATED	The timestamp that the attachment metadata was altered, or the attachm
ATTACH_LAST_UPDATED_BY_USER	The user who performed the operation
ATTACH_PATH	The original path on the client machine where the attachment was storec
ATTACH_THUMBNAIL	A thumbnail image if the field is an image

Notification Section Layouts

There is a default layout in the Global Area, Master Project that defines the layout for notifications. This may be emb *add* or *edit* layout. Before any alterations, this looks like the following:



The security permission keys named PR_ADD_PROBLEM.NOTIFICATION and PR_RESOLUTION.NOTIFICATIO overall presence of the layout on the *add* and *edit* screens. The functionality of the fields within the layout are control individual security permission keys.

Field/Security permission key	Purpose
NOTIFICATION_GENERATE_EMAIL	This is an overall checkbox which acts as a switch, allowing the user inhibit the sending of email notifications when the current issue is ins updated. The default for the checkbox may be set globally by the beh named GENERATE_EMAIL_BOX or by a business load directive ru business rules may alter the value of the checkbox during the refresh stages
NOTIFICATION_CC_EMAIL_USERS	This provides an input text box with search capability, allowing the us email addresses or user ID's of users to notify, when these users are n notification mailing list generated
NOTIFICATION_INT_LIST_SELF	This checkbox allows the current user to place themselves on an inter current issue, no matter who else may be notified during the processin The user can later change this value through their personal options - o Notification tab
NOTIFICATION_INT_LIST_OTHERS	This checkbox allows the current user to place others on an interest li issue, no matter who else may be notified during the processing of the users can subsequently change this value through their personal optio Notification tab
NOTIFICATION_TO_CUSTOMER	This allows the current user to determine when to send a notification issue to users who are members of the DEFAULT_USER_ROLE. Th obviously subject to the permissions of this role, and will often use a customized to the communication needs of your customers
NOTIFICATION_MAILING_LIST	This shows a list of the users who are on the standard distribution list issue, as determined by the ORIGINATOR, ASSIGNED_TO, CONT LAST_UPDATED_BY fields
NOTIFICATION_EMAIL_ATTACHMENT	This checkbox is used in conjunction wi the **Select ?** attachment chec

The Data Dictionary is the central place where all field definitions are stored and maintained. The data dictionary is fc System Configuration administrative menu.

Data Dictionary screen tabs

Fields

These are the fields within ExtraView that are used within all processes. There are two types of fields, built-in fields a fields (UDF's). Built-in fields are provided as part of all ExtraView installations. Although you may modify various at in fields, such as their title and their default value, you should never delete an built-in field. You may create as many U require for your installation. There is no limit on the number of UDF's that may be created. All fields have four basic scope, a fixed name, a title and a display type. It is the display type

that gives a field most of its functionality. See later in this section for a complete explanation of all the field types. On defined in the data dictionary it will behave the same as if it were an inbuilt field. You will be able to attach permissio place it on any layout, report on the field, etc. End users will not be able to detect the difference between an inbuilt fie When viewing a list of fields in the data dictionary, you will only see the fields in the Business Areas and Projects to v permission. This typically includes all the fields which are global in their scope.

As a technical point, there is no real limit to the number of UDF's you create. In addition, creating a UDF does not res to the underlying database schema. There is no system degradation in creating a large number of UDF's.

Expressions

Expression fields are used in reporting to derive or calculate the value of a reporting column. Each expression may ha expression which is then automatically used on any report which contains the expression field. Expression fields also display types, although this range is more limited than a field display type. You may define any number of additional or reuse the same expression fields for different purposes on different reports.

Labels / Buttons

This section is where field screen elements that are not database fields can be defined or altered. Buttons for menubars maintained within this tab. Once again, it is unlikely that the administrator will remove fields from this section. Label added as User Defined Fields, so it is unlikely that the administrator will add new fields to this section of the data dict

Screens

These fields are for the inbuilt screens within ExtraView. A few additional supporting fields in this area affect screen Administrators should not need to add or remove entries from this section, but can rename the individual screens with installation.

Session Variables

Fields found in this area pertain to options having to do with the user's current, active ExtraView session. Fields defin are principally used in reporting

Reserved Field Names

This is an informational section which displays the names of fields which are used internally within the ExtraView sof

- Display type of each field
- Display title for each field. The title that is used for all screen labels can be altered at will for each field
- Whether the field is selectable for reports
- Setting up field dependencies
- Populating the values into lists
- Default values
- Help text

Documenting the Purpose and Use of Fields

It is often useful for the administrator to document the purpose of any field within their system. To achieve this, add a to any field, with the type of ADMIN_NOTES. The text entered within this field is not utilized outside the data dictio as documentation regarding that field. This text is also visible within the design center when a field is placed on a lay viewed within the Cell Attributes section of the screen.

Note that if you want to view where a field is used within the overall system, you can use the **Where Used** tab within dictionary.

Built-In & User Defined Fields

Built-In fields are part of the basic ExtraView product and exist in all databases. Most of these fields have special prop example there is a built-in field named **ID** that is used to provide a unique identifier for every issue stored. Built-in fie deleted from the database else functionality may be lost, or in the worst case, ExtraView will not function. User Defin fields that are created within your ExtraView installation and do not exist in the basic product. Since you may want to own site to include fields that are more specific and appropriate to your needs, UDF's satisfy this requirement. UDF's efficient and extensible mechanism. An unlimited number of UDF's may be created. All User Defined Fields are creat maintained in the Data Dictionary. UDF's must be typed, i.e. they will take on one of many display types such as *text,* The display type is the most importanat property of each UDF. In addition, UDF's that have a *list* type can retain mult time, with the values being individual members of the whole list.

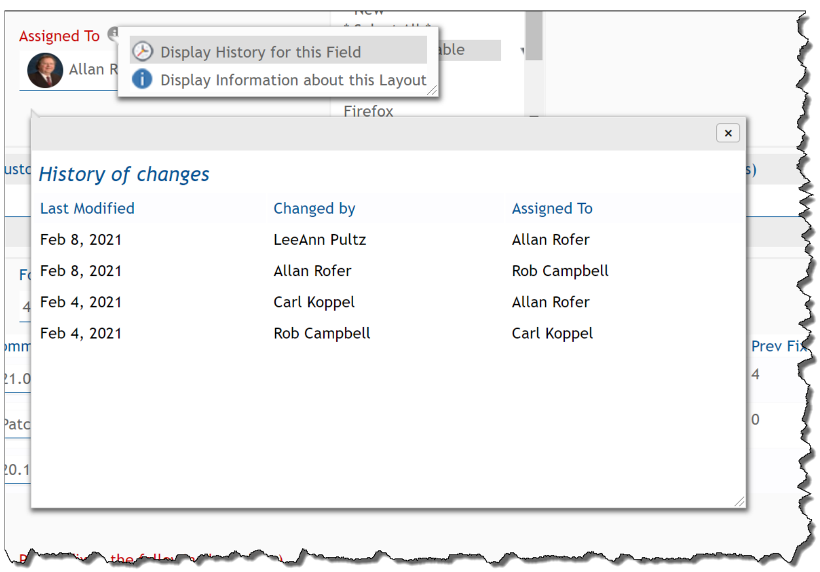
Scope

Fields may be created and assigned to be global, or created and assigned to an individual Business Area, or created an individual Project within a Business Area. This is termed the scope of the field. All inbuilt fields are global in their sc is restricted in its scope to an individual Business Area, or to a Project within a Business Area, then you will not see th you have permission to read fields in that Business Area and Project. Similarly, you cannot write to a field unless you permission to the field in the Business Area and Project within which it is held.

Field Properties

Fields have properties, or attributes, that enhance their capabilities, and provide options as to how they should work. N are applicable to all field display types. The following is a complete list of properties. Only the properties for any indi display type will be shown on the user interface. As you choose a field's display type, only the valid properties will be

Field Property	Explanation
Business Area & Project	Sets the scope for the field. If Global Area is selected, then the field will be available over all Busi specific Business Area is selected, along with its Project Defaults, then the field will be available t Business Area. If a specific Business Area and a specific data project is selected, then the field wil available within that Business Area and Project
Field Belongs To	Enter the record type that the UDF is to be associated with against the prompt *Field belongs to*. Th presently two choices: sea ***Issue Records*** – this indicates the UDF is to be associated with the mai issue in the database ***Repeating Records*** – this indicates the UDF is to be associated with each rep

Title to Display	The *Title* will appear on screens and reports. It may be from 1 to 255 characters in length and is rec contain any text. If you have turned on multiple locales, this field may be translated into any valid length may be up to 3,800 characters. The title may contain HTML for formatting purposes but it i not to include HTML within the field title. You should provide a plain text title within the data dic HTML to embellish the field title using an ALTERNATIVE TITLE wiithin the layouts where the f you do include HTML within the field title and access the field through the API or CLI then the H' passed through to the output. If you do not want to display a title, use a space character as the title
Display Type	The data type of the field, controlling its appearance and behavior. Example display types are text, checkbox and date. For a complete list of display types, click here
Allow Selection on Reports	A switch to allow or disallow the field to be selectable for reports. If this option is not set to **Yes**, tl not be available in reporting and on the abbreviated history display. This is useful in order to preve labels and for formatting appearing in field lists within reporting. It's important to note that not all allowed on reports. For example, you may not use all of ExtraView's inbuilt fields within your inst therefore want to hide them from the view of users (note you can also do this by changing the field it cannot be read). There are also fields in the Data Dictionary, such as images, buttons and screens be selectable for reporting. It is highly recommended that you set all fields to **No** if they are not us installation. This avoids the lists of fields that your users can select from to be populated with unne
Context Menu	The default for this option is **Yes**. The option places a small icon by the value on the field when the over it. When the user clicks on this icon, it brings up a context menu providing additional options For example:  In this example, the user is an administrator, and sees an entry to **Display Information about this** addition to the entry **Display History for this Field**. The screenshot shows the history of changes the **Assigned To** field. This option also has further controls within the Design Center. In the Design Center the administr context menus for the entire *add* and *edit* screens on and off, and may also control the context men individial field. Setting the option within the data dictionary provides a global control for the fiel entire system.
Associate image with values	This property is only applicable to list fields. This enables the field to use an image in conjunction alternative to the text values within the list. When this is enabled, the list management utility allov to be uploaded, updated and deleted against each field value.

	this feature for fields where the value of "field belong to" in the data dictionary is **Issue records**. T supported with the following field display types, but you can use a load directive within a business the same result: • Text Area fields • HTML Area fields • Log Area fields • Fields embedded on repeating row records
Display as URL	This option need not be completed for any UDF. You can use either the name or value associated v part of the URL that you generate. This allows you to link any field value on a form with any remo (or an inbuilt ExtraView function that can be accessed with a URL) and optionally to use values or pass as a parameter to another application. If a field with this attribute is rendered as read-only on a screen or a browser-based report, then it becomes a link to the URL specified. To activate a field w URL, click the **Display as URL** radio button to Yes.

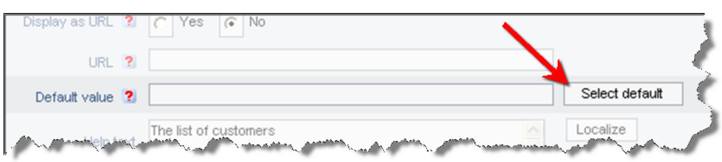
Parameter	Purpose
$$VALUE$$	Pass the current value of the field as a parameter in the request
$$DDNAME.VALUE$$	Pass the current value of the field named DDNAME as the parameter
$$DDNAME.NAME$$	Pass the name of the item for the field named DDNAME as it is storec database as the parameter. For example, if you have a field named **ST** name of **FIXED** and a value of **Fixed**, then $$STATUS.NAME$$ wil as the parameter.
$$DDNAME.TITLE$$	Pass the title of the item for the field named DDNAME as it is stored as the parameter. For example, if you have a field named **STATUS**, w **FIXED** and a value of **Fixed**, then $$STATUS.TITLE$$ will pass **Fix** parameter. This is equivalent to the $$DDNAME.VALUE$$ paramete
$$URL$$	Pass the un-escaped value of the current field as a parameter in the rec form is used to link the field to a URL that is fully formed, without es characters. For example, with a data dictionary URL value of $$URL$ containing http://www.yahoo.com would link directly to the Yahoo! si button for the Display as URL button is clicked
$$DDNAME.URL$$	Pass the un-escaped value of the field named DDNAME as the param request

a. Type the appropriate URL in the field below the **Display as URL** radio button.
b. You can pass values from the data dictionary field you are defining or from other fields on tl form of the values that you can pass as parameters are as follows –
c. Note that the trailing $$ on an entry is optional
d. Use the tag $$APP_HOME$$ to include the current path to the ExtraView instance that you
e. If the DDNAME is the name of a data dictionary Special Variable (e.g. SYSDATE) then the the value of the Special Variable
f. If the DDNAME is the name of a data dictionary Session Variable (e.g. USER) then the valu value of the Special Variable
g. You may call other functions within ExtraView and cause them to take the appropriate actio you can set up a field with a link that utilizes the search function and display the results in a

   Example 1 – Pass a value to a remote application as a parameter –

   http://search.yahoo.com/search?p=$$VALUE$$

   This will pass the current value of the field to Yahoo, and perform a search of the value. The displayed in a new window.

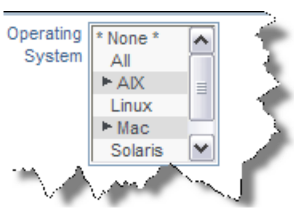
	&product_name=$$PRODUCT_NAME$$&assigned_to=$$ASSIGNED_TO$$ This example is placed in the URL value of the field (all on one line). This will access Extra class and produce a Quicklist report, using the value in the display field named searchword, values of the product_name and assigned_to fields Example 4 – Edit an issue whose ID is in the field with the display as URL – ?p_action=doEditDisplay&p_option=Display&p_id=$$VALUE$$&p_from_action=search &p_from_option=search&p_close_win=true&ev_menu=off This will open an edit screen window using the value of the field with the Display as URL a issue. Note that the parameter p_close_win=true is used to close the edit screen window onc been updated. Also note that the parameter ev_menu=off is used to suppress the ExtraView r the new edit screen window. h. The URL form is used to link the field to a URL that is fully formed, without escaping speci For example, with a data dictionary URL value of $$URL$$, a field containing http://www.y would link directly to the Yahoo! site when the button for the Display as URL button is click
Image for Display as URL	This optional entry is used in conjunction with the **Display as URL** setting. If provided, the entry i of an image in the directory specified in the IMG_NAV_BAR_HOME behavior setting. When this provided and **Display as URL** is set to Yes, then your image is used rather than the inbuilt LinkBu Care should be taken not to provide an image that is too large. The recommended size is 18 x 18 pi
URL	An optional URL which can be used to link the field to any other application
Default Value	A field must be created before you may give it a default value. This is because default values are u commonly in list fields, and you need to populate your field with these values before you can selec default. If you provide a default value for a field, the value specified will be auto-selected wheneve adding a new issue. Note that if you also have remember last value set on the field, the last value w preference to the default value. The default value is used to populate a field in a record, when the f the *add* layout for an issue. You may also use a **load** business rule to set a default value on a field. **Note**: Default values for fields of display types Checkbox, List, Pop-up, Radio Button – Horizonta – Vertical, Tab and User must be entered using the **Select Default** button. Entering text into the bo does not work. The reason for this is that in addition to the value that is displayed, ExtraView also the internal ID value of these fields. You may enter text directly for other display types, such as Te values may only be entered after the field has been created, by editing the field.  Entering Default values
Help Text	This field provides a facility that when you mouse over the label adjacent to a field you can provid message that will appear. You can have up to 2,000 bytes in a tool tip, without localization being tu ExtraView instance. If localization is turned on, then the tooltips can store up to 3,800 bytes. Howe recommended that you have large tooltips, because of the way in which Windows and other operat display these. Typically they are displayed for around 2 seconds, so you should not store more info be read in that time
Help URL	With a Help URL, you can link this to a bookmark or page in your own online help system. If you ExtraView customer hosted by ExtraView Corporation, note that this URL need not be on our serv store and access these files anywhere over the Internet

<table>
<tr><td>Thousands Separator</td><td>This block of information only appears if you have chosen a field display type of Decimal, Curre
Select whether you do or do not want a thousands separator to appear with the field</td></tr>
<tr><td>Rounding mode</td><td>This block of information only appears if you have chosen a field display type of Decimal, Curre
The default rounding mode is ROUND_HALF_UP for Decimal and Number display types. For C display types, the default rounding mode is the rounding mode of the currency instance for the cho locale. This table shows the result of rounding data input to one digit, with the given rounding moc
<table>
<tr><td>Input Number</td><td>UP</td><td>DOWN</td><td>CEILING</td><td>FLOOR</td><td>HALF UP</td><td>HALF EVEN</td><td>HALF DOWN</td><td>UN</td></tr>
<tr><td>5.5</td><td>6</td><td>5</td><td>6</td><td>5</td><td>6</td><td>5</td><td>6</td><td>thr</td></tr>
<tr><td>2.5</td><td>3</td><td>2</td><td>3</td><td>2</td><td>3</td><td>2</td><td>2</td><td>thr</td></tr>
<tr><td>1.6</td><td>2</td><td>1</td><td>2</td><td>1</td><td>2</td><td>2</td><td>2</td><td>thr</td></tr>
<tr><td>1.1</td><td>2</td><td>1</td><td>2</td><td>1</td><td>1</td><td>1</td><td>1</td><td>thr</td></tr>
<tr><td>1.0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>-1.0</td><td>-1</td><td>-1</td><td>-1</td><td>-1</td><td>-1</td><td>-1</td><td>-1</td><td>-1</td></tr>
<tr><td>-1.1</td><td>-2</td><td>-1</td><td>-1</td><td>-2</td><td>-1</td><td>-1</td><td>-1</td><td>thr</td></tr>
<tr><td>-1.6</td><td>-2</td><td>-1</td><td>-1</td><td>-2</td><td>-2</td><td>-2</td><td>-2</td><td>thr</td></tr>
<tr><td>-2.5</td><td>-3</td><td>-2</td><td>-2</td><td>-3</td><td>-3</td><td>-2</td><td>-2</td><td>thr</td></tr>
<tr><td>-5.5</td><td>-6</td><td>-5</td><td>-5</td><td>-6</td><td>-6</td><td>-5</td><td>-6</td><td>thr</td></tr>
</table></td></tr>
<tr><td>Internal Precision</td><td>This block of information only appears if you have chosen a field display type of Decimal, Curre
This is a number from -24 to 10 indicating how many digits of precision should be maintained for computations with this field</td></tr>
<tr><td>Report Precision</td><td>This block of information only appears if you have chosen a field display type of Decimal, Curre
This is a number from -24 to 10 indicating how many digits of precision should be displayed on re only displays of this field</td></tr>
<tr><td>Percentage</td><td>This block of information only appears if you have chosen a field display type of Decimal. If you Percentage option, then users must enter the number with a percentage sign. This will be convert ExtraView and stored as a decimal value</td></tr>
<tr><td>Alias Of</td><td>A field that is the alias of another field is restricted to fields that you create with a display type of I Tab. When you create a field with this setting, you will not maintain the list of values for the field, will be created using the list of values from the field you select in the Alias of selection list. This i device that is used when you require more than one field with the same list of values, but you only maintain the list in a single place. For example, you may want to create a list of product releases, a in two forms, one for Release Found and one for Release Fixed. You can place both these fields on screen, and update the fields independently, but only maintain the field in a single place. A field th another field may still be controlled by its own allowed value list. This allows you to create differe base list, where each of the aliased lists is a subset of a master list. This entry only appears when y new field, or when you are editing a field with a display type of List, Pop-up or Tab. The option is creating a field of the same types. When creating a new field, you may point it to another list field field will be an alias of the field to which it point. It will be kept in synchronization with the first f editing an existing entry which is an alias of another field, you can remove the alias entry, from wh fields will work independently</td></tr>
<tr><td>Total Field on Reports</td><td>This only has an effect on numeric display types. When this is selected, the field will be totaled au column reports. This setting is ignored if the field does not have a display type of Number.</td></tr>
<tr><td>Enable Interest List</td><td>This flag in a data dictionary item enables a notification interest list for specific values of the field. you may want to create an interest list based upon issues that have a critical severity level. If you e interest list for severity level, then the administrator can edit the critical list item in the severity lev and maintain the list of user names in the interest list</td></tr>
<tr><td>Auto-complete</td><td>This option may be used with popup list fields and with user fields when the behavior setting name USER_LIST_DISPLAY is set to a value of POPUP. Auto-complete, or type-ahead as it is sometim works by having one or more characters typed into the list and then automatically presenting you v likely matches for the value you are composing. At any time you can select a value from those pre</td></tr>
</table>

<table>
<tr><td></td><td>


Example of an Auto-complete field

When you set auto-complete to on for a field, then you also select the number of characters that th before the auto-complete is activated. There is also control over the maximum number of entries re list and control over the height of the list. This allows fine-tuning when you are dealing with very l ensuring that the user does not retrieve a very large number of records while they are typing charac
</td></tr>
<tr><td>Multiple Value</td><td>
Multiple values can only be enabled for UDF’s with a display type of LIST, POPUP or User. If you to have multiple values, you are allowing the user to select any number of items from its list as bei For example, say you have a list of operating systems against which an issue may be recorded. If y that the issue is found in some of the operating systems, but not all, you can choose the relevant en list. A behavior setting named SORT_SELECTED_VALUES controls how the selected values in r and multi-valued user lists are sorted. When this is set to NO, all multi-valued lists will be displaye set by the field's standard sort sequence. When this value is set to YES, all selected values will be beginning of the list, using their sort order, then the non-selected values will be displayed using the Note that if you place a multple value list UDF on an add or edit screen layout, and then add a layo of FIELD REMOVE NONE, and you then deselect the very last value in a list, the first value in th selected when you submit the form. If this behavior is not desirable, then the recommendation is to field required, which will force the user to select a value before the record is inserted or updated. Y character used to signify that a value in a multi-valued field is selected with the behavior setting na MULTI_VALUE_HIGHLIGHT_CHAR. The default value is &# 9654;. This displays as a ? again value. If you want to use a character that is in the basic character set of older computer browsers, i you use the + character.



Example of a multi-value list field
</td></tr>
<tr><td>Filter Criteria</td><td>
This option allows the field to be selected on a query filter layout, as a criteria for a search. Only if checked can the field allowed to be placed on a filter screen layout for querying and searching. No display types can be used as filter criteria. Fields with a display type of Label, Image, Text Area, L Print Text cannot be used as filter criteria
</td></tr>
<tr><td>Is Sortable</td><td>
If this option is set to Yes, then the field will appear on the Sort Order lists on report composition s Typically fields with a display types as follows should be flagged as sortable or not:

<table>
<tr><td>Sortable</td><td>Not Sortable</td></tr>
<tr><td>Checkbox</td><td>Button</td></tr>
<tr><td>Date</td><td>Custom</td></tr>
<tr><td>Day</td><td>HTML Area</td></tr>
<tr><td>List</td><td>Label</td></tr>
</table>
</td></tr>
</table>

	accounts maintenance screens, then you cannot remove this attribute from field, without first remo values in all the users who have this field set
Sort sequence for user attributes	This field only appears when **Used for user attributes** is set to *Yes*. It provides the ability to sort tl fields that are used as user attributes on the User Account Administration screen. The default if thi sort the fields alphabetically
Encrypt this field	This field only appears for fields with a display type of **Text Field**, and only when adding a new fi enables encryption for the field, at the database level. The key purpose is to provide an additional protection against unauthorized access direct to your database. The feature works in conjunction v obtained from a keystore. They secret key(s) must be defined before you create fields that utilize e View the page on Encryption Key Management for more information. **Note**: You cannot change this property once the field has been created

Reserved Field Names

Also, note that there are reserved field names that cannot be used as UDF names. These are:

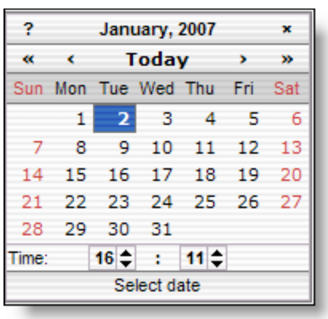
ACTION	*NEW_REPORT*	*REPORT_OWNER*	RG_RELATION_FIELD
CALLED_FROM	*NOTIFY*	*REPORT_START*	*SEARCH_ATTACH_SIZE*
CHILD	*OPTION*	*REPORT_STOP*	*SECURITY*
CLASS	*PAGE_LENGTH*	*REPORT_TITLE*	*SELECTED*
CUSTOM_URL	*PAGE_SIZE*	*RG_NAME*	*SELECTEDSO*
CUSTOMER	*PARENT*	*RG_NAME_FIELD*	*SHOW_EXPANDED*
DATE	*RECORD_COUNT*	*RG_REF_ID*	*SOURCE*
FROM_ACTION	*RECORD_START*	RG_REFERENCE_ID_FIELD	*SOURCESO*
FROM_OPTION	*REPORT_AS_OF*	RG_REFERENCE_NAME	*TARGET*
GROUP	*REPORT_DESC*	RG_RELATE_THIS_TO	*TEMPLATE_EXPANDEL*
INTERFACE	*REPORT_ID*	RG_RELATION	*UDF*
LANGUAGE			*VALUE*
LAYOUT_SESSION_TAG			

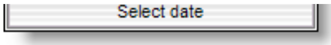
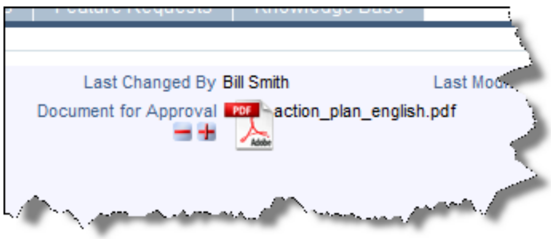
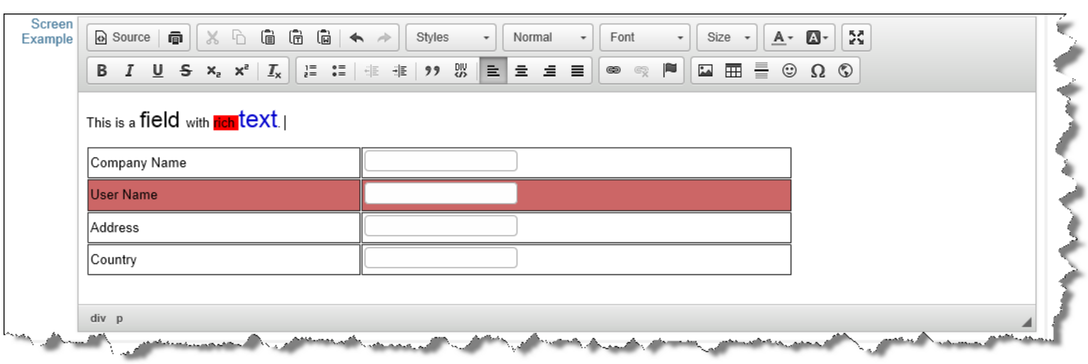
Display Types

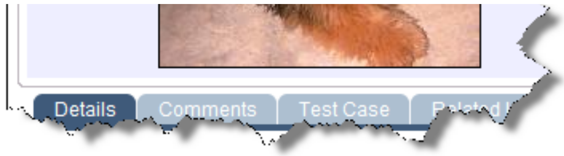
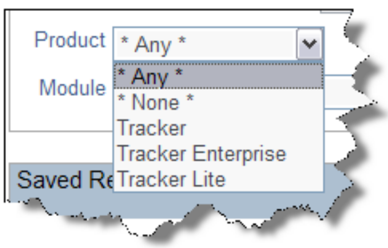
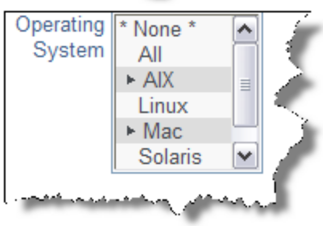
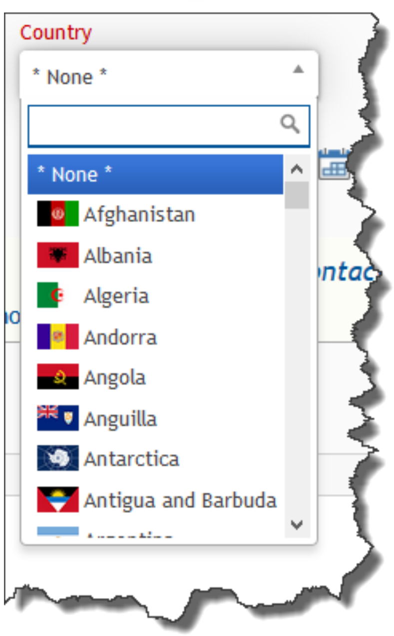
Click for end user documentation

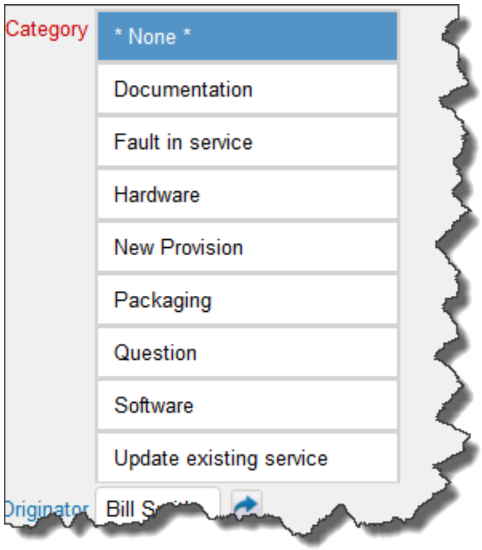
Each field in ExtraView, whether it is an inbuilt field, or a user-defined field, has a display type that controls the prese behavior of the field, both in input mode on Add and Edit screens, as well as on output for reports. The range of Displ be set is as follows:

Button	There are inbuilt fields with a display type of **Button** such as for *View*, *Edit*, *History*, *Delete* and *Selec* are used on reports to provide access to the appropriate functions. These fields appear within the data under the **Labels** tab. There are a few other inbuilt **Button** fields for internal ExtraView functions. When a user clicks on a field with a display type of button, it is expected that some action will take pl actions need to be defined with custom code within the ExtraView environment. To create a custom b

	never specifically set by a default value or a rule, then the checkbox actually has a **null** value, and is ı the database. This is an important distinction, as a **null** value is not the same as a **N** value. Querying f with *** None ***, will give different results to querying for **N** values.
Currency	This field allows the user to enter numbers that will be displayed with the formatting seen on currenc as a currency symbol, thousands separators and decimal points. The user may choose from a list of va symbols, as well as set the formatting for negative numbers and set the thousands separator. Note that information for currency fields is entered into a box that appears in the data dictionary when you sele type of **Currency** from the selection list. The implementation uses a precision of 38 and scale of 10 (left of the decimal point and 10 digits to the right) when the value is stored in the database. If a user a a number larger than this into a currency field, it is not possible to accurately display the number. At t ExtraView converts the number to a null value, and enters a message into the application log file.
Custom	This field assumes that ExtraView's user custom code will provide the contents and management of tl allowing you to extend the functionality of ExtraView with new custom display objects. The field titl rendered as normal, using the title of the object. The method call to user custom that provides the cod ucValue = Z.userCustom.ucRenderEmbeddedObject(dbconn, session, layoutType, dde, ddName, selectedVals, selectedVal, multipleVals, attributes, prefix, le, row, styleVal, doHiddenInput); The returned value ucValue is a String. For fuller details on this display type, please see the User Cus However, it is worth noting here that almost any code can be generated into your layouts with this dis
Date	 This field type allows dates and their time component to be entered a date field is automatically provided with a popup button on each add This button provides access to a calendar. Dates are validated agains locale. For example, if your locale is US English, the date 1/5/05 is i January 5th, 2005, while if your locale is GB English, the date 1/5/0 as May 1st, 2005. All dates are stored with a time component. When zone is different from the time zone stored in the behavior setting na DB_TIMEZONE, the date / time a user enters is converted to its equ DB_TIMEZONE, and stored as such. For storage, all dates are furth UTC format. When the same user accesses and displays the date aga converted to his personal time zone and redisplayed. If a user is in a different to the user who entered the date / time, and is in a time zone different to the DB_TIMEZON time are converted to their personal time zone and displayed accordingly. When any user displays a D date is displayed with the user's own personal date format. When entering a Date field, the user's loca assist in validating the entry. If the user's date format begins with the day, it is assumed that dates ente start with the day. If the user's date format begins with the month, it is assumed that dates entered will the month. This avoids ambiguity with dates such as 3/6/2012 which can be interpreted as March 6th depending on where you are located. If your application does not require time with any date you want recommended you use the 'Day' display type to define the field. **Note**: Microsoft SQL Server has a limitation in that any date before 1753 is invalid and cannot be sto calculations based on dates before this are invalid. If your installation is running on SQL Server, this that ExtraView cannot work around. Users who have write permission to date fields on *add* and *edit* screens and whose personal date form exclude time, for example using SHORTDATE, can still enter time into a date field. The popup calen the time automatically, but the user can override this. This avoids problems between users when som personal date format that contains time, while others use a personal date format that excludes time.

	 it is assumed that dates entered will also start with the day. If the use begins with the month, it is assumed that dates entered will also star month. This avoids ambiguity with dates such as 3/6/2012 which can be interpreted as March 6th or t depending on where you are located. Using a Day type field within a Business Rule is consistent whe or combined in expressions with other Day type fields. When compared with Date fields, the Date is (Day value using the user's time zone (to which the Date value is, by definition, relative) and the comp with a Day field to Day field comparison or calculation. The date will be presented to each user with t they have selected. **Note**: Microsoft SQL Server has a limitation in that any date before 1753 is invalid and cannot be sto calculations based on dates before this are invalid. If your installation is running on SQL Server, this : that ExtraView cannot work around.
Decimal	This allows a number with a number of decimal points to be entered and stored. The implementation t of 38 and scale of 10 (28 digits to the left of the decimal point and 10 digits to the right) when the val the database. If a user attempts to insert a number larger than this into a decimal field, it is not possibl display the number. At this point, ExtraView converts the number to a null value, and enters a messag application log file.
Document	 Document fields store a document of any type. you might have a document that is required as p submission of an issue, or you may require an a document to provide a signature indicating thei document. Documents are represented on the sc icon that shows its type. For example, if the doc spreadseet, you will see a spreadsheet icon besi Unlike attachments, documents are subject to w as being required if a condition is true, or a signature might be required indicating approval of a docu uploaded. Document fields are only searchable with keyword searching, and only using Quickfind sea Document fields are not searchable by default, and searching must be activated through the behavior : FULL_TEXT_SEARCH_COLUMNS or by updating the searchable columns on the Quickfind settin; uploading a document field, the permission keys named PR_ADD_PROBLEM.ATTACH_DESC and PR_RESOLUTION.ATTACH_DESC are used to control the requiredness of the description to the do
HTML Area	This display type offers the ability to enter and edit text with an HTML editor. This field will appear (*edit* screens with a toolbar, much as you have with a word processor. On reports, the HTML within th rendered, including embedded objects such as images. You can control which buttons appear on the to style of the toolbar with the behavior settings named EDITOR_BUTTONS and EDITOR_STYLE res row height of HTML areas throughout ExtraView is controlled with a behavior setting named HTMLAREA_ROW_HEIGHT. Each HTML Area field may store up to 5MB of data. 

	 is controlled by the behavior setting named THUMBNAIL_MAX_SIZE. The aspect ratio thumbnail will always be preserved, but the n number of pixels in the horizontal or vertical not exceed the setting. When the user clicks o image, a window opens with the image being full size. A behavior setting named MAX_IMAGE_DIMENSION_PIXELS controls the maximum di image thay may be uploaded. Images that have a height or width greater than this value will not be sto When uploading an image field, the permission keys named PR_ADD_PROBLEM.ATTACH_DESC PR_RESOLUTION.ATTACH_DESC are used to control the requiredness of the description to the im
Label	A label is used as a display item only. No data is stored in the database against any label field. Labels value in the data dictionary default value field, and this is displayed on the screen in read only mode. labels are also used internally within ExtraView, to provide a means of altering a term such as "proble suitable for the use of ExtraView in any customer installation. Labels may be placed on layouts such a *edit* layouts. They can be used to provide instructions to users or other information.
List	   A list of values; when you have a field with a list it will have an entry on the Field List Maintenan the administration screen. From there or from th dictionary screen, or from any layout that includ you can add, modify or delete list items. Lists are often used with allowed values, control absence or presence of any individual item when mode. If you require two or more fields that are p the same list of values, you can create the second subsequent fields using the *Alias Of* feature. You the list of values in the first field created, and Ex automatically keep the aliased lists up to date. Th saving device, and ensures that you can keep ide step with each other. At the same time, you may allowed value entries for each of the fields. You the layout cell attribute **Add the * New * entry** t allow the user to create new values for a list, wit the user to have administrative privileges. For scalability, fields with the **List** display type r changed to the display type of **Pop-up**. Note that make this change, any business rules in force are immediately, so any rules using the field you alte work until the rules refresh themselves (an auton performed by the server every few hours). If you to work immediately, just go to the rules screen, **Update** button. An attribute of list fields is that they may be set t single entry, or mutiple values within the list may Multi-valued list fields have an indicator to the le value when that value is selected. In addition, the highlighted. Reports will display all the selected the field is shown.



Another representation of list fields can be achie the option **Display Format** within the data dictic may have list fields represented by boxes, each s a mouse click. You may also use this option to a list values with a checkbox as the select mechan

An option within the data dictionary allows imag alongside the text values within lists. For examp screenshots to the left shows how country flags c and displayed. There are options to turn the ima, and on within screens and reports. You may stor such as photographs with each value. These will as thumbnail sized images within the lists and wi but a mouseclick on the image will expand the ir size. Within mobile devices which do not have t click within a list value, an additional icon is pla value allowing the user to view the large-sized ir

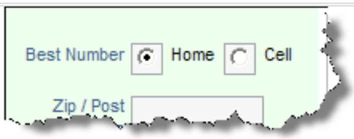
Log Area	This field functions as a log of successive text entries to a field. Without access to the security permis PR_RESOLUTION.EDIT_LOGAREA_FIELDS, the user cannot edit or delete previous entries but c additional entries. The user's name and a time stamp are shown against each entry. When the field ca two buttons, to shrink and enlarge the text area appear adjacent to the field. There is a behavior setting LOG_AREA_DISPLAY_CHARS in the Display Settings area of Administration. This can be used to size of the old entries displayed on the edit screen. When the field is truncated, "more…" is displayed allowing the user to refresh the screen with the entire entry. Each entry into a Log Area field may sto data. When there is more than one entry within a log area fields, sort icons will appear by the user's name a the first entry. The user can use these to resort the comments in different directions. Use the LOG_AREA_INITIAL_SORT behavior setting to determine the direction of the initial presentation. Log area fields may be entered on forms and presented on existing entries and reports as rich text, wh **Present as HTML** is set to **Yes** in the data dictionary definition for the field. This option is not availa fields which are defined for repeating rows. It is not recommended that you place log area fields on repeating record layouts. Each entry in a log a preceded by a header that shows a combination of the user's name, the user's company name, the tim comment and a sequence number for the comment. See the text for the behavior setting named LOG_AREA_TEMPLATE to adjust the presentation of log area fields. **Note**: If a user does not have read permission to the security permission key named PR_RESOLUTION.ASSIGNED_TO, then they will not see the name of the person who created the e area. This is useful if you want to allow customers or guests to see the comments made, but to not knc the entry. You can make the size of the log area field auto-size to the amount of text in the field, by adding a lay attribute of *onkeyup=autoSize(this);*. This attribute will only apply to the layout within which it is set attribute, the number of rows that the field occupies will increase automatically as the user enters add
Number	This is a field that accepts and stores only numbers. Numbers may have decimal points, but they must

named POPUP_LIST_SIZE, the popup list is embellished with a search box, and a list of the first cha data entry values (usually A – Z), to make it easy to search the list. Similar to fields with a display typ can create Pop-up list fields that are aliased to a master list, reducing the amount of maintenance need fields have an attribute that allows type-ahead, or auto-complete. You can set from 1 to 5 characters tl before triggering the presentation of the closest matches to the characters you have typed into the fiel

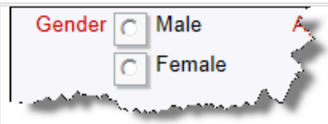
Print Text

This is similar to the Text Area type field, but on display, a fixed-width font is used for the field. This the field may routinely be used to hold diagrams drawn with characters such as +------+ on the keyboa want to preserve the spatial accuracy of the diagram. Print text fields can store up to 128k of text at or while they are in edit mode, two buttons appear adjacent to the field, allowing you to expand or shrinl text entry. Text output fields to reports with a type of Print Text will preserve exactly the spacing that created with, including spaces and returns in the data. This preservation of the input may cause report detailed report to display wider than normal. You can make the size of the log area field auto-size to tl text in the field, by adding a layout cell attribute of *onkeyup=autoSize(this);*. This attribute will only a layout within which it is set. With this attribute, the number of rows that the field occupies will increa as the user enters additional text. Each Print Text field may store up to 5MB of data.

Radio Buttons



Horizontal Radio Button



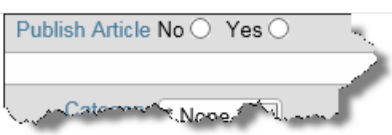
Vertical Radio Button

Radio buttons will use a list of values to create a set of buttons on the screen. The user can select only the list when they are filling in an *add* or *edit* screen. You must create at least two values for the field properly. It is usual to select one value as a default value. This will be the selected value when the for displayed. Horizontal radio buttons are rendered across the screen on both *add* and *edit* forms. Vertica are rendered down the screen on both *add* and *edit* forms. On query screens, the radio button will act valued list field, and the results on reports will look just like results from a single-valued list field.

Like all other field types that render a list-like object, the default rendering of a radio button will inclu option of *** None *** in the list. However, a global attribute is automatically added to a newly created r **Remove the * None *** Entry from the field. You may delete this attribute if you do want a *** None *** e field when it's displayed.

Within a Quickedit session, radio buttons are rendered as list fields, as the amount of space occupied l button with many values may cause navigation problems within the Quickedit session. Also, within a session, a value of *** None *** is added to the list, even if there is a layout cell attribute with a value of This ensures that the first value in the list is not selected automatically when it has no value. Radio bu treated as list fields internally within ExtraView, but there are very few occasions when you want the ***** value to be displayed.

Radio buttons have two ways in which they may rendered on the screen. Further, it is possible to set a option, allowing the user to deselect a radio button, as opposed to only allowing them to select values



Standard style radio button

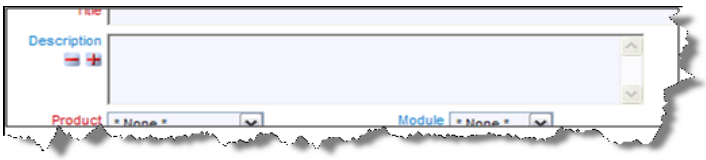
Box style radio button

Note that when you display radio buttons on the ExtraView Mobile app, radio buttons are always disp box style. Standard radio buttons are most often too small to select with a finger.

Example of a tab field

When you create a new Tab field in the data dictionary, it is strongly recommended that you add a glo REMOVE NONE, so that the *** None *** value does not appear on the row of tabs that are generated. I Tab field to default to a specific value, you should set a default value for that tab.

Text Area



This is multi-line text field. Text store up to 128k of text. When tl mode, two buttons appear adjac allowing you to expand or shrin text entry. Note that text area fie contain tab characters. You can r the log area field auto-size to the amount of text in the field, by adding a layout cell attribute of onkeyup=autoSize(this);. This attribute will only apply to the layout within which it is set. With this a number of rows that the field occupies will increase automatically as the user enters additional text. A setting named TEXTAREA_ROW_HEIGHT allows the administrator to set the default height of all t Each Text Area field may store up to 5MB of data.

Text Field

This is a single-line text field. Up to 1,000 characters may be stored in a Text Field. Note that you can width of the text box into which data is typed within each layout on which the Text field is used, usin Cell Attribute named SIZE.

Encryption

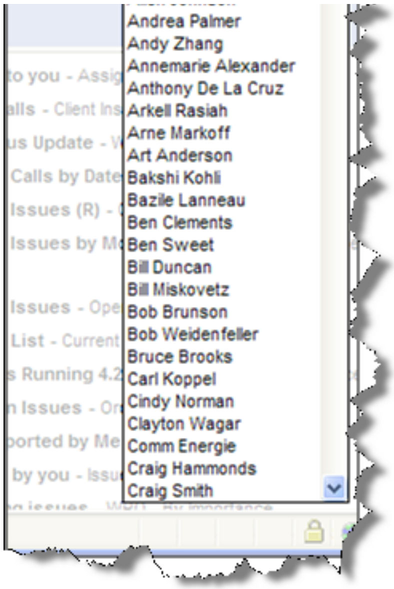
Text fields may be encrypted. To achieve this, you must set up a keystore with the encryption key(s) which fields are to be encrypted within the data dictionary, on a field-by-field bsais. Note that with er than 1,000 characters may be stored in a text field. The precise amount of characters being stored var encryption algorithm, but the encrypted fields typically require more than double the amount of chara unencrypted value.

Telephone Number Formatting of a Text Field

There is a built-in function that can be applied to a text field to apply standard formatting for US-styl numbers. To enable this feature on a text field, you create either a data dictionary global attribute or a attribute with the following HTML modifier: onkeyup=formatAsPhoneNum2(this) In addition, set a attribute of SIZE = 15 to ensure the phone number is of the correct number of characters. If you creat a global attribute within the data dictionary, there is no need to add the layout cell attribute to each lay the function. There is a deprecated telephone format using an HTML modifier function of formatAsP This should no longer be used as it does not work within all browsers. If you require the formatting o number in a different way, or if you require the formatting of any text field in an efficient way, it is re you write a user JavaScript function and call this from an HTML modifier on the field.

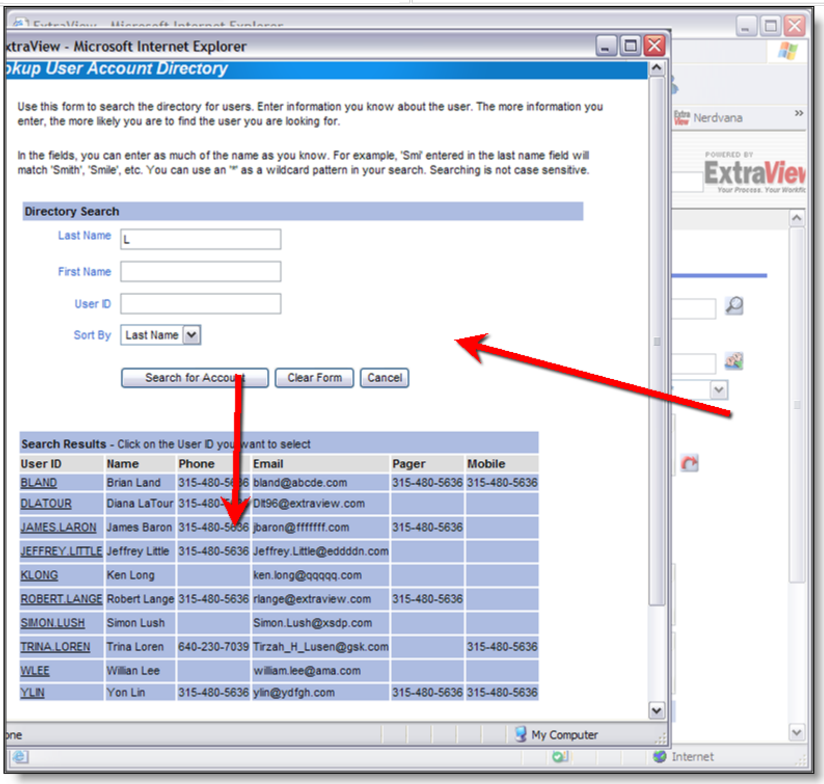
Time Interval

Time interval fields are inbuilt fields only and are used to display the formatted results of measuring t Level Agreement (SLA). These fields are automatically generated and placed in the data dictionary w

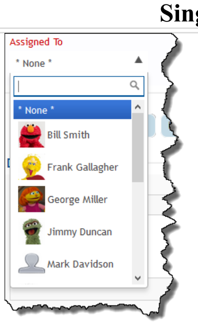
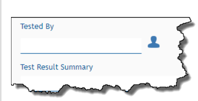


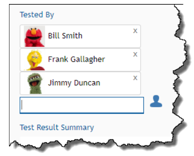
named USER_LIST_DISPLAY has a setting of POPUP, th[e]
have an attribute that allows type-ahead, or auto-complete.
from 1 to 5 characters that are entered before triggering the
of the closest matches to the characters you have typed int[o]

Note: If your installation is configured to use an LDAP co[n]
the behavior setting named LDAP_USER_LOOKUP havin[g]
YES, when auto-complete is configured, only users that ar[e]
stored within ExtraView are returned with auto-complete, a
all potential users in the LDAP server. This prevents a pot[e]
performance issue, returning a huge number of records fro[m]
server to ExtraView, whenever a user presses a single key.



User fields may be configured with images to accompany the name of the user. The images are sourc[e]
user's account where the user can upload their photograph. The way in which the fields are rendered
different, according to whether the field is single- or multi-select.

Single Select User Fields		Multi-Select User Fields	
	Selecting values in a single select		When you first view

		have entered. You can then click on your selection. You can use the X at the right of the list to delete the user.		field again and searc into which you can s the name of the next the list. Select the u on their name. You can use the X a the list to delete a us

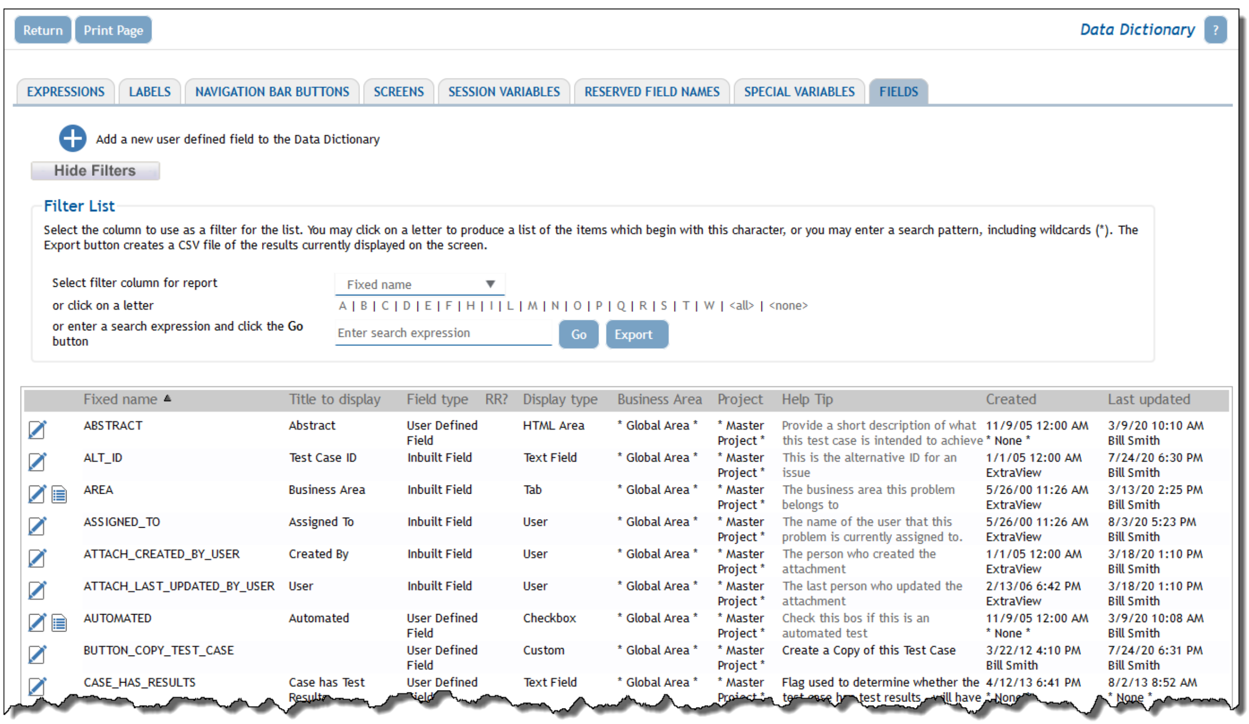
Altering the Display Type of a Field

The data dictionary allows the administrator to make changes to the display type of fields. While these are allowable, consequences if the fields are used within any business rule. For example, you may alter the display type of a field fro **up**. This is a legitimate change and the rules you have written about the field will still be valid. However, for efficienc information about the field is cached within ExtraView, and changing its display type will render this information out- ExtraView refreshes the rules and re-caches this information several times a day, but there will be periods when the ca date information. If this proves to be a problem, you can simply enter the rules file and press the **Update** button to refi information immediately.

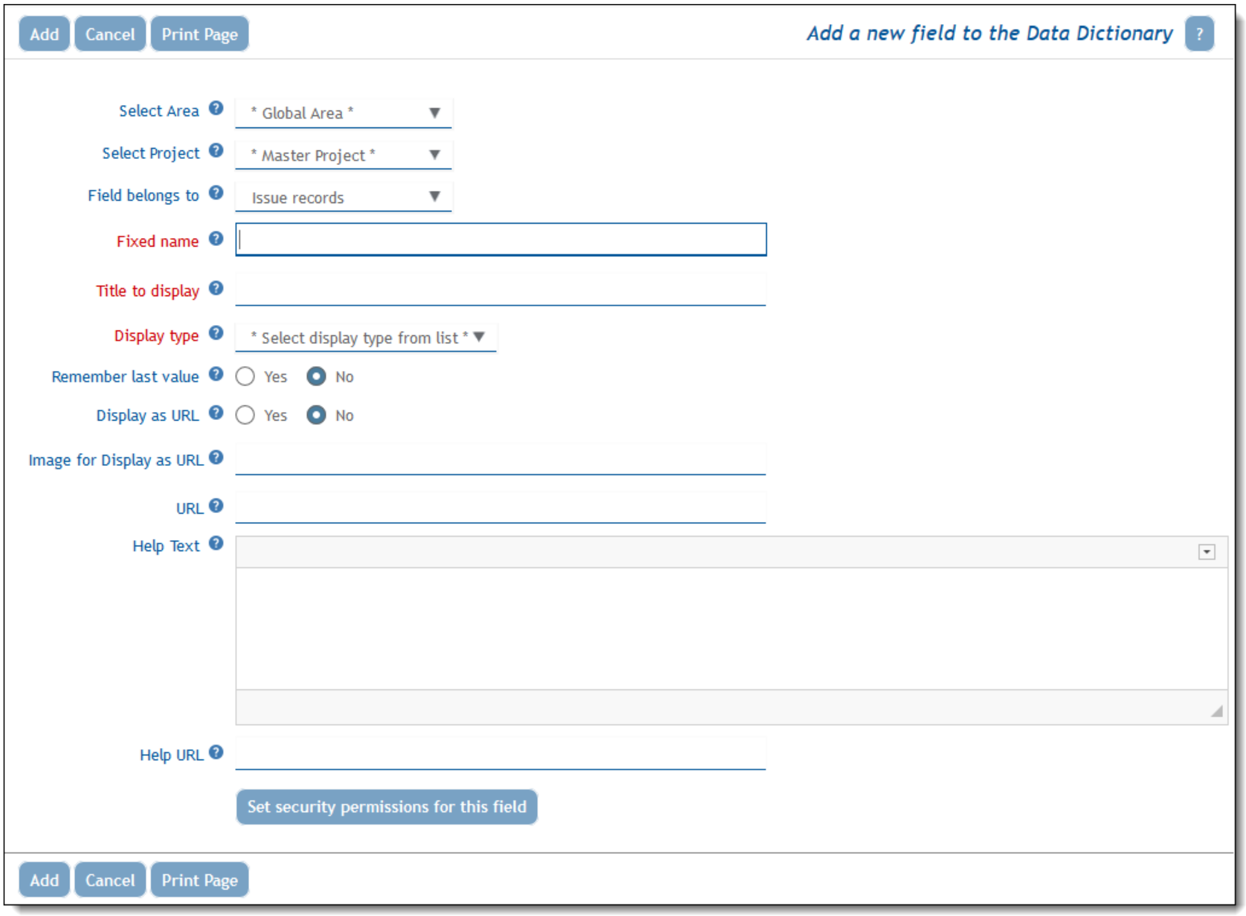
Click for end user documentation

Creating & Updating Fields

Consult the pages on Built-In & User Defined Fields and Display Types in conjunction with this page for complete de create and update fields. Access to the Data Dictionary is from the System Configuration tab. The initial data dictiona similar to the following:



From the data dictionary, under the **Fields** tab, click the **Add** button. A screen similar to the following appears:



Add a Data Dictionary Entry screen

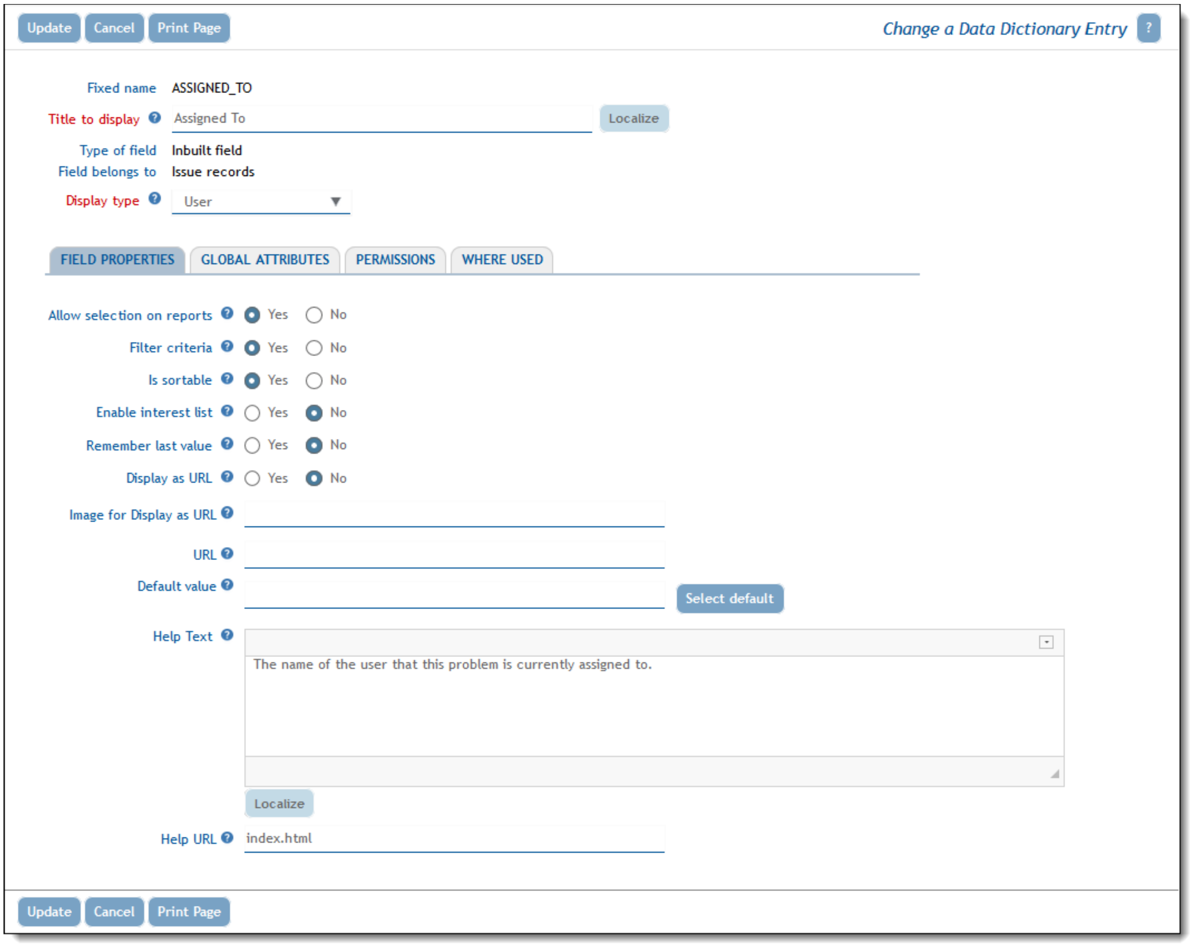
Follow the instructions on the screen to create your field. For a complete list of instructions and a definition of each of screen, click [here](#).

Updating Fields

Click the **Edit** button next to the field that you want to modify. Pressing **Update** within the edit screen will save the cl that fields with a display type of List have a button which allows you to access their values to add, edit and delete thes you can edit a field from the Design Center, by right clicking on the field and choosing the Edit option. The tabs withi dictionary offer access to the field attributes as follows:

Note the **Edit** button for each occurence where the field is found on a layout. Clicking this takes you to the layout ope Design Center.

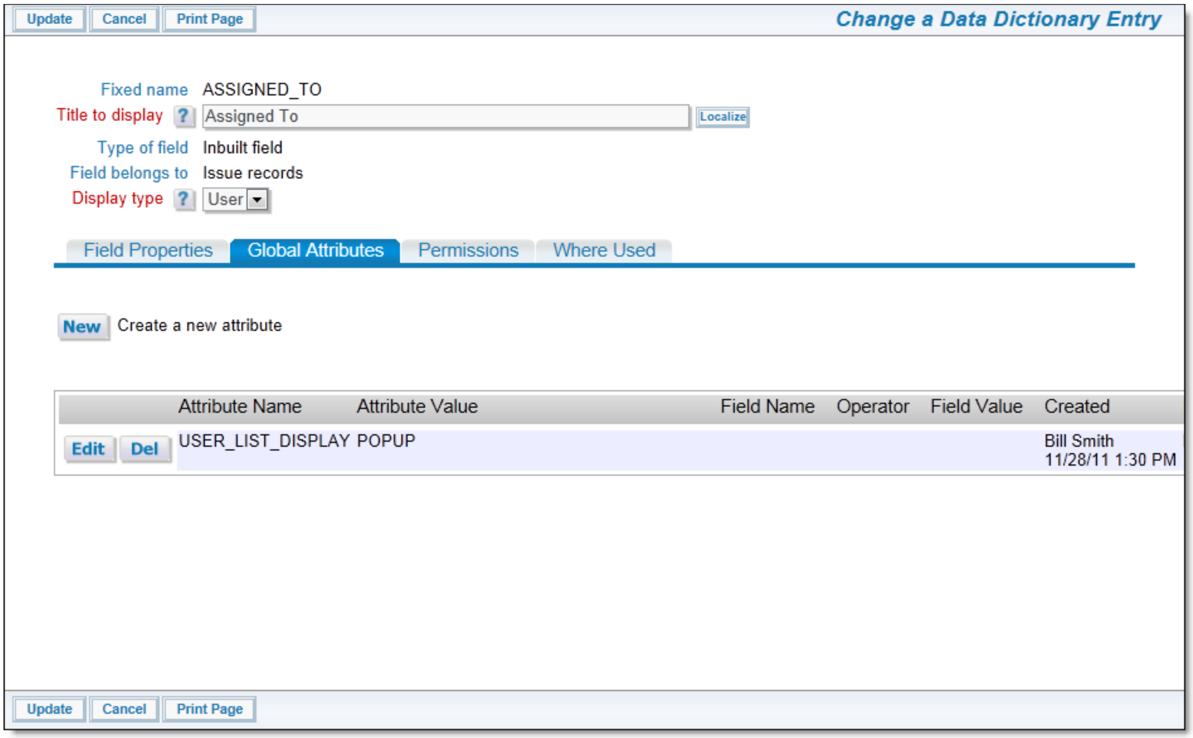
- **Field Properties** - all the basic properties of the field can be altered within this tab. Note that only the propertie the display type of the field are displayed and available to alter.



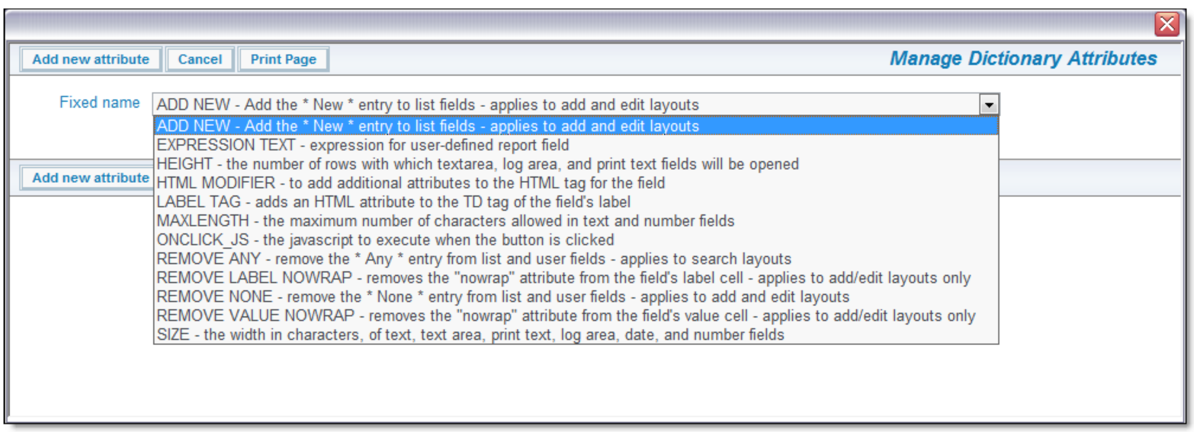
Field properties

- **Global Attributes** - The most important use of global attributes is to create field properties that will be inherite the field is placed within all layouts. For example, you might set a style or size for the field as a global attribute, the default wherever the field is used on an *add* or *edit* layout. This property is inherited by, but may be overrid these layouts by providing a local layout cell attribute. You often want a field to have the same properties and at it is used, and this mechanism provides a means to achieve this, so you do not need to set up layout cell attribut layouts where you use it..

It is recommended that you do not configure attributes such as VISIBLE IF and REQUIRED IF at a global leve

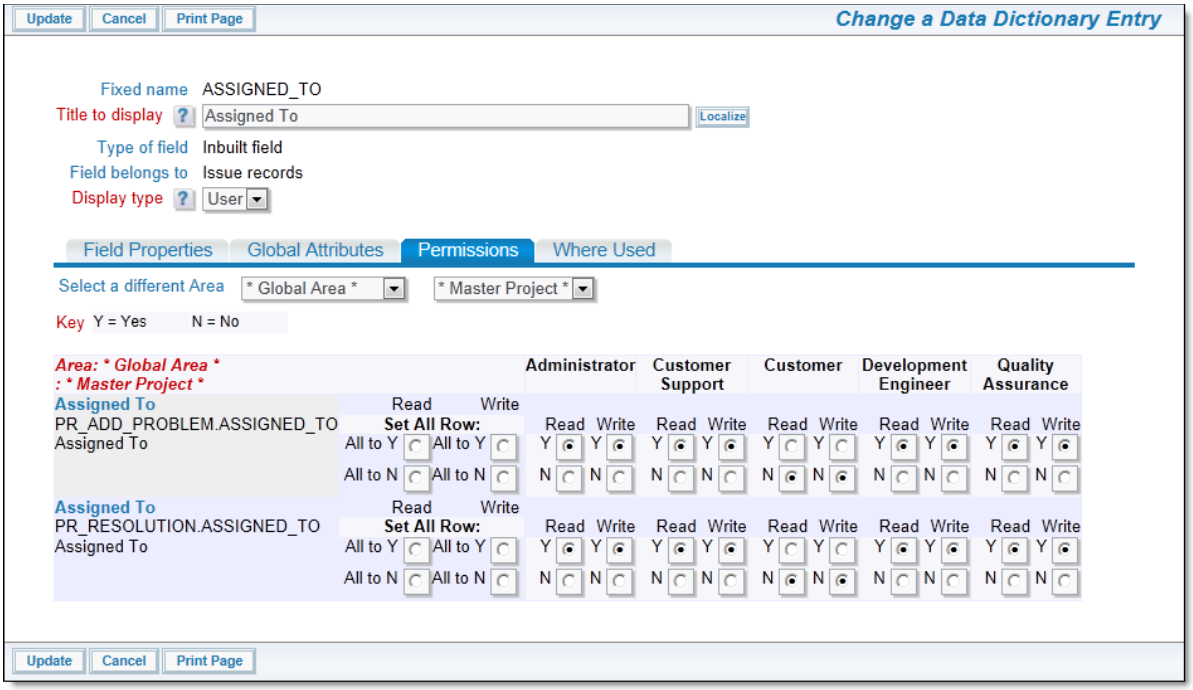


Global Attributes
When you add a new optional attribute, you will see a screen similar to the following. Information on these attri
the page layout cell attributes.



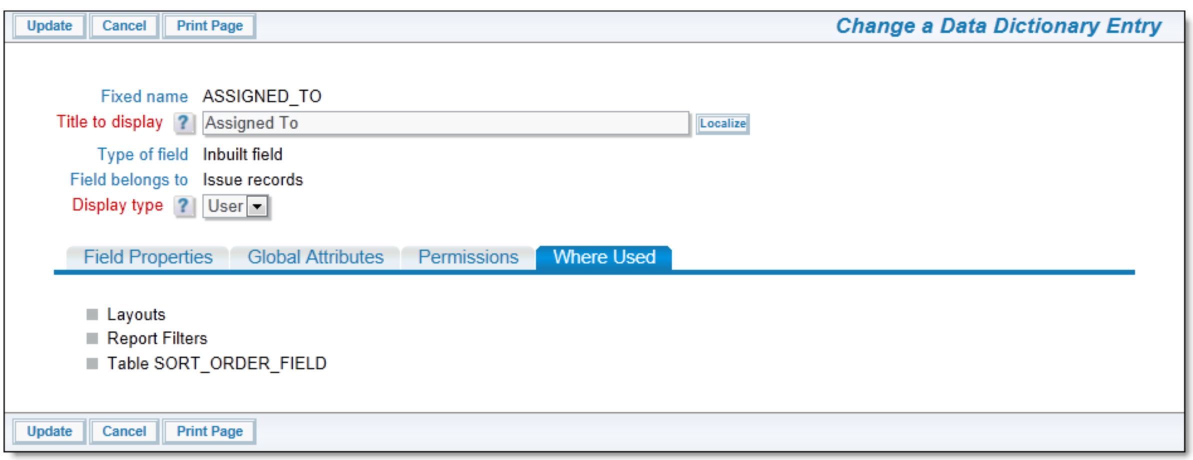
Adding a New Optional Attribute

- **Database** - The Database tab only appears if you are the ADMIN user. It is highly unlikely that you will need tc
and when you change anything on this tab, it should be under the direction of the ExtraView Support team.
- **Permissions** - This tab displays the security permissions for the field, for each role to which you have permissic
update the permissions for the fied here. For more information on security permissions, visit the page on securit

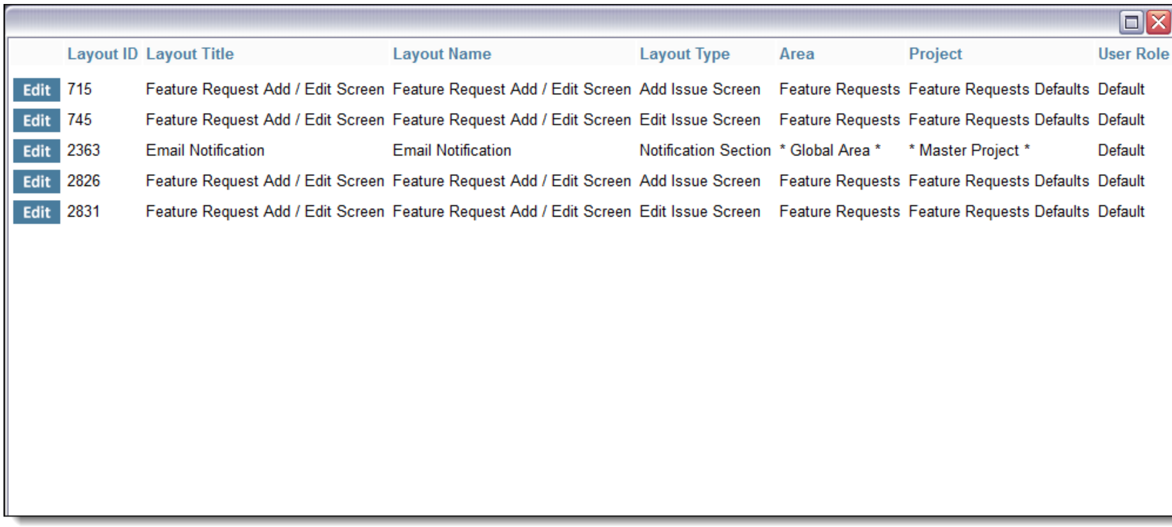


Field permissions
Note that you are viewing the permissions for the object, at the highest level to which you have permissions. If y
permissions to view / update the global area / master project level, you will not see these. If you have permissio
the object’s permissions at the global area / master project level, this will be the top level display of permission
You can view and alter the permissions for the level of the currently displayed Business Area and Project by usi
Dependent Permission Keys, Hide Dependent Permission Keys buttons. You can also switch to a different Busi
Project’s keys by using the select lists at the top of the window

- **Where Used** - This tab allows you to find out all the places where a field is used within ExtraView. For exampl
to delete a field, but want to know where it is being used before you do so. The first screen within this section sl
the high level places where a field is used, such as **Layouts**. You can drill down on this to see the exact layouts
used.



Where Used



	Layout ID	Layout Title	Layout Name	Layout Type	Area	Project	User Role
Edit	715	Feature Request Add / Edit Screen	Feature Request Add / Edit Screen	Add Issue Screen	Feature Requests	Feature Requests Defaults	Default
Edit	745	Feature Request Add / Edit Screen	Feature Request Add / Edit Screen	Edit Issue Screen	Feature Requests	Feature Requests Defaults	Default
Edit	2363	Email Notification	Email Notification	Notification Section	* Global Area *	* Master Project *	Default
Edit	2826	Feature Request Add / Edit Screen	Feature Request Add / Edit Screen	Add Issue Screen	Feature Requests	Feature Requests Defaults	Default
Edit	2831	Feature Request Add / Edit Screen	Feature Request Add / Edit Screen	Edit Issue Screen	Feature Requests	Feature Requests Defaults	Default

Drilling Down in Where Used

Note the **Edit** button with each occurence of the field on a layout. Clicking this will take the user directly to the where they can view and modify the layout.

Lists

List administration is the administrative section where you can manipulate all the lists that comprise the metadata valu ExtraView. For example, this is where you maintain lists of business areas, products, modules, and many other items. the lists that you create as User Defined Fields.

For convenience, the list of items on this screen includes Privacy Groups and User Roles. These lists can be viewed ar from this administrative section as well as within the Users section.

The metadata field lists that appear on this screen include all fields with a data dictionary display type of List and Tab.

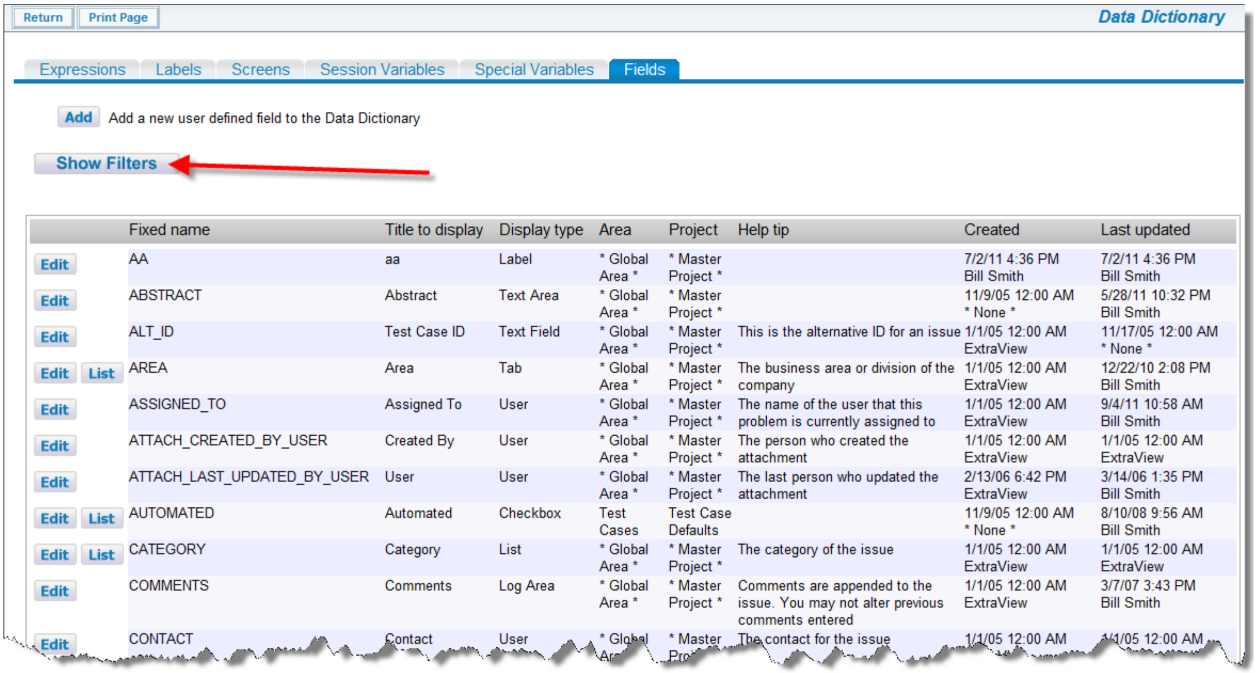
Lists values may be dependent upon values in other lists. This is termed Allowed Values, and is covered in more deptl Administration section of this guide.

Interest Lists are also maintained for field values within List maintenance. For example, if you want to maintain an int specific product, or an interest list for Priority 1 issues, then this is completed through the add and edit functions of ea

Managing Lists

Lists are managed in the same way, from a variety of different places in ExtraView. For example, there are lists of fiel behavior settings, lists of fields in the data dictionary, interest lists and many others.

When you first access a screen with a list it will look similar to this:

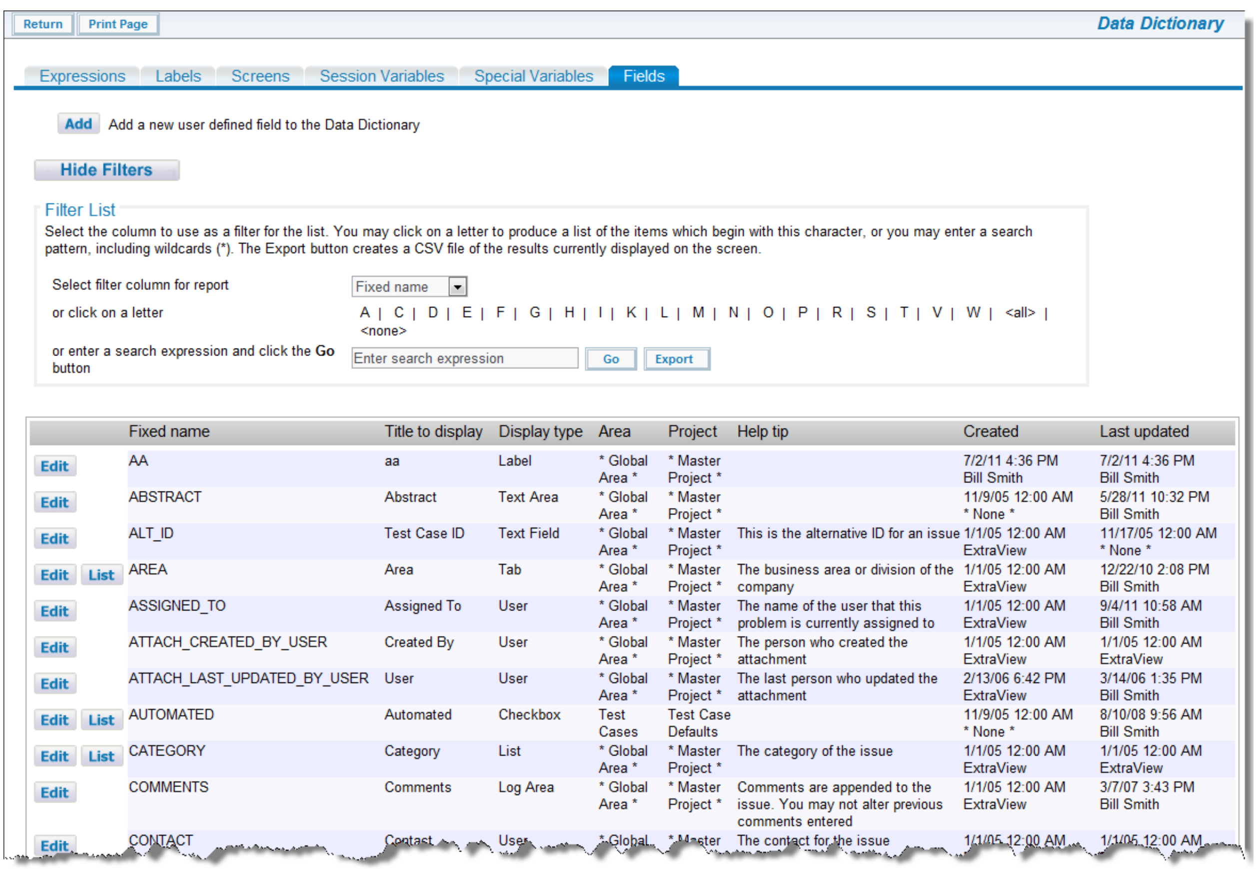


Data dictionary list

If you do not have either read or write permission to a field, it will not appear in the above list.

You can manage the list by using the Add button to add a new entry, or by clicking the Edit button at the left hand side the list. Some lists such as behavior settings allow you to edit a value, by clicking on the value. If there is a delete capa list entry and delete the value from there.

Note the **Show Filters** button on the above screen. This is provided to offer a search capability on long lists. When yo button, you will see a screen like this:



Data dictionary list with filters

Set the filter column to one of the columns displayed in the list, and then click on a letter to see all the list entries that displayed column's first character.

You can enter a search expression, including wildcards, to retrieve the subset of records you want to work with. For th can also use the Export button to create a CSV (Comma Separated Value) file with the list values.

Lists behave differently, according to how many entries are in the list, and the value of the behavior setting named ADMIN_LIST_SIZE, in order to provide a balance between ease of use and scalability, when the number of records r administration list exceeds the value of ADMIN_LIST_SIZE.

When the number of entries in a list is less than the value of ADMIN_LIST_SIZE, the list is immediately displayed in When the number exceeds the value, a search screen is displayed, with the first character of each entry of the list being click on as a shortcut to looking only at these records. Thirdly, if you set a negative number, as opposed to a positive n acts similarly to the second option, but with an abbreviated interface.

Sorting Lists

You can sort lists by clicking on any of the column headings that have a symbol in the heading. When you click on that is sorted in an ascending order and shows a then the sort symbol alters to show and the list is sorted in descen this column.

Sorting List Values

You can sort a field list within the add, edit and query screens for each list field by allocating a sort sequence to its ent administration. The sort sequence is a number or string of letters. Valid sort sequences would be:

23	2	a	2a	open

If no sort sequences are provided, the list is sorted alphabetically, using the title of the field. If you provide a sort sequ entries to the list are sorted in their ASCII sort order sequence. It is recommended that you establish a sort sequence fo room to insert new values in the future. This will give the most flexibility. For example, if you have a list that starts w but may grow, use a sequence such as:

010	020	030	040	050

This will allow you to insert new values between each of the entries, if needed in the future.

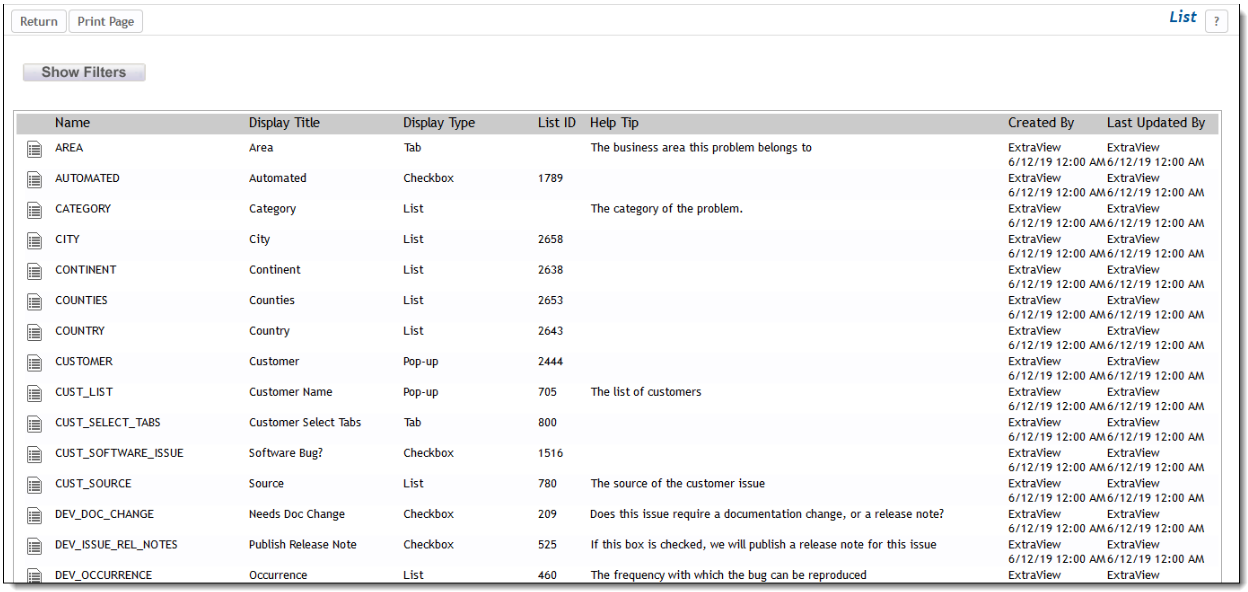
Enabling and Disabling List Values

Within all user defined lists, there is the opportunity to disable a value. Once the value has been disabled, it will not ap screen in a selectable manner. If an existing record already has the value set, then the user may leave the value in place select a new, enabled value.

Note that checkbox fields are stored internally as lists that are constrained to just two values, typically *Yes* and *No*, *On* something similar. You may not disable a value within a checkbox field.

Field List Values

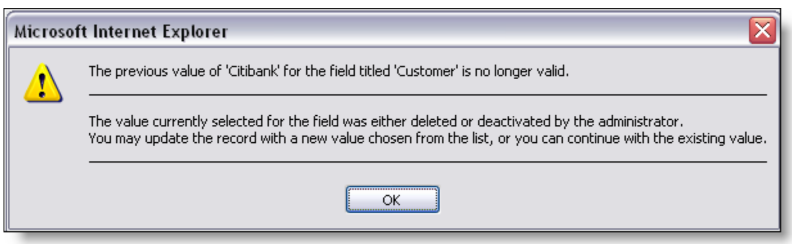
List values are maintained from one of several places - the **Manage List Values** administration menu, the **List** button field in the **Data Dictionary**, or by using your mouse to right-click on a list type field within the Design Center. This s the **Manage List Values** screen as seen from the **Manage List Values** and the **Data Dictionary**. From within the **Des**



Name	Display Title	Display Type	List ID	Help Tip	Created By	Last Updated By
AREA	Area	Tab		The business area this problem belongs to	ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
AUTOMATED	Automated	Checkbox	1789		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CATEGORY	Category	List		The category of the problem.	ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CITY	City	List	2658		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CONTINENT	Continent	List	2638		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
COUNTIES	Counties	List	2653		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
COUNTRY	Country	List	2643		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CUSTOMER	Customer	Pop-up	2444		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CUST_LIST	Customer Name	Pop-up	705	The list of customers	ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CUST_SELECT_TABS	Customer Select Tabs	Tab	800		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CUST_SOFTWARE_ISSUE	Software Bug?	Checkbox	1516		ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
CUST_SOURCE	Source	List	780	The source of the customer issue	ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
DEV_DOC_CHANGE	Needs Doc Change	Checkbox	209	Does this issue require a documentation change, or a release note?	ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
DEV_ISSUE_REL_NOTES	Publish Release Note	Checkbox	525	If this box is checked, we will publish a release note for this issue	ExtraView 6/12/19 12:00 AM	ExtraView 6/12/19 12:00 AM
DEV_OCCURRENCE	Occurrence	List	460	The frequency with which the bug can be reproduced	ExtraView	ExtraView

Managing field lists

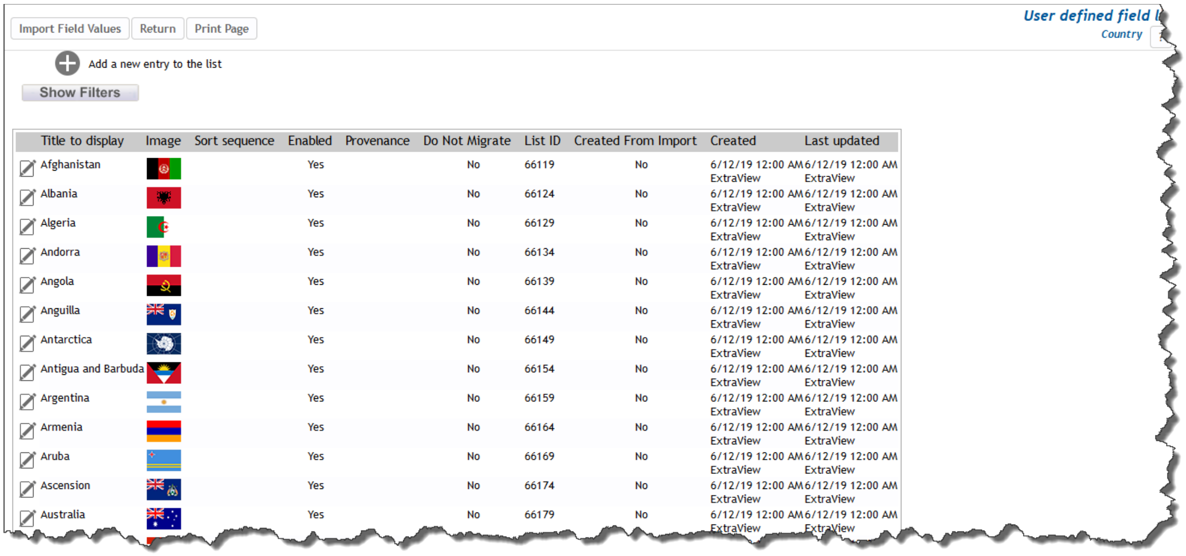
Note that once you have one or more values entered against any list type field by adding or updating issues, you are n the list value. If you want to remove a value from a list after data has been recorded against the value, most lists allow the value, so it will not appear in the add or edit screens. This allows reporting to show the historic data, even though t currently being used. If a user edits an issue which has a disabled value in a list, they will see a message similar to this



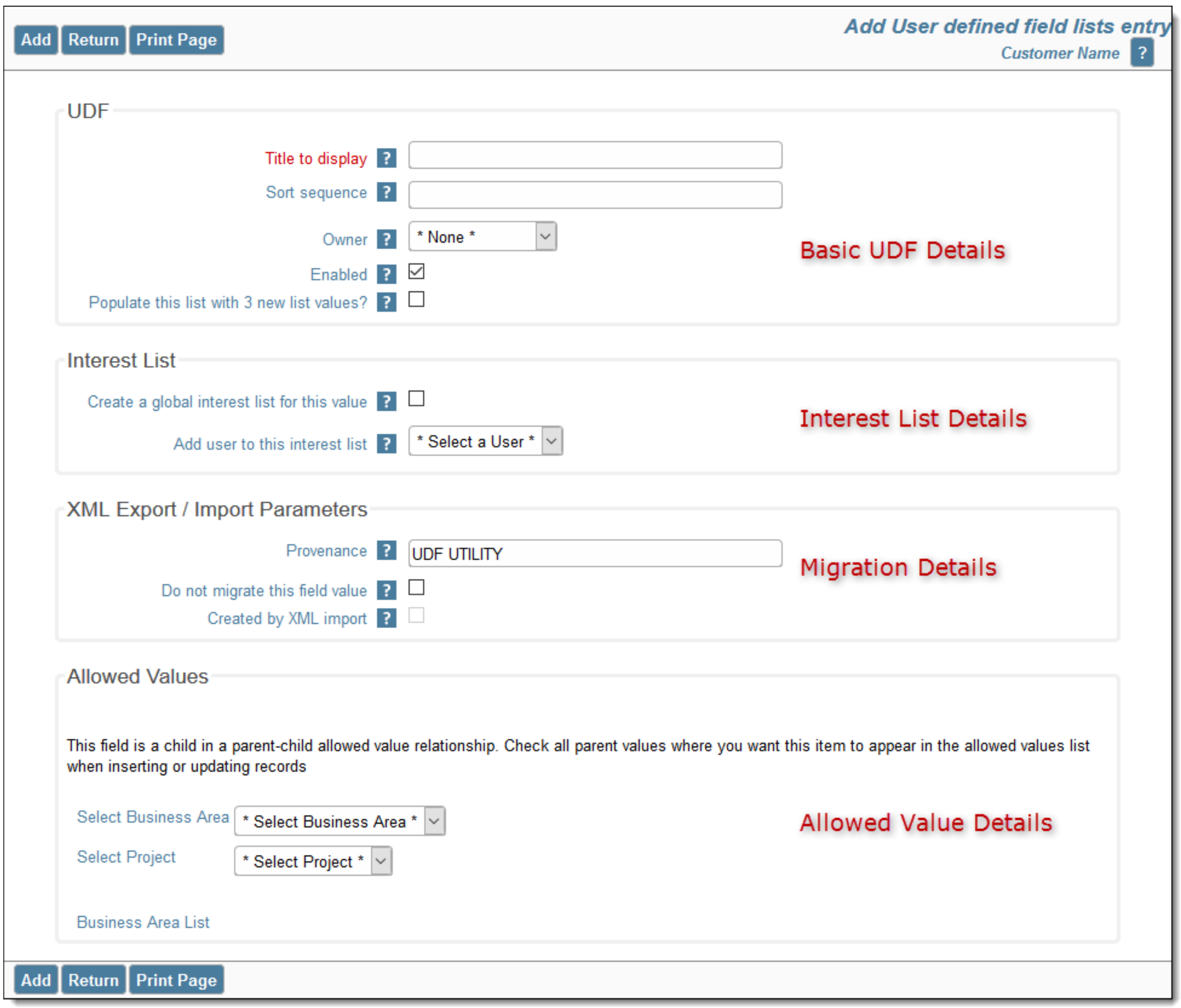
Warning when viewing a disabled value

The user may either update the record with the out-of-date value, or choose a new valid entry from the list. If the out-c removed from the list and the record updated, no user will be able to choose that value again. The behavior setting nar IGNORE_DEACTIVATED_USER_FIELDS may contain a delimited list of fields with a display type of USER. Users warned if they edit an issue which has a field in this list with a deactivated user. If a USER field does not appear in thi will always be warned if the field has a deactivated user, when they edit the issue. There are a few lists which are man

- Business Area and Project lists. These are used to set up and maintain the business areas and projects within you within these lists may not be disabled. Security permission keys exist to turn Business Areas on and off for diffe
- Values within the Category, Priority, Product Line, Status and User Role lists may not be disabled. Note that the permission fields that can be used to disable and enable the visibility of the Status field values
- The Product and the Module fields work together, and the Module field administration will ask you to select a v before you maintain any modules. Module field values may not be disabled
- List which have the data dictionary property to associate an image with the list values are shown like this:



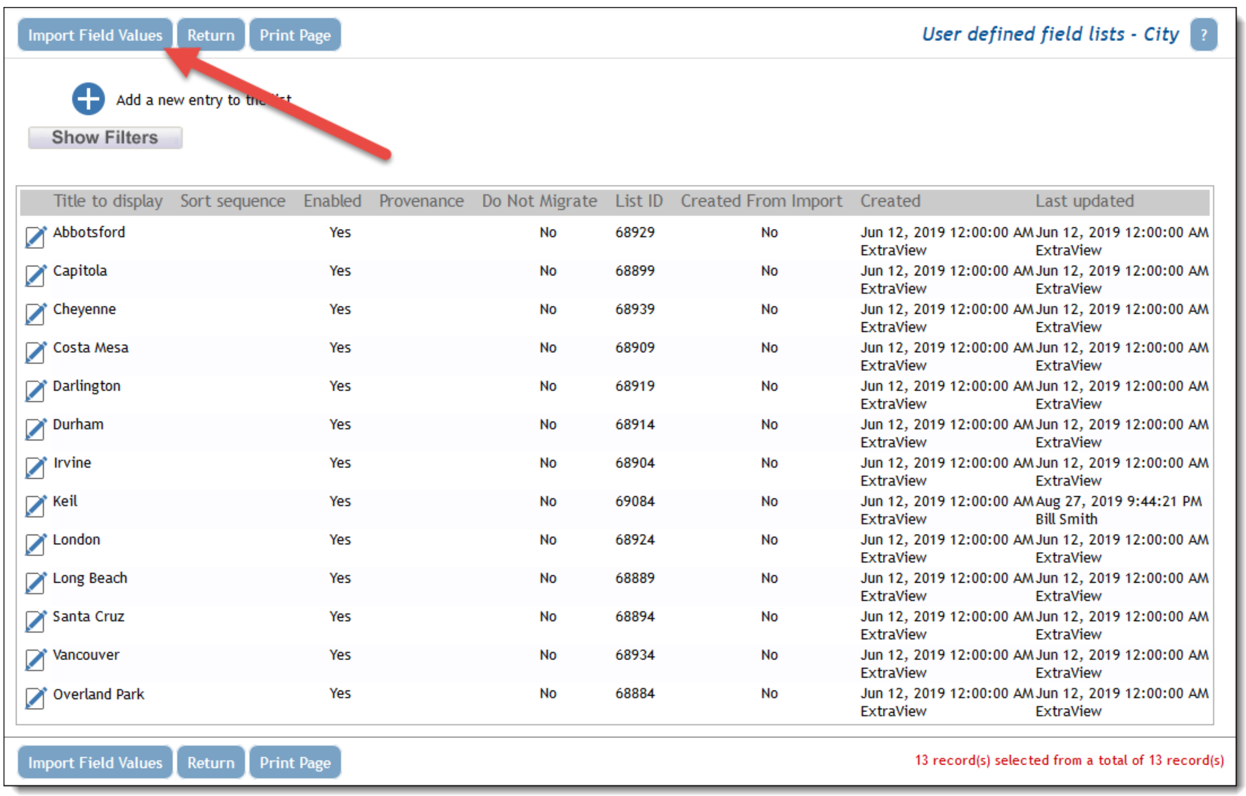
To add an entry to the list, press the **Add** button. To edit an entry, press the **Edit** button by the value you want to edit.



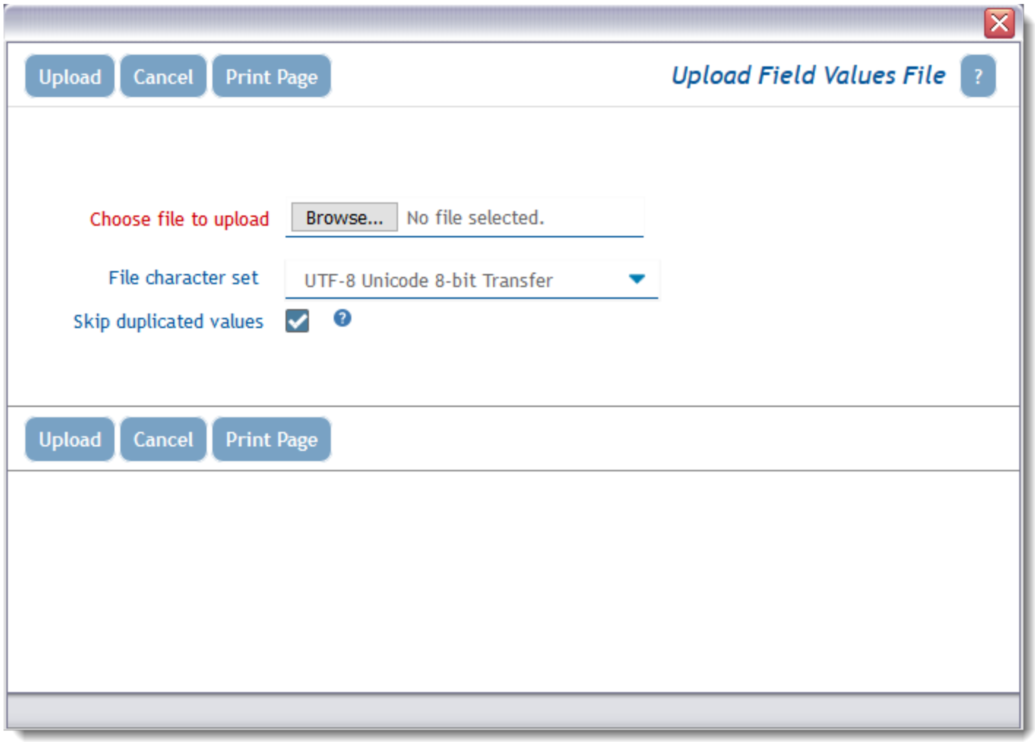
	company's names. If the data dictionary propert to associate images with the list values is enabl an additional prompt within the basic UDF details that allows you to upload an image against ea Images are restricted in their size, to 50kB each. Images larger than this will be resized so they additional space. As each image is displayed on *add*, *edit* and report screens, they will also be s uniform as possible and to match the user's personal text size option. This utilizes the behavior LIST_IMAGE_SIZE_PCT which has a default value of 100. At 100%, the images are sized to l height as text characters used for list values and reports. You may decide to make this value larg display correspondingly larger or smaller on user's screens.
Interest List Details	If the field may be used as an Interest List, this section appears. If more sophisticated processin list for the value is required, then the administrator should use the **Interest List** menu under the of **Administration**.
Migration Details	It is occasionally useful to inhibit the migration of some list values between instances when perf exports / imports. This section allows the administrator to flag specific values so they will not b between instances. Note that this section also displays how a specific list value has been createc through the user interface of this utility, or perhaps as a value created by an OBJECT business ru
Allowed Value Details	This section allows you to define which parents a field value belongs to in allowed value relatio

Loading List Values from Files

This feature only works to load values into user defined field lists. It does not work with inbuilt fields such as **STATU RESOLUTION** and user field lists. This is not a real limitation as these inbuilt field lists tend to be small lists. Each u list has a button **Import Field Values**. When this is pressed, the administrator is able to load a file of values into the fi

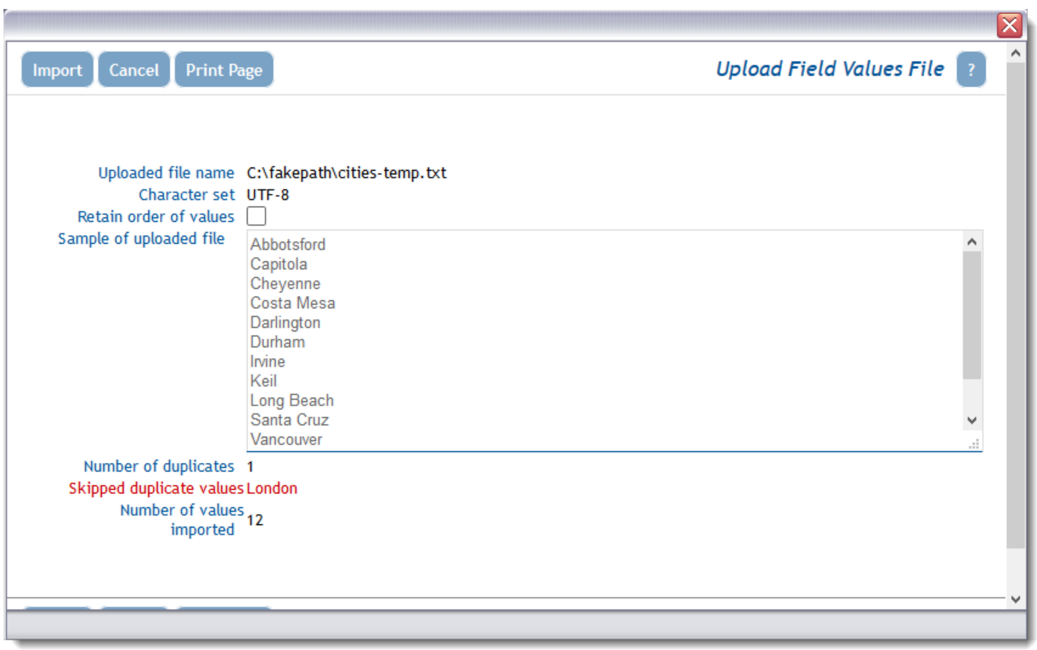


Title to display	Sort sequence	Enabled	Provenance	Do Not Migrate	List ID	Created From Import	Created	Last updated
Abbotsford		Yes		No	68929	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Capitola		Yes		No	68899	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Cheyenne		Yes		No	68939	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Costa Mesa		Yes		No	68909	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Darlington		Yes		No	68919	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Durham		Yes		No	68914	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Irvine		Yes		No	68904	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Keil		Yes		No	69084	No	Jun 12, 2019 12:00:00 AM ExtraView	Aug 27, 2019 9:44:21 PM Bill Smith
London		Yes		No	68924	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Long Beach		Yes		No	68889	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Santa Cruz		Yes		No	68894	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Vancouver		Yes		No	68934	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView
Overland Park		Yes		No	68884	No	Jun 12, 2019 12:00:00 AM ExtraView	Jun 12, 2019 12:00:00 AM ExtraView

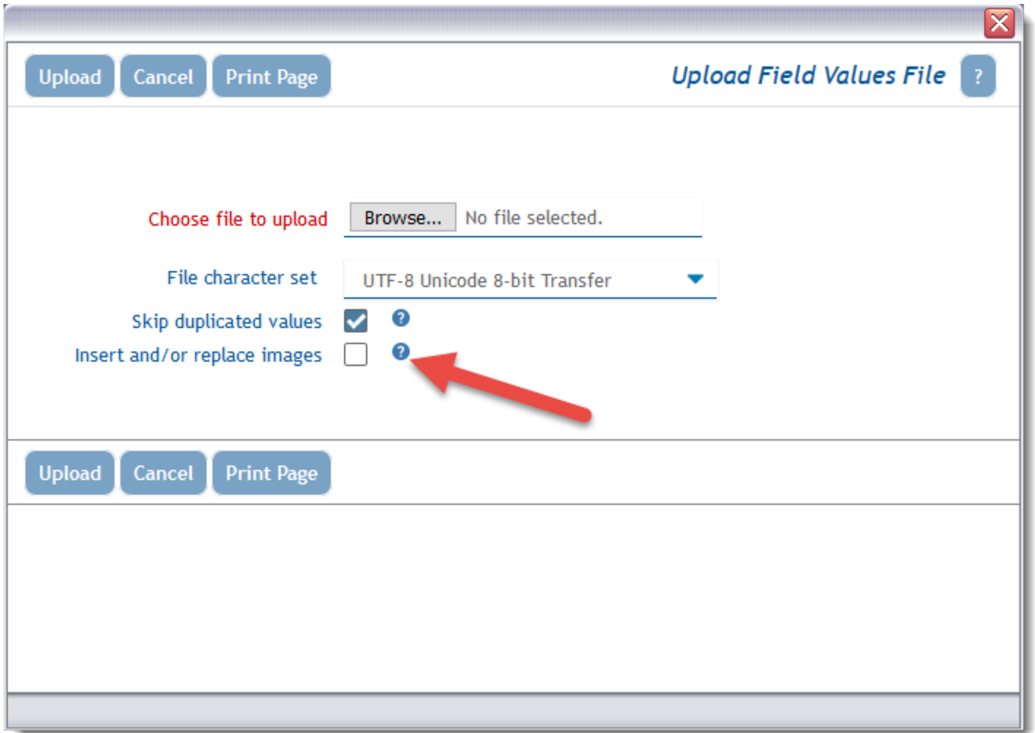


Specifying the file to upload

When the file is uploaded, you will see a sample of the file:



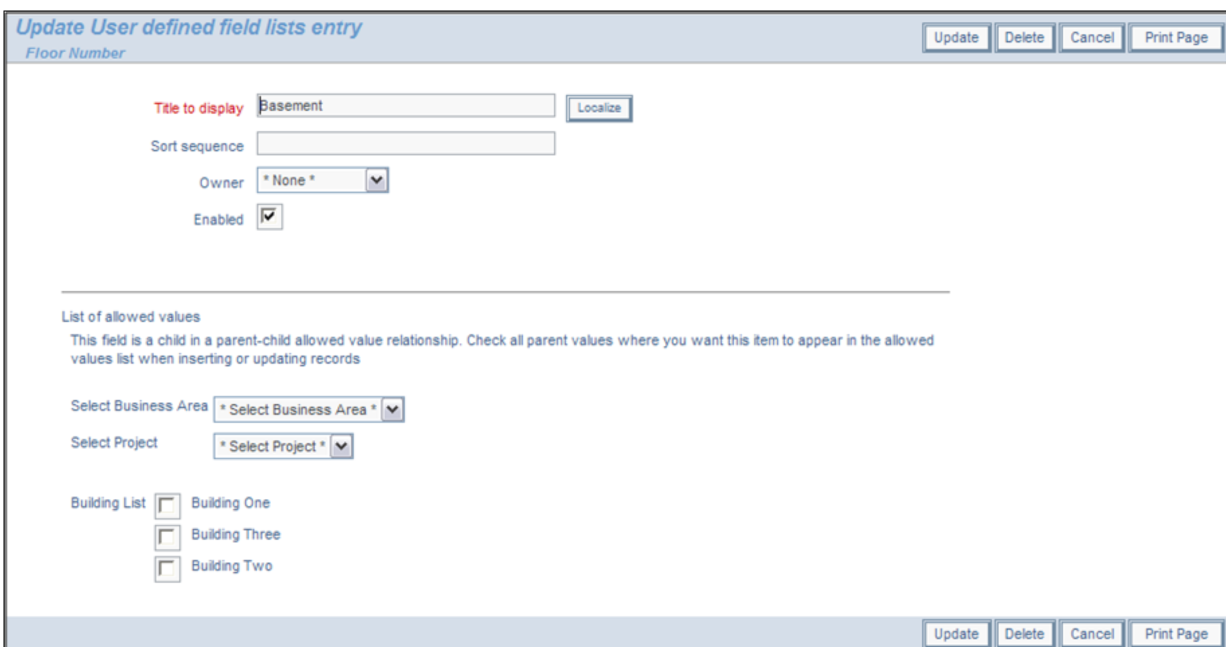
Sample of uploaded file



List Entries with Allowed Values

Editing lists that are the child in an allowed value relationship is a little different. As seen in the screenshot below, the potential parents is displayed, each with a checkbox. Also, if Business Areas and Projects are enabled, you must selec Area and Project for which you want to set the allowed values (see the next section).

Click on each of the parent values that this child is allowed to be related to. The example shows an allowed value relat two fields, where the field named *Building* is the parent and the field named *Floor Number* is the child.



sometimes it is more convenient to take a “top-down” rather than “bottom-up” approach.

Business Areas and Allowed Value Relationships

It is important to note that when Business Areas and Projects are enabled, the allowed values that you set are only for Business Area and Project. This is controlled by additional prompts on the maintenance screen as shown above. You r allowed value relationship for each Business Area and Project.

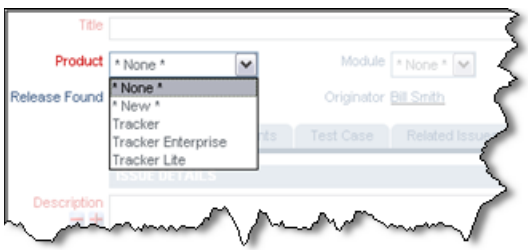
Note: If the Business Area field is the parent field in the allowed value relationship then you should be aware of how t with the fact that allowed values are dependent upon Business Area works. The implication is that you can only defin relationship to either belong, or not belong to the currently selected Business Area. There is no meaning to allowing th selected with other Business Areas. Therefore, you will only see the currently selected Business Area with a checkbox possible allowed values.

Note: You can set up a set of default values for a relationship. These will be used, unless overridden by a specific set u Business Area and Project.

End-User List Management

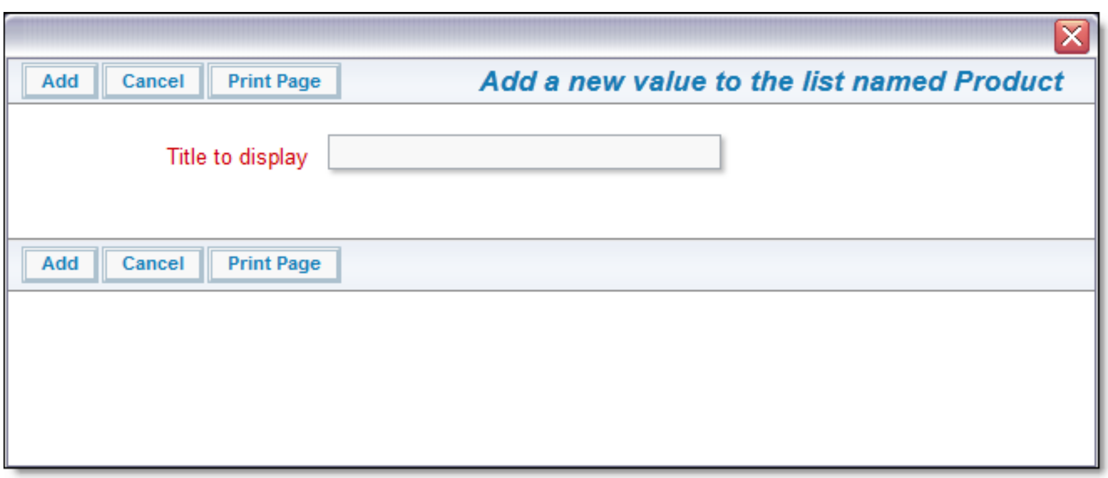
End users may add new values to lists under certain circumstances, where the administrator has enabled the feature wi permissions, and has turned on the feature on specific layouts.

To an end user, the ability to add a new value to a list appears like this:



Adding a new value to a list

When the end user selects the * **New** * entry in the list, a window pops up, asking for the details of the list. The appea popup varies a little, according to whether the list is an inbuilt list field (such as **product_name**), a child list such as **m** **release_found** or **release_fixed**, or is a user-defined field list. The inbuilt fields require the addition of the field's fixe title. Dependent child fields require the parent field to be selected, and the relevant fixed name and/or title. User defin require the title to be input. This is an example of a popup:



Field	Security Permission Key
PRODUCT_NAME	CF_PRODUCT
MODULE_ID	CF_MODULE
RELEASE_FOUND, RELEASE_FIXED	CF_PRODUCT_RELEASE
All UDF's with a display type of List, with the exception of multi-valued lists	CF_UDF_LIST

- For the user role or user roles that you want to be able to add new values to a list, give the security permission k table write access
- The * **New** * entry is added to the list by adding a layout cell attribute to the field on the appropriate *add* and/or layout cell attribute is named **ADD_NEW - Add the * New * entry to list fields - applies to add and edit lay**
- The feature works with UDF list and popup fields on repeating rows as well as on standard list fields
- The feature works with multi-valued list and popup fields on standard list fields only. It does not work with mul fields on repeating row fields
- The feature does not work with fields being used on reports with the Quickedit mode
- The feature does not work with other types of list fields such as tab and radio button.

Aliased Lists

Within the data dictionary you can create list type fields which are the alias of other list type fields. ExtraView will ke the two (or more) lists synchronized. However, you can only edit values within the original list. If a field has other fie aliased to it, you will see a message when editing the list, similar to:

This field is also the alias for 'Customers', 'OEM Customers'. Modifying the values in this list will modify all th the lists.

If the field is the alias of another field, you are not able to edit its values. There will be a message similar to:

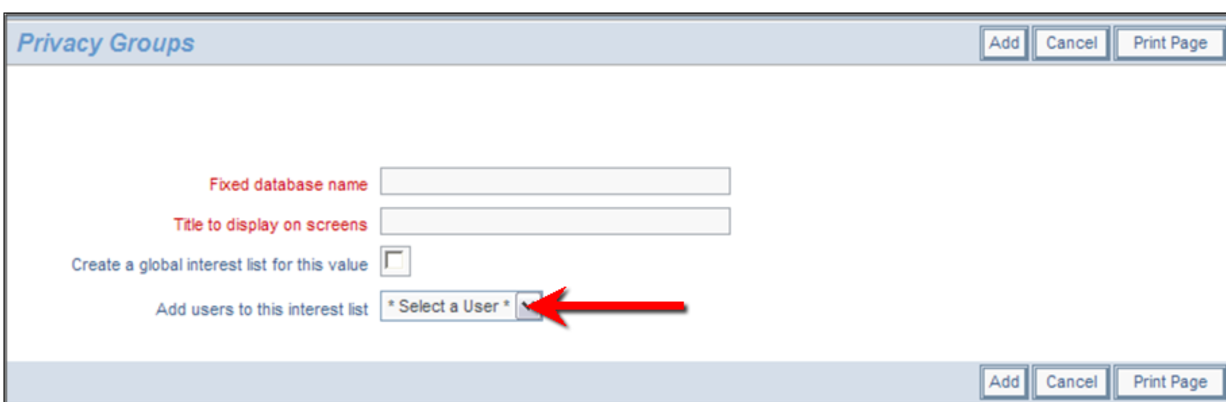
This field is an alias of the field named 'Customer'. You may not edit the list values for this field. Please go to th make changes to the entries for this list.

You can create an alias list for fields with a display type of List, Popup and Tab.

If you delete a list which is the original of a list with an alias, then the aliased list becomes an independent, stand-alon you may only delete a list when there are no values with data stored against it.

Lists with Enabled Interest Lists

When an interest list for a field is enabled, the administrator has the option to create an interest list entry for the value they are adding a new value to the list. Under these circumstances, the screen to add an item to the interest list also co additional fields, **Create a global interest list for this value** and **Add users to this interest list**. This is shown in the screenshot.

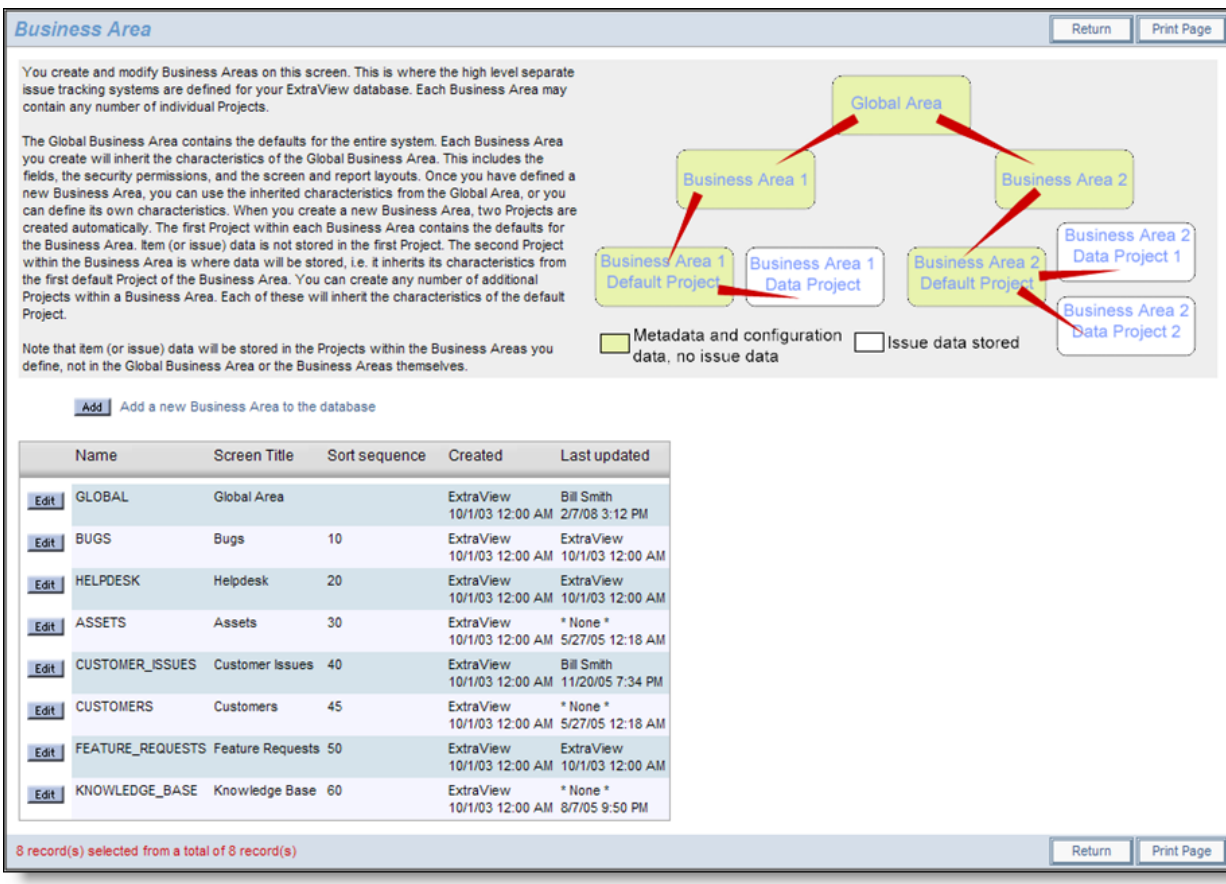


Business Areas

Business Areas are created as a list, like all other lists. From an administrator's perspective, a Business Area is createc list. Internally, many actions are taken to prepare ExtraView for the new business process you have just added. In sum

- If DISALLOW_AREA_0_DATA and DISALLOW_PROJECT_0_DATA are set to YES, then two projects are automatically. The first is named by appending *Project Defaults* to the title of the new business area. The secon appending *Project Data* to the title of the new business area. The *Project Defaults* is the project with the PROJE is the project from which other projects inherit their characteristics. The *Project Data* is the project in which the be stored, assuming you do not create other projects within the business area. You may alter the titles of these p own purposes. **It is not normal practice to set these two settings to anything other than a value of YES. Th mainly used for backwards compatibility with sites created prior to ExtraView version 5.**
- Security permission keys are created for each user role for the new business area. This allows you to enable or business area for each user role within ExtraView. These security permission keys are named with the following when you look at the Grant Security Privileges screen – AREA.id (area_title) where id is the internal ID of the area_title is the title of the business area. The effect of the security permission keys for user roles is to enable / for a user within a specific role to be able to view and / or select the business area on all the *add*, *edit* and *query* can lock any user role out of any business area with this facility.
- The layout editor will make the new area available to create new layouts. Until you create a new layout within t layouts from the Global Area will be inherited.
- The new area will be available within the status rules administration screen, to allow you to set status rules for t Until you create status rules for the new area, the rules will be inherited from the Global Area.
- You can define multiple roles with access to administration. However, each of these roles can be permitted to se combination of business areas.

- Note: Even if a user role does not have permission to see a business area, that role may still be able to retrieve r area. For example, a query that asks to retrieve all the "open" issues irrespective of business area will do just th records from areas where no permission exists to see the area. You can prevent this behavior by setting a layout query layouts with the FIELD REMOVE NONE attribute. This will force the user to select one or more areas tc access as part of their query.



Business Areas and Projects Relationship

Business Areas are linked to Projects, and vice versa. The relationship is that many projects can belong to a single bus

ExtraView Corporation does not recommend that the global business area (i.e. the business area with the internal ID o store data. It should be used primarily to store metadata about the installation, such as the security permissions to be u throughout the system, and the layouts that are common across the entire system. Taking this step will simplify the ins ExtraView when it is to be used for multiple tracking purposes.

The same principle holds true for the global project within each business area, and we recommend that this not be use

However, this may be cumbersome if you only intend to use ExtraView for a single tracking function and you have th this behavior. To accommodate the differences, there are two behavior settings in the Workflow Settings menu of Adn

Setting Name	Default Value	Purpose
DISALLOW_AREA_0_DATA	YES	When this setting is NO, issue data may be entered into AREA 0. T for backwards compatibility for installations created prior to versior Installations created with version 4.2 and greater should not allow is placed in AREA 0. With installations from 4.2 onwards, this should
DISALLOW_PROJECT_0_DATA	YES	When this setting is NO, issue data may be entered into PROJECT (provided for backwards compatibility for installations created prior Installations created with version 4.2 and greater should not allow is placed in PROJECT 0. With installations from 4.2 onwards, this sho YES

The default business area and project lists in the list modification screens do not include entries for the global area (0), DISALLOW_AREA_0_DATA is YES or project (0), if DISALLOW_PROJECT_0_DATA is YES. In addition, when an area, a warning is issued if DISALLOW_PROJECT_0_DATA is YES and the area added or modified has no projec global project.

Project Lists

The PROJECT field is the child of the AREA field. This relationship is more fully explained in the page on Business default project is used as the default project for all layouts, fields and values within the entire project, and each of thes inherited from the default project to other projects within the business area. Each business area has a minimum of two default project and a data project. The default project only stores default metadata for the entire set of projects within t and never stores any issue data. The remaining projects may store metadata that overrides the metadata within the defa well as issue data for that project.

By convention, the default project always has a value for the field PROJECT_ID of zero. When a business area is crea projects are named XXXX_DEFAULTS and XXXX_DATA where XXXX is the name of the business area. When you the data for a project, there are a number of behavior setting values you can override. The behavior settings are defaul you provide entries within the default project, the values become the values for the entire business area. If you provide any project other than the default project, then the value is only used for that project. The project-level settings that ov stored within the behavior settings are modified within the edit screen for any specific Project. Use the list manageme navigate to the PROJECT field within the data dictionary and edit the project field which will store the values that ove behavior settings.

For email notification the list of behavior settings that you can modify is:

- AD_HOC_EMAIL_FROM_ADDRESS
- AD_HOC_EMAIL_FROM_SENDER

You may set your own template for the display of the title in the browser tab title by altering this setting, Project by Pr include the following fields within $$ characters and the appropriate title will be displayed on the browser tab:

- ID
- ALT_ID
- AREA
- PROJECT
- STATUS
- CATEGORY
- PRIORITY
- PRODUCT_NAME
- Any text field

Status List

The status list drives workflow, and is explained fully in the section within this guide entitled Workflow Setup. The lis following special properties in addition to driving the workflow:

- Security permission keys are created for each status list entry. These allow you to control the visibility of the sta absolute fashion, for the list entry within each user role
- There is a behavior setting named STATUS_CLOSED_NAME. This should be set to the status name for the val "closed" in your installation. This is usually CLOSED, but you may alter this as you need. You should not alter production system, as you will lose the historic tracking related to the dates that issues were closed. Set this valu implementation only.
- The status list will be populated on *add* and *edit* screens according to the rules set within the workflow setup sec Fundamentally, the workflow can be different or the same for any combination of business area, project, and use
- Although ExtraView allows duplicate titles in lists it is strongly advised that you do not create status values witl values. If you do so, ExtraView will give a warning.

Deleting a Status Name and Value

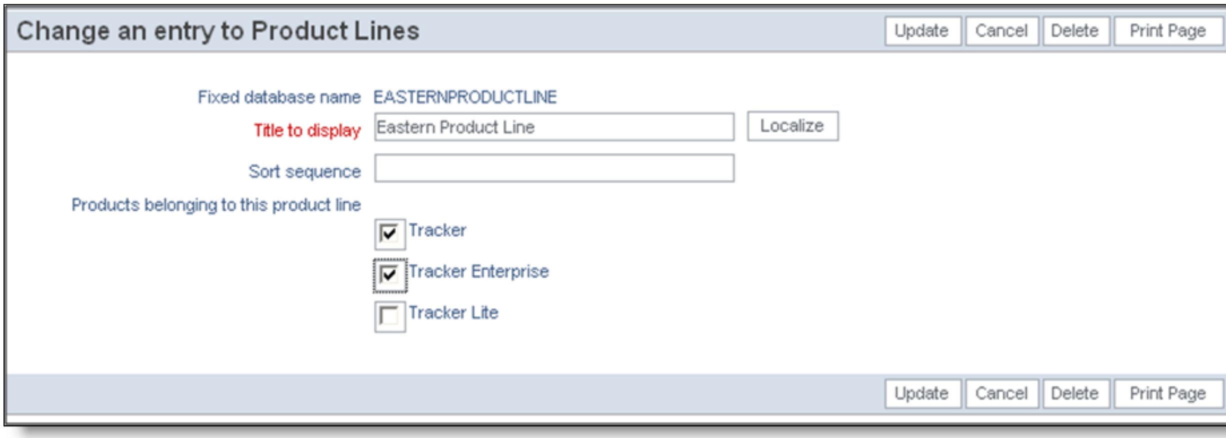
Like all field values, you must delete or remove all dependent data before you can remove the status name and value. the suggested order of removing a status name and its value:

- First you must ensure that no issues exist with the status value. With an empty database, nothing needs to be dor use the mass update feature within reporting to select all records with the value you want to remove, and then al new value you have created, or to one of the status values you are keeping
- You must next remove all the status change rules that use the value you want to remove. With this version of so remove these individually. In future versions this will be simplified
- Check that the value you are removing is not the behavior setting named STATUS_CLOSED_NAME
- Check that the value you are removing is not the default value for the STATUS field within the data dictionary
- Finally, remove the status value from the Status List maintenance screen

Product Lists

Product Line Lists

Note:This field is deprecated and should only be used within existing applications. Newly configured applications sho product line list functionality by creating a new user defined list field, then creating an allowed value relationship wer parent, and the **product_name** field is the child field. Product lines (the **product_line** field) have a special relationshi (the **product_name** field). Any single product may belong to any number of product lines.



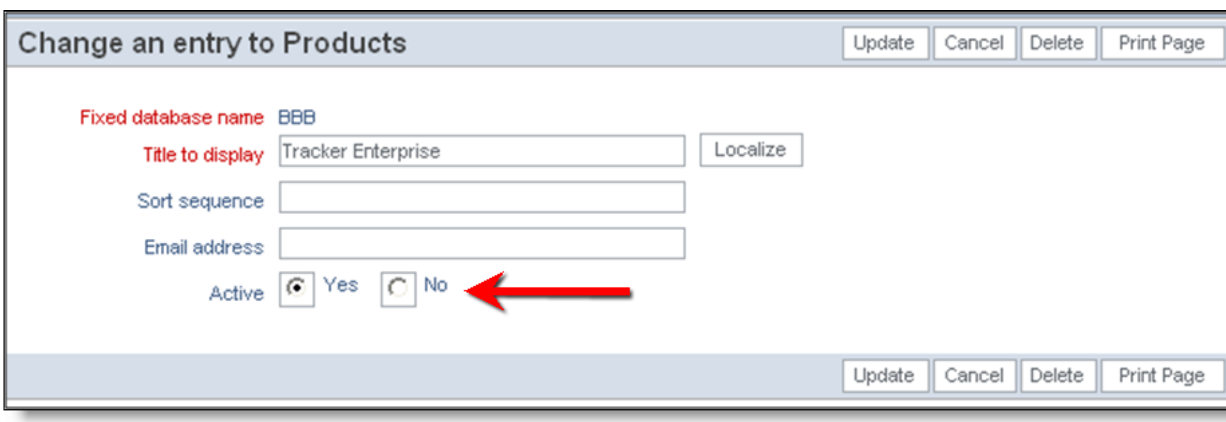
Adding a product to one or more product lines

When adding or editing a product line, you will see a list of all products, each with a checkbox. To add a product to a j simply check the box. When you place both the product line and product fields on an add screen or edit screen, they ir

Condition	Behavior
No allowed values on the *product_name* field	When a product line is selected, the screen refreshes and the list of products will ı of products in the list for the product line
product_name is the child in an allowed value relationship	When a product line or the parent field in the relationship is chosen, the screen re: list of products displayed will be those that both belong to the product line, and aı allowed value relationship

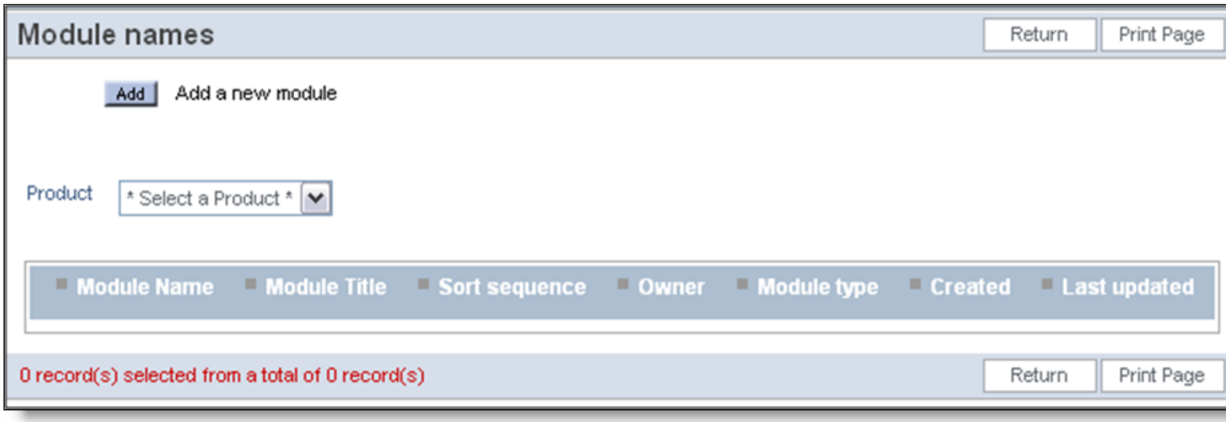
Product Name Lists

Product name lists (**PRODUCT_NAME**) have an additional attribute that gives the ability to deactivate a product. W deactivate a product, the product will no longer appear within the select list on the Add and the Edit screens. If the use with an inactive product, then they will receive a warning that it is no longer a valid option. The user may update the i inactive product, or they can select a new active product.



Deactivating a product

Module Name Lists



Module Names screen

Click the **Add** icon to create a new Module Name. Since *Module* depends on *Product*, you will have to choose an app from the drop-down list to associate with your new *Module*. Fill in the appropriate fields and click the **Update** button.

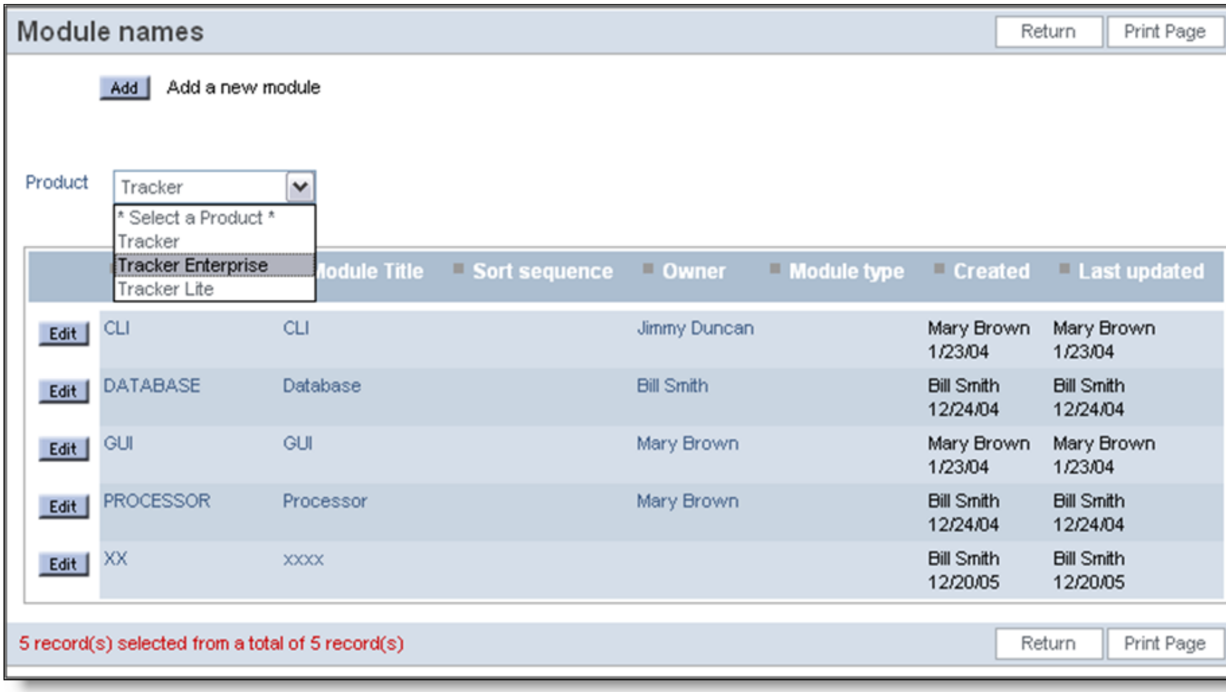
Adding a Module Name

To modify an already existing *Module Name*, return to the Administration menu, click the Manage Field List Data tab *Module Name*, as in step 4. Select the *Product* that pertains to the *Module* that you want to edit.

If you have set the display type for the MODULE_ID field to be popup, then searching for a value is slightly different fields. The search mechanism utilizes the **name** value of this field, not the value of the **title**. In most instances, the nar field values for modules are the same, but in the cases where they are not identical, the popup list will display **name_value(title_value)**, allowing you to distinguish between the name and the title.

The owner of the module will automatically receive email notification when the module is selected on an issue. Also, behavior settings that affect the way notification happens with the *module* field.

Setting	Purpose
EMAIL_MODULE_OWNER_ALWAYS	Email the module owner irrespective of whether they are assigned to an i values are YES and NO
LINK_MODULE_USER	Links the module owner field to the specified user field. This will autom value of the user field specified to the value stored in the *Module Owner* have a value of ASSIGNED_TO, CONTACT or OWNER



Editing an Existing Module

Click the **Edit** button next to the *Module* that you wish to change. On the screen that appears, you can edit the values, the record.

Release Found & Release Fixed Lists

Use of the built-in RELEASE_FOUND and RELEASE_FIXED fields are discouraged for new configurations. These relationship with the built-in PRODUCT_NAME field will be deprecated in a future release. Support for existing use continue at this time. You should configure UDF's in place of the RELEASE_FOUND and RELEASE_FIXED fields

These lists have several special properties:

- They point to the two inbuilt fields RELEASE_FOUND and RELEASE_FIXED
- These fields belong to repeating row records. They should not be used on layouts other than repeating row recoı use a field or fields for the functionality of RELEASE_FOUND or RELEASE_FIXED on layouts such as an ad then define UDF's and use these
- These fields use PRODUCT_NAME as their parent value, and therefore separate lists can be defined for each p system
- Both lists adopt the same values and are maintained in a single place within the List maintenance screen
- Releases may be made inactive. Once inactive, they will not appear within lists as you add or update an issue. H edit an issue where the release found or release fixed is inactive, you will see a warning, which you can choose
- The sort sequence of the Release Found and Release Fixed lists can be sorted in an ascending or descending ord controlled with the behavior setting named RELEASE_SORT_ORDER on the Workflow Settings administratio
- If you have set the display type for the RELEASE_FOUND and RELEASE_FIXED fields to be popup, then sea value is slightly different than for other fields. The search mechanism utilizes the **name**value of these fields, no **title**. In most instances, the name and title of the field values for RELEASE_FOUND and RELEASE_FIXED a in the cases where they are not identical, the popup list will display **name_value(title_value)**, allowing you to c between the name and the title.

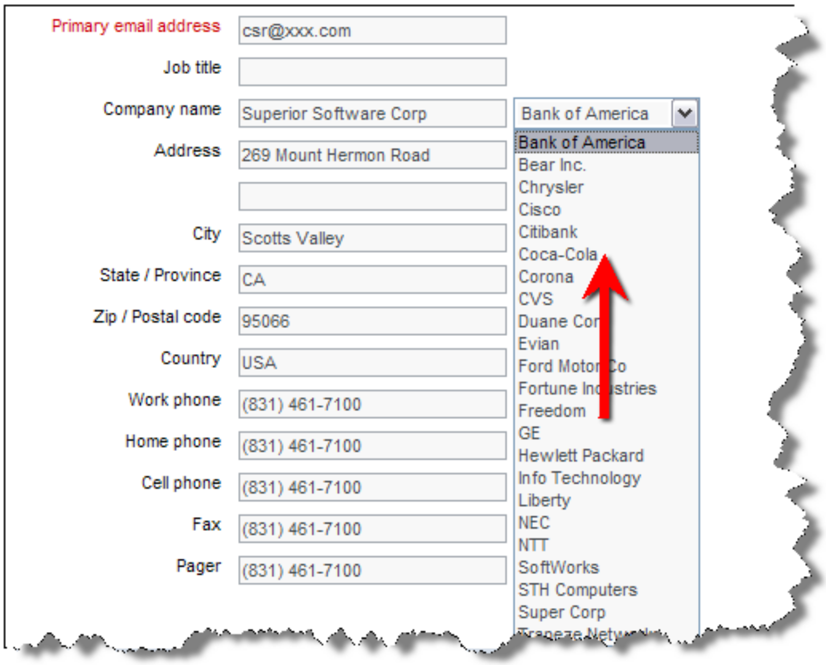
Adding a new entry to the release list

Company Name Lists

It is often useful to be able to maintain a reference list of Company Names. A User Defined Field list can be created a User Account Maintenance screens. This may prevent the duplication of multiple versions of a single company name. may otherwise enter a company name as Superior Corp, Superior Corporation, Superior Corp., etc.

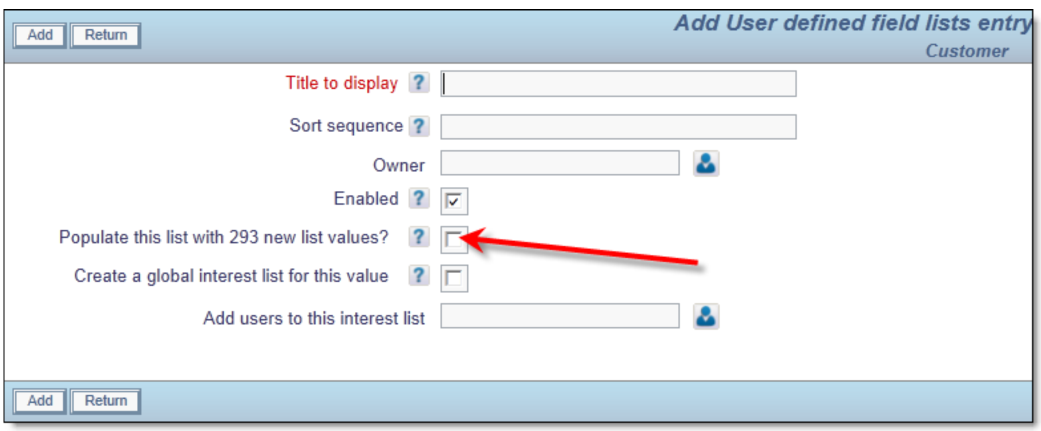
To facilitate this:

- Create a user defined field which is to retain the list of company names
- Place the name of this user defined field in the behavior setting named COMPANY_NAME_LIST_UDF
- When you add a new user to your site, you will then see a list of all current company names, and you may then previously entered name or you may create a new one.



Use of the COMPANY_NAME_LIST user defined field

When you edit the list defined by COMPANY_NAME_LIST_UDF, it has a special property as shown in the screensh



Updating the COMPANY_NAME_LIST field

This indicates that when you add the new value to the list, that you can synchronize the list values with the list of user should select this checkbox and perform the synchronization.

Relationship Group List

It is often useful to be able to maintain a reference list of Relationship Groups. A User Defined Field list can be create the Relationship Group Maintenance screen. To facilitate this:

- Create a user defined field which is to retain the list of Relationship Groups there are a number of fields whose purpose requires some additional explanation.

Attachments

When you are adding attachments to an issue from both the *add* and *edit* screens, you use the PR_ADD_PROBLEM s permission key. This is not immediately obvious with regard to the *edit* screen.

Also note that the ATTACH_FILE_DESC permission key has special properties with regard to fields with a display ty and image.

Field Name	Title	Definition
ATTACHMENT	Attachments	This field is used on reports to display all the fields that co attachment record. All fields that may be placed on the atta are displayed, assuming they have read permission.
ATTACHMENT_ID	Attachment ID	The internal ID for the attachment. Used within the ATTAC and the ATTACHMENT_HISTORY layout.
ATTACH_CHANGE_TYPE	Change Type	The type of attachment change. Used on the ATTACHMEN layout.
ATTACH_CONTENT_TYPE	Attachment Content Type	The mime type of the attachment. Used within the ATTACI and the ATTACHMENT_HISTORY layout.
ATTACH_CREATED_BY_USER	Attachment Created By	The person who created the attachment . Used within the A' field and the ATTACHMENT_HISTORY layout.
ATTACH_DATE_CREATED	Attachment Date Created	The date the attachment was created. Used within the ATT/ field and the ATTACHMENT_HISTORY layout.
ATTACH_FILE_DESC	Attachment File Description	The description of the attachment. Used within the ATTAC the ATTACHMENT_HISTORY layout and on fields with a IMAGE and DOCUMENT. This field has some special pro • If PR_ADD_PROBLEM.ATTACH_FILE_DESC is v the description for all upload objects is required on th • If PR_ADD_PROBLEM.ATTACH_FILE_DESC is v the description for all upload objects is permitted, bu the *add* screen • If PR_ADD_PROBLEM.ATTACH_FILE_DESC is r nor readable, then the description for all upload objec on the *add* screen • If PR_RESOLUTION.ATTACH_FILE_DESC is wri description for all upload objects is required on the *e* • If PR_RESOLUTION.ATTACH_FILE_DESC is wri description for all upload objects is permitted, but no *edit* screen • If PR_RESOLUTION.ATTACH_FILE_DESC is neit readable, then the description for all upload objects is the *edit* screen.
ATTACH_FILE_NAME	Attachment File Name	The file name of the attachment. Used within the ATTACH the ATTACHMENT_HISTORY layout.
ATTACH_FILE_SIZE	Attachment File Size	The file size of the attachment . Used within the ATTACHI the ATTACHMENT_HISTORY layout.
ATTACH_PATH	Attachment Path	The original path in which the attachment was stored . Use ATTACHMENT field and the ATTACHMENT_HISTORY
ATTACH_HIST_TIMESTAMP	Attachment	

		a checkbox by each attached file added to the issue. This w conjunction with another field, NOTIFICATION_EMAIL_ATTACHMENT. This field app notification layout. When a user checks the NOTIFICATION_EMAIL_ATTACHMENT field, then eac attachments checked in the list of attachments is sent out as to the notification. In this way, file attachments can optiona users connected with an issue, when the issue is either adde This field is also subject to control with the ADD and COP rules, as well as being available within user custom code.
ATTACH_THUMBNAIL	Thumbnail	Preview a thumbnail image of the attachment. Used within ATTACHMENT field and the ATTACHMENT_HISTORY
NUMBER_OF_ATTACHMENTS	Number of Attachments	This field may be placed on reports, or used as a report filte count of the number of attachments on an issue. For examp this as an advanced filter to show all the issues that have att used as **Number of Attachments > 0.**

Behavior Settings

Setting Name	Default Value	Description
ALLOWED_ATTACH_SEARCH_FILE_EXT	application/pdf,application/msword, application/vnd.msexcel,text/csv, text/html,text/plain,text/rtf	This is a list of the allowed min attachment files to be searched when the user checks the **Searc** box. If the file in the list to be s have one of these mime types, i This is used to skip searching o image files, to speed the search
ATTACHMENT_CONTROL_FIELDS	NO	This setting is only used in conj Java user custom exit named ucAllowAttachmentOperation. enables the functionality within When the value is NO the user not called. When the value is Y within the method is called and
ATTACHMENT_REPOSITORY_DMAX	999	The maximum number of files that will be created under one n external directory structure. Th value is 999. It is not likely that needs to be altered
ATTACHMENT_REPOSITORY_OPT	INTERNAL	This setting controls whether at stored internally within the data on the file system, or in some c the two methods. If the value o INTERNAL, then all attachmer internally within the database. I this setting is EXTERNAL, the attachments are stored on the ex system. Alternatively, you may comma separated list of file ext all files with these extensions w externally while all others will l database. For example, if you s

ATTACHMENT_REPOSITORY_ROOT		The name of the directory on th where file attachments will be s any attachments are stored exte also provide a valid setting for t ATTACHMENT_REPOSITOR must also ensure that the path is application server(s) that are ru ExtraView, and that you have al permissions to read and write to You must also ensure that you s backup method for this external backing up your database will n the file attachments
ATTACH_SELECT_CHECKBOX	UNCHECKED	This setting controls behavior o Attachment Select box (ATTAC on the Add and Edit layouts. Va UNCHECKED, CHECKED an ON ADD. A value of CHECKE UNCHECKED will set the chec attachment on entry to the scree new attachment is added. A val CHECKED ON ADD will caus to be checked only when the att added, otherwise it will be unch
BLOCK_ATTACHMENT_EXTENSIONS		If a user uploads an attachment, document field or a file into an with an extension that is in this not be stored on the server, and receive a message that informs are not allowed to store files of default is that all files of all typ The list of file extensions is con For example, you might set a va *com* to prohibit end users from of these types.
COPY_ATTACHMENT_ON_CLONE	YES	When this setting is YES, attach copied to the new issue when an
DEFAULT_ATTACHMENT_CHARSET	UTF-8	The default character encoding uploaded to ExtraView. This va select the initial value presented administrator when creating a n
SEARCH_ATTACH_THRESHOLD	100000000	The size of attachments to be se the user is alerted of performan size of attachments to be search value, then the user is shown a asked to confirm whether they w with the search
THUMBNAIL_MAX_SIZE	150	This is the maximum number o the horizontal or vertical directi thumbnail images will be gener ratio of the original image will b Thumbnail images are generate attachments and for fields with

Field Name	Title	Definition
RELEASE	Release	The key field used to provide repeating records with a title on sc security permissions control the presence or absence of the repea add and edit screens
RELEASE_ASSIGNED_TO	Release Assigned To	Used to provide a title for Release Assigned To. It's security per access to the value.
RELEASE_FIXED	Release Fixed	Used to provide a title for Release Fixed. It's security permissior to the value.
RELEASE_FOUND	Release Found	Used to provide a title for Release Found. Its security permissior to the value.
RELEASE_FOUND_HIST	Historical Release Reference	History is maintained on repeating records within ExtraView. Th that history
RELEASE_OWNER	Release Owner	Used to provide a title for Release Owner. It's security permissic access to the value.
RELEASE_PRIORITY	Release priority	Used to provide a title for Release Priority. It's security permissi access to the value.
RELEASE_PRODUCT	Release Product	Used to provide a title for Release Product. It's security permissi access to the value.
RELEASE_RESOLUTION	Release resolution	Used to provide a title for Release Resolution. It's security perm access to the value.
RELEASE_SEVERITY	Release Severity	Used to provide a title for Release Severity. It's security permiss access to the value.
RELEASE_STATUS	Release Status	Used to provide a title for Release Status. It's security permissio access to the value.

Button Fields

Inbuilt Button Fields

Field Name	Title	Definition
DELETE_BUTTON	Delete Button	The item delete button. Access to the security permissions for this butt to delete issues
EDIT_BUTTON	Edit Button	The drill down edit button used on reports and within email
HISTORY_BUTTON	History Button	The button that accesses history from the edit screen or reports
QUICKEDIT_BUTTON	Quickedit Button	The button that accesses the Quickedit mode from column reports and
VIEW_BUTTON	View Button	The drill down button that allows you to see the detailed report for an i
SAVE_BUTTON	Save Button	This button is used on attachment layouts, allowing users to save rathe attachments

User Defined Button Fields

The preferred method of creating button fields is to use the LABELS / BUTTONS tab within the data dictionary and c field there. Historically, before version 20.0, button fields were created as UDF fields with a specially formatted nam Custom display type. The Help Text was used to create the label text for the button. Whilst the old method is maintai backwards compatibility it is now recommended that you create a native type button field.

The historic method allows you to create and place a button with any label of your choosing on an *add* or *edit* screen t

Display Type	Must be **Custom**
Title	Typically this is a space character
Help Text	This will become the text on the button

To provide the action for the button, place a layout cell attribute of type FIELD HTML MODIFIER within the layout place the button. There are three primary ways you can provide an action for this button:

- If you want to open a new window where you can add a different issue, your FIELD HTML MODIFIER may lo

  onclick=window.open("evSignon?p_action=doAddDisplay&p_option=Display&p_close_win=true&ev_menu= p_project=9")

  The parameters for the Area and Project use their respective IDs. Note that the URL does not need to reside wit and your action might open up a web address anywhere. See the API Guide for more information.

- Your button might look to execute business rules. As an example, you might want to add a new issue directly in using values from the current issue. When pressing your button executes an `onchange` business rule, ExtraView necessary `onclick` action to initiate the action.

  In versions of ExtraView prior to 10.0, you may have added a JavaScript function via the HTML_MODIFIER a

  ```
  onclick='javascript:;userSubmitChangeAjax(this.name)';
  ```

  This is no longer required for the functionality to work. If you have such a HTML_MODIFIER, it will adversel smooth functioning of the ExtraView code by introducing unnecessary screen refreshes. Therefore, remove the HTML_MODIFIER if it exists from a previous version

- Create your business rules. This example shows how you might add an issue into a different business area, whil some of the field values from the current issue. It is based upon your button field name being BUTTON_CREATE_TEST_CASE:

  ```
  if (BUTTON_CREATE_TEST_CASE.{changed}) {
    ADD :
      AREA = 'Test Case Management';
      TEST_CASE_STATUS = 'New';
      PROCEDURE = TEST_INSTRUCTIONS;
      MODULE_ID = MODULE_ID;
      ASSIGNED_TO = '{null}';
      CREATED_FROM_BUG_ID = ID;
      COMMENTS = DESCRIPTION;
  }
  ```

- You can provide an action for the button by implementing custom code within the method named ucRenderEmb The standard distribution of ExtraView that ships with the user custom class named CustomCodeBase.java cont functionality. In this case, you would write a user custom JavaScript function that submits a URL to the server t server-side code within CustomCodeBase.java.

Date & Date Range Fields

Date Fields

The following date fields in the data dictionary provide a means to display information about an issue, calculated fron was initially created.

Field Name	Title	Definition
DAYS_OPEN	Days	The number of days that an issue has been in a status that is not closed. The closed s

SYSDATE	Current Date	This is a Special Variable Field. When this is encountered within a date field within form $$SYSDATE$$, ExtraView will substitute the current date, complete with the This allows users to compose and save queries that have a range to or from the prese
SYSDAY	Current Date	This is a Special Variable Field. When this is encountered within a date field within form $$SYSDAY$$, ExtraView will substitute the current date, without time. The ti 00:00. This allows users to compose and save queries that have a range to or from th as of midnight.

Date Range Fields

The date fields within the ExtraView database have an extra field defined in the data dictionary that works in conjunct This additional field works as a filter on ExtraView report screens, allowing reports to be defined that will select resul number of days since the date.

The date fields and the additional field are:

Data dictionary main field	Data dictionary additional field	Comment
DATE_CREATED	DATE_CREATED_SINCE	Days since the issue was create
TIMESTAMP	TIMESTAMP_SINCE	Days since the issue was last up
DATE_LAST_STATUS_CHANGE	DATE_LAST_STATUS_CHANGE_SINCE	Days since the issue's last chang
DATE_CLOSED	DATE_CLOSED_SINCE	Days since the issue was closed

Email Fields

Field Name	Title	Definition
MAILING_LIST	Mailing List	This field is used in conjunction with its security perr define which user roles have visibility to the mailing and *edit* screens
CC_EMAIL	CC Email	This field is used in conjunction with its security perr determine which user roles have the ability to see and email list on the *add* and *edit* screens
GENERATE_EMAIL	Generate Email	In conjunction with security permissions, this field is the visibility of the Generate Email checkbox on the screens. Without permission, this checkbox will not b
CUSTOM_EMAIL	Custom Email	In conjunction with security permissions, this field is the visibility of the Email button on the action bar wit screen. With permission, the user role will be able to emails
EMAIL_ADDRESS	Email Address	This field may be placed upon layouts. It serves a spe When a user accesses the custom email function from to send an ad-hoc email, or an email created from a pı template, this field will be used to automatically popu address to which the mail is to be sent. This simplifie communication to users who, for example, enter an eı when reporting an issue. The value stored in this field gives a return address.
NOTIFICATION_EMAIL_ATTACHMENT	Include selected attachments	This field works in conjunction with the attachment fi ATTACH_SELECT. Both fields need to be turned on permissions for this feature. When enabled, there is aı checkbox within the notification area. When a user cł

Expression fields are used to calculate, and display the results of the calculation, on a column report, a Detailed report report. For example, you might use a numeric expression to calculate the sum of two or more fields within an issue. T of the expression field may store an expression that will be evaluated as the default when the field is placed on a repor in this guide for Reporting and Querying for a discussion of valid expressions.

Expression fields with a type of Duration are used as filters in queries, where they compute the value associated with a field. For example, you might use an expression to filter all the issues with a *date created* of *last month*.

This list shows the built-in expressions provided with ExtraView. Adminstrators may create their own expressions. It that you do not alter the value of the built-in *duration* expressions. You may add additional expressions of any type.

Data dictionary field name	**Title**	**Type**
EVDTF_LAST_FISCAL_QUARTER	Last fiscal quarter	DURATION
EVDTF_LAST_FISCAL_YEAR	Last fiscal year	DURATION
EVDTF_LAST_FQ_TO_DATE	Last fiscal quarter to date	DURATION
EVDTF_LAST_FY_TO_DATE	Last fiscal year to date	DURATION
EVDTF_LAST_MONTH	Last month	DURATION
EVDTF_LAST_MONTH_TO_DATE	Last month to date	DURATION
EVDTF_LAST_WEEK	Last week	DURATION
EVDTF_LAST_WEEK_TO_DATE	Last week to date	DURATION
EVDTF_LAST_12_MONTHS	Last 12 months	DURATION
EVDTF_NEXT_4_WEEKS	Next 4 weeks	DURATION
EVDTF_NEXT_FISCAL_QUARTER	Next fiscal quarter	DURATION
EVDTF_NEXT_FISCAL_YEAR	Next fiscal year	DURATION
EVDTF_NEXT_MONTH	Next month	DURATION
EVDTF_NEXT_WEEK	Next week	DURATION
EVDTF_THIS_FISCAL_QUARTER	This fiscal quarter	DURATION
EVDTF_THIS_FISCAL_YEAR	This fiscal year	DURATION
EVDTF_THIS_FQ_TO_DATE	This fiscal quarter to date	DURATION
EVDTF_THIS_FY_TO_DATE	This fiscal year to date	DURATION
EVDTF_THIS_MONTH	This month	DURATION
EVDTF_THIS_MONTH_TO_DATE	This month to date	DURATION
EVDTF_THIS_WEEK	This week	DURATION
EVDTF_THIS_WEEK_TO_DATE	This week to date	DURATION
EVDTF_TODAY	Today	DURATION
EVDTF_YESTERDAY	Yesterday	DURATION
EXP_CURRENCY	Expression - Currency	CURRENCY

EXP_TEXTFIELD	Expression - Text Field	TEXTFIELD

FILTER CHILD VALUES Field

The FILTER_CHILD_VALUES field is a special field that controls the ability to return, or not return, all matching rep a query. When this field is placed on a search query layout, a checkbox will appear to the end user when they are usin Query screen. When this is not checked, a query that generates repeating row records will return all the repeating rows When it is checked, the query will only return repeating row records that match the remaining filters in the query.

If the user has selected Advanced Query mode, then the option appears a a checkbox at the top of the filter selection li

Before this field can be placed on a search layout, the behavior setting named FILTER_CHILD_VALUES must be set of USER.

History Fields

Field Name	Title	Definition
ATTACHMENT	Attachments	This field provides visibility of attachment history within the hi issue. There is an accompanying permission key named PR_RESOLUTION.ATTACHMENT_HISTORY. This field pro of a record of which attachments were added or deleted when th issue was made. However, if you are using the behavior setting ABBREVIATED_HISTORY, then the attachment history is still of each history entry
HIST_RANGE_END	Historic data filter	This field is used as a report filter to show the results as of a spe time. If this is selected, the results returned by a query are not th the current time. This allows the user to go back in time and det issues looked like as of the date/time entered. This is also used CLI command to determine the end date of transactions being g
HIST_RANGE_START	Historic data filter (start)	This field is used within the *evhist* CLI command to determine t transactions being generated.
MINI_HISTORY	History	This is a UDF with a Custom display type that can be placed on (typically edit screen layouts and detailed reports. This field ger that is about the width of your screen, that displays, by default, change dates and the person responsible for the change. If you a field in your own environment, then make certain that you set **A on reports** to Yes in the data dictionary, and that you provide re field for the roles that are allowed to see the information. There setting named MINI_HISTORY_FIELDS that is used to define fields that are displayed within the mini-history area. By default STATUS, TIMESTAMP and ASSIGNED_TO. Not every field displayed within the mini-history area. The valid fields are: SEVERITY_LEVEL, PRIORITY, STATUS, PRODUCT_NAM TIMESTAMP, ASSIGNED_TO, PRIVACY, LAST_CHANGE_ ALT_ID, AREA, PROJECT, CATEGORY, RESOLUTION, PR DATE_LAST_STATUS_CHANGE, CONTACT, ORIGINATO HIST_TIMESTAMP. Note that the STATUS field is always disp

		An example is:
	 The MINI_HISTORY field	
NOTIFICATION_HISTORY	Notification History	This field is placed on History layouts to provide a record of the sent notification at each update of the issue. There is an accomp permission key named PR_RESOLUTION.NOTIFICATION_H field provides a display of a record of the users who were sent a upon the update to the issue. However, if you are using the beha named ABBREVIATED_HISTORY, then the record of email nc still shown, as part of each history entry
PRODUCT_NAME_HIST	Historical Product Reference	This field refers to the name of a product (PRODUCT_NAME) issue's historic audit trail
RELEASE_FOUND_HIST	Historical Release Reference	History is maintained on repeating records within ExtraView. Tl to that history
RELATIONSHIP_GROUP_TXNS		This field provides visibility of related issue transactions within an issue. There is an accompanying permission key named PR_RESOLUTION.RELATIONSHIP_GROUP_TXNS. This fi display of a record of changes to related issues to the current iss you are using the behavior setting named ABBREVIATED_HIS related issue transactions are still shown, as part of each history
STATUS_HIST	Historical Status	Full history is maintained on all status changes to issues. This fi status history

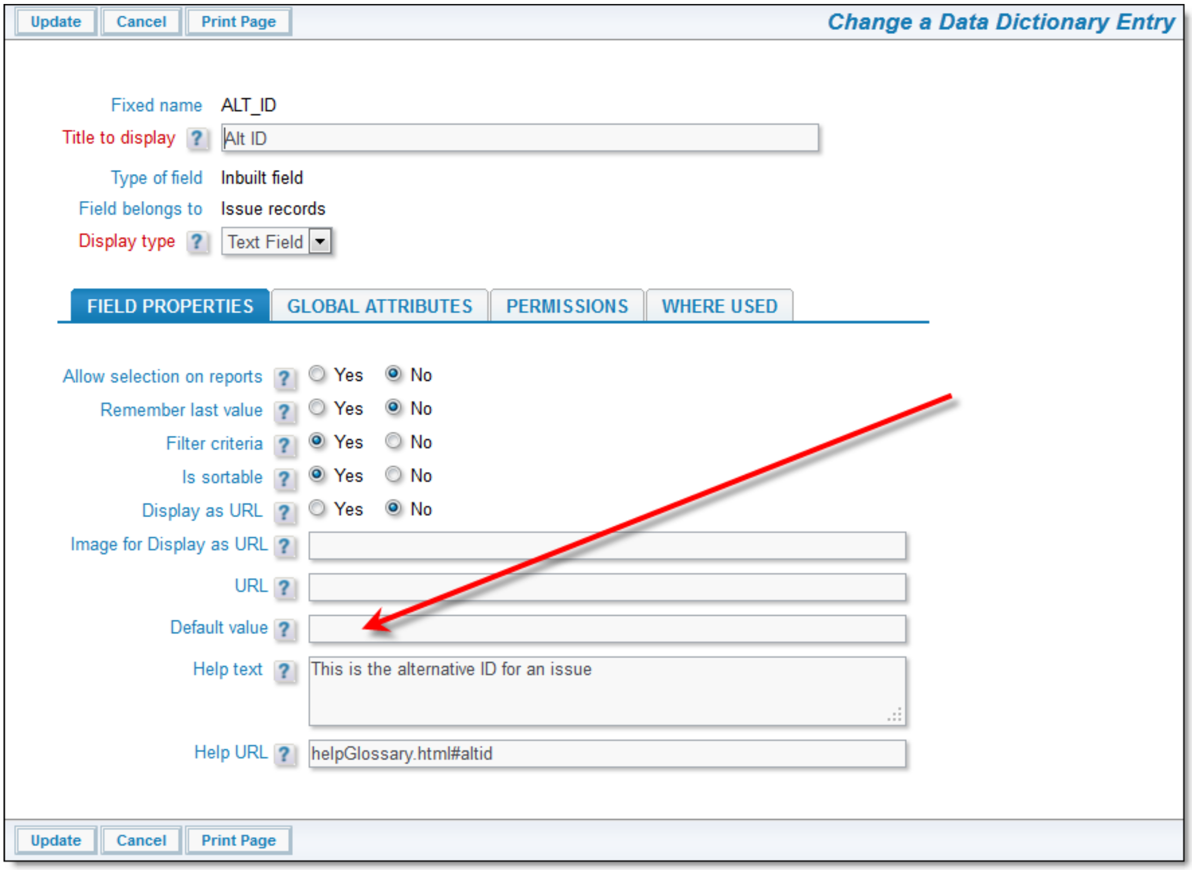
- Add new comment

ID and ALT_ID Fields

Each item added to the ExtraView database is automatically given an ID. The ID is a sequence which is incremented b issue that is inserted into the database. The field is always read-only to users and developers. It may be used as a filter ID is the primary key to all items. The sequence is applied without reference to which Business Area or Project to whi belongs. For some purposes it is useful to have a unique sequence per Business Area or per Project, with the items wit Business Area or Project being given sequential numbers.

Further, it can be advantageous to provide formatting to this identifier to easily distinguish items in different Business This can be achieved through the use of the ALT_ID field. The ID field is still maintained automatically within Extra\ mechanism described here can be set up to provide a unique sequence within the ALT_ID field. You should only set u on a new database as existing items are not back-populated with the ALT_ID values. To set up separate sequences for Area:

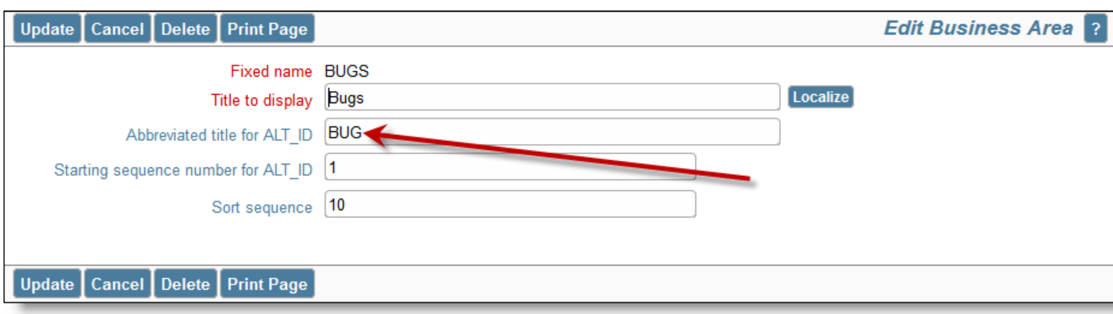
- Within the data dictionary entry for the ALT_ID field, place a pattern in the default value of ALT_ID
- You should not use the characters < and > within ALT_ID titles



Entering the ALT_ID pattern

This pattern is created as follows:

- **$$AREA.SEQ$$**. This is the unique sequence for the area within which the item is being created. You sh include this
- **$$AREA.SHORT_TITLE$$**. This is an optional set of characters entered into the definition for the Bus example, you may provide a short title in the Business Area maintenance screen of CR to define a change short title of FR to indicate a feature request. You enter the short title into the **Abbreviated title for ALT_**



Entering an abbreviated title for the ALT_ID

- Any constant string. For example, you may include punctuation characters such as : and –
- Replaceable variables of the form **$$*FIELD_NAME*$$**. These allow the use of other fields on the input f

To use this feature for Projects, within the definition for the PROJECT field, use the above instructions with **$$PROJ** opposed to **$$AREA.SEQ$$**.

Examples:

ALT_ID Default Value	Example Output
$$AREA.SHORT_TITLE$$:$$AREA.SEQ$$	FR:12345
$$AREA.SEQ$$($$AREA.SHORT_TITLE$$)	12345(CR)

Fields

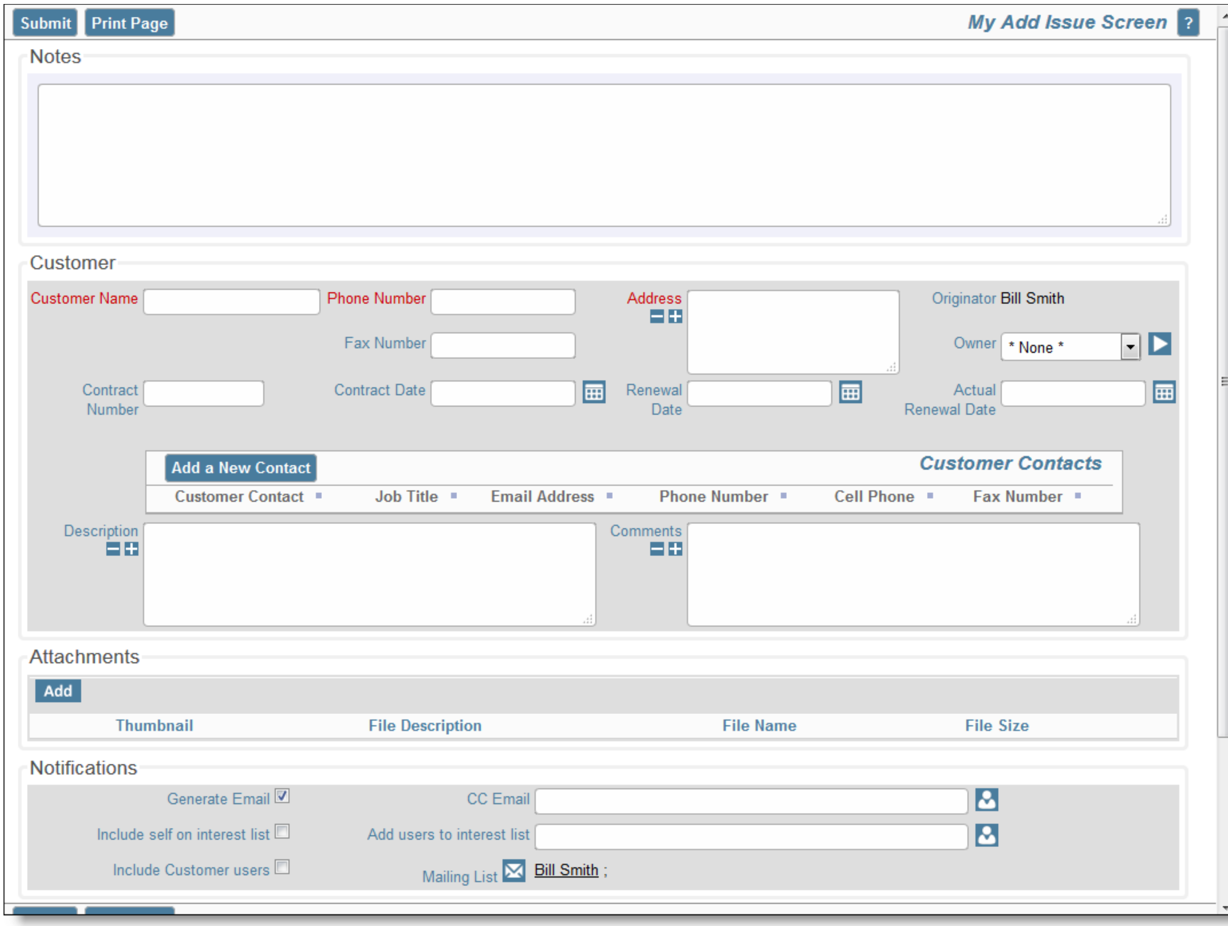
Field Name	Title	Definition
ALT_ID_START_SINCE	Start Issue ID	In conjunction with ALT_ID_STOP_SINCE, this field is used to establish a sea issues on any query filter layout. Both this and ALT_ID_STOP_SINCE should the layout. The user can enter the start of a range to search for in this field. If it' the ALT_ID_STOP_SINCE field has a value, then all issues with values less th ALT_ID_STOP_SINCE will be returned
ALT_ID_STOP_SINCE	Stop Issue ID	In conjunction with ALT_ID_START_SINCE, this field is used to establish a s issues on any query filter layout. Both this and ALT_ID_START_SINCE shoul the layout. The user can enter the end of a range to search for in this field. If it's the ALT_ID_START_SINCE field has a value, then all issues with values great ALT_ID_START_SINCE will be returned

KEYWORD Field

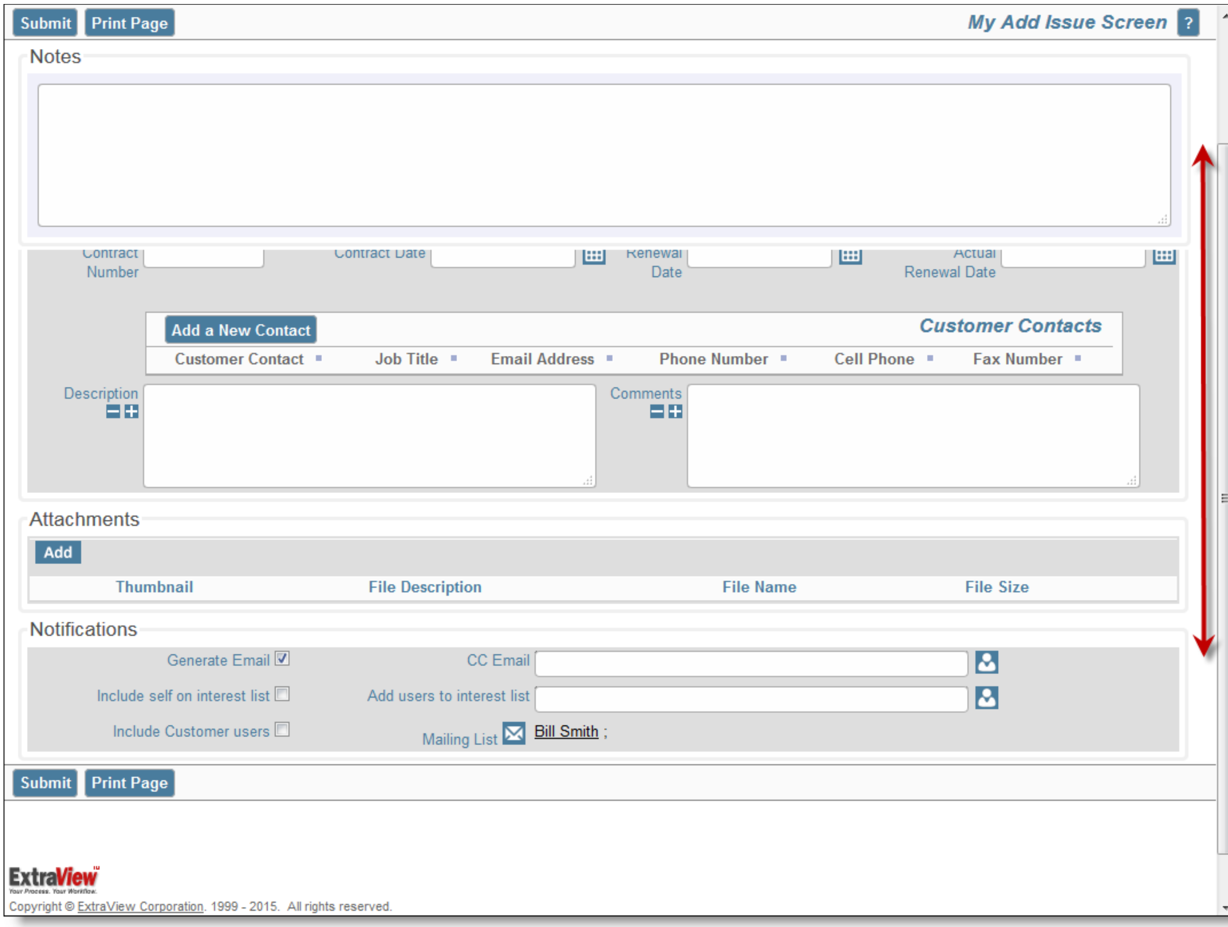
This field is used on search layouts to provide a text input box for the purpose of enabling keyword searches through t database. This field has the usual security permission key associated with the field, named PR_RESOLUTION.KEYW there is a second security permission key, named PR_RESOLUTION.SEARCH_ATTACHMENTS. This also applies KEYWORD data dictionary field. If a user role has permission to read this key, then a checkbox appears directly bene KEYWORD field. This controls the ability to search attachments as part of the query.

Notepad Field

A Notepad field is deliberately rendered at the a fixed position within *add* and *edit* screens, to provide a non-scrollabl the user may enter notes about the current issue. It is usually rendered at the top of the screen. The Notepad field wil stationary as the remainder of the form is scrolled within the browser window (or panel within a workspace). This scr how the Notepad field is first rendered on an *add* screen:



This screenshot shows how the Notepad field remains stationary, when the window is scrolled:



To setup the Notepad field, take these steps:

- On the first row of an *add* or *edit* layout, place the built-in field named EV_NOTEPAD_FOR_LAYOUT. This which renders within a fixed area at the top of the layout
- Provide read and write permission for the fields EV_NOTEPAD_FOR_LAYOUT and EV_NOTEPAD for the r used to access the field.
- You may tailor the presentation of the Notepad field with the following layout cell attributes, all placed on the EV_NOTEPAD_FOR_LAYOUT field:

SIZE	This attribute is the width, in characters, of the Notepad field
HEIGHT	This attribute is the number of rows that will be rendered with the Notepad field. A scr you exceed this number of rows
LEGEND:*title*	The default title to the Notes section is the word **Notes**. You can change this by enterin MODIFIER where *title* is the text you want to use to replace the word **Notes**
BGCOLOR:*color*	This is entered as an HTML MODIFIER attribute, and allows you to modify the backgr color of the Notepad field on the screen. *color* is a standard HTML color, entered eithe a hexadecimal value
TOP:nn	This is entered as an HTML MODIFIER attribute, and is the number of pixels from the or *edit screen* that the Notepad field is rendered. The default is 30 pixels, allowing roor menubar buttons. This number is automatically adjusted for the user's text size and for is unusual to need to add this HTML MODIFIER as a layout cell attribute, but it may b

- You can use the EV_NOTEPAD field, which has a default title of **Notepad**, within reports.

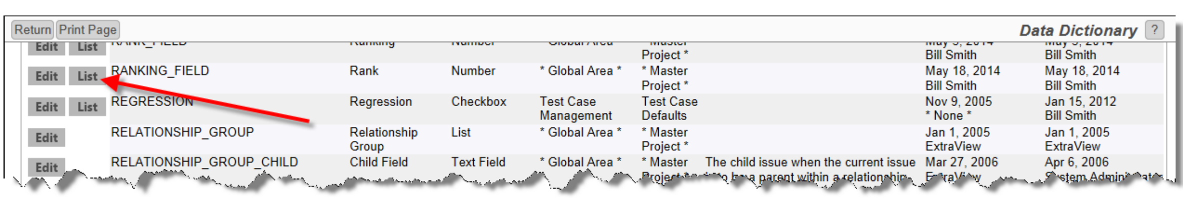
Ranking Fields

Ranking fields allow the end user to order a logical collection of issues. The collection of issues is defined by a filter field and can therefore contain any subset of issues within your database. For example, you might have a ranking that issues in a product release within a product, within a specific business area. An end user may then order the issues wi collection, using the ranking field to depict the ranking of an individual issue. Rank fields have the following attribut

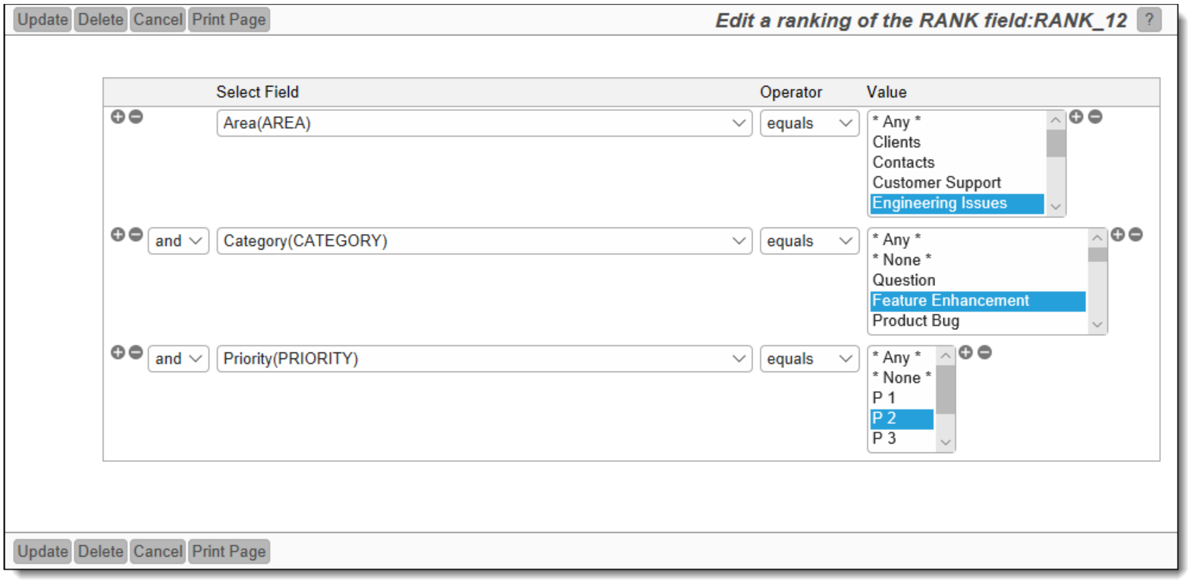
- A rank field is defined in the data dictionary as a field with a display type of number
- You set an attribute on the field to define its use as a rank field. This ensures the field will behave with its speci
- Rank fields can be updated within an *add* or *edit* screen or within a column report. However the ability to mani of issues on a column report is recommended within a workspace, where the user can drag-and-drop an issue to position in the rank. Outside a workspace, an end user can use Quickedit to update the ranking of any field, but report will need to be manually refreshed to see the updated rankings
- Any one issue may belong to different rankings, and have a different position in the ranked order for each of the ranks. Each of these different rankings is specified with a different ranking field
- Each of the ranking fields that pertain to an issue should, at minimum, be placed on the *edit* layout of the issue. the field(s) from users
- Although rank fields may be placed on *add* and *edit* layouts, they are not placed within the audit trail (history) c principal reason is that when a user is using a report to rank their issues, they may perform many, many re-ranki short space of time. These interim rankings have little value within the audit trail, and if, for example, a user pl issue at the bottom of 1,000 issues within the ranking report, 1,000 updates to history would need to be made. T a very unresponsive and slow user interface.

Creating a Ranking Field

1. Within the data dictionary, create a field with these attributes:
    1. A valid **Business Area**, or ** Global Area **
    2. A valid **Project** or the ** Master Project **
    3. **Field Belongs** to must be *Issue records*
    4. Any valid **Fixed name**
    5. Any valid **Title**
    6. A **Display type** of *number*
    7. Set **Use as a Rank Field** to *Yes*
    8. Set **Allow selection on reports** to *Yes*
    9. Set **Filter criteria** to *Yes*
    10. Set **Is Sortable** to *Yes*
    11. **Add** the field
2. The new field you created has a **List** button, as shown in this screenshot. This button accesses the screen where maintain specific ranking definitions for the ranking field



3. Click the **List** button and then click the **Add** button to add a new definition for the ranking field. The entries on



Note that you will be creating one or more reports that use this ranking definition, and these reports may have fi
a subset of the issues within the scope of the ranking

4. **Add** the ranking definition to the database
5. You may create many ranking definitions for one ranking field.

Using Ranking Fields

Ranking fields can be placed on *add*, *edit* layouts and reports. The use of a ranking field within an *add* or *edit* layout limited in that you only have a view of that issue, and not the complete collection of issues within the ranking. Consic made to making the ranking field read-only, through the use of the **read only if** layout cell attribute. You may also hic layout if you do not wish users to modify its value within issues.

Their primary use is within workspaces, where the user might want to rank a large number of issues at one time. This on the page Ranking Reports.

Relationship Group Fields

Field Name	Title	Definition
RELATIONSHIP_GROUP_ID	Relationship Group	The internal ID of a relationship group. The only change an administrator should make to this field title “Relationship Group”
RELATIONSHIP_GROUP_REMOVE_BTN	Remove ?	When this is placed on a related issue layout, it al remove the issue from the relationship group
RELATIONSHIP_GROUP_OWNER	Relationship Group Owner	This field is used to specify the user ID of the ow relationship group. The only significant change ai should make to this field is to alter the title “Relat Owner”
RELATIONSHIP_GROUP_TITLE	Relationship Group Title	This field is used to specify the title of a relations only significant change an administrator should n is to alter the title “Relationship Group Title”
RELATIONSHIP_GROUP_TYPE	Relationship	This field is used to specify the type of relationsh

has these properties –

- The STATUS field is used on issues to manage workflow. There is a complementary field available for repeatin; RELEASE_STATUS. Both fields share the same set of values and the same workflow. The values for both lists within the STATUS field list
- You may set up workflow around the transitions of the states of an issue between the STATUS values. This wor up role-by-role or product-by-product. It may also be set up globally and inherited by different business areas ai can be set up individually within any business area and project combination
- The STATUS field is unique in that each value (such as *Open* or *Closed*) is given two security permission keys, and one for updating issues. If the user does not have write permission to a STATUS add value, then the value w displayed in the STATUS list. If the user does not have permission to the key when updating an issue, they will in the list, but they may not select that value from the list and update the issue. They may still edit and update th STATUS values to which they do have permission. They simply cannot update the issue to a value of the STATU they do not have permission. This functionality is desired as a user may have permission to update an issue, but have permission to update to an individual STATUS value. When in query screens, the user will see all STATUS irrespective of whether they have read or write permission. If you require to hide STATUS values from users, cc allowed value relationship, where STATUS is the child, and use this capability to control the visibility of indivic values.

STATUS_TRANSITION Field

This is defined within the data dictionary as a UDF with a display type of **Custom**. This field provides an alternative t field, offering a visual way of highlighting the status of an issue and showing exactly which statuses are valid to transi obeying the workflow and status change rules. It looks like this:

The STATUS_TRANSITION field

The current status is highlighted. The user can click on any of the statuses shown, in order to transition the issue to tha to operate, you should retain the STATUS field on the same layout, but you may hide this from the user, using a layou FIELD STYLE. For example, setting a value of **display:none** will hide the STATUS field list. Setting an alternate titl character will hide the label to the STATUS field on this form. Only the STATUS_TRANSITION field will be display form - actually it's a clickable field.

If the STATUS field is displayed on the same screen as opposed to being hidden, then both the STATUS and STATUS fields will work in tandem.

You may alter the width and height of the field by setting a width and height (both measured in pixels) into the default in the data dictionary. Use a delimiter of a semi-colon between the values. For example, a default value of **1000;100** w the field to 1,000 pixels wide and 100 pixels high. Note that you must be precise with the syntax of the default value a checking is performed. If you do not provide a default value, a width of 900 pixels and a height of 80 pixels will be as

Tag Cloud Fields

A **Tag Cloud** field is a graphical representation of the values in a list field. The values in the **Tag Cloud** field are clicl user to select or de-select them; selected values are highlighted with the color configured in the HIGHLIGHT_COLOI setting. The **Tag Cloud** field is configured in the following manner:

- A UDF with a display type of List. This is termed the **source list field**.This contains the list of values in the tag

On the *Add* or *Edit Screen* layouts, both the **source list field** and the **Tag Cloud** fields must be included, where the **so** must precede the **Tag Cloud** field in order on the layout, i.e, the Tag Cloud field must be on a row and column higher **list field**. The **Tag Cloud** field includes support only for the REMOVE_NONE layout cell attribute, which removes th from the list of values rendered; all other layout cell attributes configured on the **Tag Cloud** field are ignored.

Layout Editor Tip: In order to hide the source List field and make only the Tag Cloud field visible to users, configure t field with the following layout cell attributes:

- FIELD ALTERNATIVE TITLE = " " (a blank space; this will replace the original title of the source List field)
- FIELD STYLE = display:none (this will cause the values drop-down box to be hidden)

This will cause the **source list field** to be rendered on the screen in a hidden mode, but still be accessible to internal ro used to communicate between the source list and Tag Cloud fields. Other layout cell attributes configured on the sourc as FIELD REQUIRED, will continue to be enforced. Note that using the FIELD/LAYOUT VISIBLE IF layout cell att source List field will disable the Tag Cloud field functionality.

The Security Permissions configured for the Tag Field affect how the values are rendered: if readonly, then values are plain text without hyperlinks; if read/write, then values are displayed as hyperlinked text.

Telephone Number Fields

ExtraView has the ability to enter phone numbers which will be formatted automatically and will, to a reasonable exte correct numbers. For example, US entries that being with the number 0 will be assumed to be incorrect. This feature automatically format international telephone numbers. When a field is configured to view international telephone nur display a flag of the country. On an *add* or *edit* screen, when making a selection, the field will look like this:

The phone number field is created with a display type of **text field** .The feature is enabled with these steps:

- Consider whether you want to format and store phone numbers from more than the USA. If so, you want to ens behavior setting named PHONE_NUM_STORE_COUNTRY_CODE has a value of YES. The fields will then store the c with the phone number and will display a country flag in the selection list. If the value is NO, the assumption is that all pho within the USA and there is no need to store the +1 prefix
- Create a field with a display type of text to storethe phone number
- Place a layout cell attribute on the form where the feature is to be enabled, or place a global attribute of PHONE the field. It is of more general use to use the global attribute within the data dictionary, as this will enable the fe

URL's and Links

A special end-user property of text fields is that if they enter a URL into the field, then when the field is rendered on a field is rendered in a read-only mode, the URL becomes a hyperlink to the URL. For example, if you enter **http://www.mycompany.com** or **www.mycompany.com** into a text field, then it will appear as **http://www.mycomp** **www.mycompany.com** on a report, and if you click the text, a new window will open at the address of the URL. This extended one step further. Assuming that the title for the ID field in your instance is **ID #**, then entering **ID # 12345** in will provide a link on reports and read-only versions of the field, to the detailed report view of the issue with the ID of title to the ID field is **Report Number**, then the end user would enter **Report Number 12345** for the same effect.

Rendering HTML within a Field or within a Field Title

It is possible to render HTML within a field on a report which has a display type of either text area, print text or log ar separate from the capability offered with fields with a display type of HTML Area, which is the recommended way of that will routinely hold HTML. The normal behavior with text area, print text and log area fields is that ExtraView wil sent being sent to the report in the browser. For example, HTML being sent to a field of these types will be shown as I rendered within the browser. This is the normal mode of working, as ExtraView is often used to track defects or bugs t HTML code. There are some circumstances when you may want to actually view the code rendered as HTML within t order to do this, place the following text within the text field as you create –

<!-- generated valid html - don't escape! -->

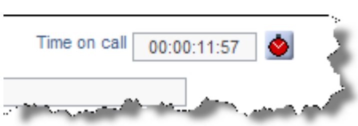
All code following this, until the end of the field will be rendered in the browser. It is the user's responsibility to ensur following the above text is valid HTML and will render appropriately. One interesting side effect of this feature is that legitimately place a complete program, along with buttons, forms and JavaScript within a field!

The field can be populated with code within user custom routines. For example, a field on an *add* or *edit* screen can cc complete results of a query in report format.

This convention can also be used to decorate field titles and default values in the data dictionary.

Timer Field

The function of this field is to create an onscreen timer that is used to measure how much time is spent processing an i may be initialized on an *add* or *edit* layout in either the **on** or **off** state using the default value of the TIMERFIELD. A is **on**, then time is accumulated in the field with each successive edit session. The user will see the timer updating each turned on.



Timer field on a layout

At this time, only one timer field is supported in an installation within a business area. To configure the timer, you mu following fields defined in the data dictionary:

Field	Configuration
TIMERFIELD	Display type – Custom Allow selection on reports – No Default value – On or Off Help text – T working on this issue This field may be placed on an *add* or an *edit* layout and presents the time with a button that is used to turn the timer on and off. Being a custom field, it is not possible to field, therefore a second field is defined which is used to provide reporting.

Field Name	Title	Definition
LAST_CHANGE_USER	Changed by	This is the user ID of the user who last updated the issue.
USER	*Current User Name*	This field adopts the value of $$USER$$ when used. ExtraView interp as the user ID of the user who is signed on to the current session.

User Fields with Different Display Formats

The display format of user fields is globally set using the behavior setting named USER_LIST_DISPLAY. This is set t of **LIST** or **POPUP** to determine how all user fields on the user input screens will appear.

You can set an Optional Attribute in the data dictionary for any field with a display type of user. This Optional Attribu USER_LIST_DISPLAY. Setting this to either **LIST** or **POPUP** will override the behavior setting, giving you control user's input values into each field with a display type of user.

Note: You should not try to set the attribute of USER_LIST_DISPLAY as a Layout Cell Attribute within the Data Dic not supported. You must set the attribute as a global attribute for the field, in the data dictionary.

Multi-Valued User Fields

To configure a User field as a multi-valued field perform the following steps:

- Create the field in the data dictionary with a display type of **User**
- Note that there is not an option on the initial data dictionary screen to make the field multi-valued
- Click on the **Global Attributes** tab
- Add a new global attribute of type **USER LIST DISPLAY** with a value of **POPUP**
- You should now set the data dictionary value fof **Auto-Complete** to an appropriate value for the field.

User Fields with Images

The images for users are sourced from within each user's account. The user may upload their own photograph to their

Within the data dictionary, set the option
Associate image with values to **Yes**. The field will then be rendered on *add* and *edit* forms, and on reports, with the u

Behavior Settings

Behavior settings control many aspects of ExtraView behavior. Behavior settings tend to be set up once with your inst retain that value for ExtraView behave the correct way for your purpose.

The behavior settings are grouped together in like categories, and each category forms one of the following pages. All modified by either clicking on the *Value* field, or by clicking the *Edit* button at the left of the field name.

The Behavior Setting utility offers the ability to filter the settings list by selecting which column on which you want to filtering operation, then clicking on a letter. The letter is the first character of the selected filter column. You may alter search expression and use the **Go** button to search for the results. Wildcards are allowed in the search.

Note the buttons that represent each category. You can use any button to filter the page so that you only see that catego

API Settings

		YES and NO
ANONYMOUS_API_USER_ID	guest	If you have ALLOW_ANONYMOUS_API_ACCESS set to the user ID that is set within issues as the ORIGINATOR
ALLOW_CLI_UPDATE_ORIGINATOR	YES	YES will allow a user to update the ORIGINATOR field thr
CLI_EDIT_MULTI_VALUE_FIELDS	NO	Indicates whether you can edit multiple value UDFs througl
DEFAULT_TEXT_REPORT_DELIMITER		Single character to place between data fields on text reports output results to a text file, or through the API / CLI, this ch to delimit the individual fields
MAX_REPORT_TEMP_FILE_HOURS	2880	This is the number of hours for which temporary report files API will be kept on the file system of the server. Following hours, the temporary files are removed by ExtraView.
MULTI_RELEASE_XML	NO	To enable multiple release to be output to XML through the values are YES and NO

Authentication Settings

This section of behavior settings deals with LDAP, SSO and SAML settings. The available settings are:

Behavior Setting	Value	Description
ALLOW_SSO_AT_SIGN	NO	If set to YES, SSO user id's will be the SSO primary key in its entirety. User ID within the header is treated email address, and the characters pr assumed to be the User ID within E example, if the User ID within the h john_smith@mycompany.com, then User ID is assumed to be john_smit
CUSTOM_AUTHENTICATION	NO, YES, HYBRID, LDAP, LDAP-HYBRID, SAML	This setting can have one of five va HYBRID, LDAP or LDAP-HYBRI value is NO, ExtraView uses its stan authentication. If it set to YES, cust authentication (with user custom co rather than using the inbuilt user au scheme. If the value of HYBRID is ExtraView attempts to perform the authentication first. If this is unsucc standard inbuilt authentication meth it set to LDAP, LDAP authenticatio rather than the inbuilt user authentic If the value of LDAP-HYBRID is s ExtraView attempts to perform the authentication first. If this is unsucc standard inbuilt authentication meth When the CUSTOM_AUTHENTIC behavior setting is set to YES and a is updated with the **Expire passwor** being checked, then if the custom a routine returns true indicating that t authentication was successful, the C Password form is presented to the u login process. When the

		authentication factor is via an email with a verification code that must b the user enters their account
LDAP_ALLOWED_STALE_INTERVAL	240	The minimum number of minutes b upsert operations on a single user. T ExtraView accessing the LDAP ser operation that requires user informa optimize performance. After this in check of the LDAP server is made
LDAP_DEFAULT_AREA	<AREA_ID>	The default area_id to be set when a user by retrieving their details from server
LDAP_DEFAULT_PROJECT	<PROJECT_ID>	The default project_id to be set whe user by retrieving their details from server
LDAP_HOST	ldaps://<hostname>:<port>	The URL to the LDAP server, e.g. ldap://blah.com:389
LDAP_MANAGER	<DN_FOR_USER_LOOKUP>	The "Security Principal" or user acc
LDAP_PSWRD	<LDAP_MGR_PASSWORD>	The password to the LDAP server. does not appear in clear text, but as asterisks.
LDAP_ROOT	<SEARCH_BASE_DN>	The root directory of the LDAP ser base, e.g. ou=blahWorker, o=blah.c
LDAP_SEARCH_FITLER		LDAP filters may be defined in the or may be defined in the Configurat file. The behavior setting takes prec Configuration.properties entry. LDA defined in RFC 2254. As an examp to add a filter to only retrieve record mycompany within the email addre this as the filter: (mail=*mycompan parentheses are essential.
LDAP_UPSERT	YES	This setting controls upserting LDA to ExtraView. THe possible values a When this value is NO, LDAP will add or update ExtraView user infor LDAP user that is not already an Ex will not be able to log in to ExtraVi setting is set to YES, the LDAP Bac must be configured and must be run in LDAP_ALLOWED_STALE_IN used to refresh the LDAP cached in within ExtraView. The information ExtraView for a user is also refresh signs on.
LDAP_UPSERT_DEFAULT_USER_ROLE	<EXTRAVIEW_ROLE>	If this setting contains a valid role, t role a user is given when the LDAP place. If this setting does not contai the role defined in the behavior sett LIMITED_USER_ROLE is used in
LDAP_USER_LOOKUP	YES or NO	When this behavior setting is set to a user performs an operation to look

SAML_SSO_SERVICE		The URL of the SSO service to whi SP sends an authentication request. points to a target in the IDP
SAML_SSO_SP_ENTITY_ID		The SP Entity ID is usually a URL identifier given by the Service Prov uniquely identifies it to the IDP.
SSO_DEFAULT_AREA	0	This setting is used to identify the E for a new user being created within when SSO headers authenticate the is the first time the user has signed the user is created automatically and Area ID is associated with the user.
SSO_DEFAULT_PROJECT	0	This setting is used to identify the F the Business Area specified in SSO_DEFAULT_AREA, for a new created within ExtraView, when SS authenticate the new user, and it is t user has signed on. In this case, the automatically, and this Project ID is the user. Set this to zero if you do n associate the user with a specific Pr have set SSO_DEFAULT_AREA tc
SSO_SIGNOFF_REDIRECT_URL		This is a URL to which the user is c signing off from ExtraView
SSO_STATE	NO	Enable Single Sign On in this instar

Company Information Settings

This section of behavior settings deals with Company Information settings. The available settings are:

System Control menu- Company Information Settings	Typical Value	Description
COMPANY_ADDRESS1		The company's address
COMPANY_ADDRESS2		Second line of your company'
COMPANY_CITY		The company's city
COMPANY_EMAIL		The company's general email
COMPANY_NAME		The company's name
COMPANY_PHONE		The company's phone number
COMPANY_STATE		The company's state
COMPANY_ZIP		The company's postal or zip c
EXTRAVIEW_TITLE	ExtraView	This is the title used on brows may alter this value to brand y
LICENSE_INSTALL_EXPIRATION_DAT		This setting defines the date a license key may no longer be
LICENSE_UPGRADE_VERSION		This setting contains the VVV code beyond which the site ca upgraded by the administrator activation key is obtained fror

This section of behavior settings deals with Display settings. The available settings are:

Workflow menu- Display Settings	Typical Value	Description
ADMIN_LIST_SIZE	1000	This number will determine how man displayed on any administrative list. I rows to be displayed exceeds this beh value, then the records are not immed Instead, there will be a drilldown capa administrator being able to search the the first character of the entry they are to see a limited number of entries. No negative number is used, then the fun remains the same, except the search c compressed on the screen, to a single
ADMIN_LIST_SIZE_MIN	50	Below this number, any admiistration display the button which allows the se displayed. This prevents the display o moderate-sized lists where no filtering needed
ALLOW_HELP	YES	When this is set to YES, tooltip help i when placing the mouse over a field l and edit screen and clicking on the fie result in a pop-up window with help c When the value is set to NO, no toolti window is generated
AUTO_SCROLL_TO_ CLICKED_LAYOUT	NO	If this value is set to YES, then when a field within an embedded layout wh screen refresh, the screen is automatic the top of the embedded layout. This you have relatively long add and edit takes the user to the same area of the they were working, as opposed to see the form on each refresh. If this value screen refresh leaves the user at the to
BG_ALT_COLOR	#DEF0F8	Alternative background color for tabl complementary color to BG_COLOR
BG_COLOR	#dddddd	Background color for tables. Used as complementary color to BG_ALT_CC
BORDER_COLOR	#C7C9C7	Border colors on the Search / Report
CACHE_AREA_PROJECT	YES	Specify YES to allow the caching of a dropdown lists in templates built inter layouts. Specify NO to force a dynam area/project list for each screen refres mode. This should always be YES un some dynamic list modification by US code.
CALENDAR_STYLE	fancyblue	Use this setting to set the color and sty calendar used to select dates. Valid en bluexp, fancyblue, forest, green, greer win2k, winter, winxp, wood and yello
CLICK_LOCKDOWN_ TIMEOUT_SECS	0	The number of seconds to wait after a screen begins loading to unlock the pa

<table>
<tr><td>DATE_FORMAT</td><td>DD-MON-YYYY hh24:mi</td><td>Default format for displaying date fiel include seconds)</td></tr>
<tr><td>DB_TIMEZONE</td><td>PST</td><td>The time zone of the database server a reference from which all local times a each user. This value should be set on installation of ExtraView, and it shoul from that time. Altering this behavior different time zone will cause all time system to be displayed with a differen with which they were created. Norma zone should be the same time zone of clock of the server on which the instal Note that you must restart the ExtraVi this setting to take effect</td></tr>
<tr><td>DEFAULT_DATE_FORMAT</td><td>MEDIUMDATE</td><td>The system default date format for pr data. This may be one of the followin of the example shown:
<table>
<tr><td>SHORTDATE</td><td>11/28/03</td></tr>
<tr><td>MEDIUMDATE</td><td>Nov 28, 20</td></tr>
<tr><td>LONGDATE</td><td>November</td></tr>
<tr><td>FULLDATE</td><td>Friday, No 2003</td></tr>
<tr><td>SHORTDATETIME</td><td>11/28/03 7:</td></tr>
<tr><td>MEDIUMDATETIME</td><td>Nov 28, 20 AM</td></tr>
<tr><td>LONGDATETIME</td><td>November 7:20:08 AM</td></tr>
<tr><td>FULLDATETIME</td><td>Friday, No 2003 7:20:</td></tr>
</table>
In addition, this may be set to a custom example, you might set DEFAULT_D to a value such as yyyy-MM-dd hh:mn case this becomes the default date forn present dates to the user. See the App formats for an explanation of valid for</td></tr>
<tr><td>DEFAULT_CHART_FONT</td><td>Arial, Helvetica, sans-serif</td><td>The font used for the body of almost a suggested that you provide three font order of preference, as different brows platforms may only have access to son in the list</td></tr>
<tr><td>DEFAULT_PDF_FONT</td><td>Arial</td><td>The default font for selection as the te PDF's. It is essential that this font exis and contains all the characters you are display in Adobe PDF documents. Th important if you are working in a dou language such as Japanese.</td></tr>
<tr><td>DISPLAY_EMPTY_ REPORT_FOLDERS</td><td>NO</td><td>If you set this to a value of YES, then on the report screen will display repor have no reports stored within them. T to hide these empty folders with a val</td></tr>
</table>

DISPLAY_SIGNON_URL_2	http://prodinfo.extraview.com/site/content/product-information-2	This is the URL of the left-hand fram on page if DISPLAY_SIGNON_PRO to YES. Care should be taken to ensu valid absolute URL into this field
EDIT_TAB_TITLE	ExtraView - $$ID$$	This is a template for the title of brow *edit* screens. Characters within $$ de required to be valid field names withi dictionary. Allow for the fact that bro are not very long, and therefore you n entire title generated. This setting is t default but a different template can be each PROJECT in the system via the management utility. Not all fields ma within the template. Use any of these • ID • ALT_ID • AREA • PROJECT • STATUS • CATEGORY • PRIORITY • PRODUCT_NAME • Any text fields
EDITOR_TOOLBAR	STANDARD	This sets the toolbar for the HTML ec HTML Area fields and other screens. values for this setting are BASIC, MC STANDARD, FULL or CUSTOM. C toolbars must be supported with Java the UserJavaScript.js file
EDITOR_TOOLBAR_BUTTONS	NO	This setting provides control over wh buttons within HTML Area fields are HTML Area fields are first displayed. then the user clicks a button in the too the toolbar buttons, if set to YES, the are visible when the screen is first dis user can click the icon to hide the butt
ENABLE_SPELLCHECK	YES	This setting enables and disables Extr spellchecking software. Many brows checking feature, but this may be usec these. See the Appendix entitled Spel more details.
FIXED_WIDTH_FONT	'Lucida Console', Courier, monospace	Font used for the display of Print Text fields and used for read-only descripti old log area fields, if REPORT_WITH_FIXED_WIDTH_F
FOLD_DISPLAY	TRADITIONAL	This setting controls the appearance o folds on *add* and *edit* screens. The va TRADITIONAL, SIMPLE and THIN supported. This setting may be overri Business Area and Project by editing for the PROJECT field and setting a v

FOLD_WORD_POSITION	100	This specifies the character position a up a long word in fields of Text Area, Log Area fields. You should not speci lower than 65. If you specify a high n 99999, long words will never be brok be used in conjunction with FOLD_TEXT_POSITION. Set FOLD_WORD_POSITION to a high make routine use of long URL's in yo This will ensure the URL's are not bro than one line, and that the user can cli with success
GUI_VERSION		This setting provides the means to pro GUI elements depending on the versi ExtraView. Prior to version 12.1, this effect. To keep backwards compatibil older GUI style, leave the setting blan 12.1, use a setting of 2019 to see the r
HIDE_MOBILE_SIGNON_SCREEN	NO	This setting may have the value of YE SIGNON_BUTTON. When the value is NO, the User ID an fields are always visible. When the setting is YES, the input fie ID and Password are never viewable a reliant on one or more of the behavior MOBILE_DIRECT_ACCESS_1 thro MOBILE_DIRECT_ACCESS_5 prov access to screens within ExtraView. When the value is SIGNON_BUTTO button with the title **Sign On** and whe the User ID and Password fields beco
HIGHLIGHT_COLOR	#FF0000	Highlight color for a table cell when y element attribute of FIELD HIGHLIG
HIGHLIGHT_COLOR_ADD	#FF0000	The color to indicate an added value b of a record, in history and email notifi
HIGHLIGHT_COLOR_DELETE	#CCCCC	The color to indicate a value deleted i record, in history and email notificatio
HIGHLIGHT_COLOR_UPDATE	#ff0000	The color to indicate an updated valu email notifications
HIGHLIGHT_TIMESTAMP	YES	If set to YES, the TIMESTAMP field highlighted on email and history repo are YES and NO
HIGHLIGHT_VALUE_STYLE		A CSS style that is applied to the valu an add or an edit layout when the layo named FIELD VALUE TAG is applie
HTMLAREA_ROW_HEIGHT	10	The number of rows to display on the screen for fields with a display type o
IMG_HOME		This is a relative path within the local your language where all the buttons a

		normally locales/en_US. If you want t own images for your navigation bar, c directory to a new folder in the path lo /nav_bar, e.g. locales/en_US/images/r Then set this behavior setting to a valu /my_nav_bar/
LABEL_COLOR	#0000FF	Color of field labels on the *add, edit* a screens
LABEL_TAG_DEFAULT		This provides a point where a default labels for fields on add and edit screen inserted. The insert is an HTML attrib within the table cell that holds the labe these screens. For example, you may s style that is applied to all the field lab You may override the default in this s by field basis with the layout element LABEL_TAG. The default value in a ExtraView is that this setting has no v
LABEL_WRAP_POSITION	15	Character position after which to wrap the *add* and *edit* issue screens and the Note that if a layout element attribute FIELD ALTERNATIVE TITLE is set ignored and the administrator will set formatting in the field
LAYOUT_SCREEN_TITLES	NO	If this value is NO, the screen title in t hand corner of each *add* and *edit* scree the data dictionary screens ADD_PRO EDIT_PROBLEM_SUMMARY respe value is YES, then the screen title is ta Description field within each *add* and thereby allowing you to have a differe on each *add* and *edit* screen
LIST_IMAGE_SIZE_PCT	100	This setting provides a scaling of the l images are displayed alongside list va number is a percentage of the height o displayed, taking into account a user's size - small, medium or large. For exa default of 100 renders an image at the the text, 200 renders the image at dou and 50 is half the height of the text
LOG_AREA_BREAK_LINE	NO	If this value is YES and ExtraView is LOG_AREA field as HTML rather th text up until a or a </p> tag will followed by a link with the word "mo pressing the "more" link, the entire fie rendered. Note that this can override t offered by the setting named LOG_AREA_DISPLAY_CHARS. If setting to override LOG_AREA_DISP then set that value to 32000
LOG_AREA_DISPLAY_CHARS	250	Maximum character length of log area they are truncated on the *edit* issue scr truncated, the word "More" appears a

		• $$LA_DATE$$ - the date the fi • $$LA_USER$$ - the name of tl performing the update • $$LA_COMPANY$$ - the com the user making the update • $$LA_SEQNUM$$ - a sequenc the comment within an issue, st
MANDATORY_FIELD_POST		HTML tag or characters to place after labels. The default is to use the HTMI but you can substitute and valid HTM
MANDATORY_FIELD_PRE	<b>	HTML tag or characters to place befo fields labels. The default is to use the but you can substitute any valid HTM
MAX_EMBEDDED_IMAGE_WIDTH	640	This provides a means to limit the width c displayed within HTML Area fields and Lc which display HTML. Users often capture other large images and they consequentl screens and email notifications overly wic need to scroll horizontally within their bro the fields within these issues. The images their original size in the database, and ar display only.
MAX_IMAGE_DIMENSION_PIXELS	4000	This setting defines the maximum nur either the horizontal or vertical directi image may be, to load it into a field w type of Image.
MENU_BUTTON_POSITION	LEFT	This setting allows the swapping of th and the menu buttons at the top and b screen. If the setting is LEFT then the at the left of the screen.
MENU_SIZE	105	Width or height of the navigation bar, according to whether MENU_DIREC VERTICAL or HORIZONTAL. Note sign off from ExtraView and sign on a setting to take effect
MINIMUM_KEYWORD_SEARCH _CHARS		This setting applies to the "Keyword l option on reports. Keyword entries in field that contain a minimum of the nu characters in this setting will be addec the report and the report will be regen this minimum number of characters ha or the user presses the Enter key, the r be generated.
MOBILE_DIRECT_ACCESS_1 to MOBILE_DIRECT_ACCESS_5		This setting defines the title for a butt within the ExtraView installation to w directed when they press the button. T entry in the setting is button_title:URI defined, a button will be displayed on screen of the mobile client and when t the user will next see the screen defin
MORE_HISTORY_NUMBER_ROWS	25	Defines the number of rows to be sho MORE... message in a related issue di

		in your user's browsers, select an ASC such as +
NAV_BAR_DRILLDOWN_ BOX_STYLE	position:relative; left:-30px	The CSS style to be applied to the tab drilldown box on the navigation bar. T when the MENU_DIRECTION is set HORIZONTAL with horizontal style and is used to alter the position of the for different styles of navigation bar. I you can position the drilldown box in position on the navigation bar, but you effects such as altering the backgroun change the presentation of the control
NAV_BAR_GO_BUTTON	NO	This places a Go button onto the navi drilldown box. Valid values are YES a changing this setting, you must sign o ExtraView and sign on again for this s effect.
NAV_BAR_LOGO_STYLE	padding:20px 0px 0px 25px	This style is used to position the Com the navigation bar, when the MENU_I set to HORIZONTAL
NAV_BAR_SEARCH_TITLE	* Search *	This provides the title to the Search dı the navigation bar. The value can be l clicking on the Edit button and provid values for all configured languages
NAV_BAR_STYLE	text-align:right	This allows you to apply a CSS style t bar buttons. For example you can use or right align all the buttons on the na
NAV_BAR_TITLES	NO	When this is set to NO, titles to the fie the user's availalable roles and the ava Area and projects are suppressed. Set YES causes the titles to be displayed
NAV_BAR_USER_SETTINGS_STYLE		This is the style used to place the user including their role and current busine navigation bar
POPUP_LIST_SIZE	100	The number of entries on a pop-up lis is accessed through a list of the charac opposed to a list of the entries themse
POPUP_WIN_STYLE	silverxp	This setting provides different styles f decoration of popup windows. You m "default", "minimal", "osx", "plain", " "winxp" as valid styles. The value mu case.
RECORD_COUNTER_COLOR		The color of the record counter displa
REFRESH_LIST_MAX_SIZE	200	A fast refresh using JavaScript will oc are less than this size and the refresh J option has been selected for an allowe relationship. This setting allows the ac make a trade off for their users, as to t metadata into a browser and perform a when selections are made, compared t takes to refresh the metadata lists fron
REPORT_HEADER	#ADBFD0	This is the background color of the he

SHOW_PRINT_BUTTON	YES	If this setting has a value of YES then allowing the user to print the current s displayed on all menubars.
SIGN_ON_SCREEN_LOGO	../images/CompanyLogo.gif	This is the path to the logo placed on screen. This setting allows you to use on the sign on screen than is used on t bar. You can point this image to any f can access
SIGN_ON_SCREEN_LOGO_STYLE	position: absolute; left:10px;top:10px	The style to be applied to the sign on default position is the top left-hand co screen
SUPPORT_LINK	ExtraView Support Site	This HTML statement is used for the of the copyright statement on each scr used to direct your users to a specific support. You should use the JavaScript functio to provide a link, as opposed to using attribute *href*. This provides a more g to link to URLs that are outside of the your ExtraView server is installed. Tl value shows how to open a web page. open a new email by using the parame [mailto:xxx@yyy.com?subject= Please%20provide%20assistance](mailto:xxx@yyy.com?subject=Please%20provide%20assistance).
TAB_DISPLAY	TAB	This setting may have the values of ei BUTTON. When this is set to TAB, t rendered with a traditional look, with When set to BUTTON, tabs are rende buttons with the same style as the butt menubar.
TABS_PER_ROW	10	Limits the number of tabs on a form s or *edit* screen, in a single row when be on the add or edit issue screens. If mo this number need to be displayed, they separate row
TAB_FONT_OFF_COLOR	#444444	Color of the font on non-selected tabs generated with the tab display type an administration area
TAB_FONT_ON_COLOR	#FFFFFF	Color of the font on the selected tab. fields that have a display type of tab a administration area
TAB_OFF_COLOR	CCCCFF	Off color is the unselected tabs color t generated with the tab display type an administration area
TAB_ON_COLOR	6666FF	On color is the selected tabs color. Th fields that have a display type of tab a administration area
TAB_SEPARATED_EXPORT	NO	When you are exporting information f administration list utilities, the default will be exported in CSV (comma sepa format. Most browsers will place this

		this if you require this functionality.
TEXTAREA_ROW_HEIGHT	4	The number of initial rows of data to *add* and *edit* screens for fields of disp Area, Print Text, Log Area
THUMBNAIL_MAX_SIZE	150	A behavior setting named THUMBNAIL_MAX_SIZE controls thumbnail. This is the maximum num either the horizontal or vertical directi thumbnail images will be generated. T of the original image will be retained. images are generated for file attachme fields with a display type of image. If value, existing thumbnail images will original size and new thumbnails will the changed value.
TITLE_HEIGHT		The height, in pixels, of the title bar h screen title and menubar button optio
USE_ALLOWED_VALUE_ SORT_ORDER	NO	If set to YES, the child allowed value sorted by the sort_seq in the allowed instead of the meta data sort_seq
VALUE_TAG_DEFAULT		This provides a point where a default value fields on add and edit screens m The insert is an HTML attribute that s table cell that holds the value for field screens. For example, you may insert is applied to all the values on the forn override the default in this setting on a basis with the layout element attribute VALUE TAG. The default value in a ExtraView is that this setting has no v
WINDOW_BG_COLOR	#ffffff	Window background color

Email Settings

This section of behavior settings deals with Email settings. The available settings are:

Email Notification Menu- Email Settings	Typical Value	Description
AD_HOC_EMAIL_FROM_ADDRESS		Return address for all emails s templates or ad hoc text entry emails sent by using the Emai *edit* screen
AD_HOC_EMAIL_FROM_SENDER		The User ID of the sender of a text emails sent from the Ema *edit* screen. The user's email a taken from his account inforn
CHECK_EMAIL_ADDRESS_FORMAT	YES	If you set this value to YES, t address entered on the user ac will be checked to ensure it ha with a fully qualified domain.

		the site has EMAIL_NOTIFIC YES, and a valid directory set EMAIL_DIRECTORY
EMAIL_ADMINISTRATOR_NAME	ExtraView Administrator	This is the title to the email ac ExtraView administrator. Ema automatically generated by Ex originated with this name. Exa emails sent upon the self regis user, or an unauthorized acces setting is used alongside the EMAIL_ADMINISTRATOR_
EMAIL_ADMINISTRATOR_USER_ID	admin@my_company.com	This is the email address from originating within ExtraView usually the administrator's em alias for the administrator. Th alongside the EMAIL_ADMINISTRATOR_
EMAIL_ALLOW_UNQUAL_ADDRESSES	NO	If your company's email serve unqualified email addresses (i addresses without the @comp the address), then set this to Y will not need to use the compl address.
EMAIL_BCC_ARCHIVE		The email address where a co and ad hoc emails are sent as Copy (bcc)
EMAIL_CC_NOTIFICATION_LIST	YES	This setting controls whether appended to the bottom of out notification emails. It can hav YES or NO, or a number. If i then the CC list is suppressed more than this number of user
EMAIL_CHARSET	UTF-8	The default character set that user when email notification i by the ExtraView server
EMAIL_CONTACT_ADMINISTRATOR	admin@my_company.com	The email address for the adm will be contacted via the sign user clicks the link "Forgotten
EMAIL_CUSTOMER_BOX	UNCHECKED	This setting can have a value or UNCHECKED. When this the checkbox on the *add* and e controls whether the LIMITED_USER_ROLE use customers) is checked by defa
EMAIL_DIRECTORY	../mailbox	Email Directory for outgoing stored. This is the location on where the batchmail process l outgoing emails. You may use path, or a relative path. Relati relative to the WEB-INF direc
EMAIL_FROM_USER_ID	support@yourcompany.dom	Return address for all email o ExtraView. This allows the re

		send. This setting is provided mail that exceeds the limit is mail being sent is larger than images and embedded docum removed to reduce the size of
EMAIL_MODULE_OWNER_ALWAYS	YES	Email module owner irrespec they are assigned to an issue. YES and NO
EMAIL_NOTIFICATION	YES	Turn email notification of cha Valid values are YES and NO master control for enabling an email. When this is set to NO, addresses are not required wh editing users. When the value email is sent and no warnings users.
EMAIL_NOTIFY_USERS_ALWAYS	YES	This behavior setting controls ExtraView will always send a user when an issue is updated notification is only sent when fields on the layout that is use communicate with the user ar this value to YES if you alwa receive notification. Note that not mean any change to the is updated, but means a change on their email layout must occ that if more than one update t occurs within a minute, and th timestamp does not include se will only receive the first upd a minute. The user can set his format to include seconds if h certain that he will receive mu within a single minute.
EMAIL_RETURN_ADDRESS		A value in this setting sets the as the return address into the message header. This is tyipc provide a return path for mess be delivered.
EMAIL_STYLESHEET	* {font-family: Arial,Helvetica,sans-serif !important; font-size:10pt} .text {font-family:Arial,Helvetica,sans-serif !important; font-size:10pt} .report_text {font-family: Arial, Helvetica,sans-serif !important; font-size : 10pt} .title_text {font-family: Arial,Helvetica,sans-serif !important;font-size:13pt;color:#AAAAAA;font-style:italic;font-weight:bold}	The style for outgoing HTML This is included within the bo notification sent, so that the u need access to a server when email. An entry in EMAIL_S pure CSS and it gets embedde HTML <style>...</style> tag, not need to be online when th email. You can use any valid either as the global style or to text or report_text styles. The relatively complex as Micros its best to render HTML-base

	bottom:2px} .msoNormal {padding:0 0 0 0 !important; margin:0 0 0 0 !important}	
EMAIL_SUBJECT_TEMPLATE	ExtraView Notification [$$ID$$]: $$STATUS$$ - $$SHORT_DESCR$$	Format for subject line of ema between the $$ signs will be r actual value from the current r
EMAIL_TABLE_WIDTH	660	This setting controls the widtl within email clients, for stand generated notifications. The r 660. If you want to generate s notifications that are not fixed value of 0.
EVMAIL_DELIMITER_TEXT	~--~--~--~--~	When generating outbound er format, ExtraView surrounds email with this text within inv user replies to this mail notifi generating an update to the iss utility will suppress all the tex two tags, thus eliminating the from being added into the issu update
GENERATE_EMAIL_BOX	CHECKED	The default value for the Gen on the *add* and *edit* screens. V CHECKED and UNCHECKE
MAX_SIZE_EMAIL_ATTACHMENTS	0	This is the maximum size, in l attachments that are sent out v email notifications. If the size exceeds this number of bytes, not updated, the notification is the user will receive a warning remove attachments from the using the **Select?** checkbox, a to update the issue again. If tl size of attachments is not sent This setting is useful if you ar within an email environment v setting for processing the size rejects emails over a specific s
SET_EMAIL_ENCRYPTION	NO	Show encryption option in ad screen. Valid values are YES a
SUPPRESS_STANDARD_EMAIL_LIST	NO	If this is set to a value of YES notification is made by using inbuilt logic. Instead rules def Email Rules script are used to notifications to users. An exce that email generated using em will still send email to the use the template.

		display allowed child values, assuming the pa already been selected in a filter that the user l created. All values will be displayed in child lists when the setting has a value of NO.
ALLOW_DEBUG_URL	YES	Allows user to set up debug level of the appli log. Valid values are YES and NO. If turned (cannot alter the debug level of the log with a of the URL is: http://server.extraview_domai /evj/ExtraView?DEBUG=6 The default level messages is 6. Valid values are in the range 1
ALLOW_MOBILE_CLIENTS	YES	This behavior setting enables or disables acce mobile phones and tablets. If this is set to NC not be able to sign onto the site with the Extr app. This does not preclude users from using browser within their mobile device to sign or
ATTACHMENT_PERMANENT_DELETE	YES	When this setting is set to YES, any file attac permanently deleted from the server when th attachment. When the setting is NO, the attac retained on the server, but is not visible on ad or on reports. However, the attachment may b the Attachment History screen for audit trail p
ATTACHMENT_REPOSITORY_DMAX	999	The maximum number of files or directories created under one node of the external directo The default for this value is 999. It is not like value needs to be altered.
ATTACHMENT_REPOSITORY_OPT	INTERNAL	This setting controls whether attachments are internally within the database, externally on t or in some combination of the two methods. I this setting is INTERNAL, then all attachmen internally within the database. If the value of EXTERNAL, then all the attachments are sto external file system. Alternatively, you may p separated list of file extensions and then all fi extensions will be stored externally while all be stored in the database. For example, if you this setting to "avi, png, gif, jpg" then files of be stored externally. This strategy leaves the internally in the database as searchable by ke the image and video files are stored externall for this value is INTERNAL. Also, ensure th ATTACHMENT_REPOSITORY_ROOT is s before storing attachments outside the databa
ATTACHMENT_REPOSITORY_ROOT		The name of the directory on the file system attachments will be stored. Before any attach externally, you must also provide a valid setti setting ATTACHMENT_REPOSITORY_OP ensure that the path is valid from the applicat that are running ExtraView, and that you hav permissions to read and write to the storage. ensure that you set up a separate backup meth external storage as backing up your database backup the file attachments.
BLOCK_ATTACHMENT_EXTENSIONS		If a user uploads an attachment, or a file into

		proxies. To counteract this, set the value of th setting to YES when you have a network con manner. This is highly unusual and most insta need to reset the default value of NO for this
CSS_HOME		This is the name of the directory within the st that contains the set of CSS files used by the theme for the installation.
DEFAULT_ATTACHMENT_CHARSET	UTF-8	The default character encoding for files being ExtraView. This value is used to select the ini presented to the administrator when creating
DEFAULT_LANGUAGE	en	Default language for the installation. This is t English
DEFAULT_REGION	us	Default region for the installation. This is typ the United States
DEFAULT_VARIANT		Default variant for the installation. This is no
DOCUMENTATION_ACCESS	YES	This setting defines whether end users may a documentation pages from a link on the menu screens. Set to YES to enable this feature.
DOCUMENTATION_BASE_URL	https://docs.extraview.com/extraview-121/	This is the location of the document pages on Corporation servers. This points to the docum version of this installation.
DOMAIN		Cookie domain - normally this is left blank
ENABLE_AREAS	YES	This setting controls whether the installation multiple business areas or a single business a be YES or NO
ENABLE_PROJECTS	YES	This setting controls whether you can use mu within each business area. Valid values are Y Note than if you use YES, then ENABLE_AI be set to YES
ENABLE_QUICKFIND	NO	This setting controls whether QuickFind text for keyword searches. Valid values are YES a that if you use YES the database must have to created to perform the searches.
HELP_HOME		The default for this is a null entry, in which c points to ../WEB-INF/locales/en_US/help for locale. An absolute URL An absolute path m into this setting to point to an alternative help installation
HTTP_CHARSET	UTF-8	The name of the default character set used wi browser. It is recommended that this be "UTF
LOCALIZE_TITLES	NO	Used to turn off and on the localization butto administration. This is used when you are usi multiple languages on the user interface. Whe set to YES, a button with the title of "Localiz beside all metadata titles and values that can different languages. Valid values are YES and
MAX_LAYOUTS_IN_CACHE	100	This is the maximum number of layouts that cached in memory once they have been built access. This layout caching improves the perf ExtraView significantly. If this number is inc should be paid to the amount of free memory

		other threads of available connections. Norm recommended value. The maximum number maximum number of connections defined in Configuration.properties file
MULTI_LOCALE	NO	ExtraView will behave as a single locale syst language specified in the behavior setting nar DEFAULT_LANGUAGE when this value is set to YES, then the administrator may add a language locales to the system, and provide l messages and metadata for each locale
QUICKFIND_ACTIVE_INDEX	PRIMARY	This setting determines which index is curren QuickFind. The value may be PRIMARY or Quickfind keyword searches are performed u directory in QUICKFIND_INDEX_LOCATI primary or QUICKFIND_INDEX_LOCATIC alternate respectively
QUICKFIND_INDEX_ENUMERATED	NO	This setting controls whether the titles to UD If indexed, keyword searches that contain iss values of these titles will be returned within t
QUICKFIND_INDEX_LOCATION		The name of the directory on the file system Quickfind text indexes will be stored. Before built, you must also enable full text searching ENABLE_QUICKFIND. You must also ensu is valid from the application server(s) that are ExtraView, and that you have all the permissi write to the storage. You must also ensure tha separate backup method for this external stor up your database will not backup the full text
QUICKFIND_INDEX_ LOCATION_ALT		This is an alternate directory path for the QUICK When using the ALTERNATE QUICKFIND_ACTIVE_I searches are performed using this directory.
QUICKFIND_INDEX_USERS		This setting controls whether Quickfind inclu the text search for keyword searches. Valid v and NO.
REAL_IP_HEADER		The name of a request header to use to retriev address. This is useful if the application serve a proxy or load balancer, and the request com and a header was added with the clients origi If this behavior setting is configured, and the the request, and it has a reasonable value, the the IP address. Many proxy servers, load bal application servers do not set the standard HT properly. This setting may be used when you server works behind a proxy server or load b users are seeing unexpected session expiries.
RESPONSE_COMPRESSION_ THRESHOLD	0	This setting provides optional compression f to Ajax calls from the user's screen. A setting provide any compression. The value is the nu kilobytes of data that are to be sent to the bro Ajax response. When the amount of data to b this threshold, the data will be compressed o then expanded by the client browser. There is is highly dependent on the speed of the netw

		browser. NO turns this facility off
SITE_URL		The full URL of the site, e.g. http://extraview.company_name.com. This se If it is not provided, ExtraView assigns two v one to be used from within the company's ne to be used externally. When the ExtraView ap initializes, the server will look at the value in setting. If the incoming request to start the se from a SSL session, the two values set interna to: Internal URL: http://extraview.company_r External URL: https://extraview.company_na values set can be seen in the application serve startup section. If the incoming request to sta originated from a standard HTTP session, the be identical. There are some circumstances w administrator will need to set a different URL done by placing the value directly into the SI The most common reason for requiring this is notification email from ExtraView, where the missing and its URL is malformed. The settin sensitive to your web server configuration an redirection provided there. If you have set up your web server, these URL's may be differen being used within your environment and the ExtraView therefore begins with https://, then must be set to https://extraview.companynam order for drill downs from email and other re applications to work correctly. With redirectio that you may not use a form such as http://extraview.company_name.com/evj/Ext on. It is most probable that you will use http://extraview.company_name.com/evj. If y incorrect value for this setting, it is highly lik will not be able to sign on to ExtraView.
USER_CUSTOM_CLASSNAME	com.extraview. usercustom. CustomCodeBase	Log timing data for every user custom metho values are YES and NO
USER_CUSTOM_ENABLE_METRICS	NO	Log timing data for every user custom metho values are YES and NO
USER_CUSTOM_JAVASCRIPT		This setting provides the capability for custo files to be loaded into the *Add* and *Edit* scree multiple files, separate the entries with a sem path(s) you enter are relative to the directory **javascript** within your ExtraView instance. done by ExtraView for the existence of the fi important to enter the correct path(s) and file

Report & Query Settings

This section of behavior settings deals with the Report and Query settings. The available settings are:

	/html, text/plain,text/rtf	user checks the "Search Attach the file in the list to be searche one of these extensions, it is sk used to skip searching of files files, to speed the search proce
ALLOW_SEARCH_ DEACTIVATED_USERS	YES	The behavior setting controls v allow users to include deactiva querying and the setting of USER_LIST_DISPLAY is set the value is YES, then an addi appears in the popup search sc option allows you to enable qu deactivated users. Users can se deactivated users when USER_LIST_DISPLAY is NC manner as searching for other values
ALLOW_SEARCH_TEXT_UDFS	YES	When this setting is YES, then keyword search will include th UDF's with a display type of T have a performance impact on searches. Valid values are YES
ALLOW_UNLIMITED_SEARCH	YES	Allow or disallow unlimited ro returned on queries when searc values are YES and NO. In lar the system administrator typica stop users running reports that amount of resources. This is us conjunction with LIMIT_QUE
AUTO_FILTER_QUERY_FIELDS	NO	This setting causes a list of the and Projects to appear within r that display one or more field l can select a Business Area and from the list, and the field lists to only display the fields which within the selected Business A
DEFAULT_SORT_ORDER	ID:DESC	The default sort order for repo
DISPLAY_ALL_FIELDS	YES	When this value is set to YES, which the user has read permis generated into the all the query which a user can select for col all levels, for hierarchy reports set to NO, then only the fields edit screen of the Business Are defined for the hierarchy level displayed. This keeps the num displayed to a minimum, and r displays all the fields in which an interest in using as filters
DRILLDOWN_ATTRIBUTE	ID	Data dictionary entry name for criterion. Typically, this is the but it may become ALT_ID or according to how your system

		therefore this number must be area fields can exceed this lim
EXCEL_PRESERVE_ LEADING_ZEROS	NO	EXCEL_PRESERVE_LEADI allows the spreadsheet to retai output. For example, if the sett when 0001234 is output, the E display 1234. If the setting is Y Excel cell will display text as (
FILL_IN_REPEATING_RECORDS	YES	In text and Microsoft Excel rep determines whether to pad par repeating rows with blanks. If then the parent data will be rep repeating row child values. Va and NO
FULL_TEXT_SEARCH_COLUMNS	ITEM.SHORT_DESCR ITEM_TEXT.TEXT ATTACHMENT.FILE_DESC ATTACHMENT.FILE_NAME ITEM_UDF.VALUE ATTACHMENT_ CONTENT.CONTENT_BLOB	This is a comma-delimited list columns that will be indexed a perform high speed keyword s users. If a column is in this list suitable index for that column underlying database, search qu standard SQL will be used wh searches that column. There is need for the administrator to m the value of this behavior setti columns used to store text witl the list.
GRANULAR_REPORT_DEFINITIONS	NO	By default, the report editors a user to output all the report de single mouse click. When this value of YES, then the end use output any combination of the Definition, Report Filters and (though individual checkboxes.
HIGHLIGHT_LAST_CHANGE_USER	YES	If set to YES, the LAST_CHA field will always be highlighte notifications and history report are YES and NO
HISTORY_DISPLAY	ABBREVIATED, SIDE_BY_SIDE, LAYOUT	This setting allows the admini which methods for the present are available to the end user. Y two or three of the values ABI SIDE_BY_SIDE and LAYOU commas. For each of these val will appear on the menubar of screen, and the user can switch alternatives. The first value in default value when the user fir for an issue
INSERT_REPORT_HEADERS	YES	This setting controls whether h footer information is inserted i a destination of Microsoft Exc Values may be either YES or N headers and footers are always

		been reached. The last row of t contents will show an error me the user that the limit has been default is 40.
LIMIT_HOMEPAGE_QUERY_ROWS	20	Maximum number of rows tha returned by any column report homepage. This is used in con ALLOW_UNLIMITED_SEA the limit of rows returned by a
LIMIT_MASS_UPDATE_BATCH_SIZE	100	This is the number of issues th processes in memory at one tin the number, the faster the proc but more memory is consumed encounter out-of-memory erro mass updates, you should redu from the default of 100
LIMIT_QUERY_ROWS	10000	Maximum number of rows tha returned by any search query. ' conjunction with ALLOW_UNLIMITED_SEA a limit to the number of rows r query. Note that a user whose ADMIN, bypasses this check
LIMIT_SUMMARY_QUERY_ROWS	1000	Maximum number of rows tha returned by a summary report. exception to LIMIT_QUERY_ the limiter for most other repo
LIMIT_WORD_DETAILED_RECORDS	10000	The maximum number of deta MS Word report. Use this if yo bug in Microsoft Word (pre-20 freezes when downloading or l HTML reports. This is an exce LIMIT_QUERY_ROWS whic for most other report types
LIMIT_WORD_RECORDS	25000	The maximum number of reco from a search to a MS Word re used to limit the amount of HT sent to Word (pre-2007), if you bug where Word freezes when amount of HTML data. This is LIMIT_QUERY_ROWS whic for most other report types
MASS_DELETE_TEMPLATE	VIEW_BUTTON, ID, AREA, PROJECT, SHORT_DESCR	This provides a list of the field the review screens when the us Mass Delete button from Quic Column reports
MAX_CELLS_ON_TASKBOARD	500	The maximum number of cells rendered when producing a Ta Browsers may run out of resou consequently hang, on client c attempt to render a huge taskb many cells. This setting provid set sensible limits on the size c

MAX_PDF_COLS	12,15	This sets the maximum numbe that a user can place on a repor outputted to PDF. This setting separated values. The first valu of columns when generating pe and the second indicates the nu columns when generating land
MAX_REPORT_FIELD_HEIGHT_ PIXELS	0	This setting controls the maxin pixels, of values of Text Area, Log Area and Print Text fields reports. When the unconstrain individual field value on a repo than the value of this setting, th constrained to the value of the buttons are placed beneath the the user to see the entire conte reduce the height back to the in value of 0 implies there is no l height and the entire contents o always displayed. As a guide, a row of characters 25 pixels high. This varies ho depending on the text size of th Also, for reference, characters approximately 12 pixels wide, characters have different width narrower, and some are wider.
MENUBAR_SEARCH_TARGET_WIN	main	When you drill down to an issu navigation bar, a value of MAI results in the main window alo navigation bar. A value of __B open a new window for the dis
MINIMUM_SEARCH_FIELDS	0, 0	This setting is used to force a u number of filters before their c executed. If you specify a sing this specifies the number of fil to the KEYWORD filter that m provided. If you provide two n separated by a comma, then th specifies the number of filters the KEYWORD filter that mus and the second number specifi filters that must be provided w KEYWORD filter is provided. 0,0. For large databases, a setti each number typically provide control, to ensure that only a sn the database is searched at one users do not attempt to downlo records or perform complex qu millions of records.

QL_REPORT_LAYOUT_ AREA_PROJECT		This setting defines the busine project to be used when creatin report. If defined, the value of QL_REPORT_LAYOUT_ARI has two comma-separated valu Project_Title, where Area_Titl Project_Title must exist. These to select the layout for the Qui business area and project can n uniquely in the search filters fo report. This happens if there ar area/project filters selected and exist, or there is more than one and project pair combinations QL_REPORT_LAYOUT_ARI is not defined, the current busi project for the current user is u layout.
QUERY_TIMEOUT_SECONDS	0	The maximum number of seco SQL query is allowed to run in before it is aborted. This preve query from taking all the datab and in the worst case, stops a q never end. A value of 0 allows to completion, regardless of ho take
QUICKFIND_MAX_HITS	20000	This setting provides a limit to results returned with a Quickfi possible to generate extremely somewhat unusable) result sets when using wildcards in querie setting provides a throttle.
RECORDS_PER_PAGE	20, 100, 500	The number of records per disp user can select on reports. The populate the list box on the Sea screens. If ALLOWED_UNLIMITED_SI then Unlimited is also appende values
RECURRENCE_ISSUES	RECURRENCE_ISSUES	This value is used by ExtraVie issues together by the recurren the calendar report. It is highly do not edit this field. Editing th recurrence has been generated loss of that recurrence
REPORT_DTL_ITEM_DATA_LAYOUT	NO	When this is set to YES Detail be rendered with the layout for area and project and the curren this is set to NO, the layout use the user's current area and proj current role
REPORT_FILTER_BY_ CURRENT_ROLE	NO	When this is set to YES, the us reports on the Query / Report p

		Report will be opened in a nev
REPORT_LABELS_POSITION	TOP	Position of the labels on report data. Valid values are LEFT ar the value of LEFT is set, the d uses the layout defined for the set the value to TOP, then the c will be displayed in a single cc labels to the left and the values to bottom. The order of fields detailed report layout, from lef bottom.
REPORT_REL_ISSUES_EXCEL_TEXT	NO	When this behavior setting is s reports that are output to Micr text, will include the RELATED_ISSUE_DISPLAY related issues to the records be When this is set to NO, related suppressed on Microsoft Exce Note that browser output and N output will always contain the RELATED_ISSUE_DISPLAY issues if it has been defined.
REPORT_SUPPRESS_BLANK_LINES	YES	If YES, the detailed report wil row where the data values are values are YES and NO. This shorten the length of reports th a significant amount of blank c
REPORT_TABLE_WIDTH	100%	This setting controls the width information and tables on all t and the home page report widt common setting is to use 100% but the setting can be an absol pixels for the width of objects presented to end users
REPORT_WITH_FIXED_WIDTH_FONT	NO	When this is set to YES, fields type of "text area" and "log are their contents with the FIXED_WIDTH_FONT. Whe to NO, these fields will display using the DEFAULT_FONT. N setting also applies to the displ fields on the *edit* screen.
RESTRICT_ROLE_BASED_REPORTS		Any report created for *** All R** to everyone that means RESTRICT_ROLE_BASED_ behavior setting is ignored if a created for All Roles. If the set RESTRICT_ROLE_BASED_ left blank, all users will see all match the role(s) they may adc has been given access to role-b the setting of RESTRICT_ROLE_BASED_

		with the same company name account or that were created by user, if the role has been given based reports. This setting doe reports saved for shared report reports are available to all user has permission to that type of the security permission keys.
RID_PAGING_DEFAULTS	0,0	This behavior setting determin results returned within a relate are paged, with **Next** and **Prev** move between pages. The pag minimum number of rows whe displays are rendered in pages commas. A page size of 0 is u resulting in no paging.
THUMBNAIL_THROTTLE	50,1000,1000	This setting is comprised of th separated by commas that dete thumbnail images are rendered reports and edit screens. The f the minimum number of attach the throttle is applied. A value throttling. The second, optiona interval in milliseconds betwe thumbnails. The third, optiona delay in milliseconds before th thumbnail on the page is rende

Security & Session Settings

This section of behavior settings deals with the Security and Session settings. The available settings are:

Systems Control menu- Security and Session Settings	Typical Value	Description
ALLOW_CHANGE_LOCALE_AT_SIGNON	NO	If this setting is set to YES, then there is a prompt on the sign on screen, where users alter their language setting as they sign on. meaning in a multi-locale system and whe regularly changing which language they u
ALLOW_PASSWORD_AUTOCOMPLETE	NO	This setting allows or disallows your brow user's password and to auto-complete this Note that setting this to YES may be a secu users access ExtraView from public compu that this setting allows the browser's **Back** used to go back and retrieve the original si the valid User ID and password. It is not re that you turn this feature on if you are not certain of who can access your installation
ALLOW_SECURITY_PERMISSIONS	NO	When you create a new user defined field read and write permissions for all user role

		the user's session is terminated when they another site or close the ExtraView windo If your installation is being used as a remo OAuth2 tokens being granted to users on c valud of this setting should be kept as YES security precaution which prevents the sm a user being able to access the site for som after their account is deactivated.
CACHE_COHERENCY_POLL_TIME		The number of seconds between updating information within the server. This setting compromise between between performanc information being available across all nod server environment, and across different s single application server environment. The cache interval, the higher the performance but the increased likelihood that a user wil information within the server cache. The d not enter a value is 5 seconds. If you chan often on an installation with clustered appl the recommendation is to keep this value a that any metadata change is propagated pr application servers and sessions. If you ch rarely, or the metadata is only changed on and then propagated to a production serve consider extending the time
CLIENT_IP_ADDRESS_CHECK	YES	YES or NO to check or ignore that the clie maintains a constant IP address during a s YES, but may need to be set to NO if your accessed via a proxy server
CONFIDENTIALITY_MESSAGE		This setting allows the administrator to cre wide confidentiality statement that appear of most screens and reports. This stateme 4,000 characters in length and may contai
DEFAULT_TIMEZONE	America/Los_Angeles	This time zone will be used as the default who are created. Please make sure the tim correctly. You can consult the Appendix o for a list of valid time zone
ENHANCED_SECURITY	NO	This setting provides password access to t Accounts Maintenance screen for enhance
KEEPALIVE_INTERVAL_SECS	300	This is the number of seconds between po from the *add* or *edit* screen. This timer is u message from the user's browser to the ser server to keep track of users with open *ad* sessions. If the user closes their browser o from an *add* or *edit* page, then the server w recognize this event.
KEEP_FAMILY_SESSIONS_TIMEOUT	NO	If this behavior setting is NO, then each w opens a new session within ExtraView wil measurement against SESSION_EXPIRE_TIME_HOURS. If th then all sessions in all windows will share

		email is sent only when a user is denied ac no availability of licenses. If the setting is warning is not generated
MAX_SIGNON_ATTEMPTS	3	The maximum number of consecutive fail attempts allowed by an individual user bef account is disabled. The number of failure the period defined in SIGNON_PERIOD_ Note that all users who have the administra by the setting ADMIN_OVERRIDE_ROL by email when a user's account is disabled you are using custom authentication, then MAX_SIGNON_ATTEMPTS is not opera
MAX_SIGNON_ID	IP_ADDR	Use a setting value of either USER_ID, IP BOTH. This setting configures the admini about a user attempting to sign on more th MAX_SIGNON_ATTEMPTS, to recogniz as originating from the entry of a specific originating from a single IP Address, or or combination of both.
NOSPILL_SESSION_COUNT	500	Two numbers control the number of sessio reside in memory at any one time: • SPILL_SESSION_COUNT • NOSPILL_SESSION_COUNT A session is created in memory in respons user or as a "sub-session" of some previou session. These sessions require memory re maintain the context of individual users "c with ExtraView. When the number of sessi large, they threaten the continued ability o operate by consuming too much resource s therefore, there is a mechanism to "spill" c disk and retrieve them only when they are the number of sessions in memory reaches NOSPILL_SESSION_COUNT, the "oldes written to the database and removed from context, the "oldest" session is the one that touched by some user action for the longes writing of the session data to disk occurs a task and does not directly affect the creatio of sessions that are in memory. Responsive only when a disk-resident session is invok activity that requires a short delay to "de-s session and reconstitute it in memory from When the number of sessions in memory r SPILL_SESSION_COUNT, the in-memor is "full" and new session requests must wa sessions to be written to the database. In th a direct effect on responsiveness while the old sessions to be written and in-memory s be made available. Often, this delay is not Another way of looking at it is that the sys three states at any one time: (N_SESSION

		created directly in memory without ; 3. Full state: SPILL_SESSION_COUN N_SESSIONS In this state, a new se request will be delayed until at least is written to disk to free a "slot" for Note that NOSPILL_SESSION_COUNT · SPILL_SESSION_COUNT in all cases. If settings do not adhere to this invariant, the (480 / 500) will be used. Note also that the settings must be set when ExtraView is sta are not inspected after startup. If they are c restart of the ExtraView application server them to take effect.
PASSWORD_EXPIRE_TIME_DAYS	0	This is the number of days which a user's p last, before it automatically is expired. Eve number of days elapses, the user will be pr create a new password when they next sign setting has a value of zero, passwords will Note that if a user is created when the valu this setting is then changed from zero to an existing users passwords will never expire administrator will then need to set a new d expiry in the users accounts.
PASSWORD_FORGOTTEN	YES	When this is set to YES, then a prompt "Fo Password?" appears on the sign on screen be able to reset their password without inte the administrator
PASSWORD_REUSE_DAYS	0	This is the number of days that must go by password can be reused, after it is changed value of zero disables checking for reused
PASSWORD_RULES	0,0,0,0	PASSWORD_RULES has four numbers se comma. The first number is the minimum number c required to compose a valid password. The which indicates that passwords may be of The second number is the minimum numb characters. Numeric characters have values 9. The default is 0 which indicates that pas contain any numeric characters. The third number defines the minimum nu characters in upper case. Upper case chara values in the range A to Z. (All passwords sensitive.) The forth number is the minimum number alphabetic and non-numeric characters. Th characters that are not in the ranges of 0 - 9 A - Z, but are valid characters to store in a Double-byte characters are not allowed, bu

		wish to wait for this cycle to complete to a refresh the settings, you can sign off and si
SESSION_EXPIRE_TIME_HOURS	24	Maximum session idle time in hours, the s user is kept. After the period set in USER_EXPIRE_TIME_HOURS and befo this setting, ExtraView will attempt to rest when their session has expired. Beyond th in SESSION_EXPIRE_TIME_HOURS th lost. If the value of this setting is less than then the session data will be kept permane server is restarted. This is not recommende
SESSION_MONITOR_POLL_SECS	300	This is the number of seconds between per the server, for session removal due to user activity. The server will test to see if the us open session at this interval. This is only u USER_TIMEOUT_SESSION_REMOVAL the user's browser has not reported to the s session is still active with the KEEPALIVE_INTERVAL_SECS timer.
SESSION_NAME_EXPIRE_TIME_HOURS	24	This is the session expiry period measured user who occupies a named user license an idle. Note that this is different from the per who occupy a concurrent license. Their ex defined in the behavior setting named SESSION_EXPIRE_TIME_HOURS. Afte in USER_EXPIRE_TIME_HOURS and be of SESSION_NAME_EXPIRE_TIME_HO ExtraView will attempt to restore a user's c session has expired. Beyond the time speci SESSION_NAME_EXPIRE_TIME_HOU be lost. If the value of this setting is less th or 0, then the session data will be kept perr the server is restarted. This is not recomme
SESSION_WARNING_INTERVAL_SECS	0	This setting works in conjunction with SESSION_WARNING_TIME_SECS. Wh for a user reaches SESSION_WARNING_ before the expiry time, the user will see a r screen warning them of the impending ses warning will repeat every SESSION_WARNING_INTERVAL_SEC expiry time, when the session will finally e user takes some action to submit the form the server during this process, the timers a user session remains active. A value of zer repeat warnings will be given.
SESSION_WARNING_TIME_SECS	0	This setting works in conjunction with SESSION_WARNING_INTERVAL_SEC time for a user reaches SESSION_WARNING_TIME_SECS befo time, the user will see a message on their s them of the impending session expiry. This repeat every SESSION_WARNING_INTE until the expiry time, when the session wil

SPILL_SESSION_COUNT	1000	Please see the entry for NOSPILL_SESSI(
SYSTEM_LOG_EXPIRE_TIME_DAYS	30	This is the number of days of history in th the user signon log that information will b is purged from the system. The default is 3 may increase this if you want to retain the longer periods. Stale information is purgec each time you access the logs, but if this s before you access the logs, then the inforr retained.
USER_EXPIRE_TIME_HOURS	8	Description - This is the time in hours for will remain signed in to ExtraView, when idle. ExtraView recognizes a user as still a action causes the user to access the server. session expires, ExtraView will ask the us again, and will attempt to restore any data or updated, and take the user to the point v working. Note that the ability to restore da enabled for the period specified in the setti SESSION_EXPIRE_TIME_HOURS. For SESSION_EXPIRE_TIME_HOURS shou equal to or greater than USER_EXPIRE_T If the value of this setting is less than one then the session will not time out.
USER_TIMEOUT_SESSION_REMOVAL	NO	The value of YES implies that sessions are USER_EXPIRE_TIME_HOURS of inacti user has sessions that remain active in the screen mode. NO implies that these sessio after this period of inactivity. The user's br checked by the server every SESSION_MONITOR_POLL_SECS to s ExtraView session is still active.

User Settings

This section of behavior settings deals with the User settings. The available settings are:

Users menu - User Settings	Typical Value	Description
ALLOW_PASSWORD_CHG_AT_SIGNON	YES	This setting controls the visibility of the Change Pa the user sign on screen. If the value is YES, the linl the value is NO, the link is not shown. Also note th inoperable if the setting named LDAP_USER_LO(to YES.
CHECK_SAME_FIRST_LAST_NAME	YES	This setting gives the administrator control over wl instituted when adding a new user or updating an e to whether ExtraView will provide a warning if the first and last name is already used
COMPANY_NAME_LIST_UDF		If this field is populated with the name of a User D with a display type of list, then the Company Name account administration screens becomes a list, with being populated from the UDF. This accompanies t

		clients. The mailto protocol allows pass-through of characters in the subject and body using the RFC-2 which is not implemented correctly in many email time, the only mail client that appears to be fully cc the standard is Mozilla Thunderbird. The RFC-204 specification of the character set for the subject anc other header fields) for the mailto protocol URI. Tl that ExtraView uses is the character set specified ir EMAIL_CHARACTER_SET behavior setting, or not specified. RFC-2047 only comes into play for t when non-7-bit-printable ASCII appear in the subj fields. Thus, the fields will be encoded when doubl European accented characters are present in those f ExtraView uses the "B" (base64) encoding in all ca non-ASCII characters.
DEFAULT_START_PAGE	Home Page	This setting allows the Start Page to default to one screens when creating a new user. This sets the sta new user. The value of *Home Page* is the system d potential values are: • Home Page • Workspace • Query Screen • Report Screen • Administration • Add Issue Screen It is possible for the administrator to add additional through the administration utility which may also b default start page by using this setting
ENABLE_PRIVACY_GROUPS	YES	Turn the Privacy Group feature on and off. Valid v and NO. If you set NO, then user administration sc offer the ability to set privacy groups for users, and able to create and maintain privacy groups
ENFORCE_DETAILED_USER_INFO	NO	This turns extra fields on for mandatory field check account screen. Valid values are YES and NO. Not the user's primary email address may be mandatory value is YES, it is not mandatory to enter the prima address when the setting EMAIL_NOTIFICATION
IGNORE_DEACTIVATED_USER_FIELDS	ORIGINATOR	This is a delimited list of fields with a display type will not be warned if they edit an issue which has a with a deactivated user. If a USER field does not a the user will always be warned if the field has a de when they edit the issue.
OMITTED_IMPORT_USER_COLUMNS		This is a comma-separated list of column names in security_user. The list of columns named here will when an XML export file is imported into a target fields that are frequently altered by a user, such as SECURITY_PASSWORD, will not be overwritten import of data. Note that this setting should be set i system that is importing the data. It is not reference exporting the data. The topic on importing user inf complete list of the fields you can reference. You s

SELF_REG_USE_COMPANY_NAME	NO	When set to YES the value of COMPANY_NAME default will be used for self-registered users. Other user_id will be used for user's company name.
SELF_REG_USE_EMAIL_ADDR_AS_UID	NO	If this setring has a value of YES, then the email ac for users who use the self registration process, as o allowing the user to choose a User ID. The email a the User ID when the database is updated
USER_DEFINED_START_PAGE	YES	If this is set to YES, the user is allowed to set their entering ExtraView, to a commonly used page such Page, the Add Issue screen or the Search / Report s set on their personal preferences page
USERNAME_DISPLAY	FIRST	Display choice for user names (ID, LOGINID, FIR example, if the users name is Mary Jones and their MSMITH, and their Alternative ID is MJONES the display msmith, LOGINID would display mjones, display Mary Jones and LAST would display Jones
USER_ADMIN_DISPLAY_COLUMNS		The default list of fields displayed on the user acco maintenance screen is: User ID, User Name, Email Company, Enabled, License type, Last access, Date Last Updated. If you want to alter this list, you can the fields from the database table security_user in t fields you can place on the screen are chosen from: USER_IMAGE, USER_ID, LOGIN_ID DISPLAY PHONE, EMAIL, JOB_TITLE, TIMEZONE, ROL COMPANY_NAME, PAGER, and MOBILE. To i the user defined field names, use the convention US through USER_FIELD_10. If you want to include been configured as a user attribute, then use the co ATTR:field_name, where field_name is the name c defined field used for the attribute. This conventio possibility that some of the attribute fields may hav name as the database field name with the user infor Note that the fields ROLES and ATTR:field_name potential to contain multiple values in a single reco
USER_LIST_DISPLAY	LIST	POPUP or LIST. If POPUP, then users are selected updating issues via a popup window. If LIST, the u appear in a select list. Typically, if you have a large users, you will use POPUP
USER_POPUP_COLUMNS	YES	The fields displayed in a user search popup window configurable using this setting. This setting takes a (using the schema column names) from the security presents these to the user. If there is no value provi setting, then the following fields are displayed: Use Phone, Email address, Company name, Pager and M You can select from any of the following fields: US DISPLAY_NAME, PHONE, EMAIL, JOB_TITLE COMPANY_NAME, PAGER MOBILE, USER_D through USER_DEFINED_10
USER_SELF_REGISTRATION	YES	You can allow your users to self-register, or you ca registrar. When this is set to YES, a prompt appear screen, allowing a user to navigate to a page where

		to self-register, that the GUEST user role must hav permission to user fields. The most important of th USER.USER_LAST_NAME. The user's default A PROJECT is assigned from the behaviour settings SELF_REG_DEFAULT_AREA and SELF_REG_DEFAULT_PROJECT. You should er behavior settings have valid entries when you wish to self-register. The EMAIL_NOTIFICATION sett to YES as well, in order for user self-registration tc

Workflow Settings

This section of behavior settings deals with the Workflow settings. The available settings are:

Workflow menu- Workflow Settings	Typical Value	Description
ADMIN_OVERRIDE_ROLE	ADMIN	Name of the user role that bypasses seve controls, and has special properties. Use set as their current role have the followi • Status change override privileges. change rules are not obeyed for th This is a significant reason why th ADMIN_OVERRIDE_ROLE use not be used for normal operationa • The security key CF_SECURITY combination with the admin-bypa determines what user role you nee to see and edit other users' privacy user roles. For example, if the AD read and write privileges, but SUI ADMIN_OVERRIDE_ROLE use of the ADMIN user role will only privacy groups and roles for users the ADMIN role. If ADMIN is th ADMIN_OVERRIDE_ROLE use of ADMIN can edit privacy group all users • If ExtraView access is disabled by administrator, only members of th ADMIN_OVERRIDE_ROLE use able to access ExtraView, until Ex is restored
ALLOW_BILEVEL_GROUPS	NO	This setting is provided for backwards c From version 5.0 onwards, bi-level relat have been superseded by many-to-many many relationship groups. Only set this system was created prior to version 5.0 previously used bi-level relationship grc value of NO, you cannot select bi-level new relationship group

		CHECKED ON ADD. A value of CHE(UNCHECKED will set the checkbox fo on entry to the screen or when a new att added. A value of CHECKED ON ADD checkbox to be checked only when the a first added, otherwise it will be uncheck
AUTO_POPULATE_ALLOWED_VALUES	YES	When this setting is YES, then in a popu or *edit* screen that adds a new value to a is the child within an allowed value rela the new value will be added to the list a automatically added to the currently sel If the value is NO, then the user will be select the Business Area, Project and th values to which the newly created child added within the allowed value relations
AV_INTERSECT_WITH_NULL_PARENT	NO	When there are multiple allowed values same child field, and one of the parents any children defined when the selected the default behavior is to show no value field, as there are no valid values for *al selected values, and the default value fo NO. However, older installations may h configurations where they expect that if parent selected values is *None* that th not included in the determination of whi to display, and the child field should dis intersection of the permitted child value parent(s) field(s). In this case, set this b to YES.
AV_NULL_PARENT_IS_NONE	YES	If the value of this setting is NO and no selected in an allowed value relationshi fields will be populated with all the pos values. If the value of this setting is YE values displayed in the child field will b for the parent value of * None *. If the relationship utilizes reverse lookup, this ignored.
CLONE_RELATION_GROUP		Relationship group name for clone relat
COMPANY_OVERRIDE_FIELDS		This setting contains a comma separate names with a display type of User, that that contain the users that the company feature works with. By default company works with only the ORIGINATOR fiel extends the feature to these other fields
COPY_ATTACHMENT_ON_CLONE	YES	When this setting is YES, attachments v the new issue when an issue is cloned
DEFAULT_USER_ROLE	GUEST	Default role for users, if they have not b role
DISABLE_INACTIVE_UDF_WARNINGS	NO	When this value is set to YES the warni caused by references to inactive UDF li disabled. The default value is NO.
DISALLOW_AREA_0_DATA	NO	When this setting is NO, issue data may

		should not allow issue data to be placed With installations from 4.2 onwards, thi to YES
EMBEDDED_LAYOUT_REFRESHES	NO	This setting is provided for full backwar with all versions prior to 6.0. When the default), sublayouts such as those render LAYOUT SELECTED mechanism and FIELD/LAYOUT VISIBLE IF mechani using AJAX calls to the server. This is f browsers do not have the capability to re presentation of the fields refreshed. If yo to YES, then the sublayouts are refreshe the server, and the alignment is retained between speed and the alignment of the screen. For many purposes the precise a embedded layouts is not significant and by users
ENABLE_COMPANY_NAME_ACCESS	YES	When this behavior setting is set to YES value), a user's company name overrides setting for an issue and gives the user ac records that were originated by other use same company name. Valid values are Y
ENABLE_GOOGLE_LANGUAGE_API	NO	When this setting has a value of YES, th Language API is enabled. This relies on a JavaScript function in UserJavaScript. may be customized by the administrator Application Programming Interface guid details on how to configure this feature.
ENABLE_PRIVACY_GRP_OVERRIDE	YES	**This setting may have the value of YE When set to YES, any one issue in a o relationship group may only have a si one time. This implies that if you set a parent ID for an issue, then ExtraVie the issue as being the child of the orig set the new parent ID for the issue in have NO for the setting, then an issue more than one parent at one time.**
ENFORCE_ONE_TO_MANY_RG	YES	This setting may have the value of YES set to YES, any one issue in a one-to-ma group may only have a single parent at o implies that if you set a different parent then ExtraView will remove the issue as of the original issue, and set the new par issue in its place. If you have NO for the issue may have more than one parent at
ENFORCE_STATE_CHANGE_RULES	NO	Switch to enforce state change rules. Va YES and NO
ENFORCE_UNIQUE_RELEASES	YES	Enforces uniqueness of RELEASE_FOU repeating record row. If the value of this repeating rows cannot be added where th RELEASE_FOUND has a null value. In may not have duplicate RELEASE_FOU within a single record. If the value of thi

FILTER_CHILD_VALUES	NO	This may have the values YES, NO or U setting controls search behavior when th contains repeating row values. If set to Y rows that match the search criteria will b the query. If set to NO, all rows are retu issue where at least one row matches the to USER, this behavior is controlled by appears on the search screen.
FILTER_MODULE_BY_CATEGORY	NO	Allow filtering of modules by category. YES and NO. This allows selection of a modules based on both the **module type** **category**. By selecting **Category**, only t corresponding module types are display choices within the select list of modules *edit* screens. For example, products may software and documentation modules. If related to software, only software the m selectable. This feature relies on use of t field in the Item record to store a value f **Type**. When FILTER_MODULE_BY_C set to YES the value entered for CATEG a second parent value for the module (M field) by providing a value for MODUL same way that the product (PRODUCT_ used as the first parent value. Note that t identical enumerated values for both CA MODULE_TYPE. In the Data Dictiona MODULE_ID field, the following shou Parent Field Name = PRODUCT_NAM SQL = where product_name Second Par = CATEGORY Second Parent SQL = an module.category To make these changes dictionary, you must sign on to ExtraVie *admin* user account.
HIDE_ISSUE_ID	NO	Controls the title of the detailed report a screens. When this is set to "YES" the s be replaced with the text "ExtraView" an time
ISSUE_LINK	DETAILED_REPORT	This setting has two possible values, DETA and EDIT_SCREEN. When ExtraView auto link on an issue within a report, this setting destination when the user clicks on the link.
ITEM_ID_DISPLAY	ID	When this setting has a value of ID, then issue ID is used in all the main display s issue number that the user is dealing wit the administrator sets their own logic to unique reference number to each issue, t ALT_ID as the value of this setting tells display the ALT_ID value in place of th
LIMITED_USER_ROLE	GUEST	This role does not own and cannot be as problems. This is typically the guest or role in your installation
LINK_MODULE_USER	ASSIGNED_TO	Links the module owner field to the spe Can be ASSIGNED_TO, CONTACT or

		DATE_LAST_STATUS_CHANGE, CC ORIGINATOR, and HIST_TIMESTAM
MULTIPLE_FIELD_SEPARATOR	-/-	Used as a separator for child level multi
OAUTH2_TOKEN_LIFETIME_SECONDS	3600	This setting defines the lifetime from tol expiration, of tokens created on this inst
RELATION_GROUP_DEFAULT		The name of the relationship group that any issue being placed into a relationshi default can be overridden by using a lay on the RELATED_ISSUE_DISPLAY, o field RELATIONSHIP_GROUP on the layout to offer the user a choice of relati
RELATIONSHIP_GROUP_EMAIL_LIMIT	30	When you update the status of an issue v relationship group, each issue will be su standard notification process. When ther RELATIONSHIP_GROUP_EMAIL_LI the group, notification is only made to tl parent issue, and a comment is inserted with this information
RELATIONSHIP_GROUP_LIST_UDF		This setting is the name of a user define display type of list. This UDF is used to of the names of relationship group for re display. The UDF is maintained by Extr relationship groups are created or delete also be aliased by other UDF's to provid number of fields that can be used to ider relationship group names to support mu issue displays on a single edit screen.
RELATIONSHIP_GROUP_MAX_DISPLAY	0	Maximum number of issues to display c relationship group screen. A value of 0 v the records. Note that if your role is the ADMIN_OVERRIDE_ROLE then all tl always be displayed.
RELATIONSHIP_LINK_DISPLAY	SELECT	Display choice for relationship group in screen (LINK or SELECT)
RELEASE_SORT_ORDER	DESCENDING	ASCENDING or DESCENDING
RG_UPDATE_BILEVEL_ONLY	NO	This behavior setting is for backwards c with ExtraView version 4.x. If you set tl then related issue updates are only trigg change to the STATUS field takes place NO then updates to related issues may b different events and many updates to dif possible
RULES_DEFAULT_CALENDAR	24_BY_7	This setting selects the number of busin week. Valid values are 24_BY_7 or WE WEEKDAY calendar runs Monday thro 24_BY_7 calendar uses all days
SAVE_AND_CONT_ACTION	PAGE	This setting determines how the Update button on Edit screens behave. The valic setting are AJAX and PAGE. When the set, all LOAD directive business rules a when the button is pressed by the user, a updated. When the AJAX option is set,

		applied when the user is operating withi
SAVE_ROLE_CHANGES	YES	Unless you have custom code that dynai roles back and forward for a specific rec your site, then this should always be set allowing any change of role for a user, b by an administrator to be saved into the database. If there is custom code that sw role and you do not want to make this ro in the database or be visible to the user, should be set to NO.
SEPARATE_WORK_FLOW	PRODUCT	Allow separate work flows per USERGI PRODUCT or NONE
SHOW_CLOSED_REL_GROUPS_PERIOD	0	The list of items on a relationship group displayed until all issues have been clos minimum number of days specified by t values are numbers equal to or greater tl that as soon as all items within a relation of the status specified by STATUS_CLC they will not be displayed on the list of r groups.
SORT_SELECTED_VALUES	NO	When this is set to NO, all multi-valued displayed in the order set by the field's s sequence. When this value is set to YES values will be displayed at the beginning using their sort order, then the non-selec be displayed using their sort order
STATUS_CLOSED_NAME	CLOSED	Data dictionary name of the closed statu This value is typically set when configu system, and should not be changed after consequence of changing this value, and different value is that history is no main will not be possible to either know wher were closed.

Business Rules

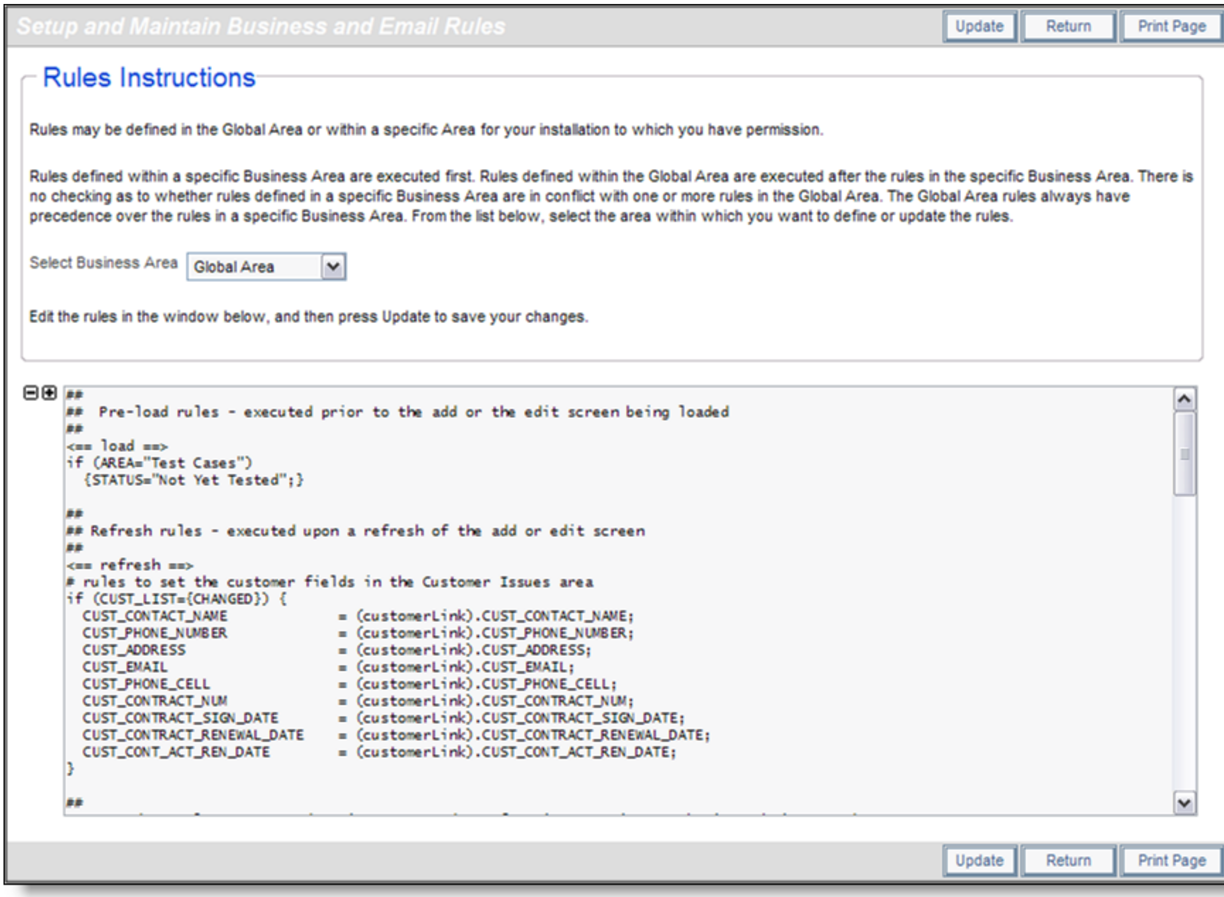
There are many occasions when you need to set the value of a field based upon the value of one or more fields. Conte typically achieve this via modifying the programming language. ExtraView allows you to set field values using this ac feature. Field values can be set at different points in the process.

Business rules are also used to link together values from different business areas, creating relationships between differ Areas. For example, a relationship can be created to populate a set of fields on a field within a Customer Issue busines upon the value of a customer name created in business area that contains a list of customers.

Rules may be defined as either global in scope, or to only be executed within a specific business area within your insta rules have precedence over rules defined in a specific business area. Therefore, rules in a specific business area are ex then the global rules are executed. This ensures that rules defined with a global scope will be the last to be executed. T checking of whether rules in a specific business area may be in conflict with one or more rules in the global area. It is administrator’s responsibility to ensure that rules work together. To avoid the possibility of a conflict, you may set a p will be created as global, and are therefore all local in their scope. When the administrator views the list of business ar

rules are only applied after you submit an issue to be inserted or updated, and therefore the names that are added to th
is displayed on the *add* and *edit* screen will not display these names.

Note that ExtraView's inbuilt notification rules remain active, and users will be notified as normal, unless you set the
named SUPPRESS_STANDARD_EMAIL_LIST to a value of YES. This can be found in the Email Settings administ



Editing the Business & Email Rules

Internet browsers have a limitation of approximately 1.5MB of content within the area into which you enter your rules
circumstances, this limit should not pose any problem, but if you cannot update your rules because of this limit, you sl
that you write your rules as efficiently as possible. Other hints to help are to keep comments brief and to not have a sig
of white space.

Automatic Backup of Rule Updates

As with all metadata changes, when you update the rules an entry is made in the System Log of the event. In addition
information, a copy of the old rules text is also placed in the System Log. You may copy the text from the System Log
into the rules text area if you need to restore a prior set of rules.

If the rules text is greater than 3,800 characters in length, there is insufficient room to hold all the information in the S
partial entry is made there and the complete rule text is written to the application server log file.

Language Description

Statements	Statements are logical expressions that perform specific actions within each directive. For example a sta assigned a discrete value or assigned the value of another field. You may use logical "if" statements. Th number of special values and special actions that may be used within statements.

Business rules are organized by Business Area, and you may also define global rules.

- Add new comment

Directives

Rule directives have one of the following forms:

```
<== directive ==>
```

```
<== directive ==> value(s)
```

```
<== directive name ==> value(s)
```

The same directive may be specified any number of times within the rules. This allows the grouping of rules for a spec together, as opposed to grouping all the rules by directive type which may not be the logical way in which to peruse th after a type directive within the rules will be interpreted as belonging to that type until the next type directive is encou

CALENDAR

<== calendar *calendar_name* ==>

This directive is used to determine which business calendar is used in date computations.

If no calendar directive is present, the calendar specified in the behavior setting named RULES_DEFAULT_CALENI this is not set to a valid calendar name, the 24_BY_7 calendar is used for date computations.

CLONE

<== clone ==>

This directive is used to execute rules and assignments during the clone process.

Typically, you can set values, or reset values of fields before the newly cloned record is saved to the database

DEBUG

<== debug ==>

Logs rule activity and includes ExtraView internal values.

This directive is primarily for use by ExtraView support. All statements from the point where the directive is found, an there, send additional deugging information to the application server log file.

END

of rules.

INFO

<== info ==>

Causes log entries to verify that rules are being executed. Minimal details are listed.

LINK

<== link *link_name* ==>

Linking Issues between Business Areas

This directive is used to specify how to connect linked issues from one business area to a different one, thereby creatir
between two business areas.

For example, you can find one or more related issues in a different business area, from which a value is to be retrievec

```
<== link customer ==> AREA='Customer', CUSTOMER=CUSTOMER
```

is interpreted that a rule action like:

```
ASSIGNED_TO=(customer).OWNER
```

which is used to set the Assigned To field in an Issue record to the OWNER field in a Customer record. If the link retu
records, and you only want to return a specific one, you can use a subscript as follows:

```
ASSIGNED_TO=(customer[nn]).OWNER
```

where `nn` is an integer which refers to the number of the record you want returned, starting with zero.

The more generalized description is that link rules have the form:

`<== link` *`link_name`* `==>` *`link_condition1`*`[,` *`link_condition2`*`]...[,` *`link_conditionn`*`]`

The link_condition parameters may use the `=` operator to provide an exact match with the link, or may use one of the f
operators:

- `contains` *`value-list`* or `contains all` *`value-list`*
- `contains any` *`value-list`*
- `contains none` *`value-list`*

where *`value-list`* is of the form:

`value1``[;` *`value2`*`] ... [;`*`valuen`*`]`

Note: `contains` *`value-list`* and `contains all` *`value-list`* are equivalent, namely, `contains` *`value-lis`*
meaning as `contains all` *`value-list`*.

Examples:

```
<== link AREA='Licenses', LICENSE_TYPE='License', COMPONENT='ABC' ==>
```

```
<== link AREA='Licenses', MULTI_VALUED_UDF contains 'MV1';'MV2' ==>
```

```
<== link rglink ==> RG(RG_NAME = MY_RG, RG_TYPE = PARENTS), STATUS != Closed
```

will only form the relationship for issues that are not in the **Closed** status.

Relationship Group links are not order dependent; the type and name may appear in either order, and the RG_ may be `RG(TYPE=CHILDREN, NAME=xxxx)` will work identically to `RG(RG_NAME=xxx, RG_TYPE=CHILDREN)`. Also, the keywor eliminated entirely, giving `RG(xxxx, CHILDREN)` as a valid link. Note that GREATGRANDCHILDREN and GREAT-GRANDCHILDREN are only supported in links, and are not supported at this time by RelationshipGroup code.

`{NULL}` and `{NOT NULL}` may also be used within link conditions. For example:

```
<== link AREA='Licenses', LICENSE_TYPE='License', COMPONENT={NULL} ==>
```

You may also add the `{EXISTS}` as a qualifier to a clause in a link directive. This will check the link, before execution, the value is present, or is a null value. For example, consider:

```
<== link cousinLink ==>AREA='Functionality', BROTHER_ID = PARENT_ID.{EXISTS}
```

If the `.{EXISTS}` was not present, all records with no value for the BROTHER_ID will be selected if the PARENT_ID

You may also add a parameter of `DISABLE_LINK` to a LINK directive. This has the effect of suppressing the drilldown the link. For example, the following is correct syntax.

```
<LINK AREA='Bugs' DISABLE_LINK>
```

If the value of the behavior setting named ITEM_ID_DISPLAY is ID, then the link uses the ID field to connect the lin value is ALT_ID, then the ALT_ID field value is used in the links.

Link directives may also utilise a `contains` clause on a multi-valued field filter. For example, a rule like:

```
<== link idTextFieldLink ==>ID != TEXTFIELD_1, TEXTFIELD_2 contains TEXTFIELD_2
```

will retrieve all the issues where all the values in the UDF field `TEXTFIELD_2` exist in the issue's values for `TEXTFIELD`

Linking with Wildcards

By default, reference to a link value returns the first value in the result list for an assignment statement. However, a su (such as `(linkname[n]).ID` may be specified, returning the `n`th value in the result list for an assignment statement. W all values in the list can be returned by specifying a wildcard subscript such as `(linkname[*]).ID`. This convention w values in the result list separated by semicolons.

Relationship Group Reference ID Feature

The RG link references currently permit the specification of `RG_NAME` and `RG_TYPE`. With this feature, you can specify which specifies a field name containing the `ID` (or `ALT_ID`) of the relationship. For example, the following rules:

```
<== link rgParentIssueLink ==> RG(RG_NAME=MY_GROUP, RG_TYPE=PARENTS, RG_REF_ID=MY_TEXTFIELD)
<== load ==>
MY_TEXTFIELD = 12345;
MY_TEXTAREA = (rgParentIssueLink[*]).ID;
```

populate a semicolon-separated list of the parents of issue 12345 from `MY_GROUP` into the `MY_TEXTAREA` field.

LOAD

<== load ==>

<== log ==>

From the point where the directive is encountered, information is inserted into the application server log, for administr
rule execution. The log file shows conditional evaluations and assignments. The `<== nolog ==>` directive ends the log

MAIL

<== mail ==>

Mail directives are used to notify users of updates using the standard notification layouts. They can either complemen
inbuilt notification rules or replace the inbuilt rules, depending on the value of the behavior setting named SUPPRESS_STANDARD_EMAIL_LIST. The mail directive will always contain rules that generate the notification b
notification layout for the issue being inserted or updated.

Note there is a key difference between the mail directive and the mail action rule which is typically used within the pr
The mail action is used to send an email based upon a template specified within the action.

NOLOG

<== nolog ==>

This is the counterpart of the log directive and ends the logging set in progress with the log directive.

OBJECT

<== object *object_name* ==> [*field1 operator value1*] [*field2 operator value2*] ... [*fieldn operator v*

This directive is used to define an object to be used as a link between two fields of different types. The most common
directive is to use it to enter a value into a text field, and have this value added to an existing field with a display type

Use the object directive to use a value entered in a text field to be inserted as a new value in a list field.

The most common operator to use within the syntax for each expression is the equal sign (=), but others may be used a
table:

Field Display Type	Multi-Value Field Support	Valid Operators
Enumerated list fields User Fields	Y	=, !=, <>, contains, contains any, contains all, contains no
Enumerated list fields User Fields	N	=, !=, <>
Text Fields Text Area Fields HTML Area Fields	N	=, !=, <>
Numeric Fields	N	=, !=, <>, >, <, >=, <=
Date & Day Fields		Not supported
Image & Document Fields		Not supported

The list of filters that you enter are all ANDed together to evaluate the expression

```
  CUST_CONTACT = (cust).CUST_CONTACT;
  EMAIL_ADDRESS = (cust).EMAIL_ADDRESS;
}
```

A multi-valued expression filter may look like each of the two following examples:

```
MULTI_VALUE_FIELD contains x;y;z
NUMERIC_VALUE_FIELD <= 1.9
```

When the directive is followed by one or more *name operator value* combinations, the object rule will only be trigger
filter expressions match the values.

This is a list of all the parameters that may be used with the object directive:

LINK=<LIST or POPUP field name>

Required - contains the name of the field with the list entry to be added, modified, or deleted

TITLE=<TEXTFIELD field name>

Required - contains the name of the field containing the title or text to be added to the list entry

PARENT=<field name>

Optional - contains the name of the parent field of the LINK field in an allowed value relationship

AREA=<area title>

Required - specifies the area of the issue where the object rule is executed

PROJECT=<project title>

Optional - specifies the project within the AREA where the object rule is executed. If this is not defined, then the obje
executed for all PROJECTS within the defined AREA

RG_NAME=<relationship group name>

Unused at present

PRIVACY=TRUE | FALSE

Optional - the option to add `PRIVACY=true` will add the customer to a privacy group with the same title, and add the c
privacy group.

DO_NOT_MIGRATE=TRUE|FALSE

Optional - The default is **FALSE**, indicating that the values will be migrated with the XML Export / Import utility. If
provided and has a value of **TRUE**, then all User Defined Field values created with the OBJECT rule are not migrate
ExtraView instance to another via the XML Export / XML Import utilities. This allows the addition of test data value
instance using the OBJECT rule, but ensures the data is not migrated to the target instance. Note that the UDF list uti
which values were added with this parameter.

Note: All object rules must reside in the global area, not in the rules sections within each business area

In summary, the link causes a value entered into the CUSTOMER field in the **Customers** business area to be automat
the list named CUST_LIST. This list is available in any other business area and is used in the rule to bring the values
the customer into the current screen, when a customer is chosen from its list.

<== refresh ==>

When a field on your layout has a rule that references it, and that the user changes the value of that field, then an onch triggered. For example, you may have two fields on a layout, named **amount1** and **amount2**. You may have an oncha

```
total = amount1 + amount2;
```

When the user changes either **amount1** or **amount2**, the **total** field on the layout will be updated via an Ajax call to tl

POSTUPDATE

<== postupdate ==>

Postupdate rules are executed subsequent to a database update on the *add* or *edit* screen.

PREUPDATE

<== preupdate ==>

or

<== database ==>

Preupdate rules are executed prior to a database update. After you press the button to submit an issue to the database c or you press the Update button on the *edit* screen, these rules are executed. The directives preupdate and database are : the future, the term database may be deprecated as it is not fully descriptive of the purpose of the directive.

USER MAPPING

<== user mapping ==>

This directive allows business rules to be triggered when a user account is modified. This directive is often used as th the action rules of CREATE USER and UPDATE USER. CREATE USER and UPDATE USER allow users to be mai and *edit* screens, while the `<== user mapping ==>` directive allows administrative changes to users to be reflected in

This is significantly different from other directives which are triggered when issues are inserted or updated. This dire when changes to user information are submitted.

As an example, the rules within this directive are triggered when an administrator goes to the User Account maintenar edits a user's account. When the administrator updates the user record, the changes to the account are made in the nor rules in the `<== user mapping ==>` rules section are executed.

This rule provides a means to synchronize the values within a user's record to issues where the user's details are stored

To facilitate the operation of this directive, there are two session variable fields defined in the Data Dictionary:

1. **RULES_MANAGED_USER** - this is the user field containing the User ID of the user that was created, modifi the user transaction that invoked the mapping rule
2. **RULES_TXN_NAME** - this is an option where a text field placed on the layout can contain either a value of *A* ***DELETE.*** This signifies which user transaction invoked the mapping rules. An example might be that with a va can have further rules within this directive to execute a ADD action rule, or if there is a value of ***EDIT*** then you

```
null}, CONTACT=RULES_MANAGED_USER, STATUS='Active'

<== user mapping ==>
if ((vendorContactLink).ID.{is not null}) {
{ UPDATE: vendorContactLink
    VENDOR_FNAME = RULES_MANAGED_USER.{first name},
    VENDOR_LNAME = RULES_MANAGED_USER.{last name},
    VENDOR_PHONE = RULES_MANAGED_USER.{cell phone}
};
```

- The link rule `vendorContactLink` searches for all issues where the AREA equals *Vendors*, the PROJECT equa is a value in the CONTACT field, there is a value in the NEW_USER_ID field, and the value of the STATUS fi value in the CONTACT field must be the User ID of the user that caused the rule to execute, i.e. the `RULES_MANA`
- The rules within the `<== user mapping ==>` directive first check to see if the identified issue or issues exist. N more than one matching issue
- For the matching issues found with the link the current value from the user's account for the first name, last nam are then saved into the issue(s) in the VENDOR_FNAME, VENDOR_LNAME and VENDOR_PHONE fields.

Actions

Actions are rule statements that may be executed within directives. Not all actions may be included within all directiv it is not valid to perform a REAUTHORIZATION rule within a `load` directive. This action is only valid within an `o` `preupdate` directive. Note that the square brackets in the action definitions refer to optional syntax.

The following pages describe each of the valid actions in Business Rules

ADD

{ADD [AS *role*] [NOWAIT]: AREA = *area_1*, PROJECT = *project_1*, *field_1* = *value_1*
[, *field_2* = *value_2*] ... ... [, ATTACHMENT[.{selected}]]}

This will add a new item to the ExtraView database, based upon a set of name value pairs, where the fields are the dat names of the fields, and the values are valid for the display type of the field. This action only works within the `postu` directive, as it is essential to perform the underlying update before you initiate actions that are dependent. As an exam will add a new record when a button named ADD_SERIAL_BUTTON is pressed:

```
if (ADD_SERIAL_BTN.{changed} && UNIT_SERIAL.{not null}) {
 { ADD: AREA='Calibration',
  PROJECT='Unit',
  UNIT_SERIAL,
  COMPONENT,
  SITE,
  FACILITY};
 } }
```

Note: You should always provide the parameters and values for the AREA and PROJECT fields with the ADD comm indeterminate as to which Business Area and Project into which the issue will be added without these.

The above example demonstrates the use of an implied assignment. When a field name is used in the rule like this:

```
UNIT_SERIAL,
```

The optional NOWAIT keyword provides the facility to execute the ADD action as a background task, not waiting for action before returning control back to the user. This may be used if you have many ADD actions to perform, and you user to wait for these to complete before they may carry on working in the user interface. This keyword should be use there are no indications to the user if there is a failure from the action. Any failures are reported in the application serv note that if you place the action within an `onchange` directive, as opposed to within a `preupdate` or `postupda` then the values within the issue as they stand at that moment will be added to the new issue, as opposed to the final va user has submitted the issue for insertion or updating. The ADD_UPDATE task must be running for this option to wo

The optional ATTACHMENT keyword allows all or selected attachments to be copied from the current issue to the ne created. If the ATTACHMENT keyword is further qualified with {selected}, then only attachments that the user has ir selected with the **Select?** checkbox will be copied. The **Select?** checkbox is enabled on the user interface with the sec keys named PR_ADD_PROBLEM.ATTACH_SELECT and PR_RESOLUTION.ATTACH_SELECT.

The ADD action is not supported in these directives: load, clone, mail

ADD ROW

{ADD ROW: [TO *layout_type_name*] *field_1* = *value_1*[, *field_2* = *value_2*][, *field3* = *sourceField*]] }

This will add a new row to a repeating record, where the square braces indicate optional elements and the parameter li standard, as in the ADD or UPDATE actions. All the destination fields must be defined in the data dictionary as repea The values may not be repeating row fields, as there is no certainty which of many repeating rows the value will refer

In the same way as with the `ADD` action, you may make implied assignments.

If the optional TO: layout_type_name is included, then the repeating row with that name is targeted for the addition o The fields being set must be in the layout that is loaded from the specified layout type, area, project and role of the us executing the rule operation.

Occasionally you might want to add a number of blank repeating rows to an issue. However, it is not valid to add con rows to a repeating row. You can, however, use an unused field that is not even on the layout in question. For exampl blank rows to a layout named MY_RR_LAYOUT, you could use this, utilizing the ALT_ID field which is not used on and using a text field on the layout:

{ADD ROW: TO *MY_RR_LAYOUT MY_TXT_FIELD* = *ALT_ID*};
{ADD ROW: TO *MY_RR_LAYOUT MY_TXT_FIELD* = *ALT_ID*};
{ADD ROW: TO *MY_RR_LAYOUT MY_TXT_FIELD* = *ALT_ID*};

The ADD_ROW action is not supported in these directives: load, clone, mail

COPY

{COPY [AS *role*]: *field_1* = *value_1* [, *field_2* = *value_2*] ... ... [, ATTACHMENT[.{selected}]]}

This action is similar to the ADD action, except it may be used entirely without the field/value list. Thus {COPY} by new issue, with all the values from the original issue. Specifying a name and value allows that value to be used for tha name.

If you do not specify a parameter and value for the AREA and PROJECT fields, then the issue is copied to the AREA the current issue. You should not specify the PROJECT field without also specifying a value for the AREA field.

In the same way as with the `ADD` action, you may make implied assignments.

created. If the ATTACHMENT keyword is further qualified with {selected}, then only attachments that the user has in selected with the **Select?** checkbox will be copied. The **Select?** checkbox is enabled on the user interface with the secu key named PR_ADD_PROBLEM.ATTACH_SELECT and PR_RESOLUTION.ATTACH_SELECT.

The COPY action is supported in these directives: onchange, preupdate, postupdate

CREATE USER

```
{CREATE USER: security user id = value1, security password = value2, first name = value3,
              last name = value4, email = value5, company name = value6
              [, company name = value7] [, work phone = value8]
              [, city = value9] [, state = value10] [, allow email dups = true | false]
              [, allow first last dups = true | false] [, other_fields = valuenn] }
```

- A full list of the fields that may be used as parameters in the command is in the section at the end of this page ti **List**
- Field values from the current issue being inserted or updated can be substituted for any of the *valuen* entries. Fo `name = VENDOR_FIRST_NAME`
- You can assign a field value from a linked record to the field on the account record. For example, `company nam (parentRecordLink).VENDOR_NAME` will assign the company name of the user being created to the vendor name parent record named `parentRecordLink`
- You may assign a string value to a field. For example, `area = 'Customer Account'` sets the value for the user course, the value for the field must exist
- Both the roles and privacy_group parameters may be multi-valued. In that case the values are separated by sem example `user role = ENGINEERING; MARKETING; ACCOUNTING` will assign these 3 rules to the user being crea
- It is recommended that this feature be used to create users in a guest role capacity, or more explicitly, to be in th in the behavior setting named `LIMITED_USER_ROLE`
- A further recommendation is that you use this command to create users who occupy concurrent licenses as oppo licenses. This avoids the potential to attempt to create a named user license when no more are avaiable. If there create a new user account and no licenses are available, the account is created, but is disabled
- An error is generated if the user attempts to create a duplicate or invalid `security user id`
- `allow email dups` - When this is set to a value of `true`, then duplicate email addresses will be allowed across The default is `false`. Care should be taken when assigning this to a value of `true`, as it will not be possible to d user is creating an issue via EVMail, as this is dependent upon the software finding a unique email address with application. The default value is `false`
- `allow first last dups` - When this is set to a value of true, then duplicate combinations of first and last name with different users. The default value is `false`
- This action is often used as a companion to the `<== user mapping ==>` directive which allows administrative c be reflected in updates to issues which were originally used to create user information.

Note

It is recommended that you use a built-in JavaScript function to verify the password before the rule is invoked. To ach configure the following:

- A text field to store the password. This field is passed to the server as part of the CREATE USER rule in the se parameter
- A text field to store the verify password field. This field is **not** passed to the server, but you should place a layo the type HTML MODIFIER on the field. The syntax of the value is:

  ```
  onchange=checkPasswordRules(p_passwordfield.value, p_verifypassword.value, minCharacters, mi
  minUpperCase, minSpecialChars)
  ```

  `passwordfield` - the name of the password field on the form
  `verifypassword` - the name of the verify password field on the form

```
if (PROJECT= 'Contacts' && CREATE_USER_BTN.{changed} && NEW_USER_ID.{not null}) {
  CREATE USER:
    security user id      = NEW_USER_ID,
    security password     = 'Welcome',
    first name            = VENDOR_FNAME,
    last name              = VENDOR_LNAME,
    email                 = VENDOR_EMAIL,
    company name          = (parentRecord).VENDOR_LIST,
    work phone            = VENDOR_PHONE,
    city                  = CITY,
    state                 = STATE,
    postal code           = ZIP,
    area                  = 'Questionnaire Area',
    project               = 'Questionnaire Data',
    alpha timezone        = PST8PDT,
    user_role             = ENGINEERING; SALES,
    privacy group         = PRIVACY_GROUP_LIST,
    enabled user          = N,
    allow email dups      = true,
    allow first last_dups = false
}
## Not strictly part of the CREATE USER rule, but we might now want to assign
## the user just created to another field on the form - in this case the list
## field named CONTACT
if (PROJECT='Contacts' && CONTACT.{is null} && NEW_USER_ID.{is not null}) {
    CONTACT = NEW_USER_ID;
}
```

Full Parameter Field List

Field	Required?	Notes
additional email		Must be a valid email address. This is optional and only used as an alternati setting
additional email on		Y or N to turn additional email address on / off
address or address 1		
address 2		
alpha timezone		This defaults to the value in the behavior setting named DEFAULT_TIMEZ(
area		The ID of the default Business Area of the user
cell phone		
chart font		Must be a valid font name on your server. This defaults to the value in the be named CHART_FONT
city		
company name		
country		
date format		Must be a valid date format. See the Appendix named [Date and Time Format] default is taken from your behavior setting named DEFAULT_DATE_FORM
start page id		This defaults to the value in the behavior setting named DEFAULT_START_
email	Yes	Must be a valid email address
email charset		
email format		The default is HTML. The alternative is TEXT
email on		Y or N. This enables or disables email on the account
enabled user	Yes	Use Y to enable the user with a Concurrent license. Use N to enable the user with a Named license. Use D to disable the user. The default value is Y, which enables the user with a Concurrent license.
fax		
file attach charset		Typically UTF-8, which is the default
first name		

`privacy group`		The name of a valid privacy group
`postal code` or `zip`		
`project`		The ID of a valid project within the Business Area being set for the user
`region`		This defaults to the value in the behavior setting named DEFAULT_REGIOI
`report 1 id`		A valid Report ID for the first report on a user's Home Page
`report 2 id`		A valid Report ID for the second report on a user's Home Page
`report 3 id`		A valid Report ID for the third report on a user's Home Page
`security password`	Yes	The unencrypted value for a user's password
`security user id`	Yes	The User's ID
`state` or `province`		
`twenty four hour time`		Use Y if the user is to use 24-hour time, else use N. The default is N
`user defined 1`		
`user defined 2`		
`user defined 3`		
`user defined 4`		
`user defined 5`		
`user defined 6`		
`user defined 7`		
`user defined 8`		
`user defined 9`		
`user defined 10`		
`user role`	Yes	A list of the names of user roles, delimited with semi-colons. The default is behavior setting named LIMITED_USER_ROLE
`work phone`		

ERROR

{ERROR: *Message*}

This is only valid in preupdate rules. It will prevent the update from going forward and return an alert to the user with Note that several messages may be accumulated and returned in the alert to the user as all the rules are executed witho database. Contrast this with the {STOP: Message} action where execution is stopped immediately.

You may use the standard escape characters in the error message. The most common requirement is to use **`\n`** as a line message.

ESTOP

```
{ESTOP: target_field_name,
        field_value = field_value
        [, field_display_value = field_display_value]
        [, page_title = message_to_display_to_user]
        [, button_yes = button_title]
        [, button_no = button_title]
        [, button_cancel = button_title]
        [, window_height = height]
        [, window_width = width]}
```

The `ESTOP`, or Extended Stop action allows the administrator to configure the `STOP` action by providing a configurabl configurable buttons that appear to the user when the action is triggered. Note that the action rule must be used in cor "flag" field. The reason is that simply introducing a pause into the pre-update process means there is a likelihood that

- The `button_yes`, `button_no` and `button_cancel` parameters allow you to display different labels on the Yes, N buttons that appear on the popup dialog. These are optional. For example, you might only provide the `button_` `button_no` buttons on the popup dialog
- The `window_height` and `window_width` parameters should be integer numbers, for the height and width of the p window, expressed in pixels.

Example

As a precursor to executing this example rule, the administrator will have placed the PRIORITY field on the layout, a text field named FLAG_FIELD on the layout. The flag field may be hidden.

```
<== preupdate ==>
if (PRIORITY!='High' && IS_HIGH_RISK = 'Yes' && RISK_FLAG_FIELD != 'Y') {
   {ESTOP: 'PRIORITY',
           FIELD_VALUE   = 'Yes',
           BUTTON_YES    = 'Yes, set the Priority to High',
           BUTTON_NO     = 'No, leave Priority as is',
           PAGE_TITLE    = '<b>This issue has been identified as High Risk, should the Priority b
High?</b>',
           WINDOW_HEIGHT = 250,
           WINDOW_WIDTH  = 500
  };
  RISK_FLAG_FIELD='Y';
}
```

This will result in a popup when the rule is triggered. This will have the message "**This issue has been identified as** **should the Priority be set to High?** There will be two buttons with the labels **Yes, set the Priority to High** and **No,** **is**. At the same time, the value of RISK_FLAG_FIELD is set to **Y**, which prevents the ESTOP rule from firing a seco

Tip

It is not easy to enter more than simple HTML for the `PAGE_TITLE` parameter within the rules editor. You can conside HTML into an HTML Area field, either hidden on the current form or held in a different Business Area / Project and a LINK directive rule. Then you can simply refer to a hidden field within the same Business Area / Project like so:

```
PAGE_TITLE = field_name;
```

LOCK_RIDS

{LOCK_RIDS: [on | off]}

This action enables or disables the saving of issues displayed on a screen and held within Related Issue Displays, for t *edit* issue.

If `LOCK_RIDS` is set to `on`, then no issues contained within Related Issue Displays within the current *add* or *edit* sessio database, when the parent issue is saved.

The `LOCK_RIDS` action can be invoked and set to `on` and or to `off` within within the LOAD, ONCHANGE and PREU directives.

LOG

{LOG: *Message*}

This writes the Message to the system log.

- You may use a space character or a comma as the delimiter between parameters
- `user_list` is a structure that defines a combination of USER ID's, Roles and email addresses. The syntax for a

```
[field_name | [ROLE:]role | USER:user_id | email_address ]*
```

  - The `*` indicates that you may repeat these parameters
  - The `field_name` is either a text field containing a user ID or email address or is a user field
  - The `field_name` contains one or more values which are USER ID's to be processed within the action. Or ID's stored within ExtraView are processed and if the installation uses an external directory such as LDAI validity of the USER ID's are made
  - The `field_name` may alternatively or additionally contain one or email addresses to which the notificatio
  - The optional `ROLE:role` parameter generates the notification to all active users who may assume the `role`
  - The optional `USER:user_id` parameter generates the email notification to a valid USER ID
  - The optional `email_address` parameter generates the email notification to the email address
- template_name is the name of a predefined email template to be used as the body of the email
- The optional `FROM:user_list` parameter is used to provide an alternative user's primary email address as the se The default email address that is used as the sender is the value within the behavior setting named `EMAIL_FROM_` `user` may be either the name of a user, or their user ID
- The optional `REPLY_TO:user_list` parameter is used to provide an alternative email address as the Reply To ad mail. The default REPLY TO email address that is used as the sender is the value within the behavior setting na `EMAIL_FROM_USER_ID`
- The optional `CC:` parameter and associated list of users or email addresses are sent via the email CC line The optional `BCC:` parameter and associated list of users or email addresses are sent via the email BCC line
- The optional `SEND_ONE_EMAIL` parameter is used, a single email is generated and sent to all recipients, irrespecti and permissions. If this is not entered then a single email is generated and sent to each recipient, and that user's permissions are used for each email
- The optional `INCLUDE:ATTACHMENTS` parameter is used to add any selected attachments (via the **Select?** check by each attachment) into the outgoing email so that they will be delivered along with the email.

It is not valid to use this action within the mail directive. It is most typically used within the preupdate or postupdate d

Both HTML and text-based email templates may be sent with this action. This is controlled by the format of the templ simple naming convention for the template. The processing for this action requires either the template_name or the te follow the MAIL: action. If this name or title has a suffix of .txt, then any email generated to a user whose personal er brief or very brief text will be generated in text. All other mails will be generated as HTML. This implies that if you w templates where some users will receive HTML mail and others will receive text, you should create two templates. Fo might have one template named **Customer_Response_Template** with the HTML and another named **Customer_Response_Template.txt** with the text.

When creating text-based email templates, make sure that you use the WYSIWYG (what-you-see-is-what-you-get) m template utility and be sure that the template does not contain any HTML tags.

In the email rule action, use the HTML template name or title, but without the .txt suffix.

If a text template does not exist, all users will receive the HTML template as a result of the action. If a text template e text email format preferences will receive the text email template. If an HTML template does not exist and a text temp then all users will receive the text template.

Examples

1. `{MAIL: 'Sales Response Template', BSMITH, GLONG }`

   This emails the `Sales Response Template` to the users `BSMITH` and `GLONG`

2.

attachments to the issue

MEETING

```
{MEETING: TITLE = text_field, ORGANIZER = user_field, START_DATE_TIME = date_field,
          SEQUENCE = number_field, ATTENDEES = user_field, MEETING_FIELD = document_field,
          UID = text_field, DURATION = text_or_list_field, [CANCEL = CANCEL,]
          [DESCRIPTION = text_or_text_area_field,] [LOCATION = text_field,]
          [COMMENT = text field] }
```

Usage

The Meeting action business rule is used to generate a meeting request file (with a file name of **meeting.ics**) when a r updated. When an email is sent following the invocation of the rule, the action generates new meeting requests, updat meeting requests and cancels meeting requests within user's online calendars such as Microsoft Outlook.

The rule should be configured within a preupdate directive. To complete the action of generating a meeting request, a rule should be configured to communicate the request via email to the participants' calendars.

The fields referenced by the MEETING rule attributes must be configured within the issue, and the fields representing MEETING_FIELD, UID, and SEQUENCE attributes are updated and then saved within the issue when the MEETIN The UID value is generated the first time the MEETING rule executes and remains the same for the life of the issue, s recommended to make the UID field read-only and not visible to the user. The SEQUENCE value starts with 0 the fir executes within an issue and is incremented by 1 every time the rule executes, thereby generating an updated meeting also recommended to make the SEQUENCE field read-only and not visible to the user. The MEETING_FIELD field configured as read-only and can be made invisible to the end user.

Required Attributes

The following are required attributes and are enforced at rule compilation and execution time; only their presence is e field types specified in the syntax above:

Attribute	Field Type	Purpose
TITLE	Text	The title or subject of the meeting
ORGANIZER	User	The user that creates and hosts the meeting
START_DATE_TIME	Date	The date and time of the start of the meeting
SEQUENCE	Number	This is used to store an auto-generated value for each meeting request generated. Th within the issue, but does not need to be visible
ATTENDEES	User - single or multi-valued	A user, or a list of users who are invited to participate in the meeting
MEETING_FIELD	Document	This is used to store the auto-generated meeting request file within the issue. It does r visible
UID	Text	This is an auto-generated value that uniquely identifies the meeting request. This is st issue, but does not need to be visible
DURATION	Text or List	This is a value that specifies how long the meeting is being scheduled for. The value specifying the meeting duration needs to have the following format. A defau is used if the value cannot be parsed: *X day(s) Y hour(s) Z minute(s)* **Examples** *30 minutes* *1 hour 30 minutes* *2 hours* *1 day* *3 days 14 hours 15 minutes*

DESCRIPTION	Text or Text Area	This provides a description of the meeting that is being generated
LOCATION	Text or Text Area	This is information on the location of the meeting
COMMENT	Text or Text Area	This is a comment that is added to the meeting request

Note that HTML Area fields are not recommended for use as DESCRIPTION, LOCATION and COMMENT attribute

Example

The following rule is used to generate a meeting request file stored in the MEETING_FILE field, based on the current

```
<== preupdate ==>
if (STATUS = 'New') {
   {MEETING: TITLE           = SHORT_DESCR,
             DESCRIPTION     = DESCRIPTION,
             ORGANIZER       = MEETING_ORGANIZER,
             START_DATE_TIME = MEETING_TIME,
             SEQUENCE        = MEETING_SEQUENCE,
             ATTENDEES       = MEETING_ATTENDEES,
             MEETING_FIELD   = MEETING_FILE,
             LOCATION        = MEETING_LOCATION,
             UID             = MEETING_UID,
             DURATION        = MEETING_DURATION
    };
}
```

This example show a rule which cancels a meeting based on the STATUS field:

```
<== preupdate ==>
if (STATUS = 'Cancel') {
   {MEETING: TITLE           = SHORT_DESCR,
             CANCEL          = CANCEL,
             COMMENT         = COMMENTS,
             ORGANIZER       = MEETING_ORGANIZER,
             START_DATE_TIME = MEETING_TIME,
             SEQUENCE        = MEETING_SEQUENCE,
             ATTENDEES       = MEETING_ATTENDEES,
             MEETING_FIELD   = MEETING_DOC,
             UID             = MEETING_UID,
             DURATION        = MEETING_DURATION
   };
}
```

Sending the Meeting Request

A MAIL action business rule should be configured to send the meeting request to the participants. This is achieved vi steps:

- Create an email template
- Within the body of the email, include the name of the document field that contains the meeting request. For exa is named MEETING_FILE, you will include the text $$MEETING_FILE$$ within the body
- A useful hint is that you may want to hide the meeting request file from user's eyes, so the calendar associated v simply acts on the request. To achieve this, you can hide the file with this within the HTML of the body:

  <div style="display:none">$$MEETING_FILE$$</div>

REAUTHORIZE

electronic signature mechanism demands that the user must enter their password before the transaction is allowe
The application will continue to request the user's password until it is entered correctly. The user may cancel ou
request, but will not be able to update the record

- The field user_field_name must be placed on the *add* or *edit* screen. The field also requires read and write acces roles that will perform the re-authentication. If you want to hide the field from the user's view until the REAUT and associated rules provide values, set a layout cell attribute of the type VISIBLE IF and a value of NOT NUL
- Do not set the value of `user_field_name` user_field_name within the rules that are part of the reauthorization is set automatically by the action and unpredictable behavior will result if you assign it any value. You can use any other field values, such as the timestamp of the event. Of course, you can assign a value `user_field_name` not triggered with the `REAUTHORIZE` REAUTHORIZE command
- The `NODISPLAY` option alters the display of the popup. This is an optional within the `REAUTHORIZE` actio not present, the current user's name appears within the popup where the reauthentication is carried out, in read-c user need only enter their password to complete the action. When this is present, the user must enter both their password. It is not valid for any other user than the one who is currently signed onto the ExtraView session to c reauthentication.
- With most electronic signatures, you will want to record a timestamp of the event. You can set up a field with a **day** or **date** and place it on the form in the same way as the user_field_name. It should also be given a similar l attribute to the user_field_name, of VISIBLE IF NOT NULL
- As an example, create the following business rule in the `preupdate` directive section of the rules:

```
<== preupdate ==>
if (STATUS.{changed to: 'Approved'} && APPROVED_BY.{is null}) {
 {REAUTHORIZE: APPROVED_BY 'By clicking the Submit button you are approving the update of this issu
electronic signature which is recorded in the database. <span style=color:#CC0000>Any appropriate text may b
warning.</span>'};
}
# if we get here, we have assented to the reauthorization, so set the trigger fields:
if (STATUS.{changed to: 'Approved'} && APPROVED_BY.{is not null}) {
 APPROVAL_DATE = SYSDAY;
}
# clear approval if reopened
if (STATUS.{changed from: 'Approved'} && STATUS != 'Closed') {
 APPROVAL_DATE = "";
 APPROVED_BY = {null};
}
if (STATUS.{changed from: 'Closed'} && STATUS != 'Approved') {
 APPROVAL_DATE = "";
 APPROVED_BY = {null};
}
```

Assign the APPROVAL_DATE to SYSDAY if the field is of type **day** as opposed to **date**. This will set the **API** to the current date and time when the **APPROVED_BY** field is set, and set it to a null value if the **APPROVEI** to null.

The key condition that triggers the reauthorization requires a little explanation. In the above example, the condit

if (STATUS.{changed to: 'Approved'} && APPROVED_BY.{is null})

The reauthorization is special, in that the user is not able to exit from the action, until they either successfully er password, or cancel the complete action. The first part of the trigger expression (STATUS.{changed to: 'Approv change upon which you want to trigger the reuthorization. Once the user enters their password, ExtraView valid then executes the expression again. This is where the APPROVED_BY.{is null} part of the expression comes ir successful reauthorization will have set the APPROVED_BY field to a value, usually the value of the current us reauthorization is not reentered, as the evaluation of APPROVED_BY.{is null} now returns a *false* value

```
if (STATUS.{changed to: 'Approved'} && APPROVED_BY.{is not null}) {
  APPROVAL_DATE = SYSDAY;
}
```

- The message to display in the REAUTHORIZE syntax allows the display of any text on the popup window whe signature is provided. Many organizations have a message approved by their legal departments that is used here message to display may contain HTML, allowing you to format the message. A typical electronic signature pop look like the following:

  Electronic signature display

- The administrator may set up any number of electronic signature requests, each with a different logical expressi the requirement for the user to enter their signature
- If an issue is on a report and Quickedit is used to update the issue, then the electornic signature can only be trig containing the signature is placed on the report. No prompt for completion of the electronic sigature is made wi
- If you implement the REAUTHORIZE rule within a repeating row, then the user field that contains the electron be a popup user field and the user must complete the electronic signatures in order, starting with the first repeati
- As explained in the section on [Creating & Updating Layouts](), you should be careful not to place the user_field_ or **date** field on a row within the layout by themselves. With the VISIBLE IF NOT NULL layout cell attributes would not be rendered within the browser's DOM, and therefore ExtraView could not alter their values with the rule.

The REAUTHORIZE action is only supported in the `preupdate` directive. As stated above, users have the ability values within their issues after an `onchange` directive is processed, and the electronic signature would not reflect th the issue at the point in time the user provided their signature.

Note: If the site utilizes SAML as a SSO mechanism to authenticate user's sign on credentials, the user is redirected tc

If used on an *add* screen, it provides functionality equivalent to use of the **Insert and Continue** button. When the act
the issue is inserted with its current values, and the user is automatically directed to the *edit* screen to continue workin

If used on an *edit* screen, it provides functionality equivalent to use of the **Save and Continue** button. When the actic
issue is saved with its current values, and the user continues working within the *edit* screen of the issue to make furthe

Example

```
<== onchange ==>
if (SCREEN_NAME = 'ADD' && PRIORITY.{changed}) {
  {SAVE:}
}
```

SAVE CHILDREN

{SAVE CHILDREN: *layoutName*}

This action allows the rules to save all child issues, without saving the parent issue. This action is typically used when `layoutName` is a layout type that is composed with **EDIT_RID_xxxxx** as the type. These layouts often cont questions held in child issues. which belong to a survey. This action allows all the related children to the parent (i.e. tl within a survey) to be saved with a single action on the parent issue.

SAVE POINT

{SAVE POINT: }

This rule is valid within `onchange` directives only. It provides a temporary "checkpoint" save of an issue for the cu are only submitted for permanent saving to the database when the user subsequently clicks on the **Submit** button, or tl period that amounts to the value stored within the behavior setting named SAVE_CONTINUE_TIMEOUT_SECS. Tl typically used within sites with complex workflow, where users spend a large amount of time processing an issue, and concern that they may be interrupted by a system failure or that they may leave their computer screen open with unsav progress. Once the `SAVE POINT` action has been triggered and before the **Submit** button has been clicked, other users the same issue. If they attempt to do so, they will receive an error message.

The command is typically executed within the rules when the user completes a part of the screen and is about to move section. For example:

```
<== onchange ==>
if (FOLD_PRE_DETAILS.{changed}) {
  {SAVE POINT: }
}
```

When the user clicks on the fold field named `FOLD_PRE_DETAILS`, the issue will be saved temporarily. Processing con for the user, and they will need to click the **Submit** button in the normal way to permanently update the issue, or they open for the amount of time specified in the bahavior setting named SAVE_CONTINUE_TIMEOUT_SECS. Howev user closes the screen or there is some failure, and they edit the issue again within the timeframe specified within SAVE_CONTINUE_TIMEOUT_SECS, they regain their place and all field values at the checkpoint where the issue v

During the time that the issue has been saved at a checkpoint, until the issue is **Submitted** or automatically saved, no edit the issue.

STOP

UPDATE

{UPDATE [AS *role*] [NOWAIT]: *linkName field_1 = value_1* [, *field_2 = value_2*]
... ... [, ATTACHMENT[.{selected}]]}

This will update one or more records, based upon the definition of the link specification. If the link points to more thai affected records will be updated. This action only works within the `postupdate` directive, as it is essential to perfo underlying update before you initiate actions that are dependent. As an example, the following will update all custome if the contact is changed:

<== link custCSRInfo ==> AREA='CSR Calls', CUST_LIST
if (AREA = 'Customers' && CUST_CONTACT_PHONE.{changed}) {
 {UPDATE: custCSRInfo CUST_CONTACT, CUST_CONTACT_PHONE}
}

If the field that provides the values for the UPDATE operation is of type Log Area (e.g. the COMMENTS field), then entry from the source issue is added to the new issue.

In the same way as with the `ADD` action, you may make implied assignments.

The as role optional syntax allows the action to be implemented by altering the user's current role to the role, purely fo role is the title of the role, not its name. This is useful when you need to update a record in a different Business Area o the current user may not have sufficient permissions. The optional ATTACHMENT keyword allows all or selected atta copied from the current issue to the new issue being created. If the ATTACHMENT keyword is further qualified with only attachments that the user has individually selected with the **Select?** checkbox will be copied. The **Select?** checkb the user interface with the security permission key named PR_ADD_PROBLEM.ATTACH_SELECT and PR_RESOLUTION.ATTACH_SELECT.

The optional NOWAIT keyword provides the facility to execute the UPDATE action as a background task, not waiting the action before returning control back to the user. This may be used if you have many UPDATE actions to perform, want the user to wait for these to complete before they may carry on working in the user interface. This keyword shou caution, as there are no indications to the user if there is a failure from the action. Any failures are reported in the appl file. Also, note that if you place the action within an `onchange` directive, as opposed to within a `preupdate` or p directive, then the values within the issue as they stand at that moment will be update to the issue, as opposed to the fi the user has submitted the issue for insertion or updating. The ADD_UPDATE task must be running for this option to successfully.

There is a 5,000 issue limit to the number of linked issues which will be updated with this action.

UPDATE USER

```
{UPDATE USER: security user id = value1, security password = value2,
              first name = value3, last name = value4, email = value5,
              company name = value6 [, login id = value8]
              [, work phone = value9] [, city = value10]
              [, state = value11] [, alllow email dups = true | false]
              [, allow first last dups = true | false] [, other_fields = valuenn] }
```

- A full list of the fields that may be used as parameters in the command is in the section at the end of this page ti **List**
- The `security user id` is typically the name of the field that contains the existing User Id
- Field values from the current issue being inserted or updated can be substituted for any of the *valuen* entries. Fo `name = VENDOR_FIRST_NAME`
- You can assign a field value from a linked record to the field on the account record. For example, `company nam`

there is an attempt to create a new license and none are available
- The `security user id = value1` parameter is required as this specifies the user record to be updated. You ma `id` to a new value as long as the `security user id` is provided
- `allow email dups` - When this is set to a value of `true`, then duplicate email addresses will be allowed across The default is `false`. Care should be taken when assigning this to a value of `true`, as it will not be possible to c user is creating an issue via EVMail, as this is dependent upon the software finding a unique email address with application. The default value is `false`
- `allow first last dups` - When this is set to a value of true, then duplicate combinations of first and last name with different users. The default value is `false`
- This action is often used as a companion to the `<== user mapping ==>` directive which allows administrative c be reflected in updates to issues which were originally used to create user information.

Note

It is recommended that you use a built-in JavaScript function to verify the password before the rule is invoked. To ach configure the following:

- A text field to store the password.   This field is passed to the server as part of the CREATE USER rule in the se parameter
- A text field to store the verify password field. This field is **not** passed to the server, but you should place a layo the type HTML MODIFIER on the field. The syntax of the value is:

  ```
  onchange=checkPasswordRules(p_passwordfield.value, p_verifypassword.value, minCharacters, mi
  minUpperCase, minSpecialChars)
  ```

  `passwordfield` - the name of the password field on the form
  `verifypassword` - the name of the verify password field on the form
  `minCharacters` - the minimum number of characters in the password
  `minNumeric` - the minimum number of numeric characters in the password
  `minUpperCase` - the minimum number of upper case characters in the password
  `minSpecialChars` - the minimum number of special characters in the password

  The 4 digits should be identical to those in the behavior setting named PASSWORD_RULES

- An example might be `onchange=checkPasswordRules(p_password.value, p_verifypass.value, 8, 1, 1,`

Example

```
if (PROJECT=Contacts && CREATE_USER_BTN.{changed} && USER_ID.{not null}) {
  UPDATE USER:
    security user id      = USER_ID,
    security password     = 'Welcome',
    first name            = VENDOR_FNAME,
    last name             = VENDOR_LNAME,
    email                 = VENDOR_EMAIL,
    company name          = (parentRecord).VENDOR_LIST,
    work phone            = VENDOR_PHONE,
    city                  = CITY,
    state                 = STATE,
    zip                   = ZIP,
    area                  = 'Questionnaire Area',
    project               = 'Questionnaire Data',
    alphap timezone       = PST8PDT,
    user role             = ENGINEERING; SALES,
    privacy group         = PRIVACY_GROUP_LIST,
    enabled user          = N,
    allow email dups      = true,
    allow first last dups = false
}
```

address 2		
alpha timezone		
area		The ID of the default Business Area of the user
cell phone		
chart font		Must be a valid font name on your server
city		
company name		
country		
date format		Must be a valid date format. See the Appendix named Date and Time list
email		Must be a valid email address
email charset		
email format		The default is HTML. The alternative is TEXT
email on		Y or N. This enables or disables email on the account
enabled user		Use Y to enable the user with a Concurrent license. Use N to enable the user with a Named license. Use D to disable the user. The default value is Y, which enables the user with a Concurrent lice
fax		
file attach charset		Typically UTF-8, which is the default
first name		
home phone		
job title		
language		Use the two character ISO 3166 codes
last name		
login id		The alternative to SECURITY_USER_ID
mobile report id		Must be the Report ID of a valid report
password expiry date		
password interval		The number of days between each prompt for a user to update their p
privacy_group		The name of a valid privacy group
postal_code or zip		
project		The ID of a valid project within the Business Area being set for the u
report 1 id		A valid Report ID for the first report on a user's Home Page
report 2 id		A valid Report ID for the second report on a user's Home Page
report 3 id		A valid Report ID for the third report on a user's Home Page
security password		The unencrypted value for a user's password
security user id	Yes	The User's ID
state		
twenty four hour time		Use Y if the user is to use 24-hour time, else use N
user defined 1		
user defined 2		
user defined 3		
user defined 4		
user defined 5		
user defined 6		
user defined 7		

Rule Values

Value Identifiers are one of the following:

- A Data Dictionary Name, e.g. DESCRIPTION or DATE_CREATED
- A Data Dictionary Name, qualified with a Layout Name, e.g. ADD_PROBLEM.DESCRIPTION
- A User ID, e.g. BILL.SMITH
- A User Role, e.g. ADMIN or QA
- A Special Value as defined on this page.

These must be upper case, and must match the internal name of the respective value. Value Identifiers are interpreted f Dictionary Name, then User ID, and then User Role unless an IDENT: is specified. Rule values are expressions of the

- 'Value' – Values can be quoted or left unquoted if their interpretation is unambiguous – i.e. there are no embedde this is a lookup field (typically this is a field with a display type of LIST, TAB, or POPUP) this will be treated a and verified against the database
- Special values are what their name implies: a placeholder for a value the system will provide. These are values, SYSDATE. See this page for a full list of special values
- DD_NAME – A Data Dictionary name may be used to reference the value associated with that data element, su **ASSIGNED_TO**. Data Dictionary names may be used on either side of the operator. Data dictionary names sho expressed in uppercase.
- (link name).DD_NAME – A link name may be specified before a DD_NAME to reference the value contained The link name must be specified in a Link Directive
- Qualifiers - Complex identifiers consist of an optional link expression, a DD_NAME followed by one or more c Qualifiers are properties, such as {is external}, or conditions, such as {changed}. They may also be complex co {changed_from:'value'}, where 'value' is interpreted as a simple value. See this page for a list of qualifiers
- IDENT:'Value' – This is a special form, used to force evaluation of an identifier as a specific type. For example to force evaluation of a value as a User ID if there happens to be a Data Dictionary entry with the same value. U following forms:
  - EMAIL to specify an email address
  - USER to specify a User ID
  - ROLE to specify a User Role

Comparison of Field Values

The internal and external representations of fields vary across their display type. When fields within rule expressions a (using relational operators such as "<", ">", "!=", or "="), the field values are coerced into objects that are appropriate comparison. The coercions used in rules are defined in the following:

- LIST – LIST : display titles in the default locale are compared as strings. Includes aliased lists
- LIST – TEXTFIELD: display title of list value in default locale is compared to the TEXTFIELD
- LIST – DATE: the display title of the list value is parsed as a date and compared to DATE field as Calendar obj
- LIST – DAY: same as LIST – DATE
- LIST – NUMBER: the display title of the list value is parsed as a double (floating point) and compared to the N a Double object
- LIST – DECIMAL: the display title of the list value is parsed as a decimal and compared to DECIMAL field as object
- LIST – CURRENCY: the display title of the list value is parsed as a currency and compared to CURRENCY fie BigDecimal object
- LIST – USER: the display title of the list value is compared to the display name of the USER field as Strings
- TEXTFIELD – TEXTFIELD: the text field values are compared as Strings
- TEXTFIELD – DATE: the text field value is parsed as a date and compared to the DATE field as a Calendar obj
- TEXTFIELD – DAY: same as TEXTFIELD – DATE

- DATE – CURRENCY: unequal
- DATE – USER: unequal
- DAY – DAY: same as DATE – DATE
- DAY – NUMBER: unequal
- DAY – DECIMAL: unequal
- DAY – CURRENCY: unequal
- DAY – USER: unequal
- NUMBER – NUMBER: compared as double (floating point) numbers
- NUMBER – DECIMAL: the DECIMAL field value is converted to BigDecimal, and then Double, then the field as double (floating point) numbers
- NUMBER – CURRENCY: same as NUMBER-DECIMAL
- NUMBER – USER: unequal
- DECIMAL – DECIMAL: the DECIMAL field values are compared as BigDecimal objects
- DECIMAL – CURRENCY: same as DECIMAL-DECIMAL
- DECIMAL – USER: unequal
- CURRENCY – CURRENCY: same as DECIMAL-DECIMAL
- CURRENCY – USER: unequal
- USER – USER: the user display names are compared

Special Values

Special values are used within rules to reference values outside the issue, or to set specific values to aid in manipulatir

EMAIL_IGNORE_GROUP	This allows you to check or uncheck the checkbox that sends notification with EMAIL_CUSTOMER field on the *add* and the *edit* screens. Normally this is th **Customer** Role. Set to a value of 'Y' to set the value to checked, or to a value c value of unchecked. Use a preupdate rule such as: if (SCREEN_NAME='ADD' && STATUS='Fixed') { EMAIL_IGNORE_GROUP = 'Y'; } Valid values are 'Y' and 'N'. Note that the value may be in upper or lower case
EXT_SITE_URL	This special value references and returns the value of the behavior setting name EXT_SITE_URL.
GENERATE_EMAIL	This allows you to check or uncheck the checkbox that governs notification on *edit* screens. Use a preupdate rule such as: if (SCREEN_NAME='ADD' && CATEGORY='Undetermined') { GENERATE_EMAIL = 'N'; } Valid values are 'Y' and 'N'. Note that the value may be in upper or lower case
SCREEN_LOAD	There are several occasions when `load` directive rules are executed: • When an *add* screen loads • When an *edit* screen loads

	`` if (SCREEN_NAME='EDIT' && SCREEN_LOAD='FULL') { ... do something ... }; ``` or ``` if (SCREEN_NAME='EDIT' && SCREEN_LOAD='AJAX') { ... do something else ... }; ```
SCREEN_NAME	This has two possible values, ADD or EDIT. This allows you to define a rule tl executed on the *Add* or *Edit* screens. For example: if (SCREEN_NAME='ADD' && STATUS='OPEN') { .... } will execute the rule, only if you are adding an issue and the status is OPEN.
SITE_URL	This special value references and returns the value of the behavior setting nam
SYSDATE	This provides a value of the current timestamp
SYSDAY	This provides the Date Value of the current time
USER	This references the current user
USER_ROLE	This references or sets the current user role. Setting the user role is only allowe conditions: a. This will only work on the *edit* screen, not the *add* screen b. To set a new role to the current user, the current user must be able to ado I.e., their user account must specify that they are allowed to adopt the ne the user configuration. c. If the rule attempts to set a role to a role to which the user does not have role will be changed to the role identified by the behavior setting named LIMITED_USER_ROLE. Thus, you may still affect a role change to a u single role defined, but this will typically be the Guest or Customer role.

Value Qualifiers

Qualifiers are applied to fields stored within the Data Dictionary or special values to return a condition or special valu value qualifier to the dictionary name of the field. They may be entered as lower or upper case. Some directives may c

	if (MY_FIELD.{changed}) { ANOTHER_FIELD = 'value'; } The second use is when the *Add another* button on a repeating row has been pressed, and you want to perform an action on the repeating row that is being added. This is a change action th allows you to manipulate fields, usually to set values in the repeating row being added. An example of this usage, where you have a repeating row named RR_LAYOUT and you want t alter the value of a repeating row field named FIELD_NAME is: if (RR_LAYOUT.{changed} && RR_LAYOUT.{max_row_num} = 3) { FIELD_NAME[3] = 'value'; } Note that the value of 3 in the above example means to change the values on the 4th row, as the first row is row zero, the second is row one, etc.
{changed from:*value*}	This returns true if the last value of the field was *'Value'*, else it returns false
{changed to:*value*}	This returns true if the field is changed to the new value *'Value'*, else it returns false
{clear}	This clears the value in the field
{company name}	This may only be applied to a field with a display type of *user* and returns the company name of the user referred to
{contains *value1*[, *value2*, *valuen*, ...]}	Used to determine if one or mores values are selected within a multi-valued list
{default}	This value qualifer is used to set a field to its default value from the data dictionary
{excludes *value1*[, *value2*, *valuen*, ...]}	Used to determine if one or more values are not selected within a multi-valued list. This qualifier is only used with multi-valued fields
{exists}	This qualifier is only used within a link directive to check whether a value is present or not present
{is active}	This may only be applied to a field with a display type of *user* and returns true if the User fiel references an active user
{is external}	This may only be applied to a field with a display type of *user* and returns true if the User's company name is different from the site company name, as defined by the behavior setting named COMPANY_NAME
{is guest}	This may only be applied to a field with a display type of *user* and returns true if the user's only role is the role defined by the behavior setting named LIMITED_USER_ROLE
{is inactive}	This may only be applied to a field with a display type of *user* and returns true if the User fiel references a deactivated user
{is internal}	This may only be applied to a field with a display type of *user* and returns true if the compan name of the User field specified matches the site company name defined by the behavior setting named COMPANY_NAME
{like:*value*}	This performs a like comparison on the value of text fields, text area fields and log area fields providing a return of true or false. Use must use either an asterisk (*) or a question mark (?) a a wild card character in the value that you are evaluating. You must use one or more wildcard characters in a single rule. If the string you are searching to match on may be in the middle of value found, then you should use a wildcard at the beginning as well as at the end of the strin For example {like:nation*} will find the word **national** but not the word **international**. However, {like:*nation*} will find both **national** and **international**. This value qualifier is

	If you are using the qualifier on a log area display type field, then only the most current entry is used in the comparison.
{max_row_num}	This qualifier is used only with repeating row layouts and is used to provide an action on a row. For example, given a repeating row layout named RR_LAYOUT, and wanting to set the value of a field named FIELD_NAME, you can use the construct: if (RR_LAYOUT.{max_row_num} = 3 && RR_LAYOUT.{changed}) { FIELD_NAME[3] = 'value'; } This changes the value of the FIELD_NAME on the fourth row of the layout, when that row i added to screen through the use of the *Add another* button on the repeating row layout. If you reference a row number that does not exist, an error is generated, of the form Repeating row index too large: FIELD_NAME. This indicates that your rule will not ever execute properly, and you must change the rule to avoid the error. If you set the value of a field with such a rule, and any of the preceding repeating rows do not have a value set, then a null value is set into the value of the field on th preceding row.
{not like:*value*}	This is used in the same manner as `{like:value}` but provides the negative result set to `{like:value}`
{not null}	This returns true if the field is not null
{null}	This is true if the field is null
{old value}	This returns the prior value of the field
{owner}	This qualifier is used to determine whether the field referred to has the same value as the valu of the built-in OWNER field
{uppercase}	This qualifier returns the value passed to it, converting all the text to upper case.

Date / Time Value Qualifers for Date Calculations

These may be used within any directive.

Value Qualifier	Purpose
{days}	This value qualifier is applied date calculations to determine the number of days between two dates For example: X_NUMBER = (X_DATE1 - X_DATE2).{days}; will return the number of days as an integer, between X_DATE1 and X_DATE2
{hours}	This value qualifier is applied date calculations to determine the number of hours between two date For example: X_NUMBER = (X_DATE1 - X_DATE2).{hours}; will return the number of hours as an integer, between X_DATE1 and X_DATE2

	X_NUMBER = (X_DATE1 - X_DATE2).{seconds}; will return the number of seconds as an integer, between X_DATE1 and X_DATE2

Date / Time Value Qualifers for Date Component Manipulations

These may be used within any directive. You may apply the qualifier to fields with a display type of DATE or DAY.
may apply the qualifiers to the values of SYSDAY and SYSDATE .

Value Qualifier	Purpose
{day}	The day number of the current month
{day of week}	The day number of the current week
{day of year}	The day number within the current year
{hour}	The hour number of the morning or the afternoon
{hour of day}	The hour of the day
{minute}	The minute number within the current hour
{month}	The number of the current month
{second}	The second number within the current minute
{week of month}	The week number within the current month
{week of year}	The week number within the current year
{year}	The year as a number

Examples:

Set a text field on an *add* or an *edit* screen to the day number within the current month:

```
MY_TEXTFIELD = SYSDATE.{day};
```

Within an expression, if a date field shows that it is the 8th day of the month, set a text field to a string:

```
if (MY_DATEFiELD.{day} = 8) {MY_TEXTFIELD = 'Today is the 8th';}
```

User Field Qualifiers

These may be used within any directive. Each field in a user's record has a value qualifier that can be accessed with tl
USER.{*userfield*}. For example, if you want to assign the value of a user's company name to the field name `COMP_NAM`
would use this:

COMP_NAME = USER.{company name};

This is a complete list of the user field qualifiers that may be used.

Value Qualifier	Purpose
{area}	The user's default Business Area
{address} {address 1}	The first line of the user's address
{address 2}	The second line of the user's address
{city}	The city within the user's address
{cell phone}	The user's cell phone number
{company name}	The user's company name

{last name}	The user's last name
{pager}	The user's pager number
{project}	The user's default Project within their Business Area
{state} {province}	The user's State or Province
{region}	The user's Region
{signature}	The user's signature. Note that this can be assigned to an image field within an issue
{time zone}	The user's time zone
{user defined nn}	where nn is a number from 1 to 10. These correspond to the user defined fields within the user's
{work phone}	The user's work phone number
{zip} {postal code}	The user's Zip Code or Postal Code

Document & Image Field Qualifiers

The metadata within Document and Image field display types can be accessed with the following qualifiers:

Value Qualifier	Purpose
{charset}	The character set of the document or image
{content type}	The content or mime type of the document or image
{created by user}	The user ID of the person who created the document or image
{external ident}	A string containing key information to identify the object externally; this is opaque to ExtraVi This is not normally used in rules
{file desc}	The description of the document or image
{file extension}	The extension of the document or image that was uploaded
{file format}	The format of the document or image that was uploaded. For example, this may be BINARY
{file name}	The complete filename of the document or image that was uploaded
{file size}	The size in bytes of the document or image that was uploaded
{last updated by user}	The user ID of the person who uploaded the document or image
{mime type}	The mime type of the document or image
{thumbnail size}	The size in bytes of the thumbnail image of the document or image that was uploaded
{udf id}	The UDF_ID of the document or image that was uploaded

Permissions

Business Rules ignore security permissions for fields, for all roles. This is similar to developing user custom extensio using Java.

It is assumed that the developer of business rules understands that they have the ability to update the value of any fiel restriction, by using a business rule. Thus, a business rule may make an assignment to a field that is read-only to the u not even placed on an *add* or *edit* screen layout.

Writing Rules

```
    <Rule Action> ; <Rule Action>;
    <Rule Action> ; <Rule Action>;
    <Rule Action> ; <Rule Action>;
    <Rule Action> ; <Rule Action>;
}
```

There is also a special syntax for negative conditions:

if !(<Rule Condition >)

Rules also support the following conditional operators. These conditional operators will work with all numeric and da types. They also work as operators using a string compare operator when used with text and list display types.

Operator	Meaning
>	Greater than
<	Less than
<=	Less than or equal to
>=	Greater than or equal to

Note: The condition(s) may extend over multiple lines, and are controlled by the parentheses.

Note: You may not set the value of the fields AREA and PROJECT with a load, refresh or clone directive. Within the referenced fields must exist in the data dictionary, and must appear on the layout to which the rule applies. You cannot or new fields "on-the-fly".

Assignment

By definition, all fields have a type, specified by its display type in the data dictionary. As with all other computer lan assignments must be made between fields with the result being of the correct type. For example, you can assign a text text field, but cannot assign a text field to a number field. However, you might assign the a value in a list field to a tex individual values within the list field are of type text.

For the most part, automatic conversions are made between different data types. For example, if you assign a list type field, the display title of the list value is automatically provided and used. Similarly, if you assign a text field to a list v reverse lookup is performed on the text value to populate the list field. Of course, if you make an assignment of this la value in the text field must correspond to an existing value of a list title else an error will be generated.

An important feature of rules within ExtraView is that you can only perform a single operation with a single rule. For two fields together (FLD_1 and FLD_2) and place the result in a third field (FLD_TOTAL) you must take two steps:

```
FLD_TOTAL = FLD_1;
FLD_TOTAL += FLD_2;
```

You cannot and must not use the form:

```
FLD_TOTAL = FLD_1 + FLD_2;
```

When applied to a repeating row field, the above syntax updates the field value on all repeating row fields. The follow demonstrates how you make an assignment to a repeating row field on a single row. Note that the repeating rows are n zero, not from one.

```
RR_FIELD[0] = 'value1';
RR_FIELD[1] = 'value2';
```

Assignments within Search Layouts

When the `FIELD_NAME2` embedded within one of the Screen layouts is set to a value, or its value is changed, the value `FIELD_NAME` within the `SEARCH_LAYOUT_NAME` is set to the value of `FIELD_NAME2`.

"IF" statements

IF statements allow the conditional processing of statements. For example, consider the following rule:

```
if (PROJECT = 'Customer Tickets') {
  ASSIGNED_TO = 'BSMITH';
}
```

This will work equally well as a load rule, an onchange rule or a preupdate rule. It will not work as a postupdate rule, be made once the rule has been read and executed. Next, consider this rule:

```
if (PROJECT.{changed to:'Customer Tickets'}) {
  ASSIGNED_TO = 'BSMITH';
}
```

This will only work as an onchange or a preupdate rule, as it is during these times that changes can be detected.

Within an *if* statement you may use the conjunctions of AND and OR. These are written within rules with `&&` represen representing OR. These conjunctions can be mixed within one *if* statement, and parentheses may be used to set the or of operations. Examples of valid *if* statements are:

```
if (PRIORITY = 'P 2' && ASSIGNED_TO = 'Fred Jones') {
  MY_FIELD = 'Yes';
}

if (PRIORITY = 'P 2' || ASSIGNED_TO = 'Fred Jones') {
  MY_FIELD = 'Yes';
}

if (PRIORITY = 'P 2' && ASSIGNED_TO = 'Fred Jones' || ORIGINATOR = 'Jill Fraser') {
  MY_FIELD = 'Yes';
}

if ((PRIORITY = 'P 2' && ASSIGNED_TO = 'Fred Jones') || (PRIORITY = 'P 1' && ORIGINATOR = 'Jill F
  MY_FIELD = 'Yes';
}
```

Nested *if* statements, *else / else if*, (), and *or* clauses are not supported at this time. However, you may write statements achieves your purpose. For example, a statement such as:

```
if (AREA = 'Customer Support') {
  if (STATUS='Submitted') {
    SUB_STATUS = 'Needs Review';
    OWNER = ASSIGNED_TO;
    DUE_BY_DATE = SYSDAY;
  }
} else if (AREA = 'Bugs') {
  STATUS = 'New';
} else {
  STATUS = 'Unassigned';
}
```

IS NOT SUPPORTED It should, and must be, written as:

```
if (AREA='Customer Support' && STATUS='Submitted') {
  SUB_STATUS='Needs Review';
  OWNER=ASSIGNED_TO;
  DUE_BY_DATE = SYSDAY;
}
```

- changed
- changed from
- changed to

You must have one, and only one, of these qualifiers in a statement. For example, the following rule will work:

if (CATEGORY.{changed to:"Software"} && PRIORITY = "P 1")   { IMPORTANCE = "High" }

whereas the following will not work:

if (CATEGORY.{changed to:"Software"} && PRIORITY.{changed})   { IMPORTANCE = "High" }

The reason is that a user implicitly changesonly one item on the user interface at one moment. The rule will never trig
it looks for two or more changes at the same moment.

- Add new comment

Quoting & Comments

Quoting

Literal values may be quoted with either single or double quotes. No escape mechanism is currently provided.

Comments

Comments are lines that begin with a `#` character. All characters following the `#` on the line are ignored.

Limitations

- Rules may only use fields that physically store their value in the database or use the special values as specified a
  not work with computed fields from the data dictionary. For example, you cannot create a rule that uses these fi
  - DATE_CLOSED_SINCE
  - DATE_CREATED_DAY
  - DATE_CREATED_MONTH
  - DATE_CREATED_WEEK
  - DATE_CREATED_TRUNC
  - DATE_CREATED_YEAR
  - DATE_LAST_STATUS_CHANGED_SINCE
  - DAYS_IN_STATUS
  - DAYS_OPEN
  - MONTHS_OPEN
  - WEEKS_OPEN
  - TIMESTAMP_MONTH
  - TIMESTAMP_SINCE
  - TIMESTAMP_TRUNC
  - TIMESTAMP_WEEK
  - TIMESTAMP_YEAR
  - WEEKS_IN_STATUS
  - WEEKS_OPEN
  - Any field with a display type of *Label*
  - Any field with a display type of *Custom*.

Rule Parsing & Recursion

Rule Parsing

Directives are case insensitive.

Conditional statements are case insensitive.

VALUE_IDENTIFIERS are case sensitive, and generally expected to be uppercase.

Values are generally display titles, and are case sensitive. A reverse lookup is done on the value to determine it's intern lookup type (list, popup, etc.). An exception is for user fields, which are assumed to be ExtraView User Ids, and are ca

Implied Assignments

When a field name is used in an `ADD`, `ADD_ROW`, `COPY` or `UPDATE` action with an equal sign and a field name on the righ statement, it implies that you want the value of the field from the current issue to be used to assign to the add, copy or This is simply a shorthand convention to save time when developing your rules:

```
SERIAL_NUMBER
```

is equivalent to using:

```
SERIAL_NUMER = SERIAL_NUMBER
```

Recursion

Programmers will be familiar with the topic of recursion. With rules, it is possible to write a rule that causes an update when an associated rule fires, it causes the same or a different rule to fire that then causes another update to occur. Thi repeatable cycle with no way for ExtraView to recognize that this is happening. The rules may continue firing on the s indication to the user that an endless cycle has started. For this reason, your rules should be examined carefully, espec add or update issues with the postupdate directive. If you accidentally set an infinite loop running, you should immedi application server and then change your rule to prevent this happening again.

Debugging Rules

There are a number of directives and techniques that help with the debugging of rules. These all rely on the placement the application server log. These entries may be viewed with the **Admin** --> **System Controls** --> **System Log** --> **Vi** **Server Log** utility. Note the ability of this screen to be able to refresh the most recent entries. You can leave this wind message area while you alter rules and test their results in a different window.

After debugging, it is strongly suggested that you remove, or comment, the debugging directives, as they have a small performance.

Directive	Use
debug	Turns on the debugging. All messages from rules execution are written to the log, until the end of rules e until an <== end ==> directive is encountered
end	Ends all processing of rules and stops debugging messages being sent to the log
info	Causes log entries to verify that rules are being executed. Minimal details are listed
log	Logs rule activity in enough detail for end users to verify rule execution. Shows condition evaluation and until the end of the rules, or until a <== nolog ==> directive is encountered
nolog	Turns off the <== log ==> directive

```
if (AREA.{is not null}) SHORT_DESCR = 'Set at DEBUG level of logging';
<== info ==>
```

The results from this will look something like this:

```
2010-07-20  16:10:34  [  info   ] ExtraView. TP-Processor7 ,122118,TP-Processor7,
>>>Entering service,Display.doAddDisplay,,,sc,0,,,uid,BSMITH,tmem,41,fmem,10,nid
,http://nerdvana.extraview.net/evj ON WS_A:
2010-07-20  16:10:35  [  info   ]  TP-Processor7 ** Rules60: * Executing:
# L0000
if (AREA.{is not null}{not null} ()) {
    SHORT_DESCR = Set at NO logging (Set at NO logging);
}
2010-07-20  16:10:35  [  info   ]  TP-Processor7 ** Rules60: * Executing:
# L0001
if (AREA.{is not null}{not null} ()) {
    SHORT_DESCR = Set at INFO level of logging (Set at INFO level of logging);
}
2010-07-20  16:10:35  [  info   ]  TP-Processor7 ** Rules60: * Executing:
# L0002
if (AREA.{is not null}{not null} ()) {
    SHORT_DESCR = Set at LOG level of logging (Set at LOG level of logging);
}
2010-07-20  16:10:35  [  info   ]  TP-Processor7 ** Rules60: * Executing:
# L0003
if (AREA.{is not null}{not null} ()) {
    SHORT_DESCR = Set at DEBUG level of logging (Set at DEBUG level of logging);
}
2010-07-20  16:10:35  [  info   ] ExtraView. TP-Processor7 ,122118,TP-Processor7,
>>>Leaving  service,Display.doAddDisplay,time,1357,sc,0,cc,46,mc,0,uid,BSMITH,tmem,41,
fmem,12,nid,,http://nerdvana.extraview.net/evj ON WS_A:
```

Note the effects of the different directives.

- Add new comment

Order of Operations

There are occasions when you need to be aware of the order of operations of the execution of rules.

The most sensitive of these operations is the use of the mail action to send an email template within the preupdate dire preupdate directive also contains rules that modifies some of the values that are used within the template, then the mo used, irrespective of the order of the rules. This is because the email notification is handled as a background process, a the record are completed before the notification task sends the mail.

Rules & Accordion Folds

Accordion folds are described on the page Adding Accordion Folds to Layouts. You may use rules to set the initial sta accordion fold to be open or closed, and you may open or close folds using rules to determine the state of the fold..

Examples

- You have created two folds within the data dictionary, named Fold A and Fold B. This implies the fields named `FOLD_POST_A`, `FOLD_PRE_B` and `FOLD_POST_B` all exist
- You have placed these fields onto an *add*, *edit* or embedded layout
- The default behavior is that both folds are initialized in a closed state
- The first example shows how you might use a load directive to open Fold A when the screen is first presented t

- Whenever we click on Fold B, and no matter its state, we open another fold

```
<== onchange ==>
if (FOLD_PRE_B.{changed}) {
    FOLD_PRE_A = {open};
}
```

- In this case, we have a more complex `if` statement, and we both open and close other folds when we open Fold also presumes the existence of `FOLD_PRE_C` and `FOLD_POST_C`

```
<== onchange ==>
if (FOLD_PRE_B.{changed to:{open}} && STATUS = 'Fixed') {
    FOLD_PRE_A = {closed};
    FOLD_PRE_C = {open};
}
```

- This last example shows how you might preset a number of folds, based upon the value of another field being cl user

```
<== onchange ==>
if (STATUS.{changed}) {
    FOLD_PRE_A = {open};
    FOLD_PRE_B = {open};
    FOLD_PRE_C = {closed};
}
```

Rules & Checkbox Fields

By definition, checkbox fields have two values, *checked* and *unchecked*. However in reality database technology real values under the covers:

- *Not Set*
- *Checked*
- *Unchecked*

There are differences in the way that *Not Set* and *Unchecked* are handled internally, but if you adhere to the following unset the values of a checkbox, ExtraView will handle the interal differences.

To set a value:

```
MY_CHECKBOX = 'Y';
```

To uncheck a value:

```
MY_CHECKBOX = 'N';
```

To check whether a checkbox is set:

```
if (MY_CHECKBOX = 'Y') { ..... };
```

To check whether a checkbox is not checked:

```
if (MY_CHECKBOX = 'N') { ..... };
```

Date differences in rules may specify qualifiers to get results computed in units other than days. The qualifiers are {se
{minutes}, {hours}, and {days}. Each of these results in an integral value after the date difference is computed. The fi
the computation is truncated, not rounded. This implies that the meaning is "the integral number of between the two d

Example:

```
## compute number of seconds between two dates
X_NUMBER = (X_DATE1 - X_DATE2).{seconds};
## compute integral number of days between two dates
X_DECIMAL = (X_DATE1 - X_DATE2).{days};
## compute total (including fractional) days between two dates
X_DECIMAL_DAYS = (X_DATE1 - X_DATE2);
```

You can specify a specific business calendar to use with date calculations. This is done with the calendar directive. Fo
use the WEEKDAY calendar provided with ExtraView, and you have a calculation such as:

```
<== calendar WEEKDAY ==>
DATE_RESULT  = SYSDATE;
DATE_RESULT += 3;
```

where SYSDATE is a Thursday, the result will be Tuesday, i.e. it is 3 workdays, plus the 2 weekend days.

If you add 0 to a date using a business calendar, the result will skip to the first work day beyond that date if that date is

Null date and day field values have special treatment. When a date or day field has a null value, and is being used in a
assumed the null date is *January 1st, 1900*. This avoids errors and null results occuring. However, tests on date and da
value qualifiers such as date_field.{is null} and date_field.{not null} return true or false depending on whether there i

Date fields and Day Fields

Using a Day type field within a Business Rule is consistent when it is compared or combined in expressions with othe
When compared with Date fields, the Date is converted to a Day value using the user's time zone (to which the Date v
definition, relative) and the comparison is done with a Day field to Day field comparison or calculation.

Rules & List Fields

This page refers to all enumerated lists, with the exception of multi-valued lists.

Enumerated lists are fields with display types of *List*, *Popup*, *Radio Button*, *Checkbox, User* and *Tab*.

The three principal abilities of rules with enumerated lists are to set a value in the list, to change a value in the list and
value from the list. Adding a value and changing the value in the list are accomplished with the same assignment:

```
MY_LIST = 'Valid value';
```

The value you assign within the rule must exist, else the rules will not compile.

If you want to remove the value in the list assign it a null value as follows:

```
MY_LIST = '{null}';
```

You may assign a text field value to a list field value, assuming the value exists within a list.

Rules & Multi-Valued List Fields

both *apple* and *orange* you would use:

```
FRUITS = ['apple','orange'];
```

The quotes around the values are optional, unless you have a space character within the value. For example, this is a v

```
FRUITS = [apple, 'orange', 'honeydew melon'];
```

If you want to set a single value of *pear* within the list you use a simple assignment statement.

```
FRUITS = 'pear';
```

Note that when you assign one or more values to a multi-valued field with an assignment, you are **adding** to the existi
For example, if the list contains both *apple* and *orange* and you execute this:

```
FRUITS = ['orange', 'raspberry'];
```

the list will then contain *apple, orange* and *raspberry.*

Adding a Value to an Existing Multi-Valued List Field

```
FRUITS += 'strawberry';
```

Clearing All Values from a Multi-Valued List Field

Simply set the the list as follows:

```
FRUITS = '';
```

or

```
FRUITS.{clear};
```

Checking Values Exist within a List

This syntax will find whether the single value of *orange* is currently set within the multi-valued list:

```
if (FRUITS.{contains 'orange'}) { ... };
```

This syntax will find whether the values of *pear*, *orange* and *banana* are currently set within the multi-valued list:

```
if (FRUITS.{contains 'pear', 'orange', 'banana'}) { ... };
```

This syntax will find whether the values of *pear*, and *orange* are currently set within the multi-valued list, but the valu
not within the multi-valued list:

```
if (FRUITS.{contains 'pear', 'orange'} && FRUITS.{excludes 'banana'}) { ... };
```

Assignments with Multi-Valued Fields

You can assign the selected values in a multi-valued list field to a text, text area, print text, or an HTML Area field. W
the assignment, the text, text area, print text, or HTML Area field will contain the entire list of selected values, delimi
colons.

Rules & Numeric Fields

Null numeric field values have special treatment. When a numeric field has a null value, and is being used in a calcula assumed the value is zero. This avoids errors and null results occuring. However, tests on numeric type fields with val as numeric_field.{is null} and numeric_field.{not null} return true or false depending on whether there is a null value

Rules & Repeating Rows

In general, rules are executed on repeating rows, just as they are executed on the main *Add* and *Edit* screens. However important differences.

- The first significant difference is that a rule such as:

  ```
  <== onchange ==>
  RR_FIELD = 'value';
  ```

  is executed for all repeating rows in existence at the time of the onchange event, in the order of the repeating ro advantage of this to perform an evaluation of all repeating rows in existence, and then set a value of a field in th *Edit* screen based upon what you find. An example of this is that you might have the repeating row field named RELEASE_STATUS with values of *New*, *Open* and *Closed*. There may be any number of repeating rows in exi one of these values in each repeating row. The task might be that you want to set the STATUS field on the main screen, to *New* if any repeating row has the value of *New*, then secondarily set the STATUS field value to *Open* value on a repeating row, but at least one repeating row has the value of *Open*. Finally, you might then want to s value to *Closed* when all the values of the repeating rows are *Closed*. The following rules will achieve this:

  ```
  <== onchange ==>
  # First, push our changed status to the STATUS field, so we can then trigger a reset
  # based on all repeating row fields, not simply the one that changed
  if (RELEASE_STATUS.{changed}) {
    STATUS = RELEASE_STATUS; }
  # Now do the actual roll up by resetting the main status based on whether specific
  # RELEASE_STATUS values exist. Note that the order of these rules is critical
  if (RELEASE_STATUS = 'Closed') {
    STATUS = 'Closed'; }
  if (RELEASE_STATUS = 'Open') {
    STATUS = 'Open'; }
  if (RELEASE_STATUS = 'New') {
    STATUS = 'New'; }
  ```

  The rules are executed in order for all rows in the repeating row set. Therefore the last rule will have the last eff for the STATUS field if any repeating row has the value of *New* in the RELEASE_STATUS field. This progress list, so that if all repeating rows have the value of *Closed*, then the STATUS value is set to *Closed*

- You can execute a rule when a new row is added via the *Add another* button. For example, the rule:

  ```
  <== onchange ==>
  if (RR_LAYOUT.{changed}) {
    RR_FIELD = 'value';
  }
  ```

  This has the effect of setting the value of the repeating row field named RR_FIELD on all new rows that are add

- You can have more finite control, and only execute rules on specific repeating rows through the use of a rule suc

Rules & Text Type Fields

Text fields are fields with display types of Text Field, Text Area, HTML Area, and Print Text. The following table sh
that can be used when making assignments with text fields.

Operator	Meaning
`+=`	Prepends text. For "area" display type text fields, the text to be added includes a line feed before and after
`&=`	Postpends text. For "area" display type text fields, the text to be added includes a line feed before and afte
`*=`	Prepends text. For "area" type text fields, the text to be added does not include a line feed before or after t
`/=`	Postpends text. For “area” type text fields, the text to be added does not include a line feed before or after

For text fields (not of the "area" type), the operators do not include line feeds in the operation.

Business Rule How To Examples

- How do I set the **Assigned To** of the issue to the person updating the issue, if the current value is null?

  if (ASSIGNED_TO={null} && USER.{is internal}) { ASSIGNED_TO = USER; }

- How do I set the value of a field on the *add* screen?

  ```
  if (AREA=Issues && PROJECT=Issues && SCREEN_NAME='ADD')
    {FIELD_NAME=VALUE;}
  ```

- How do I set the value of a field on the *edit* screen?

  ```
  if (AREA=Issues && PROJECT=Issues && SCREEN_NAME=EDIT)
    {FIELD_NAME=VALUE;}
  ```

- How do I set the value of a field without any conditions?

  FIELD_NAME=VALUE;

  Note that this construct does not work within an onchange rule

- How do I set the value of a field within an onchange rule?

  ```
  if (FIELD_NAME.{changed}) {
     OTHER_FIELD = FIELD_NAME;
  }
  ```

- How do I set the value of a user field such as ASSIGNED_TO to the current user’s name?

  ```
  if (AREA="Contracts" && SCREEN_NAME='ADD') {
    ASSIGNED_TO=USER;
  }
  ```

```
  ASSIGNED_USRS =[PCOLLINS,MGREEN];
}
```

- How do I check to see if a value is selected in a multi-valued list?

  ```
  if (MY_LIST.{contains 'Yellow'}) { COLOR = 'Yellow';}
  ```

- How do I check to see if several values are selected in a multi-valued list?

  ```
  if (MY_LIST.{contains 'Yellow', 'Blue', 'Orange'}) {
    COLOR = 'Yellow';
  }
  ```

- How do I check to see if a multi-valued list contains some values, but does not contain some other values?

  ```
  if (MY_LIST.{contains 'Yellow', 'Green'} && MY_LIST.{excludes 'Blue', 'Red', 'Purple'}) {
    COLOR = 'Yellow';
  }
  ```

- How do I set a field with a display type of checkbox to be checked?

  ```
  checkbox_fld = 'Y';
  ```

- How do I set a field with a display type of checkbox to unchecked?

  ```
  checkbox_fld = 'N';
  ```

- How do I check whether the current user has the *Administrator* role to allow an operation?

  ```
  if (AREA='Bugs' && STATUS.{changed_to:'Closed'} && USER_ROLE='Administrator')
    {COMMENTS='OK!'};
  ```

- How do I alter a value, if another value has changed?

  ```
  if (STATUS.{changed}) {FIELD_X='Changed'};
  ```

- How do I set the values of fields to values from the user’s personal options?

  ```
  if (AREA='Issues' && SCREEN_NAME='ADD'){
    PHS_COMPANY_NAME = USER.{company name};
    PHS_FIRST_NAME = USER.{first name};
    PHS_LAST_NAME = USER.{last name};
    PHS_JOB_TITLE = USER.{job title};
    PHS_ADDRESS = USER.{address};
    PHS_WORK_PHONE = USER.{work phone};
    PHS_EMAIL = USER.{email};
    PHS_USER_DEFINED_1 = USER.{user defined 1};
  }
  ```

```
if (AREA='Bug' && UNIT_PRICE.{not null} && TAX.{not null}){
  TOTAL_PRICE = UNIT_PRICE;   TOTAL_PRICE += TAX;
}
```

- How do I add subtract a value named **DISCOUNT** from a field called PRICE and put the results in a field name **DISC_PRICE**?

```
if (AREA='Issues' && DISCOUNT.{not null} ){
  DISC_PRICE = PRICE;   DISC_PRICE -= DISCOUNT;
}
```

- How do I multiply two values named **HOURS** and **AMOUNT** together and put the results in a field named **PR**

```
if (AREA='Customer Issues' && HOURS.{not null} ){
  PRICE = AMOUNT;   PRICE *= HOURS;
}
```

- How do I divide a value named **TOTAL_COST** by a value of **HOURS_WORKED** and put the results in a fiel **PRICE_PER_HOUR**?

```
if (AREA='Issues' && HOURS_WORKED.{not null} ){
  PRICE_PER_HOUR = TOTAL_COST;
  PRICE_PER_HOUR /= HOURS_WORKED;
}
```

- How do I make the **Comments** field required, when the **Status** changes to *Fixed*? At the same time, inform the if they do not provide a Comment (database only rule):

```
if (STATUS.{changed_to:Fixed} && STATUS.{changed_from:Open} && COMMENTS.{is null} )
  {Error: Comments are required when an issue is marked fixed.};
```

- How do I build a text field from other text fields?

```
if (AREA="Customers" && SCREEN_NAME='ADD') {
  SHORT_DESCR="New Customer - ";
  SHORT_DESCR&=CUST_NAME;
  SHORT_DESCR&=" - ";
  SHORT_DESCR&=CUST_LEGAL_INDENTITY;
}
```

- How do I set the value of a date field to the current date?

```
if (AREA='Issues' && ACT_PERCENT_COMPLETE.{changed}) {
  COMPLETE_AS_OF_DATE = {SYSDATE};
}
```

- How do I increment a date field?

```
NEXT_MAINTENANCE_DATE = MAINTENANCE_COMPLETION_DATE;
NEXT_MAINTENANCE_DATE += MAINTENANCE_INTERVAL;
```

```
  {
   ERROR: Invalid status with this severity level
  }
```

- How do I pop up error messages in different languages?

```
if (AREA=Issues && SEVERITY_LEVEL=1 && STATUS=Pending && USER.{language}='fr')
  {
   ERROR: Statut invalide avec ce niveau de gravité
  }
if (AREA=Issues && SEVERITY_LEVEL=1 && STATUS=Pending && USER.{language}='en')
  {
   ERROR: Invalid status with this severity level
  }
```

- How do I set the value of a field to the value of a linked issue field?

```
if (AREA='Contracts' && CUST_LIST.{not null}) {
  RELATIONSHIP_GROUP_PARENT = (customerLink).ID;
}
```

- How do I set the value of the built-in field RELEASE_FOUND within a rule?

  The important factor here is that the RELEASE_FOUND field is dependent upon its parent fied, PRODUCT_N
  you must set both values at one time. The RELEASE_FIXED field has the same dependency.

```
PRODUCT_NAME = 'My Product';
RELEASE_FOUND = 2.3.4;
```

- How do I "roll-up" the values in repeating rows, so that the main issue represents a concensus of all the repeatin
  commonly-defined use case for this rule is a scenario where you have a STATUS field on the main issue, which
  RELEASE_STATUS values held in mulitple repeating rows where each row may have the same or different val

  For example, let's say that your STATUS and RELEASE_STATUS fields have four values, **New**, **Open**, **Fixed** a
  want the STATUS field to show the value that corresponds to the earliest one in the list that is encountered acros
  RELEASE_STATUS values. Thus, if there are three repeating rows, with values of **Open**, **Fixed** and **Fixed**, you
  STATUS field to indicate a "roll-up" value of **Open**. Likewise, if all three values of RELEASE_STATUS are **O**
  want the STATUS to also show **Open**. This is achieved with the following onchange rules:

```
# First, push our changed status to the STATUS field, so we can then trigger a reset
# based on all repeating row fields, not simply the one that changed
if (RELEASE_STATUS.{changed}) {
  STATUS = RELEASE_STATUS;
}
# Now do the actual roll up by resetting the main status based on whether specific
# RELEASE_STATUS values exist. Note that the order of these rules is critical
if (RELEASE_STATUS.{changed} && RELEASE_STATUS = 'Closed') {
  STATUS = 'Closed';
}
if (RELEASE_STATUS.{changed} && RELEASE_STATUS = 'Fixed') {
  STATUS = 'Fixed';
}
```

- Say you want to add 3 blank rows to the repeating row named MY_REPEATING_ROW
- Create a new text field that is not going to be used on the layout, say MY_HIDDEN_FIELD. This will no associated with it
- You will use a field on the repeating row layout to store the MY_HIDDEN_FIELD value - remember this the field on the layout is a text field named MY_RR_FIELD
- Now use the ADD ROW action to add 3 new rows:

```
if (SCREEN_NAME = 'ADD') {
  {ADD ROW TO MY_REPEATING_ROW MY_RR_FIELD = MY_HIDDEN_FIELD}
  {ADD ROW TO MY_REPEATING_ROW MY_RR_FIELD = MY_HIDDEN_FIELD}
  {ADD ROW TO MY_REPEATING_ROW MY_RR_FIELD = MY_HIDDEN_FIELD}
}
```

- How do I "roll-up" the values in sibling related issues, so that they update the status of their parent issue to **Clos** statuses of the child issues change to **Closed**. This is a common requirement, where a parent issue reflects the st many child issues. The child issues are in a sibling relationship to the parent. The following example can be exp a roll-up over many different status values, and the same technique can be used to update any other field on the using a common value over many child issues. To achieve this structure, consider the following postupdate dire

```
# Define a link to the parent issue
<== link myParent ==>
RG(RG_NAME = relatedChildren, RG_TYPE = PARENTS)
# Now define a link for the child issues of the same parent - i.e. the SIBLINGS
<== link openChildren ==>
RG(RG_NAME = relatedChildren, RG_TYPE = SIBLINGS), STATUS != 'Closed'
<== postupdate ==>
# If we have a parent and all its children are Closed - i.e. there are no children that are not closed
if (STATUS.{changed to: 'Closed'} && (myParent).ID.{is not null} && (openChildren).ID.{is null}) {
  {UPDATE: myParent STATUS = 'Closed'};
}
```

- How do I add a value entered into one field to become a member of a list in another field?

  First define the object to be used to move the value from a text field to a list field:

```
<== object cust ==> AREA='Customers', LINK=CUST_LIST, TITLE=CUSTOMER, PRIVACY=false
```

  Now, use the rule in a way that is similar to:

```
if (CUST_LIST.{changed} && AREA='Issues') {
 CUST_CONTACT = (cust).CUST_CONTACT;
 EMAIL_ADDRESS = (cust).EMAIL_ADDRESS;
}
```

- How do I handle multi-valued fields?

```
if (AGENCY.{contains 'Federal'})
  {GROUP = 'Fed';}
```

- How do I check if a field has a value of null?

```
if (AREA=Issues && THEME={null})
  { DRAFT=Y }
```

```
<== preupdate ==>
if (AREA=Issues && STATUS.{changed_to:Pending Approval}) {
  {MAIL:'Issue Approval Request', APPROVER} };
```

- How do I create an email directive to send the standard notification email to all the users in a role?

```
<== mail ==>
if (AREA="Contracts" && STATUS.{changed to:Finished}) {
  ROLE:MANAGER;
}
```

- How do I send standard notification email to the **ORIGINATOR**, all users in a role and to specific users?

```
<== mail ==>
if (AREA='Trouble Report' && SCREEN_NAME='ADD') {
  ROLE:CE;
  ORIGINATOR;
  JLACEY;
  KMORRIS;
  SCHRISTIANI;
  PREEVES;
  BKISER;
  LMJAMES;
}
```

- How do I add a new record based upon a user pressing a button on a screen?

```
if (ADD_SERIAL_BTN.{changed} && UNIT_SERIAL.{not null}) {
  { ADD: AREA='Calibration',
       PROJECT='Unit',
       UNIT_SERIAL,
       COMPONENT,
       SITE,
       FACILITY
  };
}
```

- How do I update existing records based upon a field on the current screen changing?

```
if (CALIB_DATE.{changed} && CALIB_DATE > (unitLink).CALIB_DATE && AREA='Calibration') {
  {UPDATE: unitLink, CALIB_DATE, UNIT_CAL_EXPIRES };
}
```

- How do I add a related issue record to the database, following the creation of an issue? This example also show useful techniques. This rule would be executed in the <== postupdate ==> section of the rules. Note the use of t to prevent recursion after the new record is added and when the rule fires again for the record just added. Next r where the **SHORT_DESCR** of the issue is modified before it is added to the new record. The relationship betw created by assigning the value of the ID of the current issue to the field named MY_PARENT_ID, which will e *add* and *edit* screens of the destination Business Area / Project.

```
if (AREA='Helpdesk' && EMPLOYEE_NAME.{not null} && SCREEN_NAME='ADD' && STATUS='New'
```

```
        SHORT_DESCR,
        IT_DATE_REQUESTED,
        IT_APPROVED_BY,
        ORIGINATOR,
        EMPLOYEE_NAME,
        EMPLOYEE_DEPT,
        EMPLOYEE_START_DATE
  };
}
```

- How do I only allow the person in the **ASSIGNED_TO** field have update permission to an issue?

  This is achieved by altering the current role of the user, if that user is not the **ASSIGNED_TO**. Given that the C typically not allowed to update issues, then changing the role to that of the Guest or the role identified by the be LIMITED_USER_ROLE, will cause the record to appear in read-only mode if the user is not the **ASSIGNED_**

  ```
  if (USER != ASSIGNED_TO) USER_ROLE = Guest;
  ```

- How can I use a link in a relationship group to detect no Open sub-issues?

  ```
  <= link rgOpen ==> RG(RG_NAME=MY_GROUP, RG_TYPE=CHILDREN), STATUS != Closed
  if (STATUS.{changed to: Closed} && (rgOpen).ID.{is not null} )
    {ERROR: Cannot set the status to Closed when there are open child issues.};
  ```

- How can I calculate one number as a percentage of another, and display the result with two decimal points?

  If you simply have two rules that state the following:

  ```
  TOT_PERCENT_DEFECT = DEFECTS;
  TOT_PERCENT_DEFECT /= SAMPLE_SIZE;
  ```

  where the value for DEFECTS is 25, and the value for SAMPLE_SIZE is 100, the result returned is .2, not .25. this result is that rules try to make sense of operations, especially division, and therefore avoids results like 1.33 returns 1.3 instead. The rules engine looks at the number of decimal places (the precision) of each of the values, the number of decimal places returned to no more than the number of decimal places used to express the value, minimum additional needed to get a non-zero value. Generally this works well, but as seen in this case there car problems, not the least of which is that there is no way to guarantee that either of the numbers has a certain num places.

  To avoid this, write the rules as follows:

  ```
  TOT_PERCENT_DEFECT = DEFECTS;
  # multiply by 100 first to preserve accuracy
  TOT_PERCENT_DEFECT *=100;
  TOT_PERCENT_DEFECT /= SAMPLE_SIZE;
  # explicitly add '.00' to preserve 2 digits of precision in the result
  TOT_PERCENT_DEFECT /= 100.00;
  ```

  By first multiplying by 100, you guarantee that there will be an integer value, and then by specifying the .00 wh causes the rules to keep at least two digits of precision

- How can I test an incoming email, uploaded with the EVMail utility to see if it is a new or an existing issue?

```
if (CUST_LIST.{changed}) ASSIGNED_TO = CUST_LIST.{owner};
```

This onchange rule will look for the owner of the user defined field named CUST_LIST and set this user's ID ir the Assigned To

- How can I ensure that a user enters a date that is in the future, not the past?

  First, create a user defined field in the data dictionary. This is used to hold the number of days different betweer field, and the current date. The field does not need to be on any layout, but it should have read and write permis example, the field is DIFF_DAYS. The following preupdate rule will check that the date is not in the past.

```
if (PROJECT = 'Action' && DATE_FOLLOW_UP.{not null})   {
   DIFF_DAYS = (DATE_FOLLOW_UP - SYSDAY);
}
if (PROJECT = 'Action' && DATE_FOLLOW_UP.{not null} && DIFF_DAYS < 0)
  { STOP: The Follow Up Date must be greater than todays date };
```

- How can I add new repeating rows and populate them with values?

  The following onchange rule will populate the first blank repeating row, and add two new repeating rows, when the button named GENERATE_PARTS_LIST_BTN and the value of the field named ASSEMBLY has a value (

```
if (GENERATE_PARTS_LIST_BTN.{changed} && ASSEMBLY='Primary' ) {
  PARTS='Part 1';
  { ADD ROW: PARTS='Part 2'};
  { ADD ROW: PARTS='Part 3'}; }
```

  If you want to set additional values on the repeating rows, you can modify the above along these lines:

```
if (GENERATE_PARTS_LIST_BTN.{changed} && ASSEMBLY='Primary' ) {
  PARTS='Part 1', RELEASE_STATUS='New';
  { ADD ROW: PARTS='Part 2', RELEASE_STATUS='New'};
  { ADD ROW: PARTS='Part 3', RELEASE_STATUS='New'};
}
```

- How can I set field values, based on the user's choice, when clicking on a navigation bar item?

  The following load rule will work on an **Add** screen only, and will set values on the screen as it is loaded.

```
if (SCREEN_NAME = 'ADD' && MY_ADD_NAV_BUTTON= 'Add Task' ) {
  PRIORITY = 'P 2';
  CATEGORY = 'Task';
}
```

  If the user chooses the Add Task navigation bar item, then the PRIORITY and CATEGORY fields are set as shc

- How can I add a number of blank repeating rows to an issue?

  It is not valid to add completely blank rows to a repeating row. You can, however, use an unused field that is nc layout in question. For example, to add three blank rows to a layout named MY_RR_LAYOUT, you could use ALT_ID field which is not used on repeating rows and using a text field on the layout:

```
{ADD ROW: TO MY_RR_LAYOUT.MY_TXT_FIELD = ALT_ID};
```

  - Create an image field and place this on the same layout. This is used to hold the user's signature, so it ren the record and part of the audit trail
  - Create a rule similar to:

    ```
    <== load ==>
    MY_IMAGE_FIELD = USER.{signature};
    ```

  - Within the HTML Area field have text such as `$$MY_IMAGE_FIELD$$`. This provides the link from the fie signature into the body of the email or letter that you are composing.

- Setting a date field such as `DUE_DATE` will set the time of the entry to 12:00 AM unless the user explicitly sets th means deadlines occur at the beginning rather than the end of the work day. How do I enforce setting the time t the work day, rather than the beginning of the day?
  - Create a rule similar to this:

    ```
    <== preupdate ==>
    {
      DUE_DATE = SYSDAY;
      DUE_DATE += 0.75
    }
    ```

Security Permissions

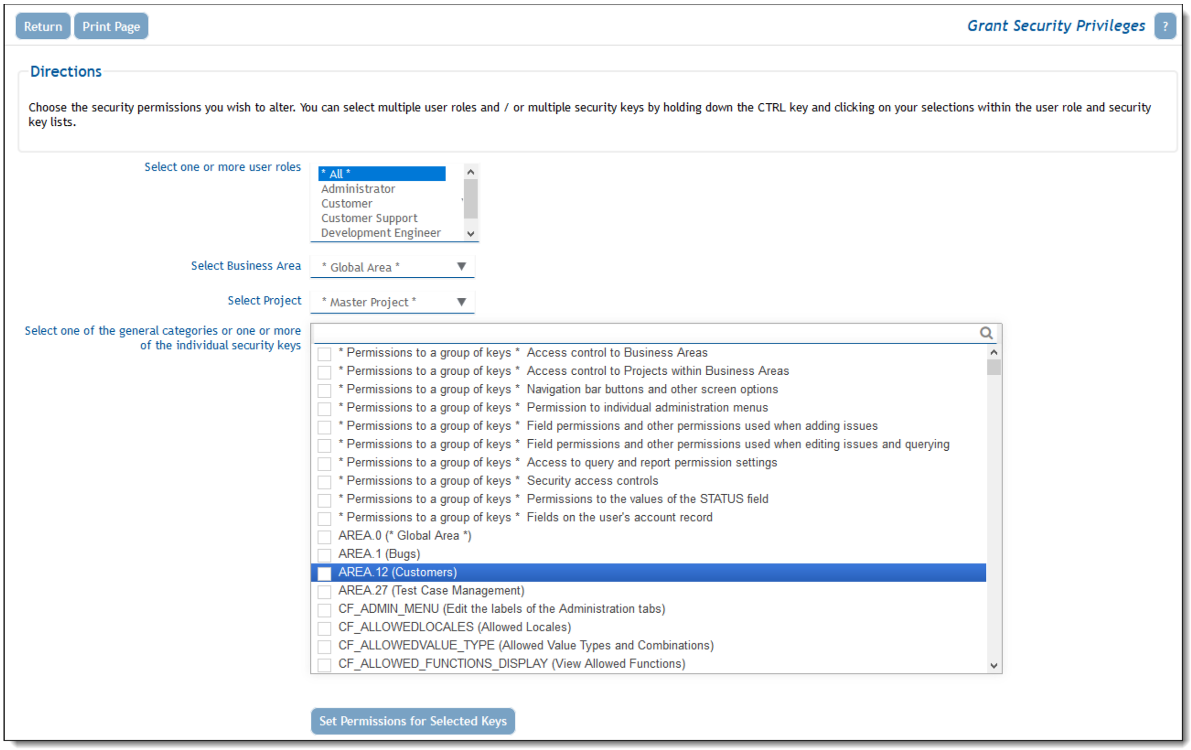
Granting Security Permissions, controls each user role's access to all fields, buttons and features in ExtraView. In setti the System Administrator has the ability to make these kinds of items read only, write only, readable and writeable, or

The security system uses the concept of inheritance. Each Area and each Project can have different security permissio However, if no setting is made at the Area level, then the value of the key at the global level is used. In the same fashi given at the Project level, then the key is set to the value at the Area level. This provides an economic means of admin ExtraView where you need only provide settings for security keys that differ from the global level.

When you update a security permission key, or a number of keys, the change in permissions is immediate for the admi who made the change. All other users will see the change when the time period defined by the behavior setting named SECURITY_CACHE_MINUTES, causes the security cache for each user to be refreshed. The default time period for minutes, so any user signed on will see the change within this time period. Any user who signs on will see the newly u permissions immediately.

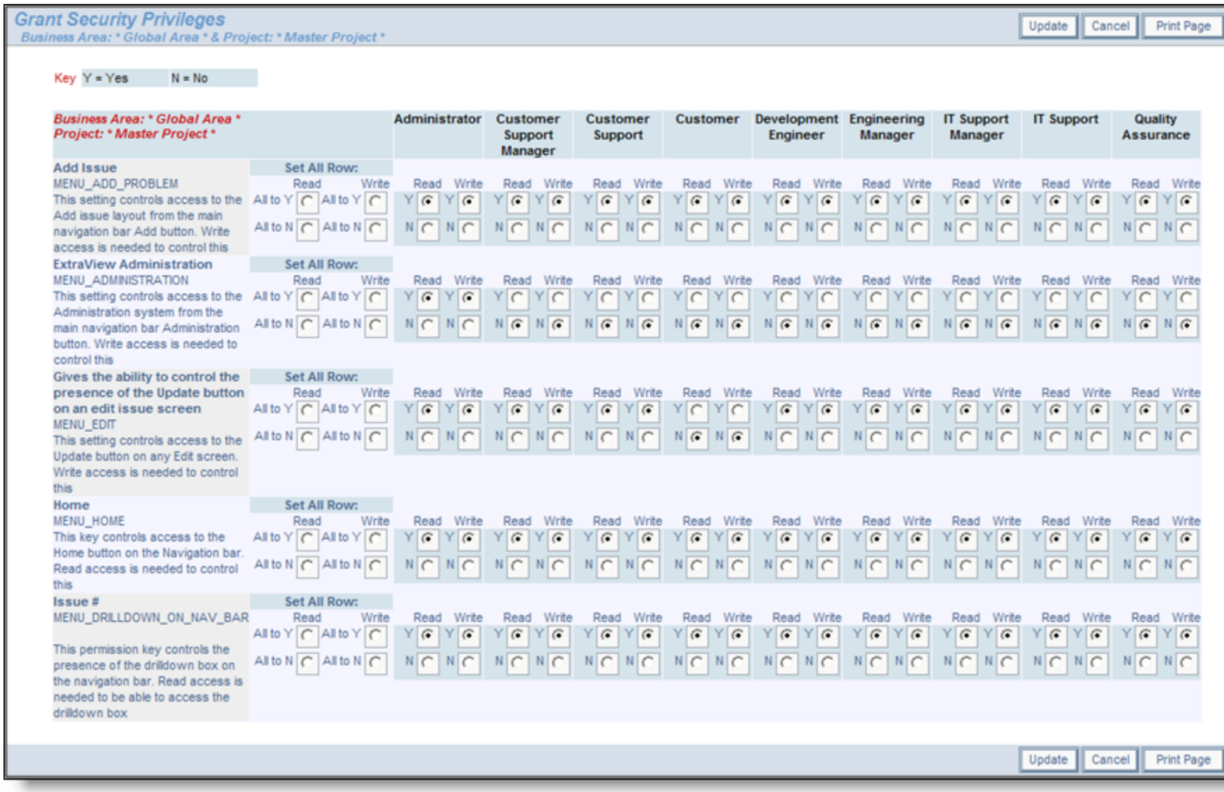
The security permissions for individual fields may also be set within the data dictionary and within the layout editor. T convenient means of setting the permissions while working on a field.

1. Click on **Grant Security Privileges** within administration.
2. The following screen appears:



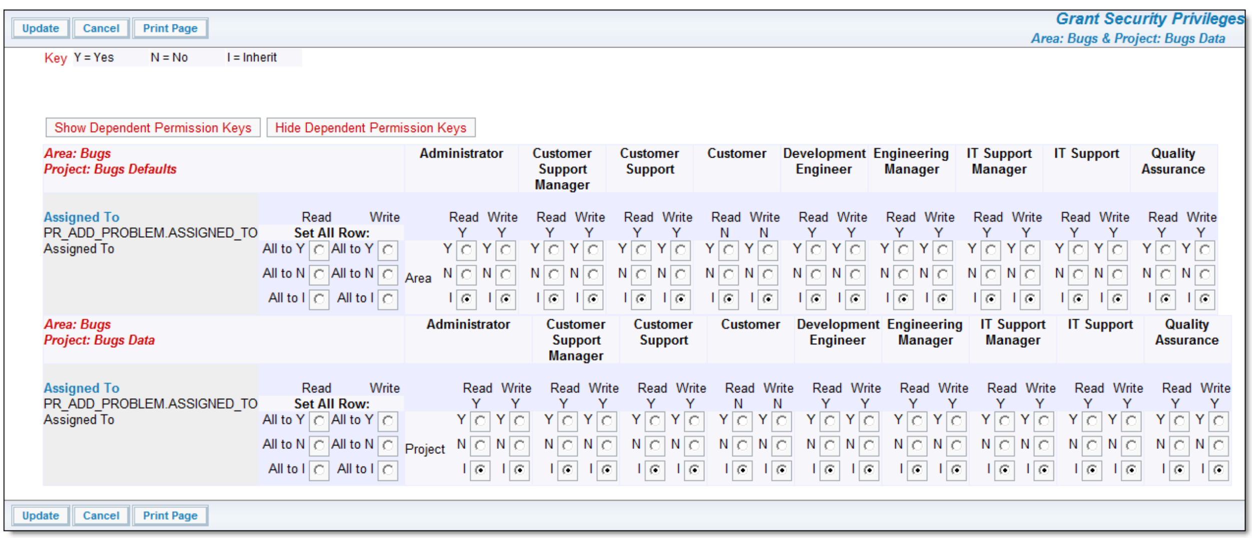
Grant Security Privileges screen

3. This screen gives you access to alter the user role permissions for all of the System Security Keys. The options a
    - Business Area access by user role
    - Projects within Business Area for each user role
    - Navigation bar buttons and other screen options
    - The individual administration menus
    - Fields and other permissions used when adding issues
    - Fields and other permissions used when editing issues and querying/reporting
    - Access to personal and shared report types
    - Security features, roles, password and privacy settings
    - Permissions to the values of the STATUS field
    - Fields on users' account records
    - Individual security keys, or a selection of individual security keys
4. The selection box accepts any characters, and will filter the list of settings displayed to match only those entries character string you enter. You can check the entries you want to edit. You can make a selection, then enter a d string in the selection box and make further selections before you click the button to alter the settings for your e
5. After selecting a user role (or all user roles) and a security key category or individual security key, click the **Set Selected Keys** button. You can select multiple keys by using the standard combination of CTRL and SHIFT key keyboard, with the mouse button.



Grant Security Privileges screen

If youwant to modify permission keys at an inherited level, i.e. you have not selected the Global Area and Master Proj
modified , allowing you to see where security permissions for an individual key are inherited, and where they are over
following screenshot has an example.



Setting permissions for an inherited field

Make a Field or Option Read Only

Make a Field or Option Read and Write for a Particular User Role

1. Identify the column head for the User Role whose privileges you would like to change
2. Put check marks in both of the boxes, for that User Role only (Read and Write)
3. Click the **Update** button.

Make a Field Invisible to a Particular User Role

1. Identify the column head for the User Role whose privileges you would like to change
2. Remove the check marks from both of the boxes for that User Role (Read and Write)
3. Click the **Update** button.

Note that you may alter all the permissions for a single field or object, across all user roles, by using the radio buttons **Row:**. Use the buttons to set all read and/or write permissions to **Yes** or **No** for any row of settings.

Inheritance

Permissions set in the global area and master project are inherited and used by all other business areas and projects un inheritance is broken at an individual business area or project. By doing this, you can establish a different set of permi field or object at any level within your installation. Setting a different permission for a field within a business area, ca permission to be used for all the projects within that business area. Setting a different permission within a master proj other projects within that business area to use these permissions. Setting different permissions within a project other t project causes these permissions only to be used within that single project.

This provides an economic means of setting permission through your system. You set them at the root level, i.e. the gl area and master project. These permissions are then used with all junior objects, unless you choose to override them.

You provide the override by editing the field or object within the business area and project where you want to provide When you first look at the permissions within a specific business area and project, you will see that the permission is s inherit. You simply set the read and write privileges to override the inheritance. You can always set the permission ba to restore the inheritance.

Allowed Values

Click for end user documentation

Allowed Value Lists give you the opportunity to have certain field lists and their values be dependent on other values fields; for example, a list of specific *Platforms* may only be displayed if the connected parent Product is first selected. Parent ➧ Child relationships would be set up so that OS 9 or 10 platforms would only appear for Mac products, and R appear for Linux.

Product	Platform
Macintosh Client	OS 9.x
Macintosh Client	OS 10.x
Linux Client	Red Hat
Windows Client	Windows 98
Windows Client	Windows XP

In the above example, when you select the product named Macintosh Client, the ExtraView Add Issue or Edit Issue sc and the field titled *Platform* will have the two values OS 9.x and OS 10.x. This feature can be used both to ensure data and that data entry can be accomplished with a minimum of searching. Allowed Values can be “chained” together, pro cascading set of values. Common examples of allowed values are:

Not every combination of fields is allowable to be created as allowed values. For example, it is not possible to create a with a combination of MODULE_ID or MODULE_NAME and PRODUCT_NAME, as another inbuilt mechanism ex this requirement.

Allowed Value Usages

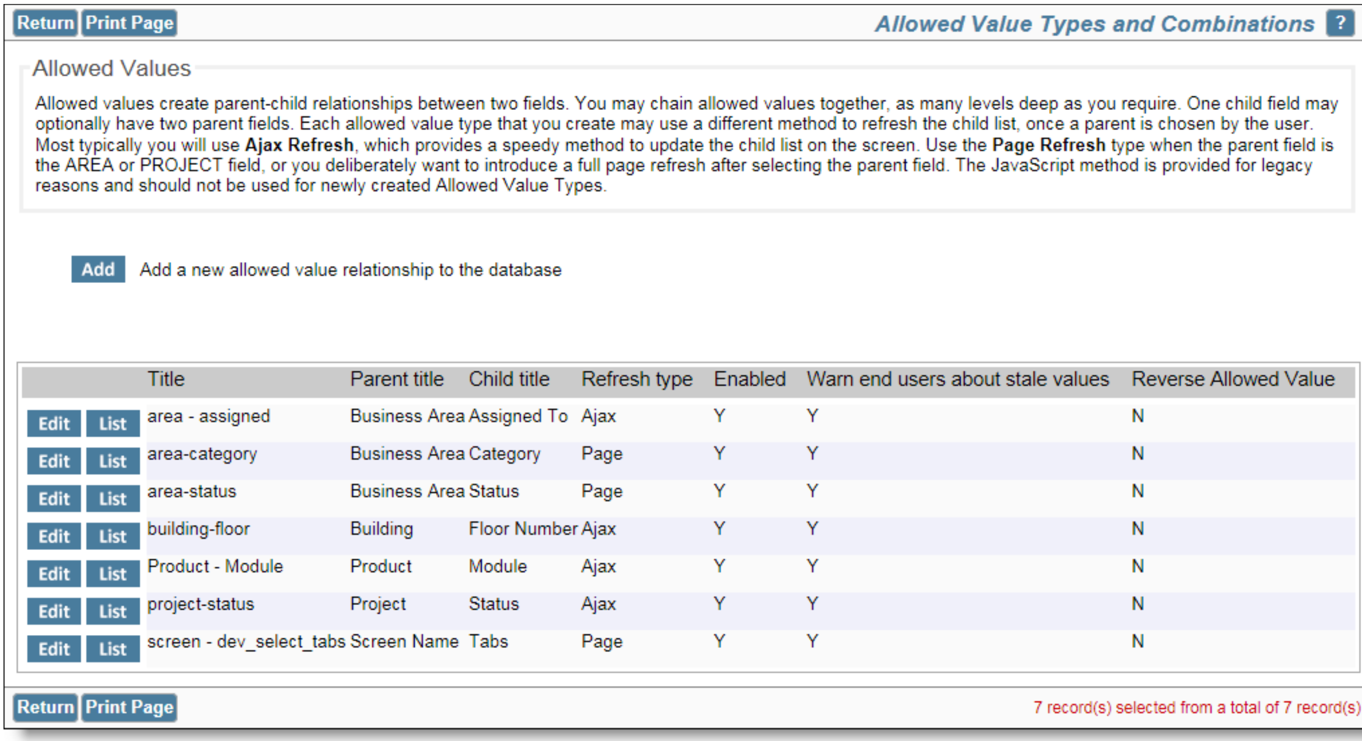
These are typical usages for different configurations of allowed values, within different places in the ExtraView enviro

Both parent and child fields exist within an *Add* or *Edit* screen	This is the most common usage of allowed values. The child fields are simply filte to the parent value chosen. Before a parent field is chosen, the child field has no v
A parent and multiple child fields exist within an *Add* or *Edit* screen	In this instance, each child field is filtered according to the parent field that is chos parent field is chosen, the child fields have no values
Both parent and child fields are configured to use the **Reverse Allowed Value** option	It is recommended that a parent only is configured to have unique children, as opp field being the child of more than one parent. Both parent and child fields are popu with all values. If the user selects a child value before selecting a parent, the paren to only show the valid parent. If the user selects a parent before a child, the child l only show valid children of the chosen parent
The parent field resides on an *Add* or *Edit* screen and the child field exists within a Search layout embedded within the *Add* or *Edit* screen	This allows a search field to be populated with a value dependent upon the selecte The user may still choose a different value from the child list
The parent and child fields both reside within a Search layout embedded within the *Add* or *Edit* screen	Allowed values work in the expected way, where the child fields are simply filtere the parent value chosen.

Click for end user documentation

Creating Allowed Values

The administrator creates allowed value definition (the allowed value type) from the **Fields & Layouts** tab on the adn click **Allowed Value Types and Combinations**. The administrator also creates the allowed value combinations from utility. The administrator can configure list type fields such that end users may add new values to a list (the **ADD_NE** attribute). See the section at the end of this page regarding the configuration of allowed values when an end user adds field. The following screen appears when the administrator uses the **Allowed Value Types and Combinations** utility:


Return Print Page **Allowed Value Types and Combinations** ?

Allowed Values

Allowed values create parent-child relationships between two fields. You may chain allowed values together, as many levels deep as you require. One child field may optionally have two parent fields. Each allowed value type that you create may use a different method to refresh the child list, once a parent is chosen by the user. Most typically you will use **Ajax Refresh**, which provides a speedy method to update the child list on the screen. Use the **Page Refresh** type when the parent field is the AREA or PROJECT field, or you deliberately want to introduce a full page refresh after selecting the parent field. The JavaScript method is provided for legacy reasons and should not be used for newly created Allowed Value Types.

Add Add a new allowed value relationship to the database

	Title	Parent title	Child title	Refresh type	Enabled	Warn end users about stale values	Reverse Allowed Value
Edit List	area - assigned	Business Area	Assigned To	Ajax	Y	Y	N
Edit List	area-category	Business Area	Category	Page	Y	Y	N
Edit List	area-status	Business Area	Status	Page	Y	Y	N
Edit List	building-floor	Building	Floor Number	Ajax	Y	Y	N
Edit List	Product - Module	Product	Module	Ajax	Y	Y	N
Edit List	project-status	Project	Status	Ajax	Y	Y	N
Edit List	screen - dev_select_tabs	Screen Name	Tabs	Page	Y	Y	N

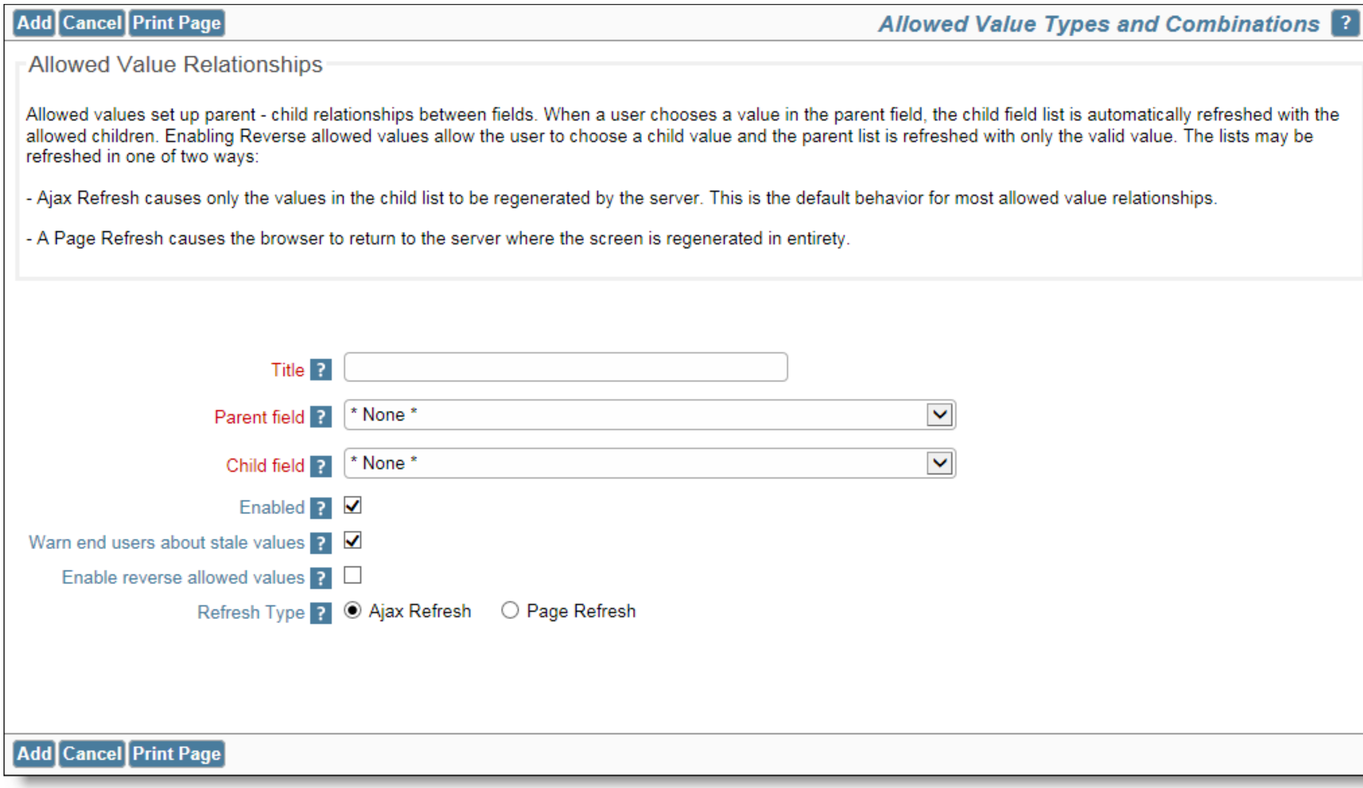
Return Print Page 7 record(s) selected from a total of 7 record(s)

Allowed Value Types screen

To create a parent-child dependency:

1. The Title can be any text that describes your Allowed Value Type. The title is not used in any processing and is
2. For the Parent field, select the field that is the parent in the relationship. This fields is required
3. Select the Child field that is dependent on the parent value you selected. This fields is required
4. You may enable and disable the allowed value using the checkbox with the title of **Enabled**
5. If you check the box against **Warn end users about stale values** then end users are warned when they edit a sa parent or child value in an allowed value relationship has been deactivated since the record was saved. The end that they can continue, but if they alter the saved value, they must choose a current valid value or leave the stale is not checked, then the user is not issued the warning but the same rule applies. If the end user chooses a new v valid.
6. Reverse allowed values are a special case for allowed values. These allow the end user to not only choose a val selecting a parent value but also allow the end user to choose a child value and to then see the valid parents. Yo only use this in a scenario where each parent has unique children and the children are not shared across more th You must set the behavior setting named AV_NULL_PARENT_IS_NULL to a value of NO when using reverse
7. If you are creating an allowed value where the Parent field is either AREA or PROJECT, you should select **Pag** refresh type. This is because a page refresh always occurs when a user changes the AREA or PROJECT field or screen. If you select a different type of refresh when the parent is AREA or PROJECT, you are adding unnecess the processing, which might degrade the performance of your system. Most allowed values should use the **Ajax** you choose a new parent value, the child list is refreshed via a call to the server from the user's browser. The Aj also ensures that any business rule or user custom programming call is made when the parent value changes. Tl efficient
8. Click the **Add** button.

Note: On occasions, you might want to create an allowed value list where only a subset of the values in the list will ap example, you might have retired some of the values in the child list and only want current values to appear. You can a using the AREA field as the parent, and the list field as the child.



New Allowed Value Type

More about Refresh Methods for Allowed Values

There are three methods that can be used:

1. **Ajax Refresh**. When the parent value is selected, an Ajax call is made to the server to retrieve only the child va list is refreshed, but the remainder of the screen is untouched. This provides a fast means of dealing with large l need to repaint the entire screen. For most purposes, this method should be used for maximum efficiency.
2. **Page Refresh**. On all changes of the parent value in the allowed value combination, the program returns to the s data in the child list. This is primarily used when the parent field is either AREA or PROJECT. These fields, by require a page refresh, therefore setting this refresh method minimizes the amount of work needed on the server smallest amount of code to the browser.
3. **JavaScript Refresh**. This is deprecated with ExtraView version 9.1, and new allowed value types can no longer use this method, but its use is retained for existing allowed value relationships that had this set in previous versi update the allowed value type to use **Ajax Refresh**. The JavaScript refresh method pre-calculates all the possib of parent and child values and delivers these to the browser. For relatively small lists, this is very efficient. How parent or child value has a business rule that needs to be triggered when its value changes, then this type of refre the built-in intelligence to call back to the server to execute any business rule. Ajax Refresh allowed values hav efficient and have none of the drawbacks of JavaScript refresh, hence the reason for their deprecation.

The same field may be used as a parent to more than one child field by creating more than one allowed value type. Ea allowed value types may have any one of three refresh types. When a parent field is changed by a user on an *add* or *ed* one of the above three methods can be used. Which method chosen is decided as follows:

1. If there are any JavaScript refresh types for the parent, then a JavaScript refresh is done for all child values
2. If there are any Page refresh types for the parent, then a Page refresh is done for all child values
3. If neither of the above was true, an Ajax refresh is performed.

have been selected. If you alter the metadata associating the allowed values, in such a way that editing a record causes be invalid, a warning will be displayed by ExtraView, informing the user that the child value is no longer valid. The in still displayed at this time though. If the user alters the values of the grandparent or parent, the invalid value in the chi longer be displayed.

Reverse Allowed Values

It is strongly recommended that you only use this feature when there is a single parent to all the children within a list a not excessively large. You may use the feature with cascading allowed values, but all the individual allowed value rel set the **Enable reverse allowed values** checkbox. When reverse allowed values are enabled, ExtraView initially fills the allowed value relationship with all the parent values and all the child values. When a user selects any value in any the allowed value relationship, the remaining fields are all filtered, both parents of the selected value and children of tl value.

For example, if you have an allowed value relationship with a parent and child field, the user may then select a child v appropriate parent is then selected. If there is a cascade of three fields, and the user chooses a value in the middle fiel value in the parent field is selected. The child values in the third field list are then filtered to only display the valid ch second field.

When a user selects a parent, then all child fields are filtered as with regular allowed value lists.

If the user selects *** None *** in any list within the allowed value relationship and reverse allowed values are enabled, th the allowed value list are reset to their initial values.

For reverse allowed values to work, all the fields in the entire chain of allowed values must be on the layout, and must write permission. This includes using reverse allowed values on a report or Quicklist layout.

Allowed Value Parent Fields with Multiple Child Fields

One parent field may be the parent to multiple child fields. When you set up layouts with this scenario, you may also u refresh to maintain the lists for users, provided that there are no more than 10 child fields for the parent. In the very ra exceptional circumstance that you need more than 10 child fields to a single parent, then server-side refreshes will stil no restriction on the number of child fields to a single parent.

Allowed Value Child Fields with Two or Three Parent Fields

You may create two or three allowed value relationships for the one child field, with different fields as the parent field create this scenario you individually populate the allowed children for each of the parents in their respective allowed v you include the two or three parent fields and the one child field on the same *add* or *edit* screen, then the children that be those that have common parents. If a child value only has one of the parent fields as an allowed value, the child wil and it is not a valid selection. If only one parent and the child exists on the *add* or *edit* screen, then this combination w as the simpler single-parent allowed value combination. The parent and child fields used for this combination must all lists with a display type of List, Popup, Tab, Checkbox, or Radio button. User display types are not supported at this ti you should not use JavaScript refresh for an allowed value with multiple parents.

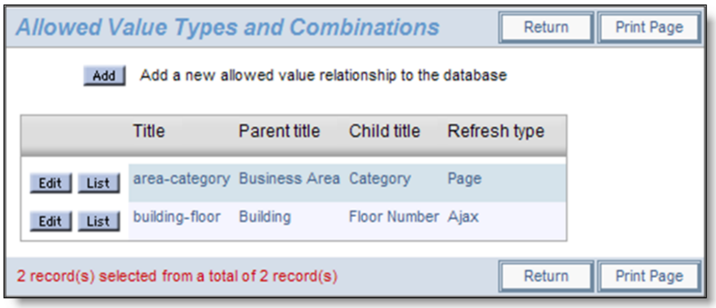
Allowed Value Additions by End Users

The **ADD_NEW** layout cell attribute controls the ability of an end user being able to add a new value to a list on the *a* screens. If a field with this layout cell attribute is the child in an allowed value relationship, there is control over the b the new field value as a child of the allowed value relationship. The control is achieved through a behavior setting nan AUTO_POPULATE_ALLOWED_VALUES. When this setting is YES, then in a popup from an add or edit screen th value to a list, and that list is the child within an allowed value relationship, then the new value will be added to the lis automatically added to the currently selected parent(s). If the value is NO, then the user will be prompted to select the Project and the specific parent values to which the newly created child value will be added within the allowed value re

area and master project
- When allowed values are populated as children on an *add* or *edit* screen by an end user, all the possible allowed automatically become parents to the new child value.

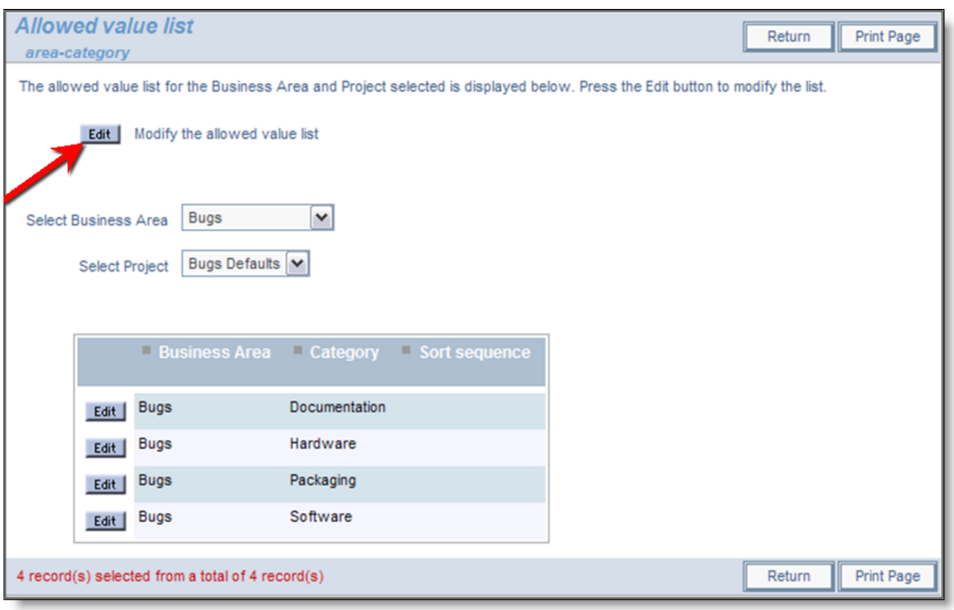
Entering Allowed Value Combinations

Once the allowed value type has been created, navigate to **Allowed Value Types** administration menu. The following metadata appears:



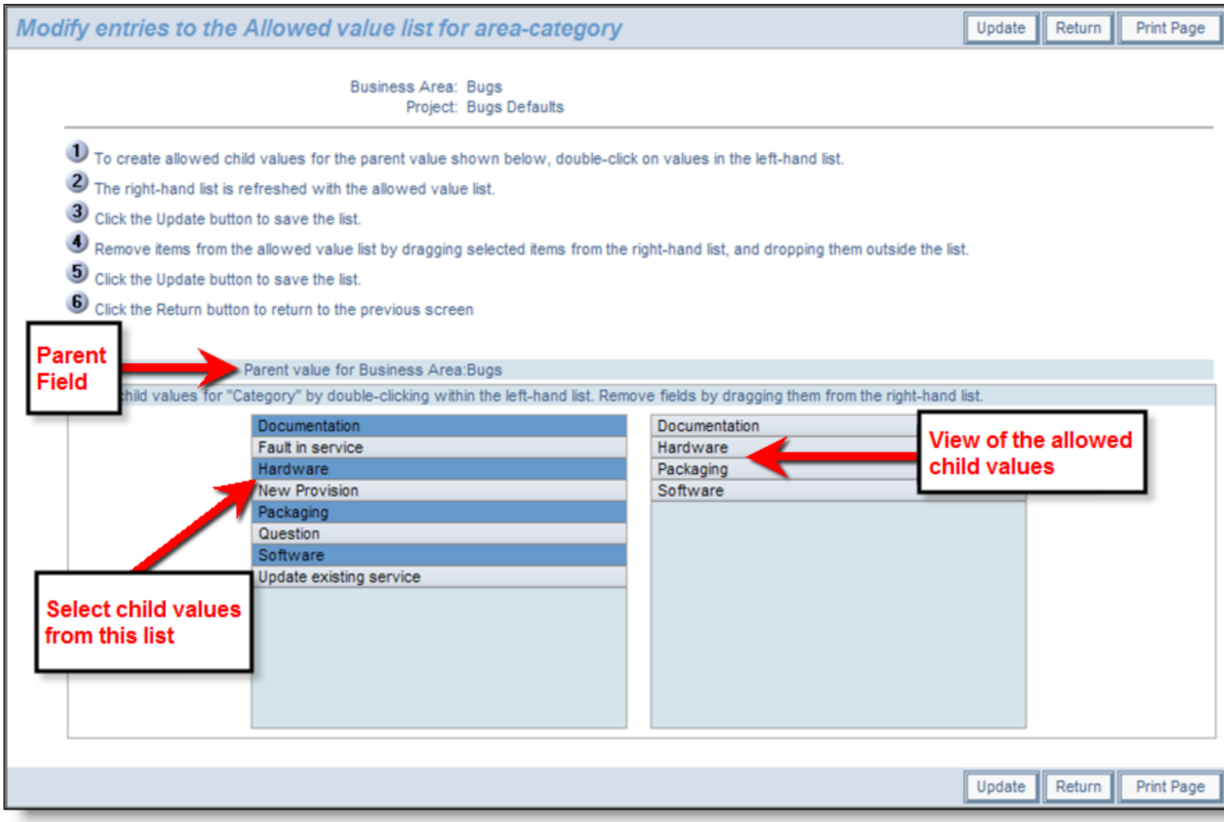
Allowed Value Types

Once you have created the dependency relation above, you can view or specify the details of the relationship. For exa view or modify which values of *Owner* will appear in a list box based on a selected *Category*. To do this, click the **Lis** applicable Allowed Value Title. Note that the prompts for the Business Area and Project are only displayed if these ar system.



Allowed Value List

If Business Areas and / or Projects are enabled, you can select any combination from the select lists to view the entire defined for the allowed value relationship. To modify an allowed value list, click on the **Edit** button. If Business Area are enabled, you can define the values for the global area and global project, or you can define the values such that the



Managing the Allowed Value List

When you modify an allowed value list, the screen will look similar to the example above. You select the allowed chil left-hand list, by double-clicking with your mouse on each value you want to allow as a child. The value will then app hand list. You remove allowed child values by holding your mouse button down on the list item in the right-hand list, value out of the selection box. Note that if the parent field is AREA, then you cannot modify the parent list value fror you need to return to the previous screen to make a new selection. When you have selected the values as the valid list left-hand list, values are updated when you press the **Update** button. Note that the selected list displays the child valu they will appear in lists on other screens. This order is set in the list management screen for the value, unless you wan default alphanumeric order. When you have modified the list, you must press the **Update** button to make your change You can select other parents and modify their children before pressing **Return** to return to the previous screen.

Note: If the parent value is either the AREA or PROJECT field, you can only select its value from the previous list of

Note: You can also maintain the allowed values from the List maintenance screens. When a list field value is a child i value relationship, you can select the parents to which it belongs from the List maintenance screen. The two methods allowed values are complementary. The method described here is more convenient to use if you want to make the entr parent field, while the method available from the List maintenance screen is more convenient if you want to make you from the child field. You will typically place both the parent and child values in the allowed value relationship onto an *embedded* layout. If you place just one of them on a layout then the allowed values are not rendered; the field on the la a normal list. You should always place the parent field on the layout before the child field, as there are occasions wher processed in order, from left to right, top to bottom.

Auto-Population of Users

There is a special use of allowed values that is only relevant when the parent field is the field set in the behavior settin

Allowed Value Considerations

Not all fields are valid combinations as parents and children in allowed value relationships. The following is a list of v combinations:

Parent Display Type	Valid child display types
List	List Pop-up Tab Radio button User
Pop-up	List Pop-up Tab Radio button User
Tab	List Pop-up Tab Radio button User
Radio button	List Pop-up Tab Radio button User
User	List Pop-up Tab Radio button User

Note: Other display types (Date, Log Area, Print Text, Text Area, and Text Field) are not supported in Allowed Value

Allowed Values with Repeating Rows

There are some restrictions on the use of allowed value relationships with repeating row records. These are as follows

- JavaScript refresh for the allowed value relationship must be used for the child values to be populated correctly
- Both the parent and child fields must be UDF's
- The mass update feature within repeating row fields with allowed values right is not supported at this time.

Allowed Values and the Radio Button Display Field Type

Due to limitations within browsers with HTML and JavaScript, it is only permitted to use server refresh on field comb the child field is a radio button.

Allowed Values and Different Refresh Types

Allowed values are applied upon each refresh, with the following priorities:

- **Page** refreshes have the highest priority
- **Ajax** refreshes have next highest priority
- **JavaScript** refreshes have lowest priority (these are deprecated with version 9.1)

These priorities are applied, irrespective of what has caused the refresh. The refresh cause can be triggered by the allo relationship, by a business rule being triggered, by a layout cell attribute, custom code or some other trigger. If any rel a **Page** refresh, then everythng is refreshed by the **Page** refresh. If you have a chain of allowed values, say **Field_A** == **Field_C** and the refresh between the first and second pair of fields is of a different type, then only one refresh type is u processing, according to which allowed value definition has the highest of the above priorities.

It is strongly recommended that you define and use **Ajax** refreshes as much as posssible and that you do not mix the re within a chain of allowed values. The exception to this is when the parent field in a relationship is either AREA or PR fields always imply the use of a **Page** refresh. This will offer the highest performance, except in the case of simple allo relationships with a single parent and child where there are a relatively small number of combinations of allowed valu **JavaScript** refreshes are more efficient.

Allowed Values Types with the Same Parent and Child Fields

You may create multiple allowed value types with the same parent field and child field. However, if you do, only one value types may be active at one time. All inactive allowed value types are ignored.

screens for a child field will adopt the default children.

Uploading from a File

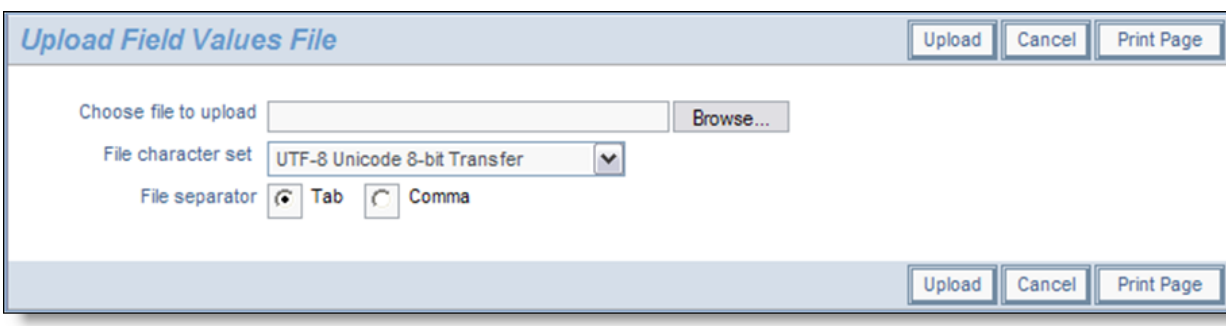
Note: This option also allows you to create both the parent and the child list values at the same time that you create th relationships. Both the parent and child values should be user defined fields with a display type of a list form - i.e. Lis Radio button. It is sometimes convenient to upload a set of allowed value relationships from an external file. The file i of the form

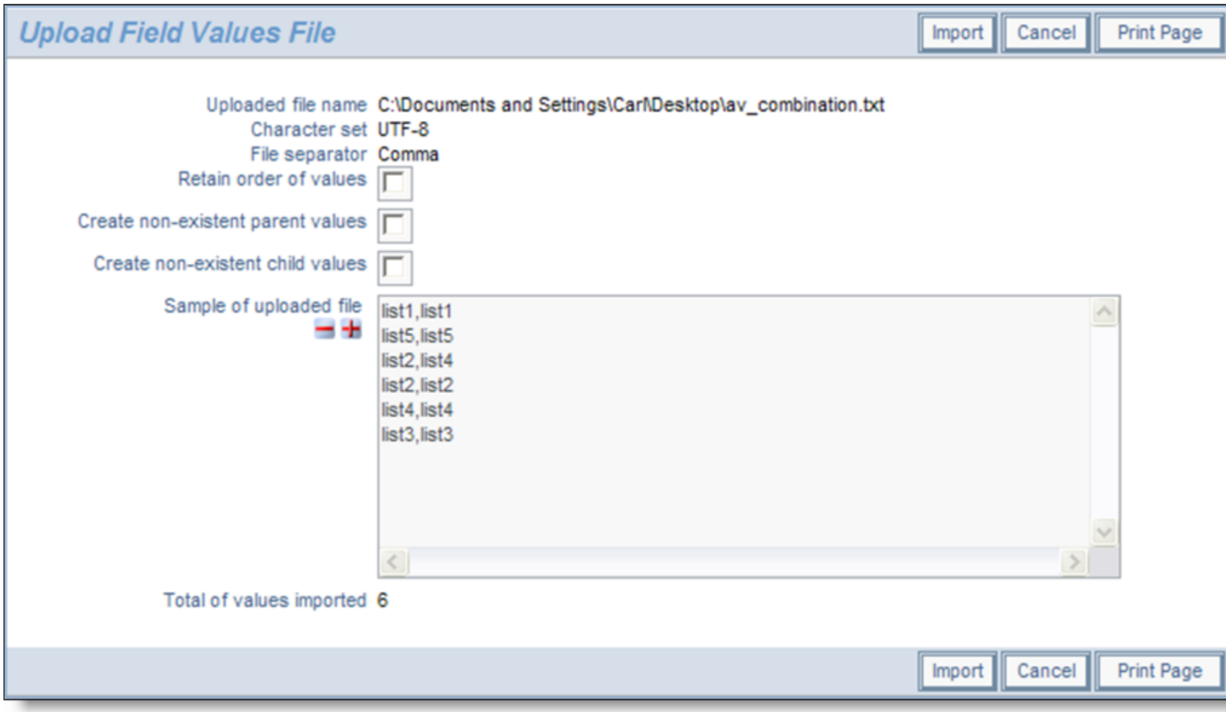
```
parent_value_1, child_value_1
parent_value_1, child_value_2
parent_value_2, child_value_3
parent_value_2, child_value_4
parent_value_2, child_value_5
parent_value_3, child_value_6
… …
```

The file may be comma-delimited or tab-delimited. Each set of allowed values to be uploaded may only be uploaded i Area and Project that is selected on the screen, shown in this screenshot:

Selecting the Business Area & Project for the Upload

When you press the **Import Allowed Values** button, you see the following dialog:





Setting Options for the Upload of Allowed Values

As you can see from this screenshot, you can set the allowable parent and child allowed value relationships within the At the same time, you may create parent or child values that do not exist. You may also use the sort order of the values the file you are uploading, or you may let ExtraView sort the values alphanumerically.

Workflow Setup

In addition to user and security management, ExtraView allows the System Administrator to manage workflow and pr many behavior settings, creating rules with a scripting capability and by creating and enforcing status change rules.

Business rules allow the administrator to configure ExtraView with field value assignments based upon the values of a In a similar way, email rules allow you to control the notification process with a set of rules, as opposed to using the d notification.

Status change rules allow you to determine the valid transitions from status to status. This is completely under the con administrator, and can be set individually for each business area, project and user role.

You can also maintain relationship groups as part of your workflow. Relationship groups allow you to connect issues t linked, and you apply an update to one of the issues, you can automatically provide a status update and comments to tl the relationship group.

Service Level Agreement management allows the administrator to set up the conditions to measure whether the handli issues fall within predetermined conditions that you have set up to manage your customers. For example, you may hav to respond to all customer issues within two hours, and an obligation to provide closure on an issue within two days. T you to set up these criteria. Under reporting, your users may use these criteria to prepare and run reports that show you performance against these SLA's.

Status change rules can be switched off altogether, with the behavior setting named ENFORCE_STATE_CHANGE_R

In addition, if you are using business areas and / or projects, the status change rules can be set independently for each This gives the flexibility of setting status change rules for any combination of Area, Project and User Role, or any con Project and Product. Thus the status change rules allow diverse tracking systems to be set up within a single database, own process and workflow.

An important concept with status change rules is inheritance. When you have defined a combination of business areas together with user roles or products, inheritance allows you to define a workflow at any point in the hierarchy, and hav subordinate points inherit the same workflow. This provides an economic way of defining workflow, without having t workflow for each and every combination of business area, project, user role and / or project that you define.

Note:If you provide even a single entry in the workflow matrix at any level in the hierarchy, then this is used as the wo entire level.

Enabling Status Change Rules

1. From the Administration menu, under the **Workflow** tab, click on **Workflow Settings**.
2. Click the **Edit** button next to the default value entitled ENFORCE_STATE_CHANGE_RULES.
3. Change the value from NO to YES, and click the **Update** button (if the value is already YES then leave it so).

Interaction with the ADMIN_OVERRIDE_ROLE Behavior Setting

Status change rules are not obeyed by a user whose current role is that specified by the behavior setting named ADMIN_OVERRIDE_ROLE. Thus users whose current role is that of an administrator, typically have freedom to alte issue from any value, to any other value. The audit trail for the issue will still show the transition.

Choosing the Workflow Process

Note: For this next step, you have to decide which workflow is best for your company. You are able to choose betweer PRODUCT and USERGROUP (as discussed above).

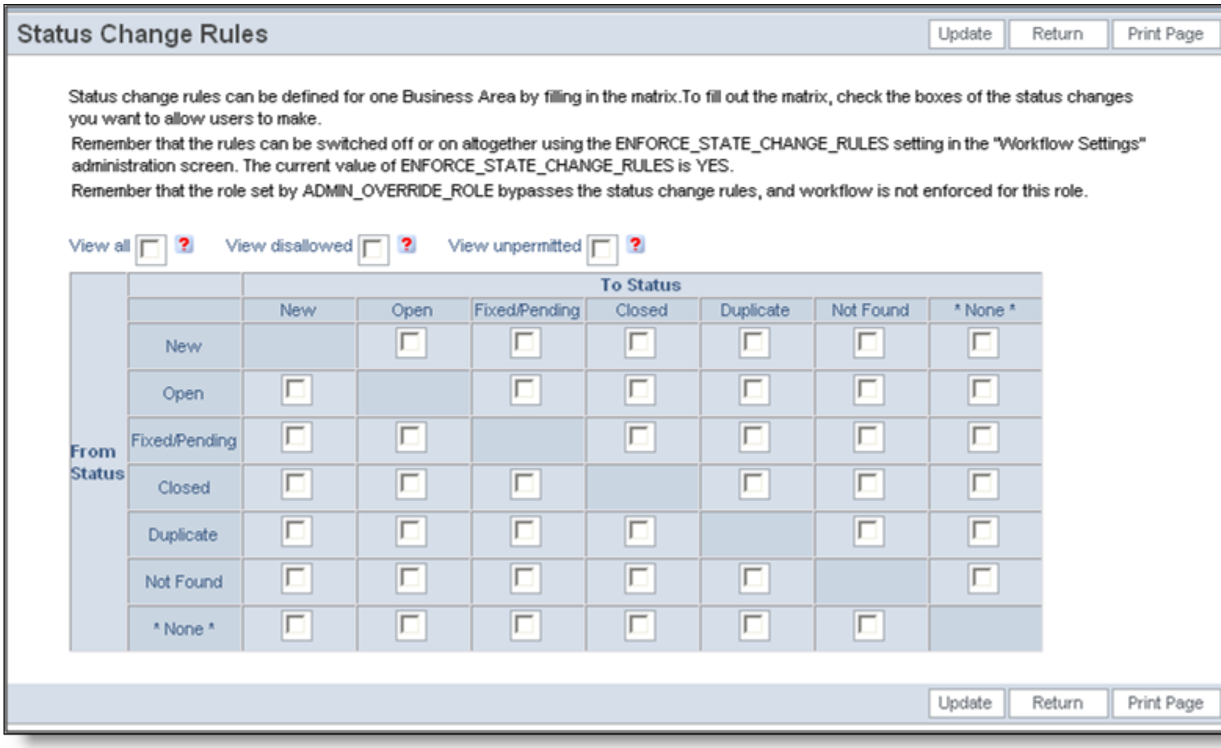
1. From the **Workflow** tab of Administration, click on **Workflow Settings**.
2. Click the **Edit** button next to the SEPARATE_WORK_FLOW default value.
3. Change the value to DEFAULT, USERGROUP or PRODUCT and press the **Update** button.

Building Status Change Rules

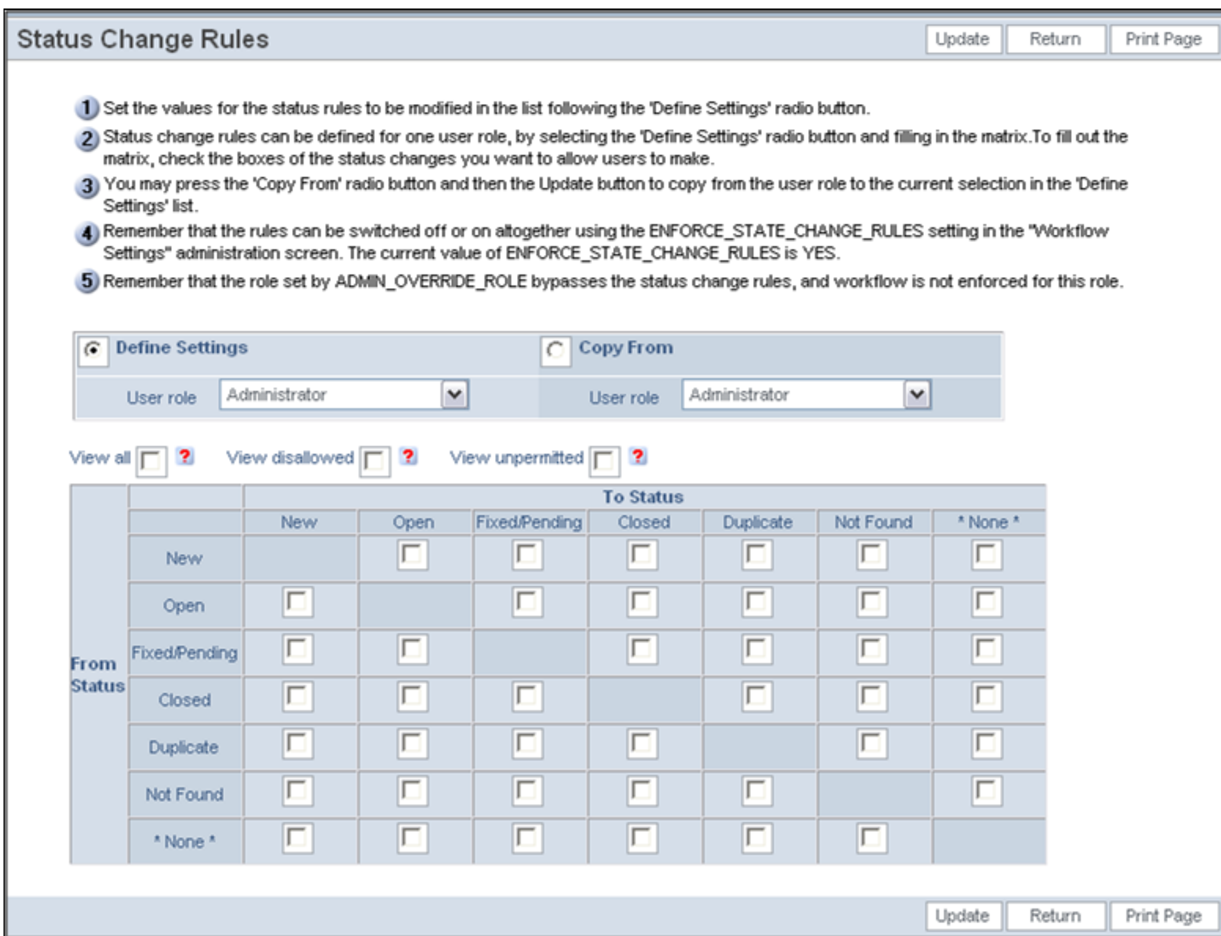
From the Administration menu, under the Site Configuration tab, click on **Status Change Rules**. Based on your choic format, one of the following three screens will appear (the screens may look slightly different than what is representec functionality is identical).

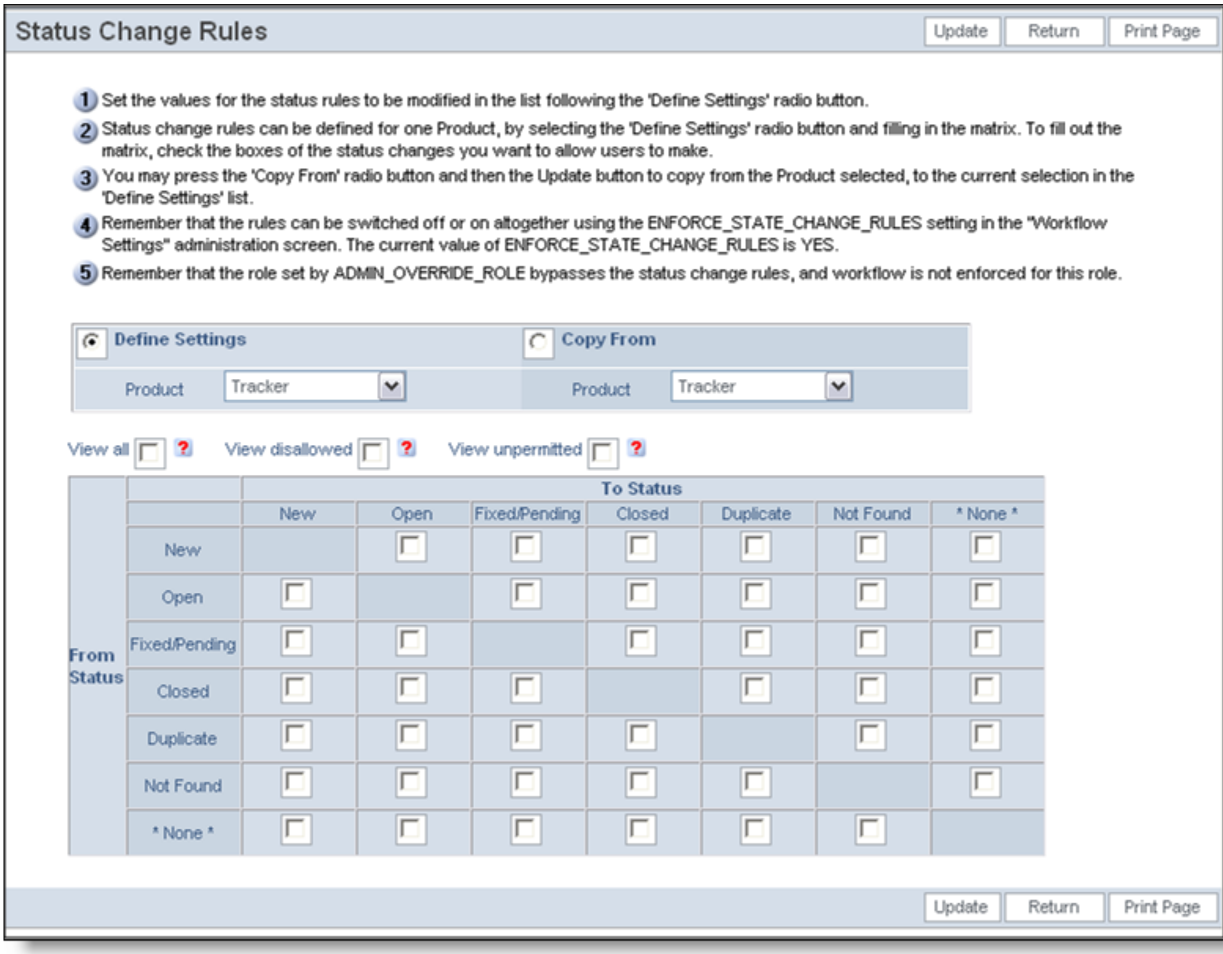
Note the use of *** None *** as a value in the To Status and From Status column and row of the table. As well as control t issues between different values, you can also control whether *** None *** is an allowable value. *** None *** may be set as for the status field in the data dictionary.

When accessing the matrix showing the valid status transitions, all checkboxes may appear “grayed-out”. This implies shown for the combination of the user role or product, the business area and the project are being inherited and cannot for this combination. To break the inheritance and set explicit values for the combination, either press the Update butt the Copy From option to select the values from another combination of user role or product, business area and project



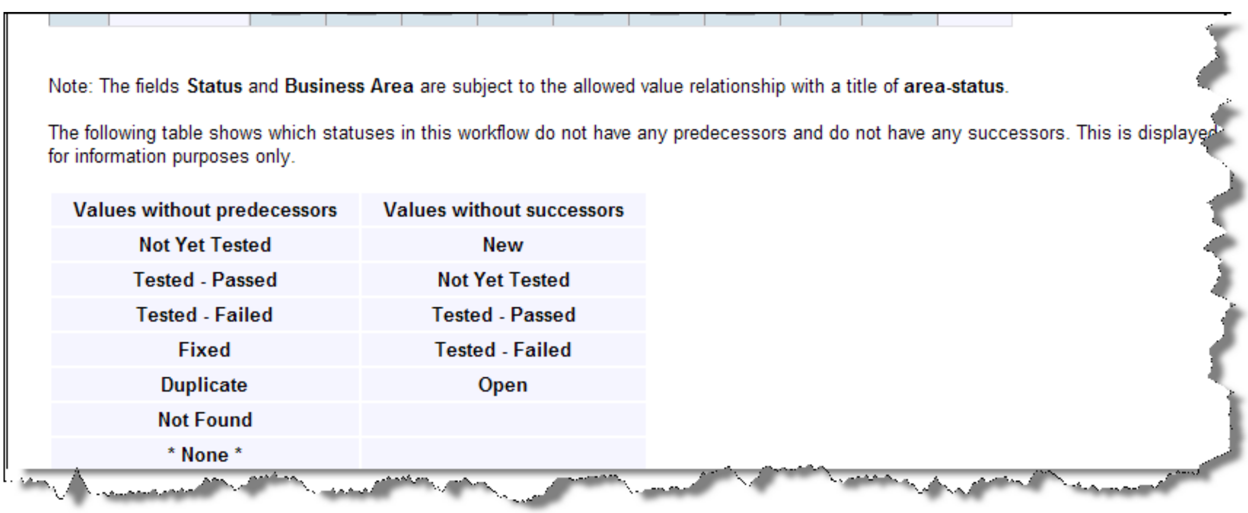
Status change rules applied universally to all issues





Status change rules applied to different products

Open-Ended Rules



Enforcing Status Change Rules

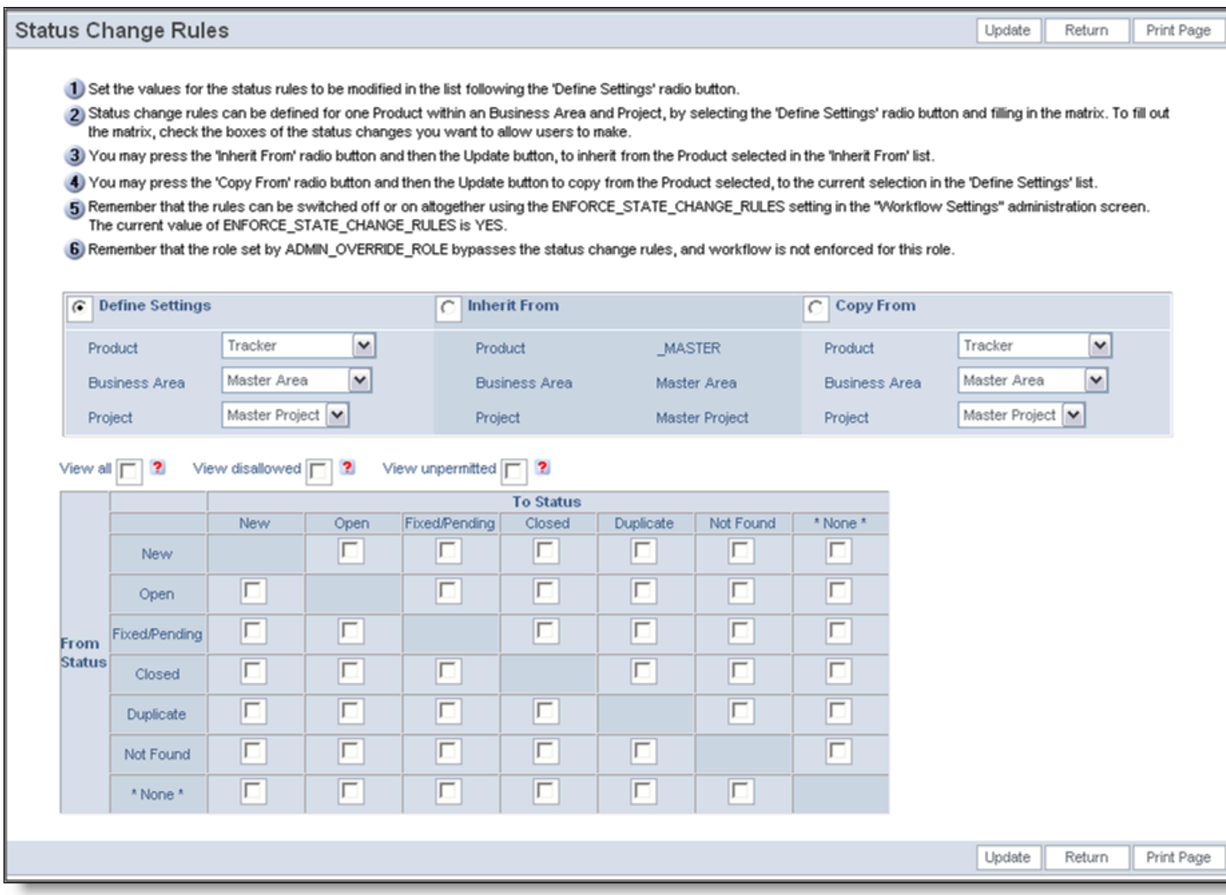
1. For Product or User Role workflows, select a Product or User Role from the dropdown list in the Define Setting
2. Start by clicking the check boxes for each *From Status* (left-hand side) to the *To Status* (top). Click on the box a the *From* and *To* statuses where you want to allow a status transition.
3. After you are satisfied with the *From* and *To* values, click the **Update** button.
4. Select another Product or User Role from the list, and follow steps 1 through 3. Do this for each Product or Use
5. Note that you may copy the settings for any Product or User Role from a different Product or User Role. To do t
    1. Select the Product or User Role you want to define in the Define Settings List
    2. Choose the Product or User Role you want to copy the settings from in the Copy From List
    3. Click on the Copy From radio button

    The screen will refresh with the copied values in place.

After your final update, your Status Change Rules are fully implemented. You can now test out the functionality by ed making status changes. Note that at any moment, you will only see the valid statuses in the list that you can move the according to the present status of the issue.

Enforcing Status Change Rules with Areas and Projects

As discussed above, you are able to use the principle of inheritance to control status change rules over multiple user ro areas and multiple projects.



Status Change Rule Views

It is possible to create an infinite number of statuses within an ExtraView installation. This can make it difficult to vie status change rules on a single screen, as the matrix displayed can grow very large, both horizontally and vertically. C business areas will use the AREA field as a parent in an allowed value relationship, and the STATUS field as the child relationship.

The Status Change Rules screen will restrict the statuses shown to the statuses that are the children of the current busi makes the screen much more manageable.

At the same time, it is possible to use security permission keys in any valid combination of user roles and business are status.

A problem may arise, if you restrict a valid status change transition, then turn off the security permissions, or alter the for the allowed transition, in that you will no longer see the checkbox for the transition on the screen. To facilitate the your metadata under these conditions, the status change rule screen has three checkboxes, which will turn on hidden t allowing you to check for incorrect settings.

View All – This will turn on all the checkboxes, irrespective of permissions, and allowed values

View Disallowed – This will turn on the checkboxes that were omitted due to the allowed value relationship

View Unpermitted – This will turn on the checkboxes that were omitted due to security permission settings.

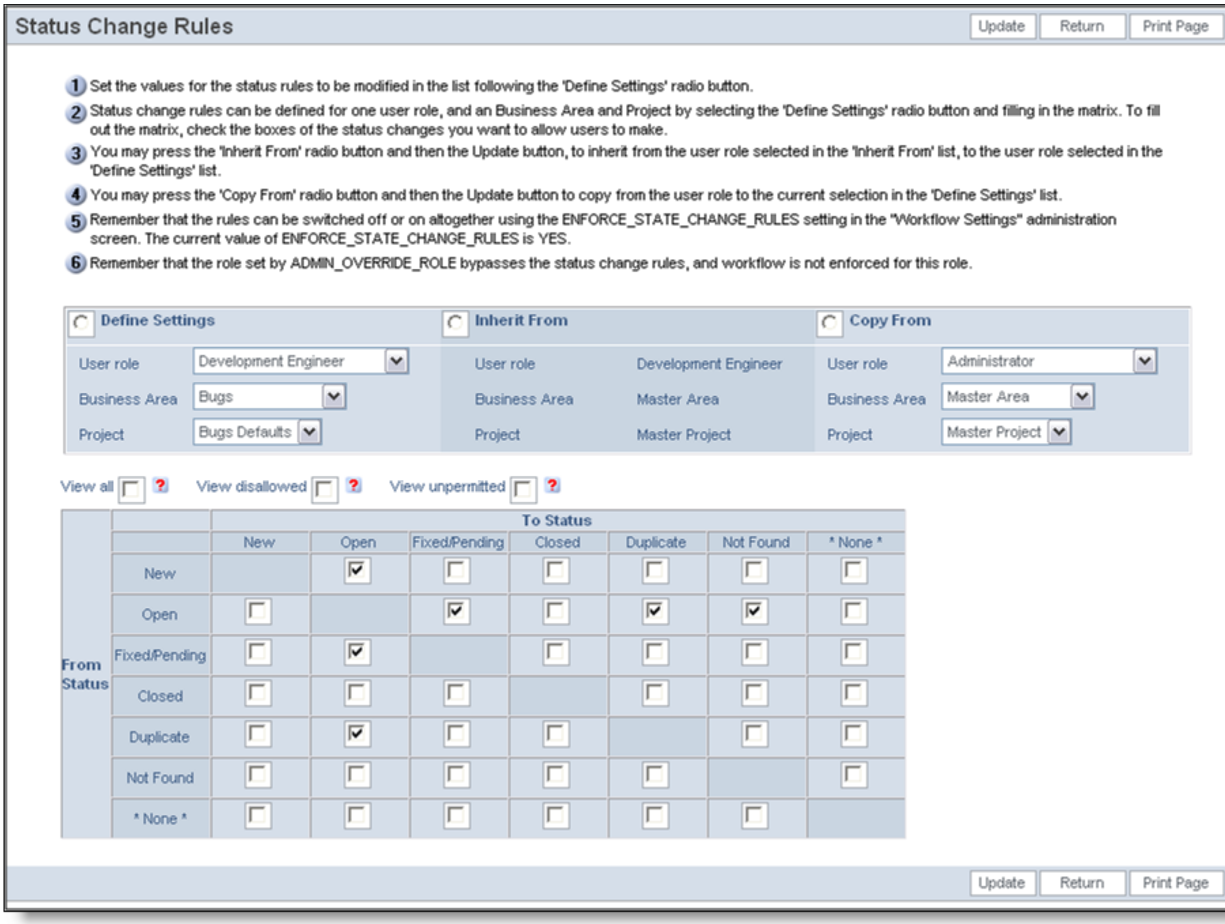
Status Change Rules Example

This example shows the key elements of setting up the status change rules to form a workflow. This example shows th of the user roles, the *Development Engineers* and the *Quality Assurance* engineers. In most companies, there will be a that will be configured, and the steps in the workflow (i.e. the statuses) can be composed of many additional steps.

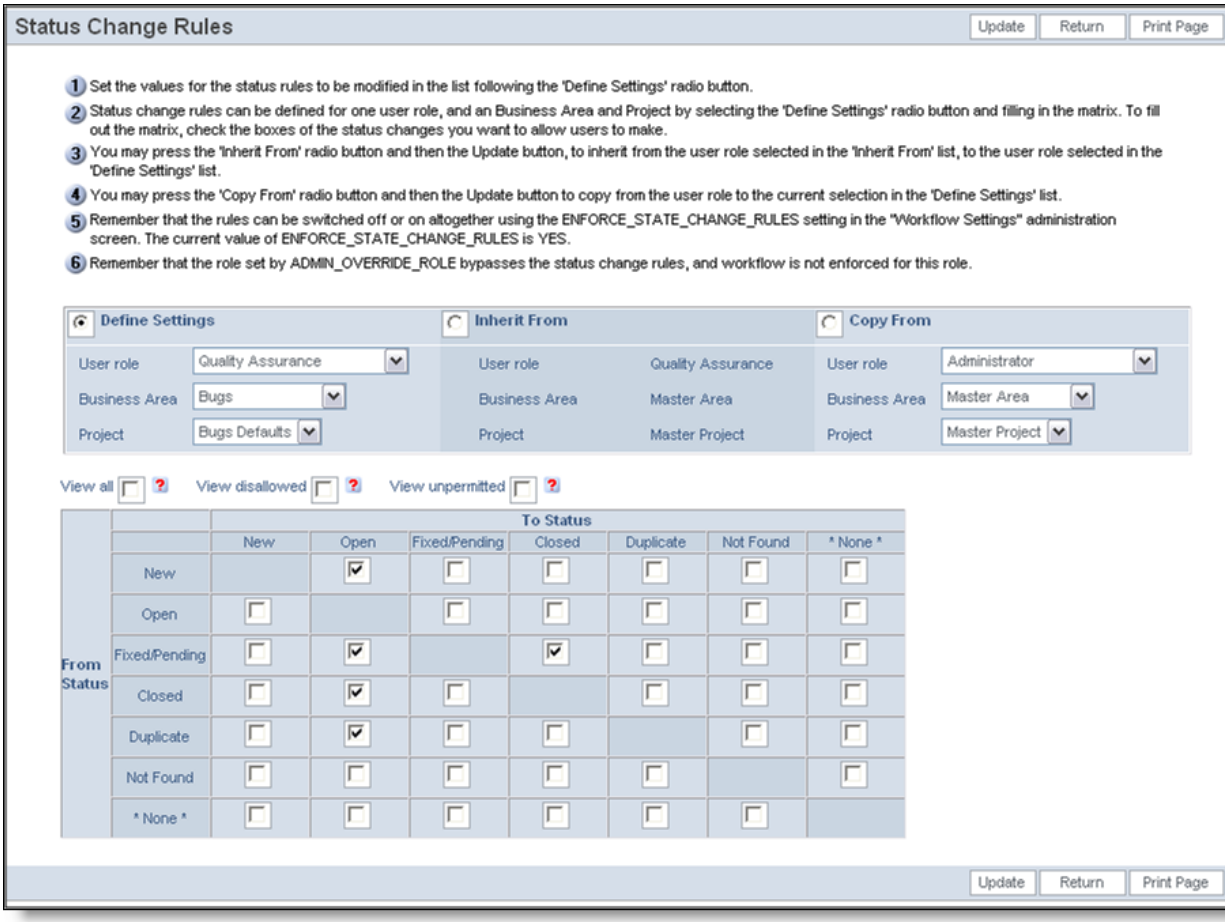
The basic workflow tasks are centered on a defined set of statuses, as set up within the list manager **STATUS** field.

Task	Development Engineers	Quality Assurance Engineers
Create **NEW** issues	✘	✘
OPEN issues to work on them from the NEW status	✘	
Re-**OPEN** issues that were marked as Fixed	✘	✘
CLOSE issues that are marked as Fixed		
OPEN issues that were previously marked Duplicate	✘	✘
Re-**OPEN** an issue that was previously Closed		
Re-**OPEN** an issue marked as Duplicate	✘	✘

No user will be allowed to set the status of *** None *** within the **Status** list, therefore a layout cell attribute of FIELD I will be set within the Status field on the *Add* and *Edit* Layouts.

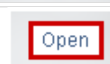
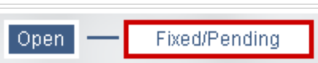
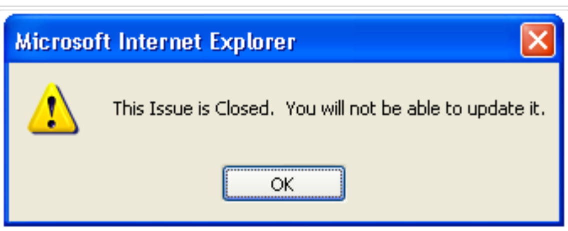
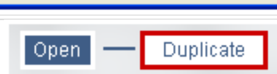


Status Rules Example for Development Engineering role



Status Rules Example for Quality Assurance role

With these two diagrams, the Status field will look as follows within the Edit Screen, dependent upon the value of Sta
Note that these examples display the status values using the STATUS_TRANSITION field. If you use the STATUS fie
screen layout, you will see the same values for each role in each status, but in a drop-down select list.

Status	Development Engineers see	Quality Assurance see
New		
Open		
Fixed/ Pending		
Closed		
		

into the issue, when the issue is moved to the closed state. The closed state is defined by the behavior setting named STATUS_CLOSED_NAME. Its default value is *CLOSED*, but the administrator may change this. The value should o during the implementation of a new system, as once data accumulates in a system, you will lose the historic reference were closed, if you change this setting.

However, your workflow may (or may not) allow closed issues to be re-opened. The rules for setting the DATE_CLO database are as follows:

1. The initial value for DATE_CLOSED is *NULL*. As long as the status of the issue is not set to the value of the STATUS_CLOSED_NAME behavior setting, DATE_CLOSED remains equal to *NULL*
2. If the Status is changed to STATUS_CLOSED_NAME, then DATE_CLOSED is assigned the value of the curre
3. If a user has write permissions the security permission key named PR_RESOLUTION.ALLOW_EDIT_CLOSE change the status to a value other than STATUS_CLOSED_NAME, then DATE_CLOSED is reset back to NUL is again changed to the status of STATUS_CLOSED_NAME.

Note: The field named DATE_LAST_STATUS_CHANGE always is initially set to the date that the issue is first creat subsequently is only modified if the status changes value.

Reporting & Querying

This section provides information to the Administrator on reporting options that may, or may not, be granted to users

Counting Issue Records versus Counting Repeating Row Records

It can sometimes be important to understand the distinction that ExtraView makes between rows on a report and recor This difference in semantics is used to distinguish between the times when ExtraView returns a precise number of ***rec*** and when it returns a set of ***rows*** that may or may not correspond exactly to the number of records.

The difference comes when a query may return a single record multiple times on a report, or count the same record m the same report. This happens when there are one-to-many relationships within your data. The two most common tim are:

- You prepare a report that uses repeating row records, then use a repeating row field to sort the report. When you repeating row record to sort, it will generate a row on the report for each occurrence of the repeating row. There 3 repeating rows within a single issue, it will generate 3 ***rows*** on the report for each ***record***.
- You use reporting hierarchies. In a similar manner to the above bullet, one record at a level in the hierarchy may child records, and when you sort by a field at the child level, you will generate one ***row*** on the report for each ***r***

Click for administrative information

Report & Query Permissions

There are a variety of security permission keys that give a large degree of control over access to reports. There are tw groups of permission keys, providing overall control, and then control over individual report types.

Permission Keys - Overall Control

Permission Key	Purpose
SR_ALLOW_ADVANCED_QUERIES	When this setting is YES, the user role can create, edit, save, delete and e

SR_ALLOW_REPORTS_ACCESS	This is a master switch for access to the ability for a user role to either cr reports, or to run existing reports. Unless a user role has Read Access to are not permitted to undertake any reporting activity from the Reports sc
SR_ALLOW_HIERARCHY_REPORTS	Write permission to this key allows the user the ability to create reports t hierarchical filters
SR_DASHBOARD_ON_HOME_PAGE	This permission key is controlled by user custom code. When this is set f permission for a role, then a dashboard report inserted by user custom co on the Home page of the user
SR_FILTER_BUTTON	Grant access to the filter button used to change report filters.
SR_KB_ON_HOME_PAGE	Read permission to this key will allow the user role to view and use the k search box on the Home Page
SR_MENUBAR_REPORTS	If the user has permission to this security key, then they will see and be a report from the menubar at the top of the screen
SR_RELATIONSHIP_GROUP	This key controls access to allow the user to group issues on column and reports with the Group Issues button. Write access is needed to control th
SR_REPORT_GROUP	Write permission to this key allows the user role to share reports
SR_REPORT_REPOSITORY_ACCESS	The user role requires write access to write to the repository from the rep Read access is required to be able to view reports stored within the repos access also provides the ability to view and use the **Manage Repository** feature.
SR_REPORT_SCHEDULE	Write permission to this key allows the user role to use the report schedu
SR_SET_HOME_PAGE_REPORTS	Read access to this key allows the user to select and set their Home Page

Permission Keys - Individual Report Control

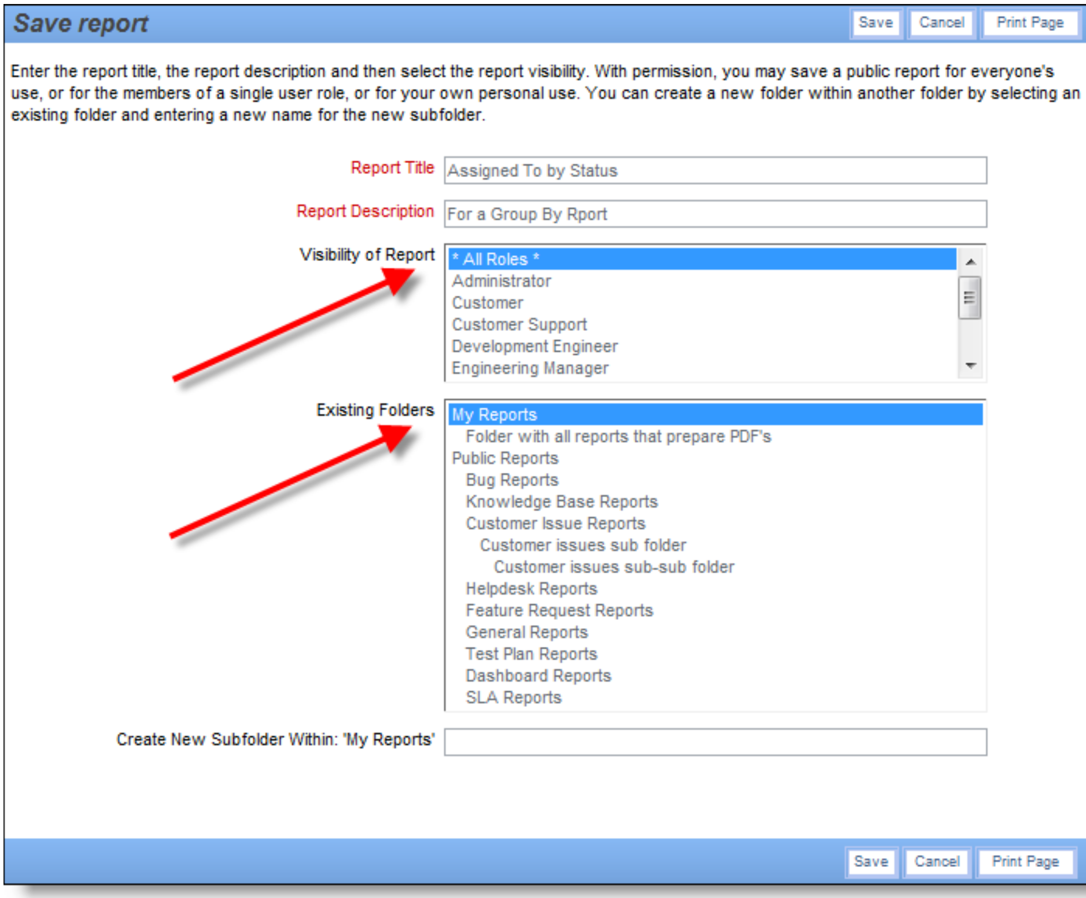
Reports fall into two major categories, **Shared** reports and **Personal** reports.

Shared reports appear on the Query screen underneath the section entitled **Shared** reports while **Personal** reports app **Reports** section. There is a sub-division of **Shared** reports whereby reports can be shared across one or more user rol

For each type of report, there are three separate security permission keys. In total, this allows each report type to have permissions set for each role. The keys are:

Personal Key	Shared Key	User Role Key
SR_PERSONAL_AGING	SR_PUBLIC_AGING	SR_USERROLE_AGING
SR_PERSONAL_CALENDAR	SR_PUBLIC_CALENDAR	SR_USERROLE_CALEN
SR_PERSONAL_CHART	SR_PUBLIC_CHART	SR_USERROLE_CHART
SR_PERSONAL_COLUMN_REPORT	SR_PUBLIC_COLUMN_REPORT	SR_USERROLE_COLUM
SR_PERSONAL_CONTAINER	SR_PUBLIC_CONTAINER	SR_USERROLE_CONTA
SR_PERSONAL_DASHBOARD_REPORT	SR_PUBLIC_DASHBOARD_REPORT	SR_USERROLE_DASHE
SR_PERSONAL_GEOSPATIAL	SR_PUBLIC_GEOSPATIAL	SR_USERROLE_GEOSP
SR_PERSONAL_LINKED_REPORT	SR_PUBLIC_LINKED_REPORT	SR_USERROLE_LINKE
SR_PERSONAL_MATRIX	SR_PUBLIC_MATRIX	SR_USERROLE_MATRI
SR_PERSONAL_PAGE_LAYOUT	SR_PUBLIC_PAGE_LAYOUT	SR_USERROLE_PAGE_
SR_PERSONAL_PLANNING	SR_PUBLIC_PLANNING	SR_USERROLE_PLANN

Saving Reports



The section of the window **Visibility of Report** is present if you can save the report for different roles, i.e. you have p SR_USERROLE_xxx permission key. You can save the report for all user roles or you can select multiple roles from t these roles will have the abilirt to access the report.

Within the **Existing Folders** section, you can select the **My Reports** section to save the report for your personal use. T permission to the SR_PERSONAL_xxx permission key. If you want to save the report within an existing personal fol folder.

Within the **Existing Folders** section, you can select the **Shared Reports** section to save the report for shared use or fo or more user roles. This requires permission to the SR_PUBLIC_xxx or SR_USERROLE_xxx permission key. If you report within an existing shared folder, select that folder.

To create a new subfolder within the **My Reports** section, select **My Reports** and then enter the name of the new fold field. To create a new subfolder within the **Shared Reports** section, select **Shared Reports** and then enter the name o in the bottom field.

Quicklists & Detailed Reports

Quicklist layouts and only Detailed Report layouts can be defined for each Business Area in your system. These repor within the layout editor, in exactly the same way that screen layouts are created and maintained. The Quicklist and De the screen. Most often used on the Quicklist, and never used on the detailed report itself.

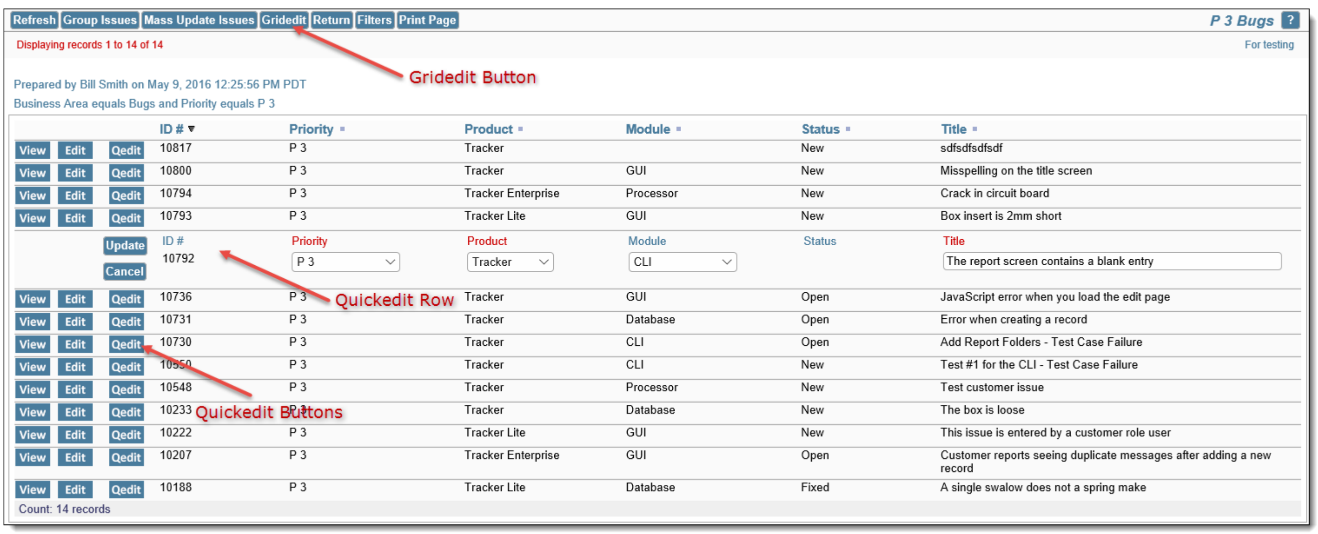
- There is a field in the layout list named HISTORY_BUTTON. This allows you to place the drill down button to on the screen. The user must have read permission for the PR_RESOLUTION.MENU_HISTORY security key button on the screen.
- There is a field in the layout list named EDIT_BUTTON. This allows you to place the drill down button to the e
- There is a field in the layout list named DELETE_BUTTON. This allows you to place the delete issue function user must also have privileges to the PR_RESOLUTION.DELETE_BUTTON security key in order to be able t
- You may want to use the Highlight layout element attribute to alter the display color of some fields. For exampl critical issues appear in red. If you do this, then the color used is defined in the behavior setting named HIGHLI
- If you have a dependency within one field of a layout with another field on the layout, such as Highlight, then b on the layout.

Formatting of Fields on the Output

If you specify a specific style or format with a layout cell attribute for a field on the layout or as a global attribute with dictionary, this will be utilized on the report output. In a similar fashion, you can hide field values on the output using layout cell attribute. The STYLE layout cell attribute, or global attribute can be used to apply a style to the value on t

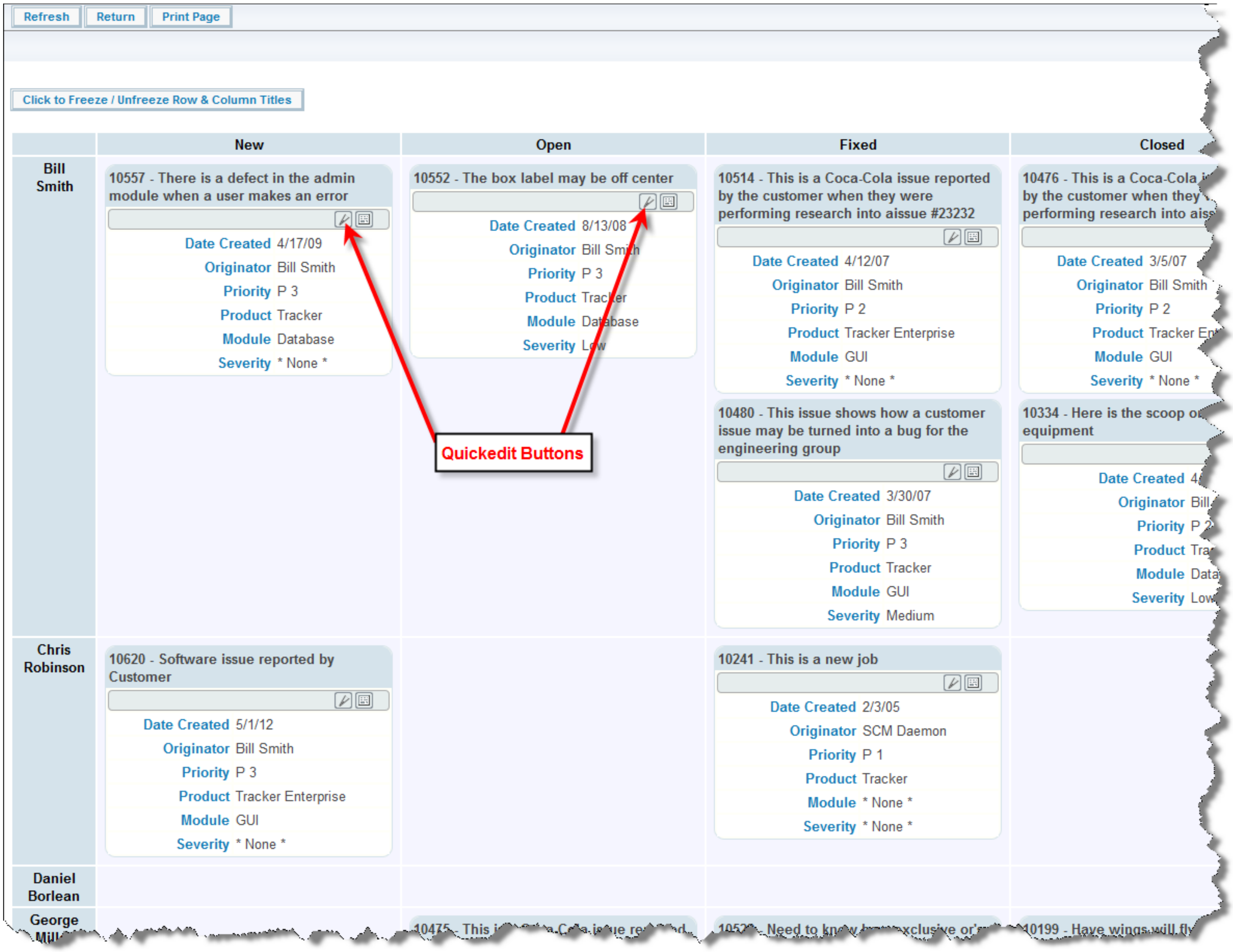
Quickedit Mode

The Quickedit mode allows the inline editing of fields within a row or issue of a report. You may place the QUICKED any Quicklist layout, any Detailed Report layout, onto column reports and onto taskboard reports. Quickedit provides efficient means of updating many records in succession. For example, if you have a weekly status meeting where you issues and make changes to details such as priorities and who an issue is assigned to, then the Quickedit mode is very



Column Report Quickedit mode

When a **Quickedit** button is configured on a Column report, a button with the title **Gridedit** is placed on the menubar panel. This allows the user to place all the issues on the report into Quickedit mode with a single click. The user can issues that are displayed, but they must update issues one at a time when the edits to an issue is complete. It is not pra users to update all the records within a single button, as each update may have dependencies which result in a popup - required fields or to satisfy a validation requirement. This would have the potential to generate a huge number of pop could not manage easily.



Taskboard Quickedit mode

When you press the Quickedit button, you are able to edit the fields that appear on that row of the report. This is often than going into the edit mode of the issue. When you are in the Quickedit mode, you must exit by either updating the i canceling the update. There are some caveats using the Quickedit function, as follows:

- The user must have write access to a field in order to update its value
- As the administrator, you must have placed the field on the edit layout for the appropriate business area and pro update its value. If the field is part of the issue and not on the layout, you may still see it in a read-only mode
- The – character will be displayed in a field, if the field is not an ExtraView built-in field and it has not been plac screen layout. This may happen if the user is sitting in one Business Area, but the record they are trying to edit i different Business Area or Project, and does not have that field
- Calculated fields such as **Days Open** and **Days in Status** will be displayed as read-only
- If a field has a link using the "Display as URL" function, this link is not active when in Quickedit mode
- The user cannot ever edit the Business Area or Project fields in Quickedit mode
- If repeating rows are on the report or layout, the user may edit the existing values on a row, but cannot add a nev an existing row
- All allowed value relationships are maintained. However, if the parent value is not on the report, the user may o

exists in the UserJavaScript.js file you may place code that emulates the HTML modifiers.

Quickedit on Detailed Report Layouts

There are the following restrictions in using Quickedit on Detailed Report layouts:

- Quickedit is not supported if the Detailed Report contains embedded layouts
- Quickedit is not supported on Detailed Reports if the behavior setting named REPORT_LABELS_POSITION h LEFT. Only when the labels are rendered with REPORT_LABELS_POSITION equal to TOP is Quickedit supp

Keyword Queries & Quickfind

Keyword queries are enabled with the following actions:

- Place the inbuilt field named KEYWORD on a query filter layout
- This is subject to the normal PR_RESOLUTION.KEYWORD security permission key, allowing you to control access to the facility
- There is a further security permission key named PR_RESOLUTION.SEARCH_ATTACHMENTS. When this user role, they will see a checkbox appear beneath the keyword search. When the user checks this box, attachme also be searched for the keywords entered.
- ALLOWED_ATTACH_SEARCH_FILE_EXT – this behavior setting controls which file attachment types are s example, you may have large image files within your database, through which there is no point searching for ke
- ALLOW_SEARCH_TEXT_UDFS – When this is set to YES, all User Defined Fields with a display type of TE in the keyword query search
- SEARCH_ATTACH_THRESHOLD – This is another control to stop huge searches when using keyword querie ExtraView will first calculate the total size of the attachments that are to be scanned for keywords. If the size (ir than the number in this setting, then ExtraView will ask the user to confirm that he wants to execute the search.

ExtraView composes SQL queries to search for keywords in its underlying database by default. However, the Adminis an extremely fast, indexed search mechanism named Quickfind. Quickfind requires additional resources and storage to performance boost, but for large sites with a significant amount of text and attachment files, it significantly improves p

Searching Microsoft Documents for Keywords

Microsoft documents, such as Word and Excel, are stored using a character set known as **UTF-16LE Unicode 16-bit** you want to search these documents for keywords, you should store the documents, when you upload them, using this encoding. This is especially important for Asian languages. Many searches with Roman alphabets will work fine with identifying the character set within the Microsoft document.

Quickfind

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to use this feature without contacting ExtraView support.

Quickfind uses indexes built and maintained by ExtraView to speed up the search process for keywords. Understandin and constructing your search terms properly is critical in generating the expected results from your query. The feature Apache Lucene technology.

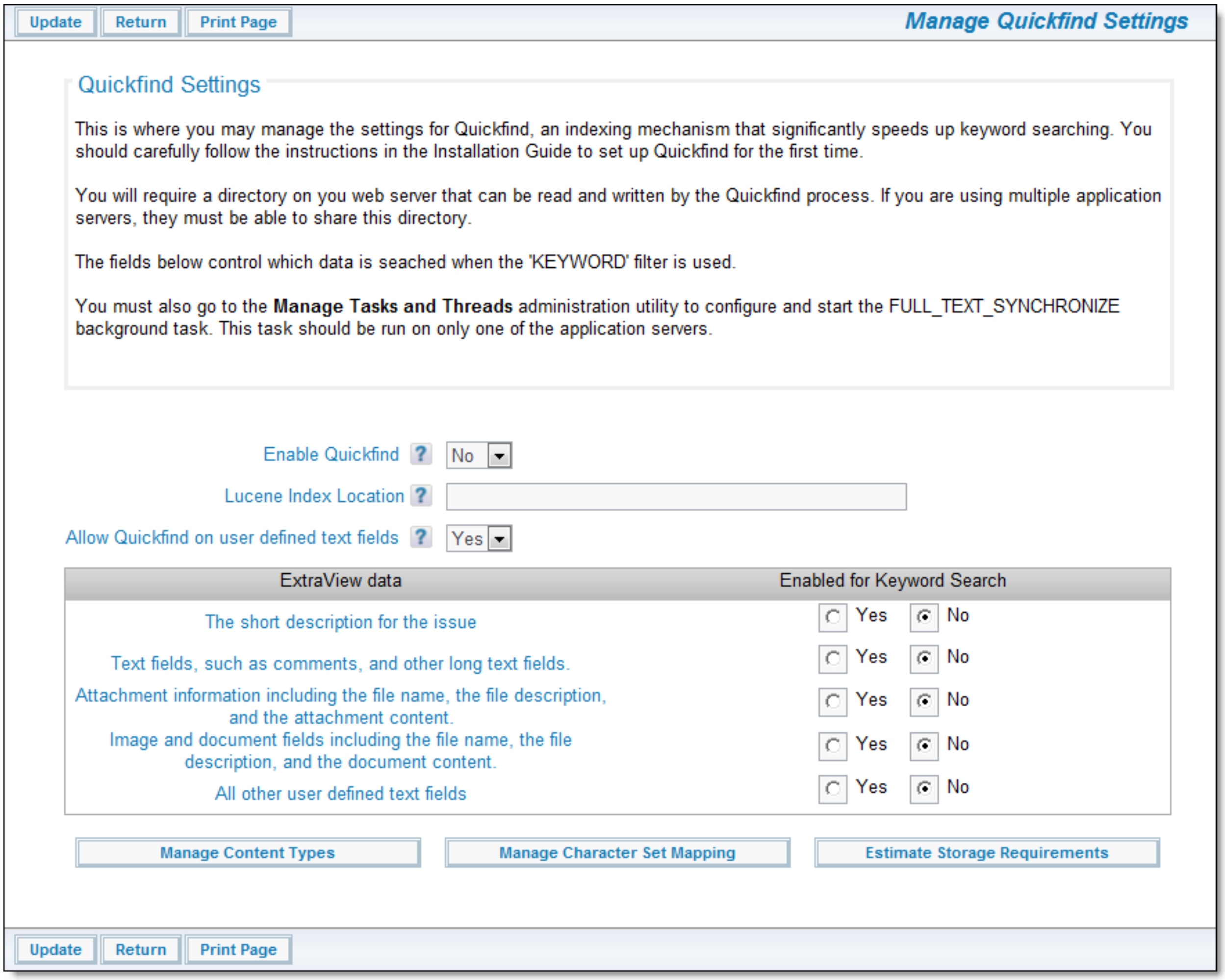
To enable this feature, see the section on Managing Quickfind and the section on setting up the task that performs the managed in the Manage Tasks and Threads administration utility.

The indexes built are based on words extracted from the data being searched. The database automatically extracts wor documents, ignoring most special characters.

ExtraView extends the keyword search term entered to search for words that start with the same characters. For examp **APPLE** can return results for **APPLE** as well as **APPLEs** and **APPLEsauce**.

The default installation of Quickfind into your database environment performs case insensitive matching. Any combir and lower case characters will match the same list of characters with any other combination of capitalization. For exar following list of words would all be found when searching for **apple: applE, ApPlE**.

You may configure which text fields and file attachments are indexed. The indexing happens as a background task run within ExtraView. This timer is controlled by a behavior setting on the management screen for Quickfind, with the de five minutes. This means that text entered or attachments uploaded are not immediately available for finding with the capability, but will be included in the results following the next completion of the Quickfind background task. To ente look at the [Managing Quickfind](#) section of the documentation.



Managing Quickfind settings

Note that in addition to the **Estimate Storage Requirements** button, the two other buttons at the bottom of the screen

Manage Content Types – This allows you to manage the different content types that are indexed by Quickfind. It is r that you will need to modify these settings as the default values provided are fairly extensive.

Manage Character Set Mapping – This utility is only used for Oracle databases. Again it is not likely that you will r

- All queries using Quickfind are case-insensitive and support the wildcard character (*)
- Quickfind ignores most non-alphabetic characters when indexing the content and your users can search for and The standard search mechanism does not attempt to retrieve words when performing a query, if they contain no characters
- Quickfind indexes numbers as well as alphabetic characters, therefore text fields that contain numbers are index true for standard search.

Reporting Hierarchies

Reporting hierarchies allow the administrator to set up relationships for reporting purposes. These relationships may b a single level with a single parent and single child. You can set up reporting hierarchies of up to ten levels although it use cases go beyond three or four levels.

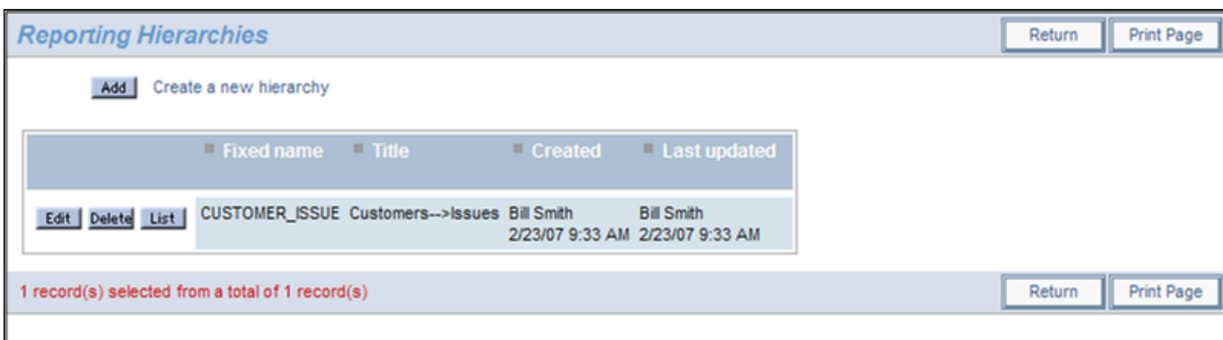
Some examples of reporting hierarchies may be:

Customers ➡ Customer Issues	A single customer may report many issues, and you may want to display customer inforn their name, contacts, and email addresses on a report along with the details of all the indi that were reported by the customer, such as the issue title, status and resolution.
Requirements ➡ Engineering Orders	You may want to set up a business area within ExtraView that has the high-level requiren new products. Each of these high-level requirements may be the parent of many individu orders that build the component parts of the new product.
Line of Business ➡ Action Plans ➡ Action Items	A company may be split into many lines of business, and each of these lines of business number of high-level action plans, which themselves are broken down into action items. represented by a reporting hierarchy.

The relationships between the parent and child levels of the reporting hierarchies are represented by relationship grou ExtraView. Please see the section of this guide on how to set up and maintain Relationship Groups, and to see how iss within these relationship groups.

A reporting hierarchy is simply the definition of the structure that makes it possible to create and view reports based u relationship groups. For instructions on how to create a report that uses a reporting hierarchy, see the Column Report s ExtraView User Guide.

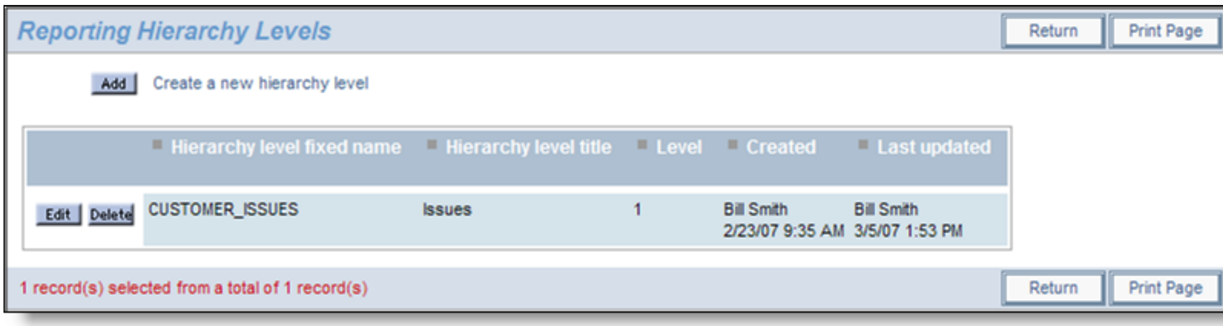
To create a report hierarchy, select the **Reporting Hierarchies** entry on the **Site Configuration** tab of the **Administra** ExtraView. This presence of this menu entry is controlled by the security permission keys named CF_HIERARCHY a CF_HIERARCHY_LEVEL. If you grant access to one of these permission keys, you should grant access to both in or set up the reporting hierarchies. The following screen is displayed when you select the **Reporting Hierarchies** option



Reporting hierarchies management

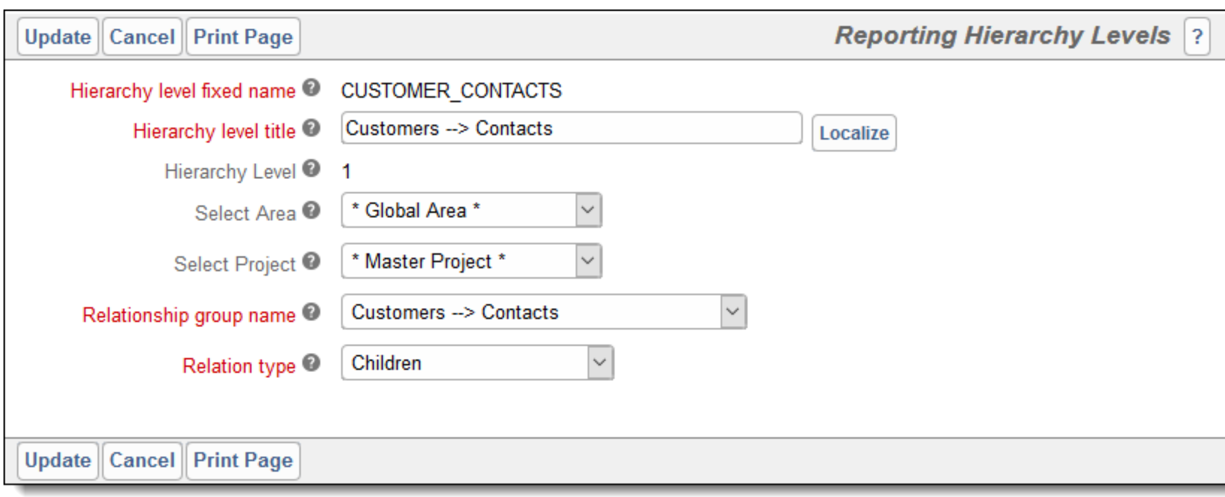
Adding a new reporting hierarchy

Once you have entered a fixed name and the title, click the **Add new hierarchy button**. To add a new hierarchy level hierarchy, click on the **List** button from the Reporting Hierarchies Management screen. You will see the existing level and you can add additional levels to this. This screenshot shows an existing reporting hierarchy level of one level:



Single level reporting hierarchy

If you use the **Edit** button to alter the metadata at this level, it will look similar to this:



Editing a hierarchy level

Note from the screenshot that the level is **1** and this cannot be changed. As you add new levels to the hierarchy they w be set at an incrementally higher level. So, the next level you add will be **2**, etc. When adding a new hierarchy level yo existing relationship group to represent the relationship, and you will then choose the relationship type. This must be o *Parents*, *Related*, *Members*, *Linked* or *Siblings*. These are defined in the section on relationship groups. The selection

- The normal rules of inheritance are obeyed if there is no *edit* layout at that business area and project level
- When you create or edit a report using the hierarchy, then only the fields on the *edit* layout and its sublayouts w populate the field list for this level in the hierarchy. The normal security permission rules also apply.

This behavior helps provide clarity on the report editor screen. It is highly unlikely that a user will ever want to select hierarchy level that is not present on the *edit* screen and this behavior will most probably reduce the number of selecta level in the hierarchy from hundreds to tens.

Filtering the Number of Issues within the Levels of a Hierarchy

In the filter list for reports which support hierarchical filters, there is a field with the title of **Related Issue Count** (its EV_HIERARCHY_LEVEL_COUNT). This may be used as a filter on any level of the hierarchy, and will provide a issues in the next level of the relationship. For example, you might want to display child records when there are more a number you provide.

You can also use this field as a sort field on report output by clicking on the title to the field. The field is a built-in fie dictionary and has the name **EV_HIERARCHY_LEVEL_COUNT**.

Report Expressions

Report expressions are used to calculate or derive new field values which are only placed on report output. For examp to multiply the values held in two columns of a report to derive a new calculated value. Another example may be to su from another to calculate the number of days between two events. Report expressions are first defined by creating a fi dictionary that is placed on the report. The actual calculation or expression is defined in the default value of the field, that is stored with the field within a report. Using the default value allows you to define a calculated field that may be many reports without further configuration. However, you can use a single Expression type field defined in the data di reuse this on many reports for many purposes. You achieve this by selecting the field for use on any report, then using **Title** and **Expression** attributes to modify its purpose for that report.

Syntax for Report Expressions

The general syntax of an expression matches a subset of that in ANSI-99 SQL expressions, with arithmetic, string, an This includes infix and prefix operators, with standard precedence rules. Also, parentheses may be used to group sub-

Note that although the expressions utilize ANSI-99, the different databases upon which ExtraView may be installed d syntax for many operations, and the syntax you use within your expressions must be correct for the underlying databa matters even more complex, the syntax of some expressions varies across different versions of the same database.

Literals of each type are supported and although full ANSI syntax is not promised, it should be sufficient to allow spe specific value for each data type. Variable names may refer to fields in the database. Each variable is in the form **$$DI** may refer to a standard ExtraView field name or special variable. Usually, the specification of a variable name refers t (viz., its title or rendered form). However, inside an expression, the **value** of the variable is used, not its rendered form note on enumerated types below.

Limitations

1. Expressions are not supported for use on repeating row fields within your data dictionary
2. Text Area, HTML Area, Print Text and Log Area fields are limited in that they can only display (approximately characters of any entry. In many circumstances this is sufficient, but if you have really long entries, they will b report expressions. This is because these field types are actually concatenated in 4,000 chunks in the database a is used to handle word boundaries so that words are always searchable as keywords in the database.

Variable References to Enumerated Types

- Retrieval of the detailed expression values for rendering in the report row

Syntax checking includes tests for single-quoted strings, double-quoted strings, parentheses and the "cast" function. S done before the attribute is entered and stored as part of the report.

Null Values

The existence of a null value in an expression renders the result of the entire expression value to be null.

Expression Error Handling

Each report expression is syntax-checked and variable references are validated before allowing the containing report t run. There may be opportunity for the user to create erroneous expressions, as not all expressions can be determined w to the values in the database.

Report Field Titles

To support report-specific titles on the expression fields, the **ALTERNATE FIELD TITLE** attribute is supported. Th for the difficulty for users to create column headings when they are sharing a data dictionary entry, such as the EXPRI entries. The **ALTERNATE FIELD TITLE** attribute appears within the GUI of the report builder to allow the user to report through a simple selection mechanism.

Use of Session Variables

Session variables defined in the data dictionary may be used as substitutable variables in a report expression. Each ref variable value must be set using a runtime filter for the report. Session variables may also be used within runtime filte mechanism to provide the same value for the occasions when the same field is used multiple times within filter querie happen with advanced queries that use multiple **and** and **or** conjunctions. Date fields within the ExtraView database a *timestamp* type fields, which is done for internal efficiency and to facilitate a wide number of internal computations. T make them very simple to work with in expressions, but the following examples should help significantly. The sessior have been defined with a compatible display type, such as DATE, DAY, or TEXTFIELD for use within the expression

Date Calculations

A frequently use of expressions is to calculate the difference between two date fields. The internal database representa use the TIMESTAMP data type. This data type does not lend itself to simple addition and subtraction to calculate diffe dated. The date_diff function is an ExtraView function that simplifies date calculations. It is used in this way:

NUM_DAYS = date_diff($$DATE_FIELD_1$$, $$DATE_FIELD_2$$)

This returns the difference as a whole number, between the two date fields.

Examples

1. Compute the elapsed time, in number of days, from when an issue was created, to when it was last updated, and in a field named DAYS_ELAPSED:

   DAYS_ELAPSED = date_diff($$TIMESTAMP$$, $$DATE_CREATED$$)

2. Compute a total sale value with sales tax based on a rate of 8%:

   $$currency_field$$ * 1.08

MySQL - DATE_ADD($$SYSDATE$$, INTERVAL 7 DAY)

Derby - {fn TIMESTAMPADD(SQL_TSI_DAY,7,$$SYSDATE$$)}

5. This is a more complex example, which concatenates several fields together, and places the results in a single ou report. The example takes the fields `SALUTATION_TITLE`, `FIRST_NAME`, `LAST_NAME` as the first line of the output. provides a linefeed so that the field `ADDRESS` appears on the second line. The next line contains `ADDRESS_2`, then next line by `ADDRESS_3`. The next line contains a concatenation of the `CITY`, `STATE` and `POSTAL_CODE`. The fina the `PHONE` field. The decode statements are standard SQL that allow the suppression of the field, if there is no v from the query.

```
decode($$SALUTATION.TITLE$$,'','',$$SALUTATION.TITLE$$ || ' ') ||
decode($$FIRST_NAME$$,'','',$$FIRST_NAME$$) || chr(10) ||
decode($$LAST_NAME$$,'','',$$LAST_NAME$$) || chr(10) ||
decode($$ADDRESS$$,'','',$$ADDRESS$$ || chr(10)) ||
decode($$ADDRESS_2$$,'','',$$ADDRESS_2$$ || chr(10)) ||
decode($$ADDRESS_3$$,'','',$$ADDRESS_3$$ || chr(10)) ||
decode($$CITY$$,'','',$$CITY$$ || ', ') ||
decode($$STATE$$,'','',$$STATE$$ ||' ') ||
decode($$POSTAL_CODE$$,'','',$$POSTAL_CODE$$) || chr(10) ||
decode($$PHONE$$,'','',$$PHONE$$)
```

The end result is that you have composed a single field that contains the address in the expected format, althoug were each stored as individual fields.

Remember Filter Values

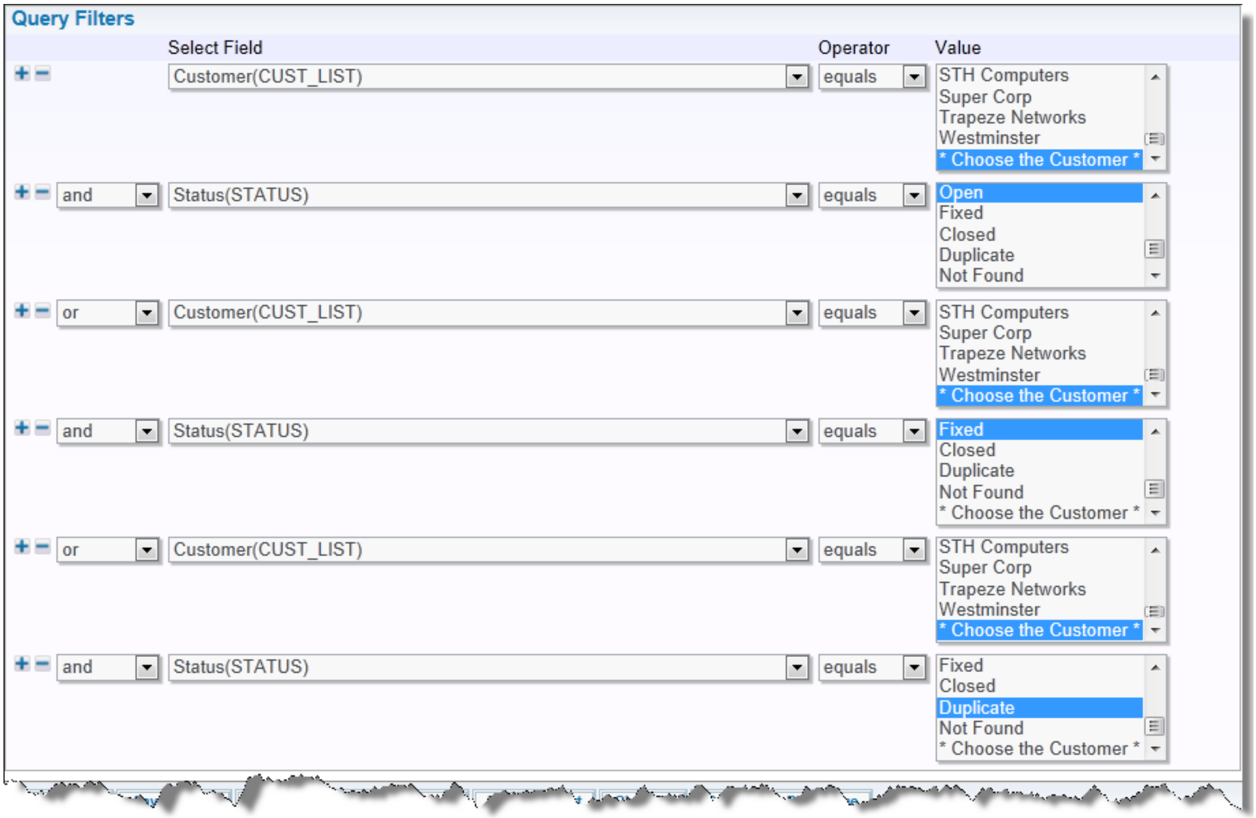
In between sessions, ExtraView automatically remembers the filter values on advanced search screens. This is a time-s a user often wants to return to where they left off when returning to ExtraView. Further, it is only a single-click operat filters. However, there is one item to recognize with this, in that the administrator may alter the metadata supporting th even remove access to a field for a user. To support this, all remembered filter values will be removed if the administra metadata such as a search layout.

Complex Runtime Filters

There are occasions when you might want a user to run a report that has a complex set of advanced filters, including th **and** and **or** conjunctions. For example, you might want to pose the following query filters (this is not a real query, but example):

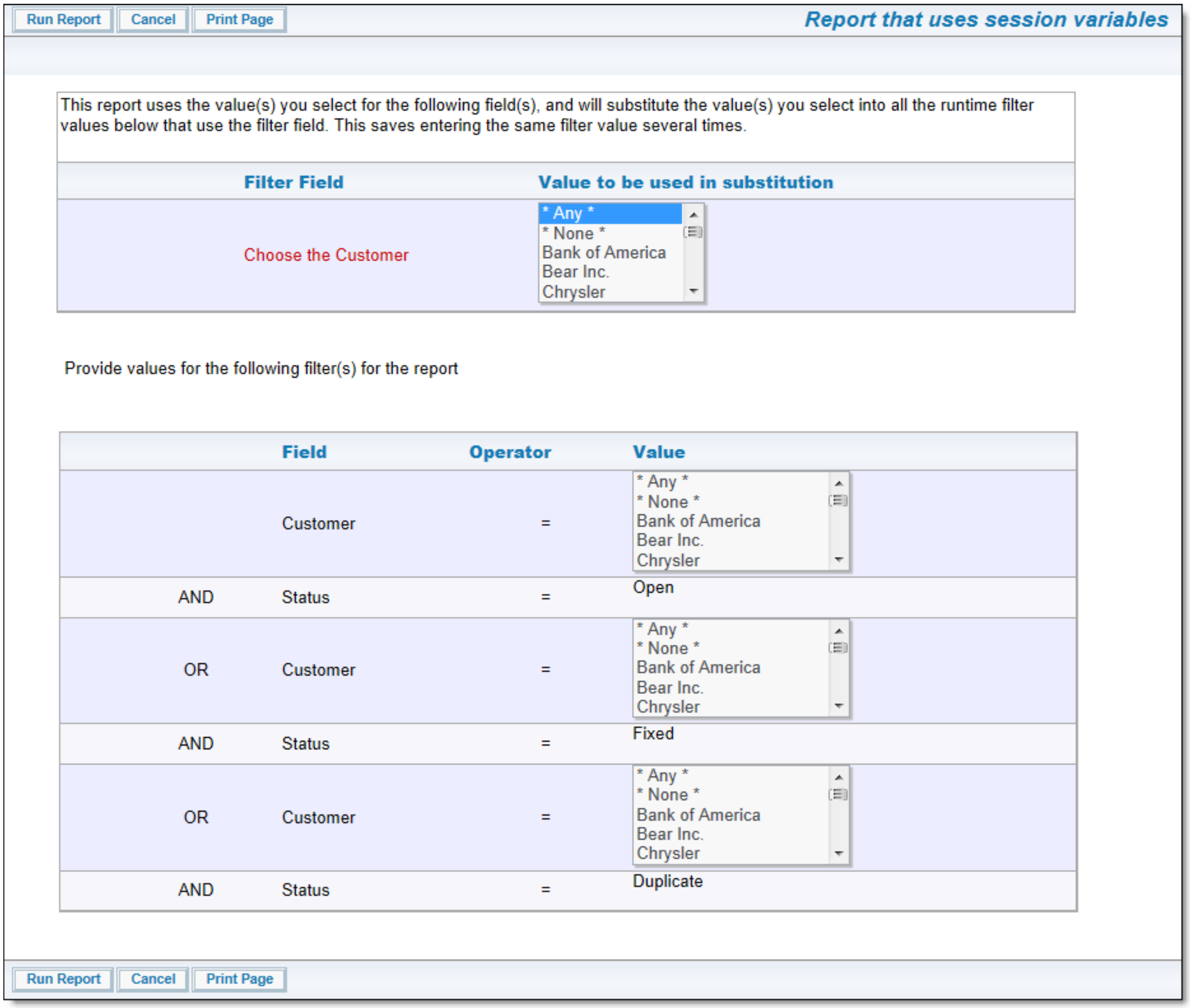
(Customer = *** Ask at runtime *** AND Status = **Open**)
OR (Customer = *** Ask at runtime *** AND Status = **Fixed**)
OR (Customer = *** Ask at runtime *** AND Status = **Duplicate**)

This would be represented in the report editor like this:



Setting up a complex query with runtime filters

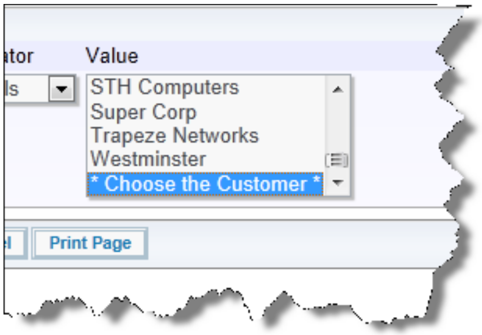
When the report is run, the user will see the following screen:



Running a complex query with runtime filters

When the user selects a customer from the top list, all the bottom filters that require a Customer will be set to use the v top list. To accomplish this type of query with complex runtime filters, you set up Session Variable type fields in the D Session Variable fields are created as follows:

- **Administration** menu
- **Site Configuration** tab
- **Data Dictionary** menu
- **Session Variables** tab
- **Add** button
- Provide a **Fixed Name** for the field
- Provide a **Title** for the field. It is helpful to use a title like *Choose the XXXXX* so that the runtime filter will shov Obviously, *XXXXX* represents the title of the filter field
- Choose the **Display Type** for the field. It is important to understand that you need a session variable field for ev will use in your complex queries, and that the display type must match the display type of the filter field it is be
- **Add** the field to the data dictionary.



Session Variable field to be used as a runtime filter

Note that the Session Variables appear at the bottom of list fields. If you are using the Session Variable as a filter with
number field, you should enter it as $$FIELD_NAME$$, substituting FIELD_NAME with the name of your Session

Charts

There is overall control to access charting from within the Search / Report screens, as well as control over access to cr
chart types. These are all controlled by security permission keys, as explained in the following table.

Security Key	Purpose
SR_PERSONAL_CHART	This security permission key allows access to produce charts and to save them for perso permission is needed.
SR_PUBLIC_CHART	This security permission key allows access to produce charts and to save them for share them for use by an individual user role. Read permission is needed.

Aging Reports

When looking at the trends and movement of issues through a process as part of aging reports, it would be misleading
partial view of an issue's movement through the workflow.

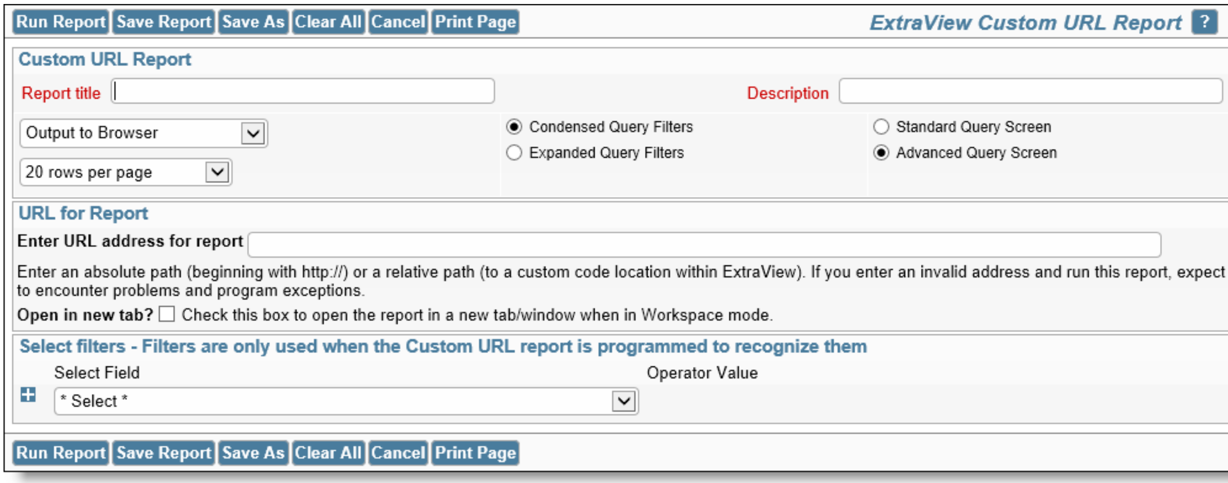
Therefore aging reports do not use the STATUS.xxxx permission keys and the user will see all the potential status valu
If this behavior is not desirable you should remove the user's access to all aging reports, using the SR_PUBLIC_AGI
SR_PERSONAL_AGING and SR_USERGROUP_AGING permission keys.

Custom URL Linked Reports

ExtraView reports has a feature that makes it possible to gain access to reports or pages generated outside the system,
generated internally (via the API) that involve custom code. The administrator can create these links, and then make tl
available to a general user community by saving the report as a Shared Report.

To use this feature, or to turn this off for your users, use the security permission keys named SR_PERSONAL_LINKE
SR_PUBLIC_LINKED_REPORT, according to whether users should be able to create their own personal linked repo
they should be able to create shared linked reports.

As custom URL linked reports can generate any type of output, and may not even output directly to a browser, you ma



Link to Report screen

- To link to custom reports created via the API, enter a report title, a report description, and then enter the URL in provided
- The URL can be an absolute path to a URL external to ExtraView. In this case, the URL must begin with **http:/** pointing to a relative path within ExtraView, only enter the option and action you want to pass. For example, to an absolute URL that exists at a different server, the URL address for the report may look like this – http://www.myserver.com?param1=xxx¶m2=yyy To set up a relative URL to produce a report within ExtraView like this - ?p_option=search.SearchReportDetailDisplay&p_action=doRunDetailed&id=10200 This report actua detailed report looking for the ID of 10200
- Note the Limitations at the bottom of this page, to decide whether you want to open the report within a new bro window
- Select any desired filters, noting that these will only be available to reports generated internally within ExtraVie custom code exit is used to process these and pass them to an external URL
- Click the **Run Report** button, or **Save** the report

Note: ExtraView will not validate the URL that you enter at the time you create a Custom URL report. It is the user's check that valid URL's are entered. It is exceedingly likely that you will generate a runtime programming exception er an invalid URL.

Notice that you can turn the filters on the screen off and on, with the and buttons.

Limitations

Different browsers and different web sites place different restrictions on how content is accessed. This constraint mig exarcerbated by ExtraView, according to whether you are trying to open the Custom URL report within an browser Ifr happens when the report is on ExtraView's Home Page, or when the report is opened within a Workspace. Some web access to reports opened in this way, either because of their concern for security, or simply because it is their policy to mode of operation.

Note the prompt on the screen, **Open in new tab?** You can choose this option for your Custom URL report, so that E the report within a new browser tab or window, thereby satisfying the conditions set by the external URL. If all the U users are within the same domain as ExtraView, this constraint is not liklely to affect them.

Admin Reports

SR_PERSONAL_ADMIN	This key controls access to Admin reports for personal use. Read access is required t while write access is required to save reports.
SR_PUBLIC_ADMIN	This key controls access to Admin reports for public use. Read access is required to r while write access is required to save reports.
SR_USERROLE_ADMIN	This key controls access to Admin reports for role-based use. Read access is requirec while write access is required to save reports.
SR_USERGROUP_ADMIN	This key controls access to Admin reports for use with user groups. Read access is re reports, while write access is required to save reports.

Usage

Please see the section in the End User Guide for instructions on how to create and use these reports from the **Report** s

Service Level Agreement Reporting

Service Level Agreement management allows the administrator to set up the conditions to measure whether the handli issues fall within predetermined conditions that you have set up to manage your customers. For example, you may hav to respond to all customer issues within two hours, and an obligation to provide closure on an issue within two days. T you to set up these criteria. Under reporting, your users may use these criteria to prepare and run reports that show you performance against these SLA's.

SLA definitions for organizations can differ widely, and different parts of an organization may need to create their ow their individual customers.

ExtraView provides a scalable method to provide many SLA's within the product, but for simplicity an example follov global set of SLA conditions that look like this:

	Status Transition		
Priority	New-Open	Open-Resolved	Resolved-Close
P1 Issues	< 2 hours	< 1 day	< 2 days
P2 Issues	< 4 hours	< 5 days	< 30 days
P3 Issues	< 1 day	No commitment	< 180 days

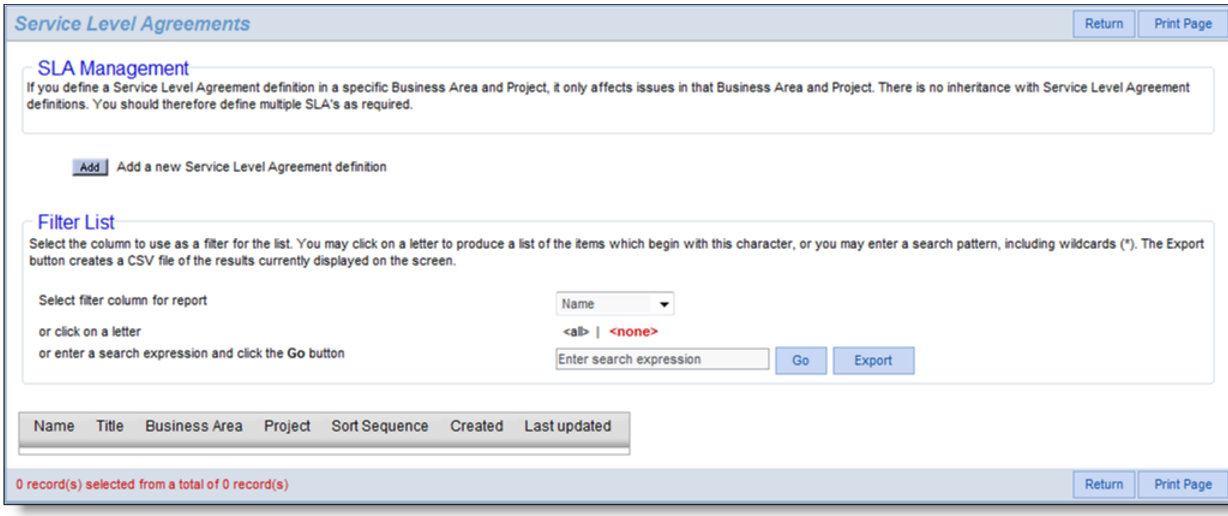
This implies that the STATUS field contains (at least) the values *New, Open, Resolved* and *Closed*. The PRIORITY fie P 1, P 2, and P 3.

Note: A key feature of measuring SLA's is that an issue may move between the different statuses many times, yet it is the status that is measured and reported. For example, a customer may report a P 2 issue via email, and it is initially cr and placed in the *New* status via the EVMail capability. Your support technician moves the issue to an *Open* status in : the agreed time of 4 hours or less.

Three days later, the issue is moved from the *Open* to the *Resolved* status and handed back to the customer. This is wit time for the SLA. However, some time later the customer reports back to your support technician that the resolution w and the issue is moved back to the *Open* status. In a further four days time the issue is handed back to the customer an once again moved to the *Resolve* status. The customer accepts this resolution.

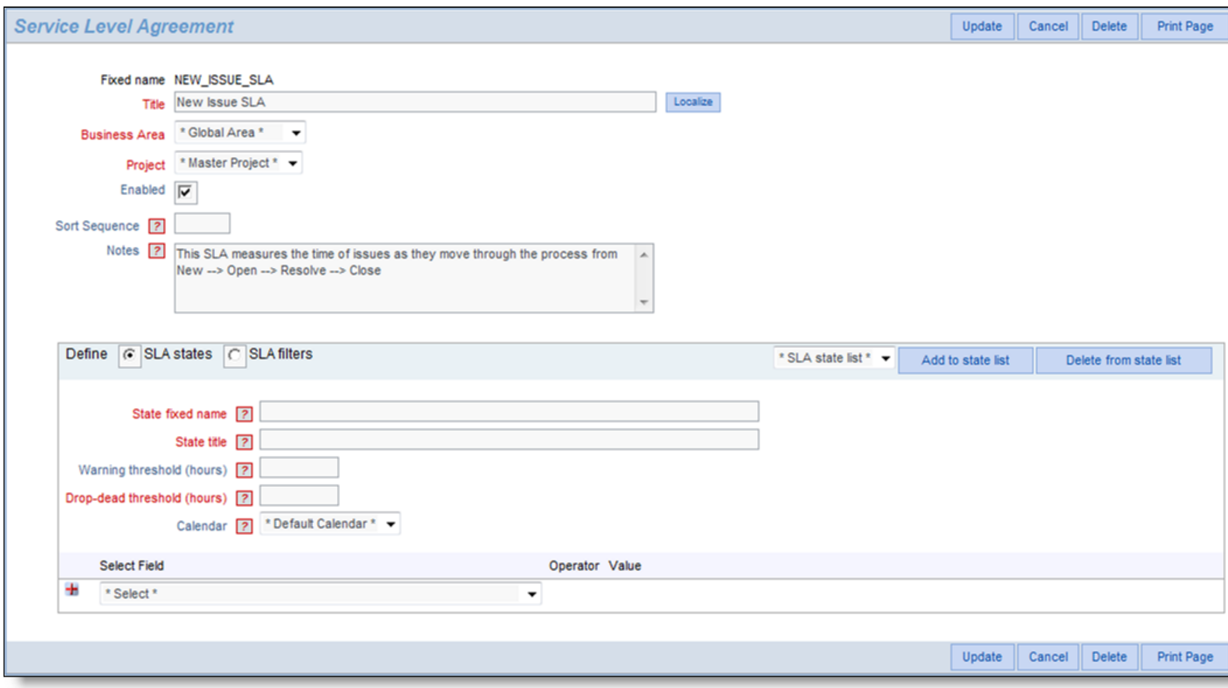
The SLA that followed this workflow was not met, as the issue took a total of seven days to resolve, not just the three which the issue was *Open* on each occasion. The SLA measurement spans all the occasions the issue was in the *Open*

Following are instructions on how to set up this scenario to monitor all the conditions in the above table. The reporting users to run reports that utilize SLA States defined by the administrator. The end user may not define their own SLA S



SLA Management screen

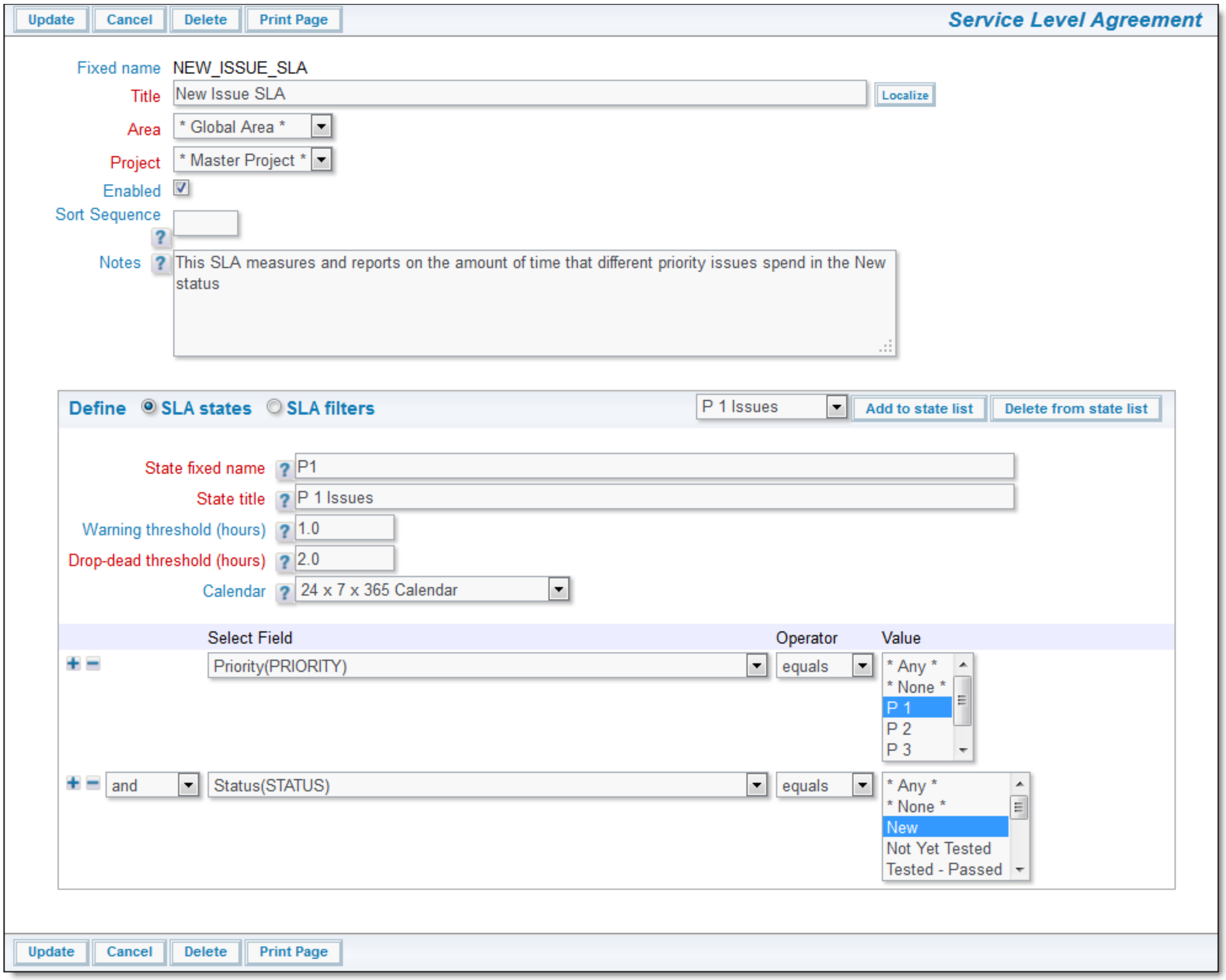
Click the **Add** button. First, we use the upper part of the screen to create and add the SLA. For our example we can us this screenshot to create our first SLA named **NEW_ISSUE_SLA**.



The NEW_ISSUE_SLA

Looking at the table at the top of this page, we are going to create three SLA's, one for **New** Issues, one for **Open** issu **Resolved** issues. The **New** SLA State will have three SLA States, one for **P 1** issues, one for **P 2** issues and one for **P**

We create the SLA in the top-half of the screen, providing a Fixed Name, Title, Business Area (if any) and Project (if minimum. There is the capability to enable/disable the SLA, provide a sort sequence and notes.



Defining an SLA State

Each time we define an SLA State as exemplified by the above paragraphs, we use the **Add to state list** button to save
When we have added all the individual SLA States, you must also use the **Add** or **Update** button at the top and bottom
save the entire set of metadata, i.e. you are saving the overall SLA information plus the individual conditions that mak
We can create the SLA with the following values:

State fixed name	State title	Warning threshold (hours)	Drop-dead threshold (hours)	Filters
P1	P1 Issues	1	2	Priority = P1 S
P2	P2 Issues	3	4	Priority = P2 S
P3	P3 Issues	20	24	Priority = P3 S

Next, to implement the requirement, we will create an **OPEN_ISSUE_SLA** with the following metadata:

Fixed name = **OPEN_ISSUE_SLA**
Title = **Open Issue SLA**

State fixed name	State title	Warning threshold (hours)	Drop-dead threshold (hours)	Filters
P1	P1 Issues	18	24	Priority = P1 S

P3	P3 Issues	4000	4320	Priority = P3 Statu

When you have completed these additions, you have set up three SLA's to measure the conditions in the table at the bo section, plus we have added warning times to aid users be aware of impending deadlines being exceeded.

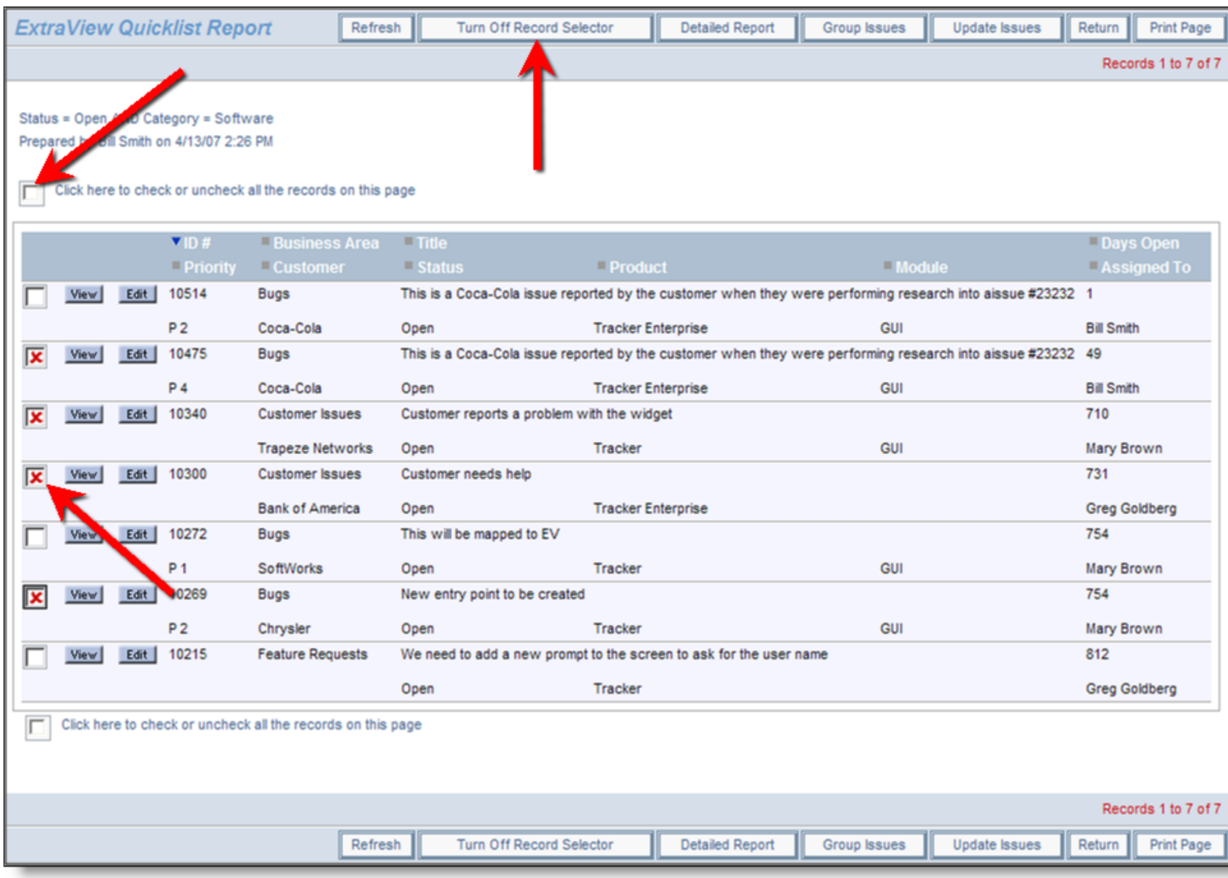
Searching for Disabled Values

There are occasions when users may need to search for results, using disabled list values as filters. For example, the us search for issues that are assigned to a user whose account is disabled.

This functionality is accessed from the advanced search mode. When in advanced search mode, and a list contains ina entries, there will be an entry in the list of values, labeled * **Show disabled entries** *. When you select this entry, the s refreshed and you will see all the disabled as well as enabled values in the list. Note that you can remove the disabled list by then pressing on the * **Do not show disabled entries** * list entry.

Record Selector

This feature allows a button to be placed on the menubar of a Quicklist or Column Report, and this button is used to se arbitrary issues on the report, and to perform an operation on the selection. This screen shows the result of clicking the **Record Selector** on the Quicklist report.



Data dictionary	The Label field named EV_REPORT_SELECTION must exist in the data dictionary. This is preset
Permissions	Set the Read permission to **Yes** for each role that you want to use this feature, for the permission ke PR_RESOLUTION.EV_REPORT_SELECTION.
Layouts	On each of the Quicklist layouts that you want to use the feature, place the field EV_REPORT_SEL 1, column 1.
Column Reports	Within the Column Report editor, the user chooses to display the available buttons, then selects the check mark (✓) as the first column on the report output

Mass Updates of Issues

Click for end user documentation

It is not recommended that you give end users access to this facility, as it allows the mass update of issues. One wrong affect hundreds or thousands of issues and may be very difficult or impossible to undo. This function is most frequent such as:

- Reassigning issues from one person to another
- Reassigning open issues from one release to the next
- Setting a field on many issues to a single specific value

Access to this feature is controlled by the security key named PR_RESOLUTION.MASS_UPDATE_ISSUES.

Assuming the permission is set to be able to use this feature, there will be a button labeled **Mass Update Issues** on Qu Detailed Reports and Custom Reports that you generate. This button allows the batch or mass update of a list of fields

Not all fields can be updated by this method. Only fields to which you have write access, and fields that are of display up, Tab, Checkbox, Log Area, Text, HTML Area, Currency, Number, Decimal, Date, Day and User can be updated. T offered for update are those that exist on the *edit* layout in the current business area and project. You cannot update an your current business area and project. However, if your query that selected the field to mass update contains records i areas and/or projects, then these will be updated, assuming the field is on the *edit* layout of the specific area / project.

The execution of mass updates is a background process within ExtraView. Once started, the process cannot be interru provides several advantages, in that ExtraView will prevent several mass update operations happening concurrently (v data integrity problems, and the corruption of data) and it gives a significant amount of insulation from problems such of the communications network or the client computer crashing midway through the process. To use this feature:

- First, prepare a report
- Click on the **Mass Update Issues** button on the menu bar of the report
- You may update any number of fields with one pass of the mass update procedure. After you select a field, you button to add an additional field to the update process. If you want to remove a field, you can use the button t the second and subsequent fields
- For each field you add you will see a prompt asking for the new value for the field as well as the list of all the is about to be updated. You can uncheck any issue from the list that you want to exempt from the update
- You must check the button **Generate Email** button if you want the standard notification sent for each issue bei default for mass update is not to send email, as you may be generating a very large list of updates and hence em
- Click **Update all records**. Note that if you are updating a large number of issues, the process may take some ti probably around one to three seconds for each issue.

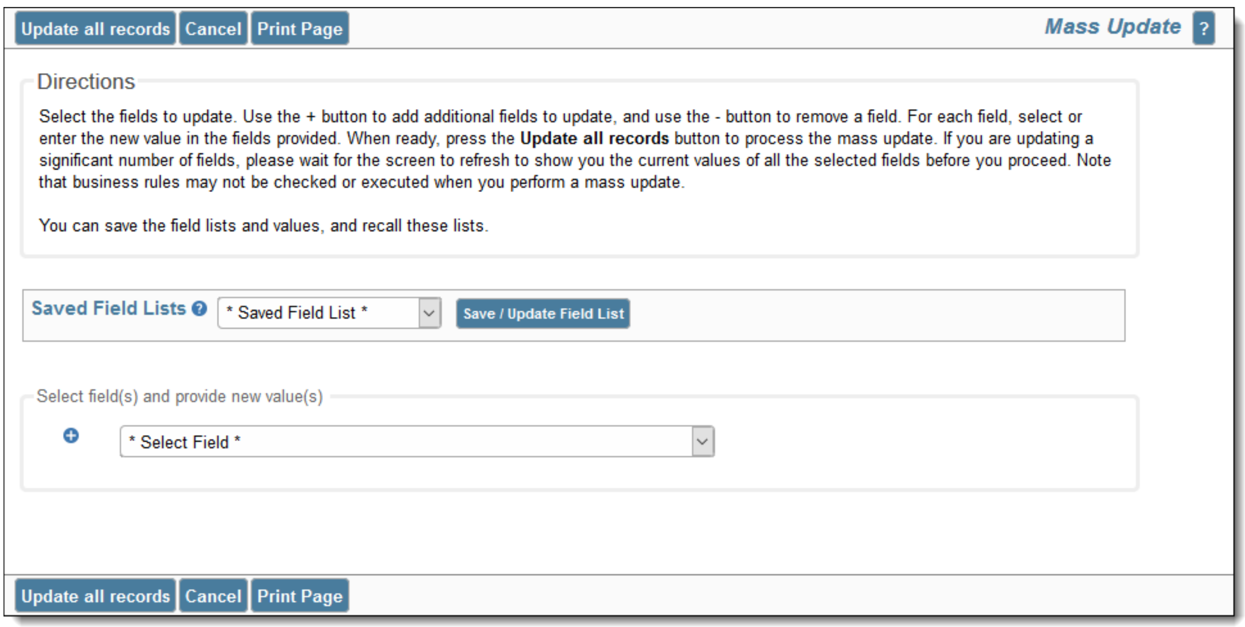
Note the following when using Mass Update:

- If a field you are updating is a multi-valued field or part of a repeating record that can have many values, then t the new value to the existing list of values for the field you are updating

- To conserve database resources, ExtraView limits this feature to updating a maximum of 5,000 issues in a singl need to update more than this number, simply run the selection multiple times and perform the update over agai
- You may update issues across multiple business areas and projects provided the value to be updated does not vi and required if layout cell attributes of the current user role, current business area and current project of the use operation. Also, you must not violate the allowed values relationship of the issue, within the current user role, c area and current project of the user. If any of these conditions are encountered, you will see an error message st issue cannot be updated
- If you include a field with a display type of Log Area in a mass update operation, the existing log area entries a a new log area entry is added, corresponding to the text entered into the mass update field
- It is possible that you may update issues across multiple business areas and/or projects, and that in doing so you mass update a field that does not exist on the *edit* layout for one or more areas / projects. When this happens, th area / project will not be updated, and no error occurs
- The mass update function will not update all records if the query used to generate the list for updating used the interface, and used the or conjunction. There is a simple workaround, to create the list using each part of the filt conjunction in turn, and perform the update
- Any user or administrator may only run one mass update operation at one time.

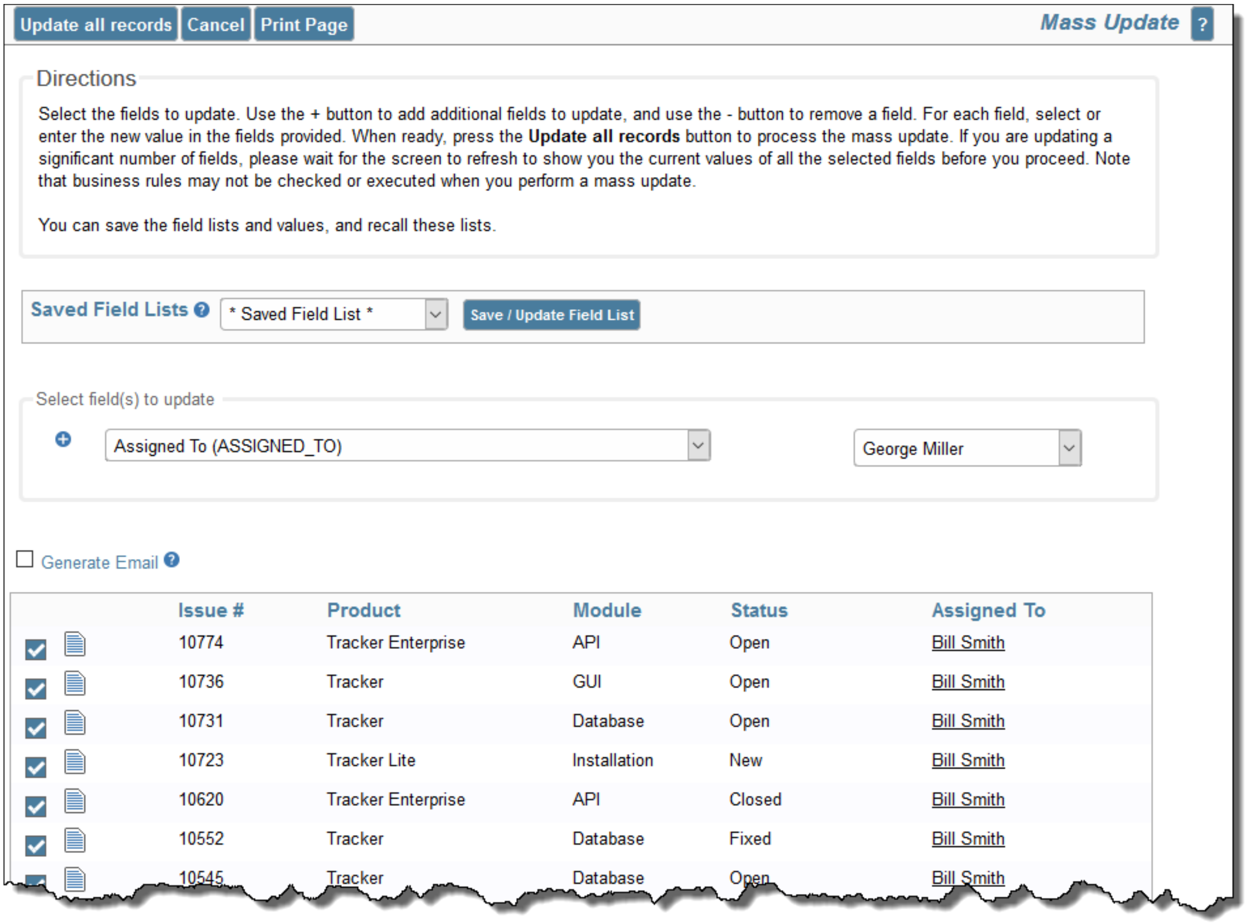
Example

This shows how you can reassign all open issues from one person to another, for a given product: Prepare a Quicklist Product, Assigned To and Status as filters. From the resulting report output, press the **Update** button. You will see a s



Selecting a field to update

Select the Assigned To field from the list and the screen will redisplay, showing something similar to:



Mass update screen

From the select list labeled for the Assigned To values, select the person you want to reassign the issues to. You can vi issues to check whether they should be part of the update, and you can uncheck any of the issues. You can also add on to the mass update by pressing the button.

If the field you are trying to update is dependent upon another field (for example a *module* field may be dependent up you will be prompted for the parent field, then the child field, to ensure that the relationships between the values are k only valid combinations are stored.

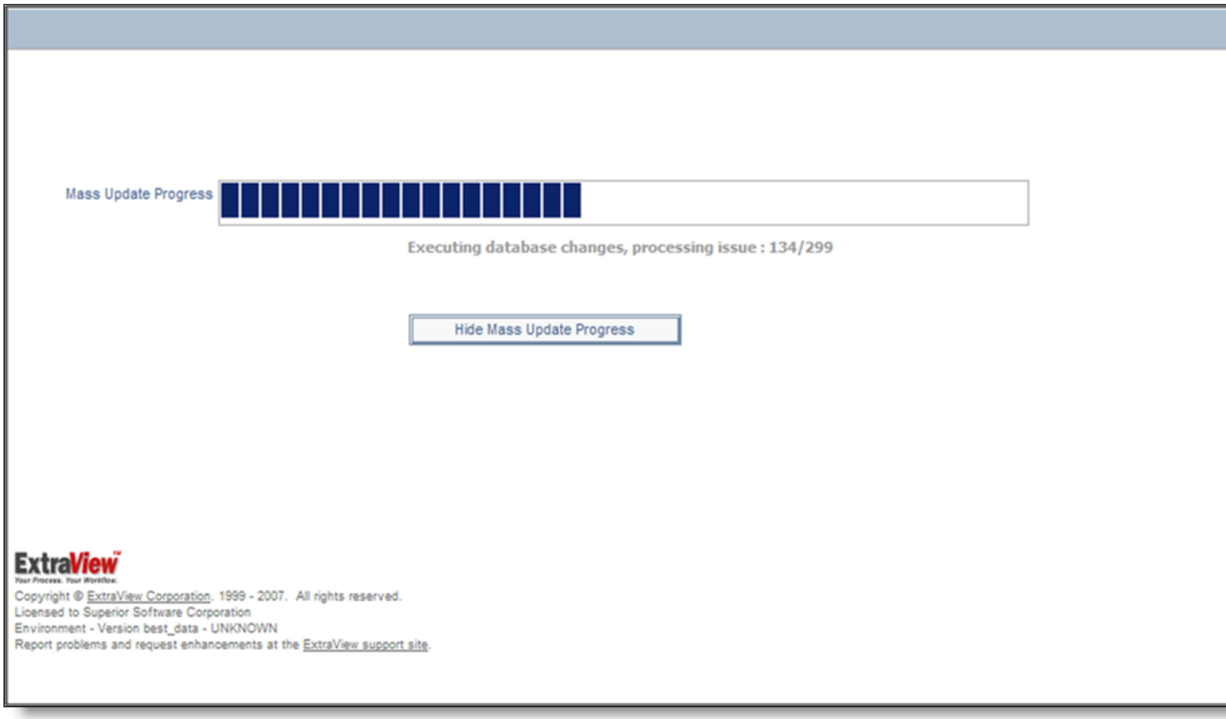
If you try to update a parent field that would invalidate the child records, for example trying to set the product field to appropriate for a given module, you will receive an error for that issue, or issues, and these issues will not be updated.

When ready, you can press the **Update all records** button.

You will be asked to confirm that you want to update the issues.

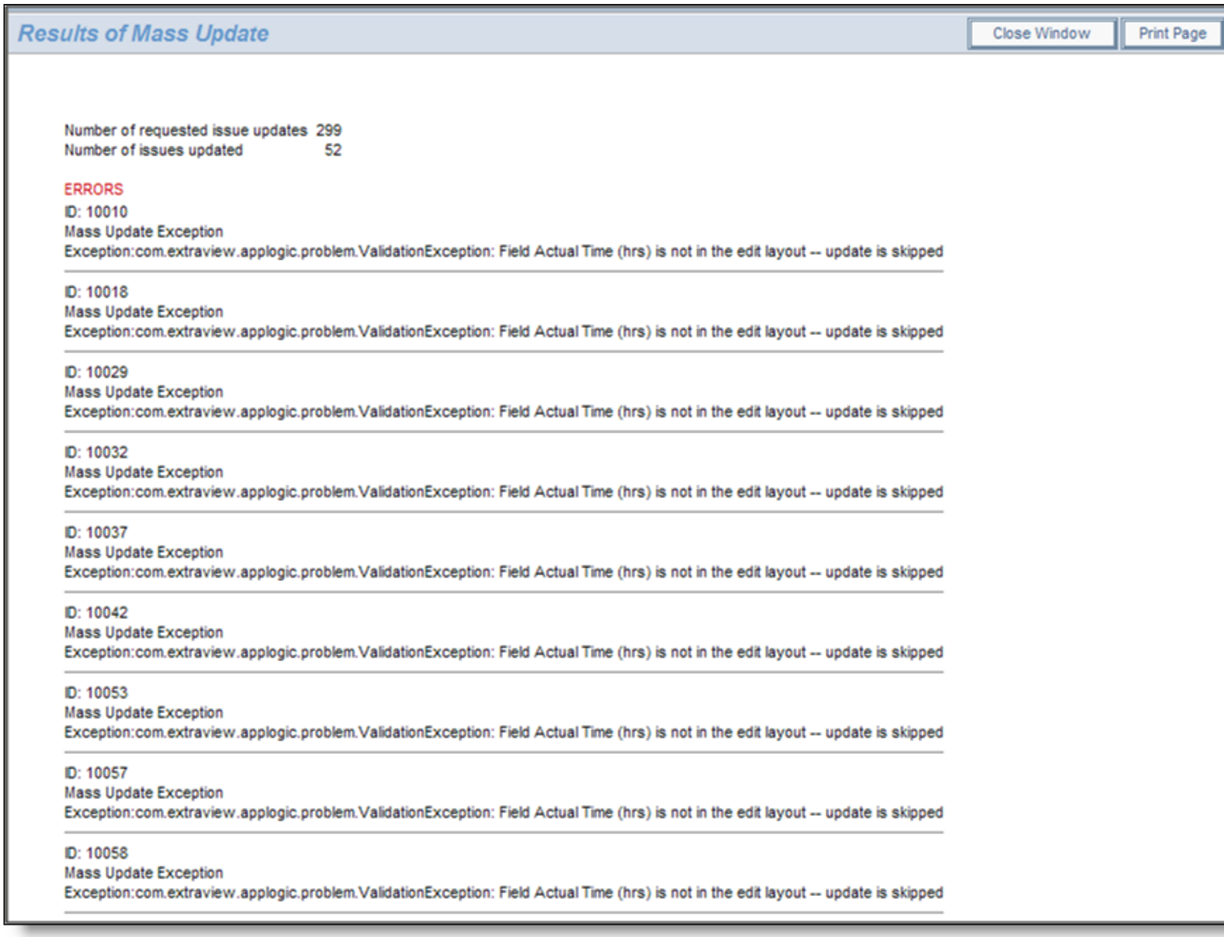
The default is that email notification is not sent when performing a mass update of issues. However, you can turn this the **Generate Email** checkbox to on.

On the screen, there is a checkbox that allows you to alter the mass update capability to a mass clone utility. When yo will see that you can select a new business area and a new project. When you perform the update, the issues are copie project, rather than updated. When you undertake this function, you are asked to confirm the operation before it proce



Mass update progress bar

Note: Pressing the button to hide the progress bar, or closing the window has no effect on the execution of the mass up background process, it will continue. The progress bar is purely for informative purposes. Once the mass update is coi assuming you have not closed the progress window, you will see a summary of the mass update, including any errors (most common error is trying to perform a global mass update across several business areas, when the field you are try not on the *edit* screen for the business area and project to which the issue belongs.



Results of a mass update, showing errors

Saving the Mass Update Settings for Future Use

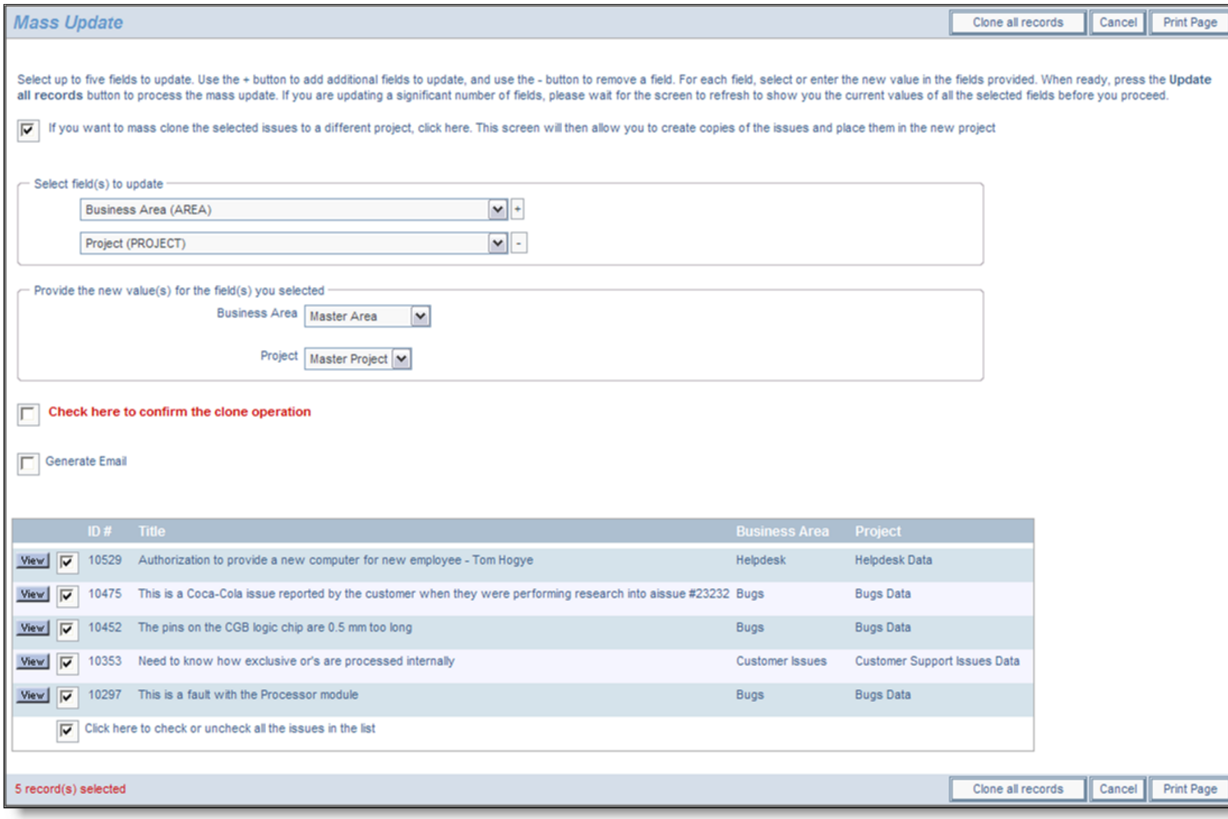
Once you have selected the fields to update, you can click the **Save / Update Field List** button and provide a name fo
future, any fields saved in the list may be selected to populate the screen with them to facilitate another similar mass u

[Click for end user documentation](#)

Cloning Issues via Mass Update

This procedure only clones issues from one Project in your installation to another Project. The destination project may
different Business Area. The operation of this feature is from within the Mass Update facility described in the last sect
must have both read and write access to the PROJECT fields (PR_ADD_PROBLEM.PROJECT and PR_RESOLUTI
order to be able to perform this function.

Follow the guide in the previous section and select the Project field from the list of available fields to update. Your adı
have given you permission to write to this field within your current Business Area and Project. When you choose the l
will see a screen similar to the following:



Mass cloning of issues from one Project to another

- You must give your consent to the cloning of the issues displayed before proceeding.
- Select the destination Business Area and Project in which to place the newly created issues
- If you choose Project, you cannot select any additional fields to update beyond the Area field
- Proceed by clicking on the **Clone all records** button
- No email notification is generated from the mass clone operation, even if the Generate Email checkbox is check

Geospatial Setup

[Click here for end user documentation]

Geospatial reporting must understand which fields in your installation point to fields such as latitude and longitude. T processed as a group so the link between which fields comprise addresses and the corresponding latitude and longitud defined. You may also have several fields that all have the same context, for example more than one field for latitude, field with the city name. Each field is defined with a global attribute which identifies the collection of fields that are u This is termed a GEO_GROUP and you may have any number of of these. Typically a GEO_GROUP will have most

- Latitude
- Longitude
- Street Address
- City
- State and or County
- Zip or Postal Code
- Country

The ideal configuration is one where you use an address verification service to check addresses you enter. These serv an address and return the precise street-level geolocation of a verified address. Contact ExtraView Corp. for details if assistance configuring this feature - ExtraView Corp. can license this service on your behalf. Note it may not be avail countries in the world.

Built into ExtraView is a more straightforward means of deriving the latitude and longitude of an address that does no of an address verification service. This provides geocoordinates to the city level internationally, and to the zip code le USA. Once configured, when you enter a complete or partial address into an issue, ExtraView can determine the clos longitude and automatically store these values within your issues, making them available for the generation of maps w

Summary of Steps to Configure Geospatial Reporting

1. Load the geospatial data
   1. Load Shapefile data if you intend to produce Shaded and Heatmap output - users will primarily use these reports
   2. Load geospatial coordinate data - this will be used to geocode address data entered. The data supplied wi data to the closest Zip code. Users utilize this data for the production of interactive heat maps. This step you will use an address verification service which geocodes your data to the street level
2. Setup the Data Dictionary fields with their global attributes. This is a required step
3. Load list data - these lists are provided to reduce the effort of configuring data such as lists of Countries and Cit optional step
4. Configure your layouts - place the fields you have configured onto the appropriate *add* and *edit* screen layouts. step

Loading Geospatial Data

In order to set up geospatial reporting, two types of data are provided. You may load one or both of these dependent u requirements.

- **Shapefiles** - these files contain vector-based polygons that provide the outline of territories, such as the outline States, Counties, etc. The shapefiles provided with ExtraView provide outlines of the Countries of the world, th Counties within the USA and the Provinces within Canada. Other shapefiles can be sourced and loaded. Shape generate shaded maps and heatmaps. These maps are ideal for reporting where the requirement is to generate A which are distributed via the report scheduler. The maps may also be presented within user's browsers. If you produce interactive maps, shapefiles do not need to be loaded
- **Geospatial Coordinates** - these files provide the latitude and longitude of locations. They are not required if y address verification service to validate addresses entered and to return the geocordinates of the validated addres provided are used to return the geocordinates of all major cities and major administrative areas within the world Provinces or Countries), and the States, Cities and Zip Codes within the USA. When configured as described o geospatial coordinates provide the means to add the latitude and longitude to any issue from the address informa enter. These coordinates are not accurate to the street level, but are accurate enough for most reporting purpose geospatial coordinate files may be sourced and loaded for other parts of the world.

Loading Shapefile Data

The shapefile data supplied with ExtraView is loaded as follows. Additional data sourced for other locations is loaded database in the same manner as described here. The shapefile data provided is:

- Country outlines for all countries in the world
- Outlines of all States within the USA and Provinces within Canada
- Outlines of all Counties within States within the USA

To load the data, a utility named populateShapeFiles is run externally to ExtraView as a Java application. This utility are contained in a subdirectory of the ExtraView directory named `WEB-INF/data`. All files within this directory with a

Any errors encountered while running the utility are communicated to the console as well as to the ExtraView applica

Windows Example

This example will load the data supplied with ExtraView and assumes that the environment variables `JAVA_HOME`, `TOM`
`EV_BASE` have been set.

Change your working directory to `%EV_BASE%/data`

Enter the command:

```
populateShapeFiles.bat %JAVA_HOME% %TOMCAT_HOME% %EV_BASE%
```

Linux Example

This example will load the data supplied with ExtraView on a Linux server.

Change your working directory to `$EV_BASE/data`

Modify the script named `populateShapefiles.sh` and edit the `JAVA_HOME` and `TOMCAT_HOME` entries to point to the co
your server

Enter the command:

```
./populateShapeFiles.sh EV_BASE [geospatial directory name]
```

`EV_BASE` is the base location of ExtraView and `[geospatial directory name]` is the optional directory name for the geospatial information if the directory name is not `geoshapefiles`.

Loading Geospatial Coordinate Data

The geospatial coordinate data supplied with ExtraView is loaded as follows. Additional data sourced for other locatic
your database in the same manner as described here. The geospatial data provided is:

- Country level data for all countries in the world
- Top administrative level within each country. For example the geolocations for States in the USA, Provinces in
  Counties in the United Kingdom
- Within the USA, geospatial coordinates for each County within each State
- Within the USA, geospatial coordinates for each Zip Code

To load the data, a utility named populateGeospatialTables is run externally to ExtraView as a Java application. This u
scripts that are contained in a subdirectory of the ExtraView directory named `WEB-INF/data`. All scripts within this di
with an extension of `.sql` are executed. These scripts may all be contained within a single zipped file (with the exten
data supplied with the installation is in the directory and file named `WEB-INF/data/geoscripts/geoscripts1.zip`.

The populateGeospatialTables utility takes these arguments:

- `JAVA_HOME`
- `TOMCAT_HOME`
- `EV_BASE`
- Optionally, the name of the directory under `WEB-INF/data` where the script files are stored if you do not intend t
  `geoscripts`.

Any errors encountered while running the utility are communicated to the console as well as to the ExtraView applica

Windows Example

This example will load the data supplied with ExtraView on a Linux server.

Change your working directory to `$EV_BASE/data`

Modify the script named `populateGeospatialTables.sh` and edit the `JAVA_HOME` and `TOMCAT_HOME` entries to point t places on your server

Enter the command:

```
./populateGeospatialTables.sh EV_BASE [geospatial directory name]
```

`EV_BASE` is the base location of ExtraView and `[geospatial directory name]` is the optional directory name for the geospatial information if the directory name is not `geoscripts`.

Geospatial Global Attribute Definitions

As stated above, your ExtraView configuration is preconfigured to work with geospatial reports. You may define add fields for geospatial working within your site or you may alter the default configuration provided. For example, you r different GEO_GROUPS for different tracking applications in different Business Areas and Projects within your insta may want to alter the default GEO_GROUP name (which is GEO_GROUP).

Attribute	Field Type	Purpose
GEO_GROUP	--	The name of the group of attributes that collectively define the information required to save geocoded information. All attribut a group must have the same name. This allows you to define an of groups for different purposes, with each group pointing to dif fields for latitude, longitude, etc. Examples of names are GEO_ (the preconfigured group name), MY_GEO_GROUP, or NORTH_AMERICA_GEO_INFO. This attribute name is place the fields that form a group.
GEO_LATITUDE	Decimal	This attribute is placed on the field that contains the latitude of t address for the GEO_GROUP
GEO_LONGITUDE	Decimal	This attribute is placed on the field that contains the longitude o address for the GEO_GROUP
GEO_RELIABILITY_LEVEL	List or Text field	Depending on the source of the geocoding information (anywhe manual entry to automated lookup of latitude and longitude) Ext may detect that the information entered is inaccurate. For exam might try to enter a latitude and longitude for an address in the S California and the geo coordinates you provide are obviously in different part of the USA or different part of the world. ExtraVi determine the most reliable level of the data. For example, if the geo coordinates are in New York and the adc entered states that it's in California, the reliability level will be tl Country level of the USA. Similarly, if you enter an address wh that a City's name is in the state of California, but no such City r exists, the reliability level will be set to the State level.
GEO_ADMIN_BOUNDARY_LEVEL	--	This attribute provides the level of the data for the field within v defined. For example, the field which contains the values for th will most probably have a GEO_ADMIN_BOUNDARY_LEVE GEO_ADMIN_BOUNDARY_LEVEL1 and the field that conta values for the State will have a GEO_ADMIN_BOUNDARY_L GEO_ADMIN_BOUNDARY_LEVEL2

Location of Data	Purpose
`WEB-INF/data/countries.txt`	A list of the full names of the Countries in the World
`WEB-INF/data/countries-iso-alpha-2.txt`	A list of the ISO 3166-1 alpha-2 character abbreviations (in the World
`WEB-INF/data/countries.txt`	A list of the ISO 3166-1 alpha-3 character abbreviations (in the World
`WEB-INF/data/au-states.txt`	A list of the States and Territories of Australia
`WEB-INF/data/au-states-abbrev.txt`	A ist of abbreviations of the States and Territories of Aus
`WEB-INF/data/ca-provinces.txt`	A list of the Provinces and Territories within Canada
`WEB-INF/data/ca-provinces-abbrev.txt`	A list of 2 character abbreviations of the Provinces and T Canada
`WEB-INF/data/cn-divisions.txt`	A list of the Divisions of China
`WEB-INF/data/cn-divisions-abbrev.txt`	A list of numeric abbreviations of the Divisions of China
`WEB-INF/data/de-states.txt`	A list of the States witrhin Germany
`WEB-INF/data/de-states-abbrev.txt`	A list of 2 character abbreviations of the States witrhin G
`WEB-INF/data/es-provinces.txt`	A list of the Provinces and Municipalities in Spain
`WEB-INF/data/es-provinces-abbrev.txt`	A list of abbreviations for the Provinces and Municipaliti
`WEB-INF/data/fr-regions.txt`	A list of the Regions of France
`WEB-INF/data/fr-regions-abbrev.txt`	A list of abbrevitions of the Regions of France
`WEB-INF/data/it-regions.txt`	A list of the Regions of Italy
`WEB-INF/data/it-regions-abbrev.txt`	A list of abbreviations of the Regions of Italy
`WEB-INF/data/ja-prefectures.txt`	A list of the Prefectures of Japan
`WEB-INF/data/ja-prefectures-abbrev.txt`	A list of abbreviations for the Prefectures of Japan
`WEB-INF/data/nz-regions.txt`	A list of the Regions within New Zealand
`WEB-INF/data/nz-regions-abbrev.txt`	A list of 3 character abbreviations for the Regions within
`WEB-INF/data/uk-counties.txt`	A list of the Counties within the United Kingdom
`WEB-INF/data/us-states.txt`	A list of the 50 States plus the District of Columbia withi States of America
`WEB-INF/data/us-states-abbrev.txt`	A list of the 2 character abbreviations of the 50 States plu Columbia within the United States of America

Example Configuration

Step 1

Within the data dictionary search for and edit the field named MAP_RELIABILITY_LEVEL. This field should be co follows:

	Property	Value
	Multiple Value	No
	Allow selection on reports	Yes
	Filter Criteria	Yes
	Is sortable	Yes
	Add a Global Attribute of GEO_GROUP	GEO_GROUP
	Add the Global Attribute of GEO_RELIABILITY_LEVEL	--

The field list values should be examined, and if necessary the titles may be altered for your configuration. The predef

In the data dictionary edit the field named LATITUDE. It should be configured as follows:

	Property	Value
	Field Name	LATITUDE
	Field Title	Latitude
	Display Type	Decimal
	Allow selection on reports	Yes
	Filter Criteria	Yes
	Is sortable	Yes
	Global Attribute of GEO_GROUP	GEO_GROUP
	Global Attribute of GEO_LATITUDE	--

Step 3

In the data dictionary edit the field named LONGITUDE. It should be configured as follows:

	Property	Value
	Field Name	LONGITUDE
	Field Title	Longitude
	Display Type	Decimal
	Allow selection on reports	Yes
	Filter Criteria	Yes
	Is sortable	Yes
	Global Attribute of GEO_GROUP	GEO_GROUP
	Global Attribute of GEO_LONGITUDE	--

Step 4

If they do not already exist, create your own user defined fields in the data dictionary that hold data for the *Country*, *S* *County*, *City* and *Zip/Postal Code*. These correspond to the values created in Step 1. Frequently you will not require fields. For example, it is common within the United States not to use *County* as part of the address. Configure the pro permissions for these fields as necessary. The fields may be one of the following display types:

- Text
- List
- Pop-up

It is typically more convenient to configure fields with shorter amounts of text as List or Pop-up types and fields with more data as Text fields. F is often configured as a List field and an *Address* field is usually configured as a text field. You may use one or more of the optional s to pre-load values into List and Pop-up list fields.

Add a global attribute for the GEO_GROUP name, which in our example is GEO_GROUP. Add the GEO_ADMIN_BOUNDARY_LEVEL global attributes as follows:

	Example Field Name	GEO_GROUP	GEO_ADMIN_BOUNDARY_LEVEL	GEO_RELIABILITY
	COUNTRY_NAME	GEO_GROUP	2	Country
	STATE_NAME	GEO_GROUP	3	State / Province
	CITY_NAME	GEO_GROUP	4	City
	POST_CODE	GEO_GROUP	4	Zip / Postal Code

Note that the GEO_ADMIN_BOUNDARY_LEVEL values do not correspond to the sort order of the values for the MAP_RELIABILITY_LEVEL values. First, the GEO_ADMIN_BOUNDARY_LEVEL value of 1 is defined as the l World. Secondly, when generating shaded maps and heat maps, ExtraView is only prepopulated with maps for the co world, states and provinces of the USA and Canada, and counties of the USA. An interactive map of the world allows

This allows you to defined multiple, independent groups of fields where each group has completely independent work single ExtraView installation. For example, you might have one group that is used to map customer issues, while a se map the location of all your organization's stores.

Each group must have its own set of fields as stated here. For the MAP_RELIABILITY_LEVEL, you may create an MAP_RELIABILITY_LEVEL field.

Click here for end user documentation

Mass Deleting of Issues

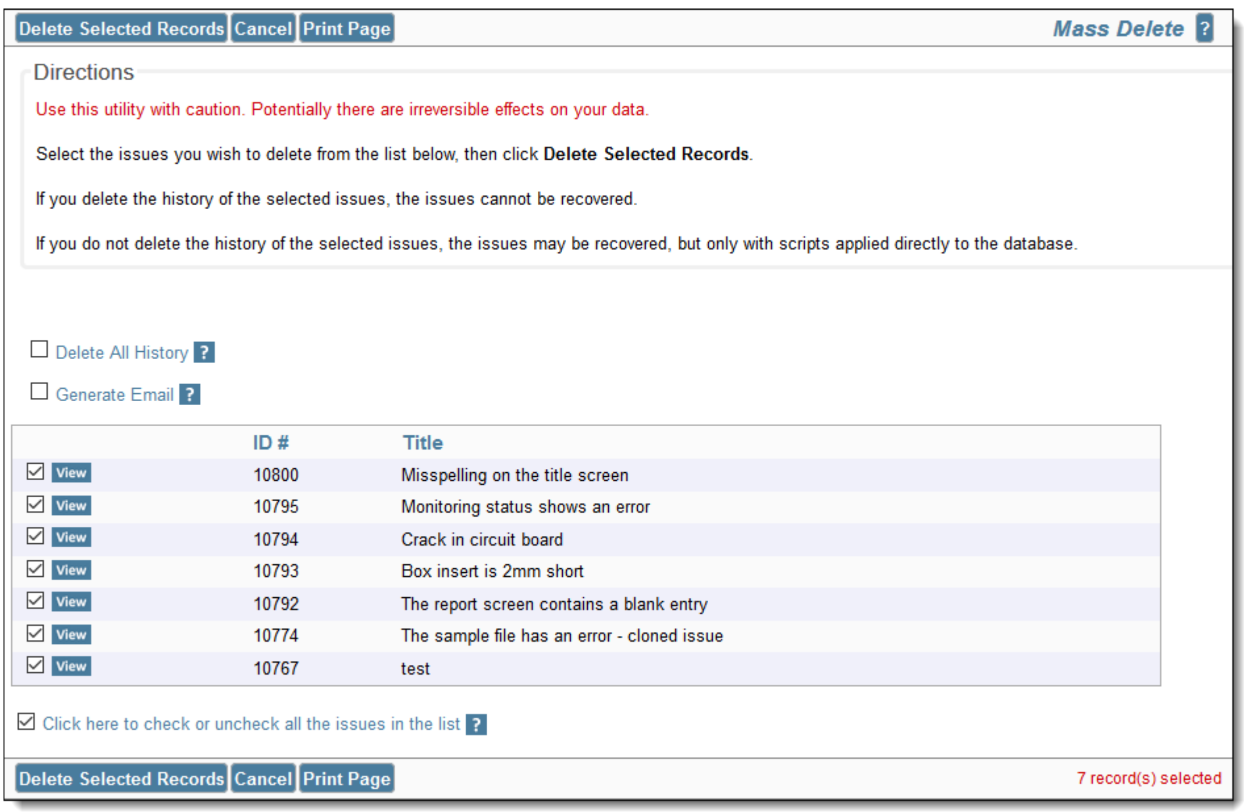
Click for related information

Extreme caution should be used with this utility. Only user roles who have the authority to make mass changes which undone should be granted access to this utility.

The primary use for this feature is to allow organizations who have record retention policies to be in compliance with For example some organizations may have a policy that states that records more than 7 years old should be deleted.

Access to this feature is granted with the security permission key named PR_RESOLUTIO.MASS_DELETE_ISSUES strongly recommended that only user roles who have permission to make wholesale changes to your database should permission to this utility.

With permission, a button labeled **Mass Delete Issues** appears on the output of Quicklists and Column reports. This utility and shows a screen similar to the following:



When you have made the appropriate selections for deletion, click the **Delete Selected Records** button on the menuba asked to confirm that it is OK to proceed. There will be a progress screen displayed. Once the deletion is complete, tl summary of the deletions made.

Configuring the Fields Displayed on the Screen

By default, the fields named VIEW_BUTTON, ID, AREA, PROJECT, and SHORT_DESCR appear on the review scı may be changed via the behavior setting named MASS_DELETE_TEMPLATE. This field contains a comma-delimit fields that are displayed.

Click for related information

Scheduled Reports

With write permission to the key named SR_REPORT_SCHEDULE, members of user roles have the ability to genera timed, periodic basis. These reports are sent out via email and may also be added to the document repository for futur task named SCHEDULED_REPORT_TASK must also be running.

Please view the end user documentation here for instructions on how to use the report scheduler, to send reports by en

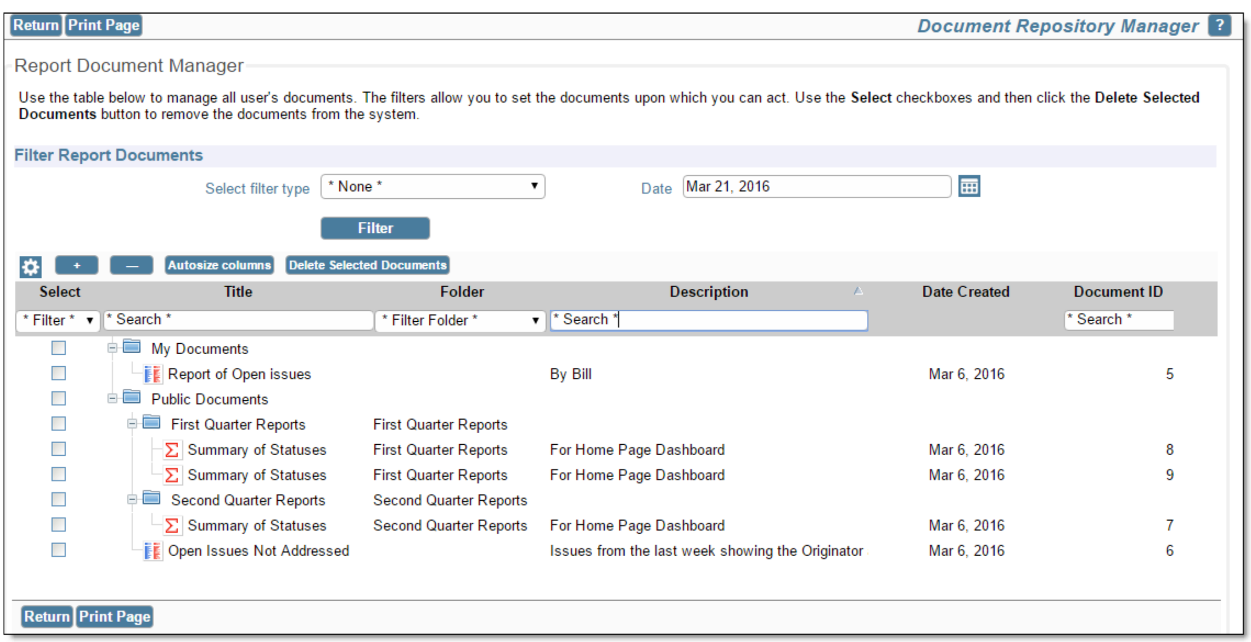
Document Repository

Reports that generate output that you send to the document repository are controlled with the following:

- The Report Scheduler Task must be running
- Users accessing the document repository must have permission to schedule reports via the role-based security p named SR_REPORT_SCHEDULE
- Users adding documents or deleting reports with the document repository must have write permission to the sec key named SR_REPORT_REPOSITORY_ACCESS
- Users who view or download documents from the repository must have read permission to the security permissi SR_REPORT_REPOSITORY_ACCESS
- Administrators who require access to the utilitiy named **Document Repository Manager**, must have read and v to the security permission key named CF_REPORT_DOCUMENT

The Document Repository Manager

The utility resides within the **Operational Tasks** administration menu.



Document Repository Administrative Utility

The utility allows you to perform the following tasks:

- Filter the documents by:
  - Created on or before a date
  - Last updated on or before a date
  - Created on or after a date
  - Last updated on or after date
- Select any subset of documents, whether filtered or not and delete these documents, irrespective of the owner of

Controlling Large Queries

With a very large database, you may want to control how large reports are run, restricting users from doing repeated q
each try to return hundreds of thousands or more records. Use these behavior settings to provide some sensible constra

- ALLOW_UNLIMITED_SEARCH – This behavior setting can be used to turn off the ability to perform unrestri the database. When this setting is set to NO, it is used in conjunction with the next setting, LIMIT_QUERY_RC
- LIMIT_QUERY_ROWS – This sets a numeric limit on the number of rows returned by a single user's query. T if ALLOWED_UNLIMITED_SEARCH is set to YES
- MINIMUM_SEARCH_FIELDS – This setting is used to force a user to select a number of filters before their q executed. If you specify a single number, then this specifies the number of filters in addition to the KEYWORD be provided. If you provide two numbers, separated by a comma, then the first number specifies the number of to the KEYWORD filter that must be provided and the second number specifies the number of filters that must no KEYWORD filter is provided. The default is 0,0. For large databases, a setting of 2 or 3 for each number typ sufficient control, to ensure that only a small section of the database is searched at one time, and that users do n download millions of records or perform complex queries across millions of records.

  If the user has selected the advanced query mode, ExtraView only counts the conjunctions with an *and* conjunct conjunctions do not restrict the query keyword query.

Updating Consecutive Issues from Reports

Some workflows find it useful to be able to edit a number of records in sequence. For example, a user may want to run open issues, then edit each record in turn, but without needing to return to the report to click on the **Edit** button for ea alternative is to use the Quickedit feature within the report itself.

To set up this feature, there is a permission key named PR_RESOLUTION.ALLOW_EDIT_NEXT_PREVIOUS. This when write permission is available for the user's current role, and the user executes a Quicklist or column report. Whe down into any issue with the **Edit** button on any issue, the *edit* screen will have two additional buttons on the menu ba **& Prev** and **Update & Next**. When the user clicks one of these buttons, they will be taken directly to the previous or following a successful update.

Ranking Fields on Reports

This is documented in the section on special purpose fields. Click here to access the page.

Privacy Groups

Privacy groups are designations that limit the visibility of issues, except those users who are members of the privacy g

This is found in the Users behavior settings menu.

Note: If ENABLE_PRIVACY_GROUPS is set to NO, then issues may only be marked as PUBLIC or PRIVATE. If ENABLE_PRIVACY_GROUPS is set to YES, then issues may be marked as PUBLIC, PRIVATE or a member of a p you create. With the latter option, you may also elect to remove either the PUBLIC and / or PRIVATE designation fro explained in the section following.

Note: There is a behavior setting named ENABLE_PRIVACY_GRP_OVERRIDE. If the value is set to YES, then int see all issues regardless of the value of the PRIVACY field. Internal users are defined by the user's personal Company identical to the company name defined by the behavior setting named COMPANY_NAME. If the value is set to NO, see issues when they are a member of the privacy group to which the issue is assigned.

The precise rules for how issues are handled with respect to privacy groups are as follows:

- **Private issues**. When an issue is marked as private, then only users whose Company name setting in their user identical to the behavior setting named COMPANY_NAME will be able to view and update the issue. If the Pri not appear on the Add Issue screen, then ExtraView will automatically set the PRIVACY field with its default v in the data dictionary (usually PRIVATE). If there is no default, ExtraView always sets the value to PRIVATE. S permission settings for individual fields, screens and functions still apply. Note that there is a behavior setting n ENABLE_COMPANY_NAME_ACCESS that overrides this behavior for specific circumstances. Please refer t this guide on Company Name Security for full details.
- **Public issues**. When an issue is marked as public, then any user with an active account can potentially view an issue. The specific permissions to view and update the entire record or individual fields are subject to the securi each object.
- **Issues within a privacy group**. As a user, you must be a member of the specific privacy group to view and upd Once again, security permissions for all objects still apply.

PUBLIC and PRIVATE Visibility

When using privacy groups, it is sometimes useful to be able to control whether the entries for PUBLIC and PRIVAT within the select list boxes on the *add*, *edit* and *search* screens.

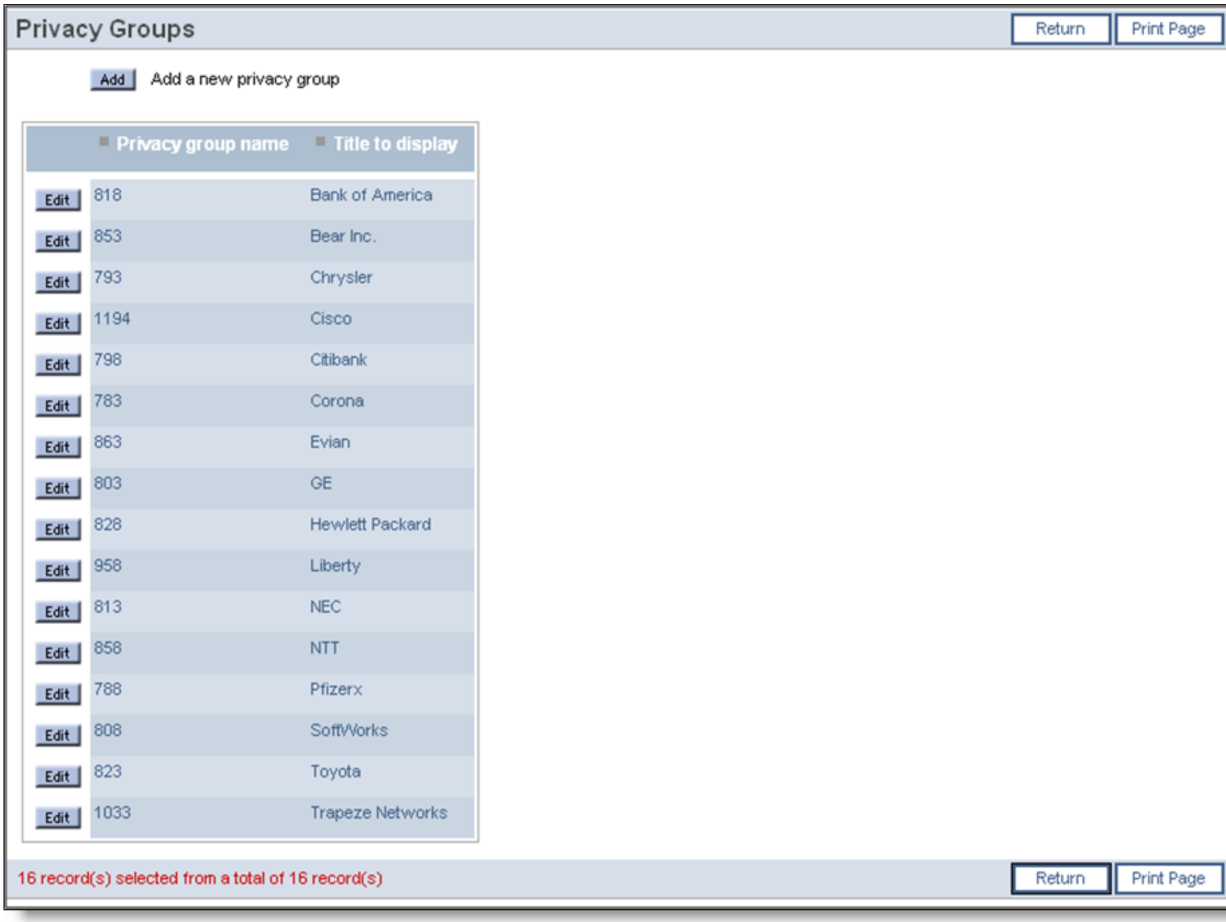
For example, you may always want a privacy group to be selected for every issue without exception.

This can be achieved through the settings of the following security permission keys. These can be set for each user rol ExtraView, in the standard way of setting security permissions.

Security permission key	Purpose
PR_ADD_PROBLEM. SHOW_PRIVATE_IN_PRIVACY_LIST	Write permission to this security key is needed to place the entry select list for the Privacy field on the add issue screen. If this key issues cannot be marked as private for the user role.
PR_ADD_PROBLEM. SHOW_PUBLIC_IN_PRIVACY_LIST	Write permission to this security key is needed to place the entry select list for the Privacy field on the add issue screen. If this key issues cannot be marked as public for the user role.
PR_RESOLUTION. SHOW_PRIVATE_IN_PRIVACY_LIST	Write permission to this security key is needed to place the entry select list for the Privacy field on the edit issue and query screens. set to N, then issues cannot be marked as private or searched for t
PR_RESOLUTION. SHOW_PUBLIC_IN_PRIVACY_LIST	Write permission to this security key is needed to place the entry select list for the Privacy field on the edit issue and query screens. set to N, then issues cannot be marked as public or searched for th

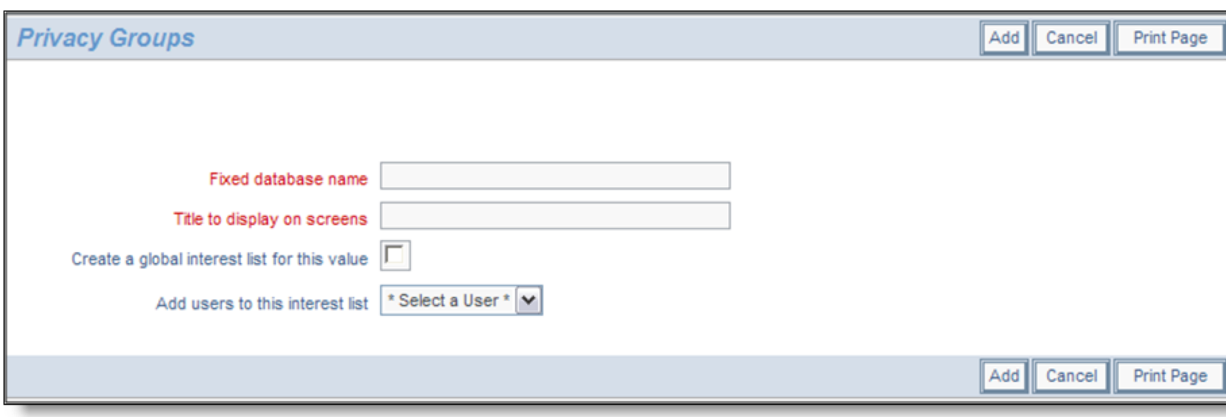
Creating New Privacy Groups

From the Site Configuration administration menu, click the **Privacy Groups** button. A screen similar to the following



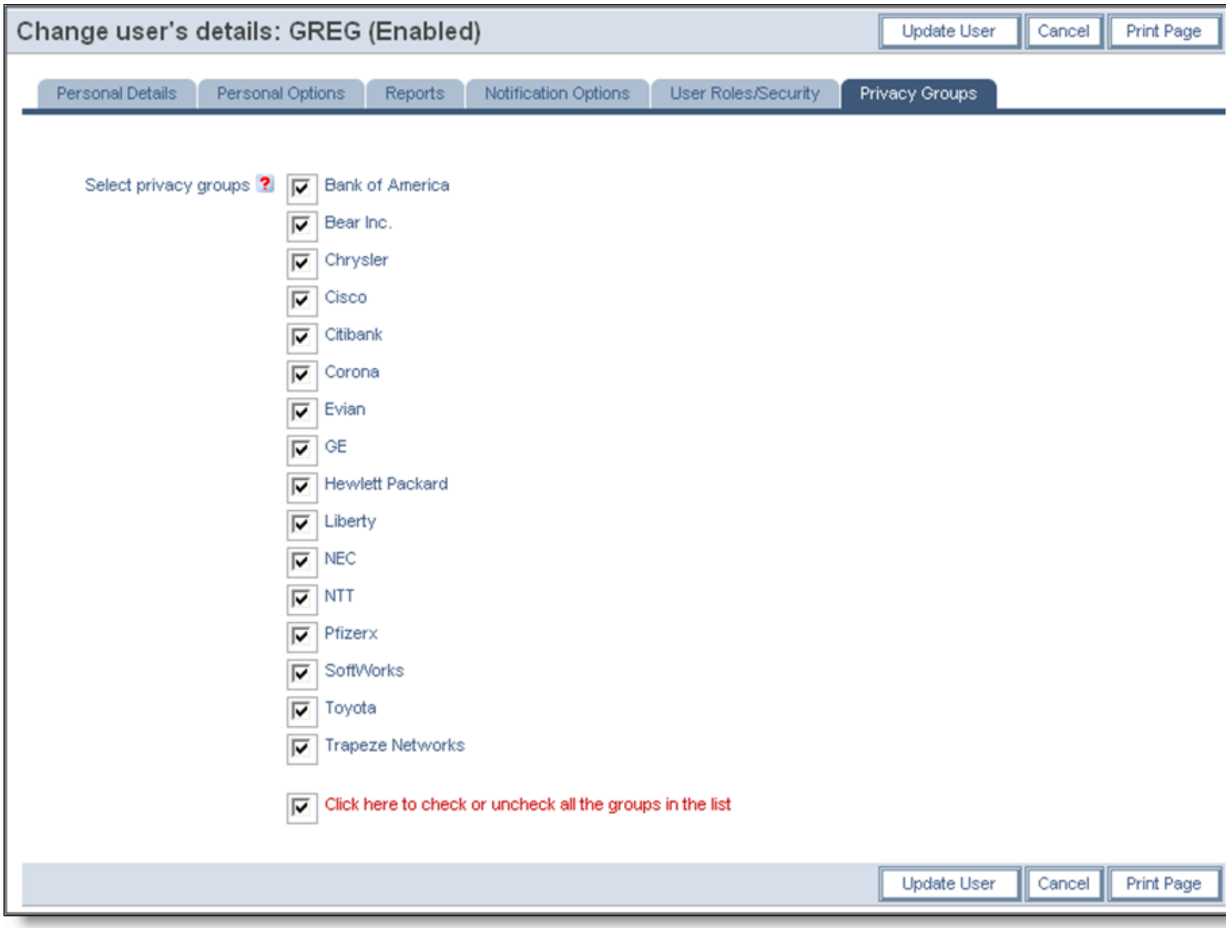
Privacy Groups screen

To create a new privacy group, click the **Add** button. The following screen appears:



Add New Groups screen

Enter a database name (no spaces or special characters) and a display name. If an interest list is allowed on the field, y
create an interest list for this value and add a user. When ready, click the Add button to create your new value. Once th



Change User's Details screen with Privacy Groups

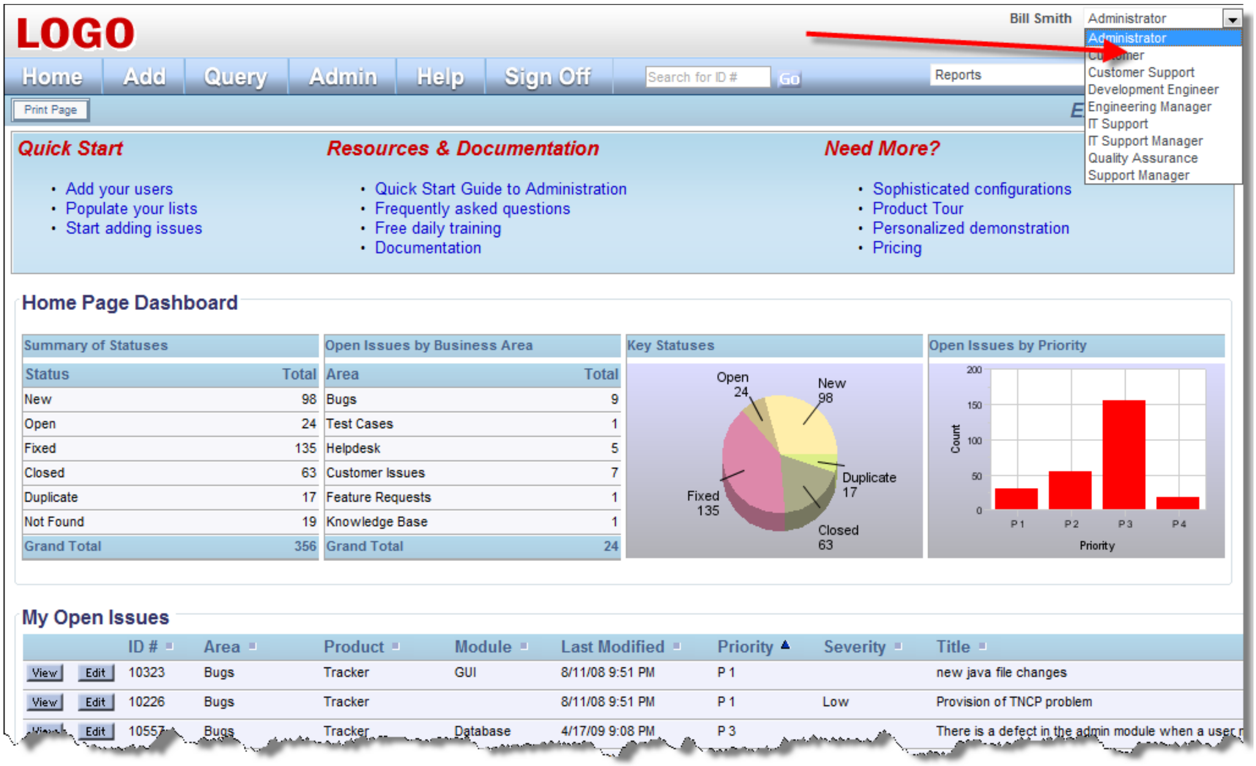
User Roles

User Roles are the functional teams of your company or the external users that will be using ExtraView. User Roles ar specific privileges based on what you want each of them to be able to see and do. Example user roles may be:

- Administrator
- Customer
- Engineer
- QA
- Manager

There is no limit to the number of user roles that may exist within your ExtraView system. Additional user roles may l time. Individual users may belong to any number of user roles. When a user is given the privilege of belonging to mor role, they are automatically given a link in the title bar of the screen that shows their current role. Following the link a alter their role. A user may not change their role when in the add / edit issue process, or during the process of preparin change may significantly alter their permissions, and would lead to unpredictable behavior.

Altering the Current User Role



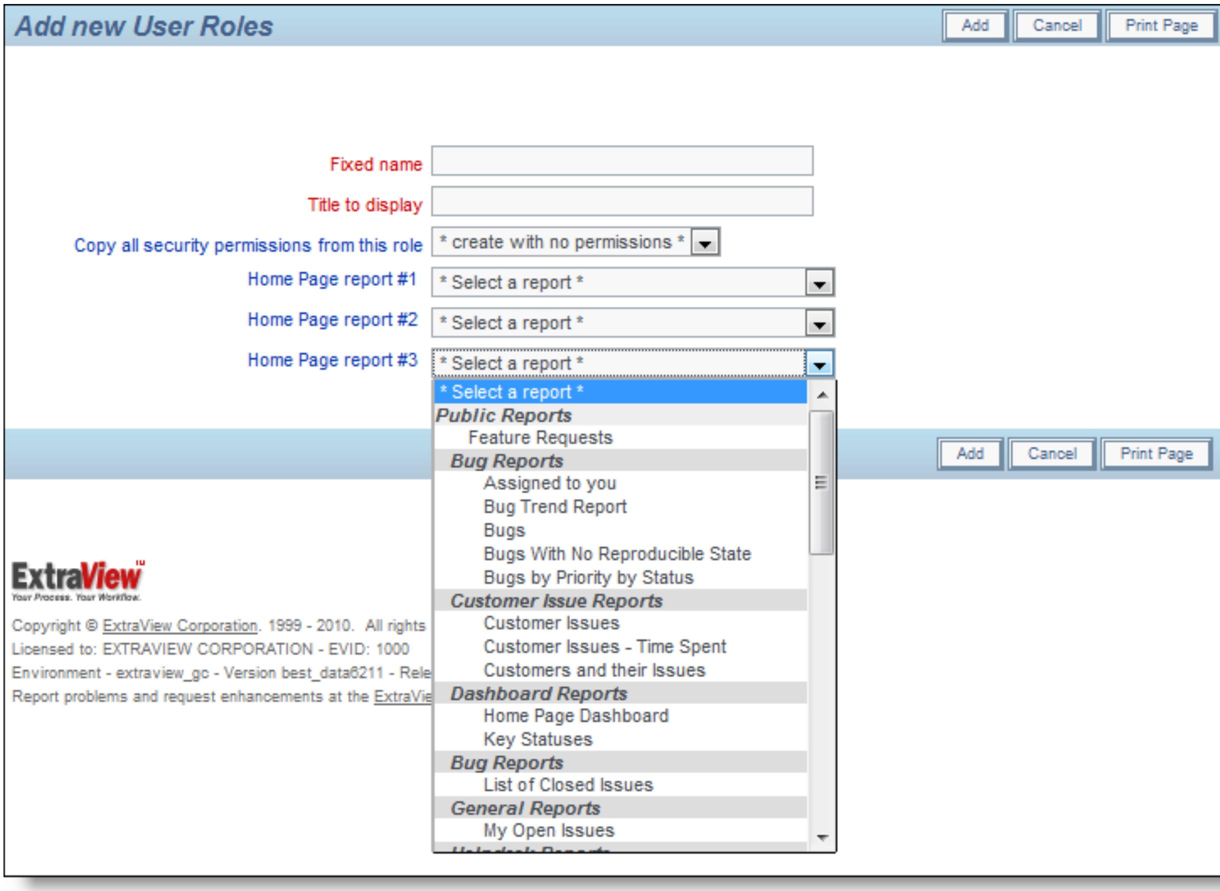
Home Page screen

1. Click on the list of user roles in the navigation bar and observe a list of the roles that your user may adopt
2. Select the role you would like to adopt by clicking on its name. Your role is immediately changed and your perr reflect the change. You may find that access to certain buttons on the navigation bar disappear or appear, or that show up in the add/edit screens, or that buttons are added and fields appear in some screens; this is a direct resu your role.
3. When you change the user role to which you currently belong, ExtraView automatically adapts and presents the and reports that have been customized for that user role.

Adding New User Roles

Click the **User Roles** entry under the Site Configuration tab within administration. Click the **Add** button on the User I

User Roles Summary screen



Add a User Role screen

- Click the **Update** button when done.

Multi-Language Setup

ExtraView allows each user to select their own language for the user interface of the product. In addition to localizing messages and prompts, the administrator may also localize their own metadata for the fields and layouts that they crea matter what languages you want to support on the user interface, ExtraView will handle any alphabet within the data t within issues. Unicode is fully supported.

Setting up a multi-lingual setup requires a number of behavior settings to be set at their correct values. These settings the **Environment** behavior settings category.

Environment Settings	Purpose
DEFAULT_ATTACHMENT_CHARSET	The default character encoding for files being uploaded to ExtraView. Tl to select the initial value presented to the administrator when creating a r is the default value and should be used for most installations. If the majo users use Japanese, you may consider an alternative such as Shift-JIS
DEFAULT_LANGUAGE	This is the default language for the installation and will be used as the de

LOCALIZE_TITLES	This setting is used to turn off and on the localization buttons within adn is used when you are using ExtraView's multiple languages on the user i this option is set to YES, a button with the title of **Localize** will appear b metadata titles and values that can be localized into different languages. YES and NO
MULTI_LOCALE	ExtraView will behave as a single locale system, using the language spec behavior setting named DEFAULT_LANGUAGE when this value is NO to YES, the administrator may add any number of additional language lo system, and provide localized messages and metadata for each locale. If using a single language, do not set this value to YES, as there are perforr to running in a multi-locale mode

The following settings are sensitive if you are working within a language such as Japanese, where there are not necess characters between each word or character. Under these circumstances, the HTML language used in display browsers forgiving and can give strange display results.

Display Settings	Purpose
FOLD_TEXT_POSITION	This specifies the character position at which to fold text lines in TEXT LOG_AREA fields. You should not specify a number lower than 65. If high number, such as 99999, the text input will never be folded. This is double-byte languages where spaces may not appear between words, as ExtraView to introduce line-breaks at appropriate intervals
FOLD_WORD_POSITION	This specifies the character position at which to break up a long word i and LOG_AREA fields. You should not specify a number lower than 6 a high number, such as 99999, the long word will never be broken up. for double-byte languages where spaces may not appear between words ExtraView to introduce line-breaks at appropriate intervals
REPORT_WITH_FIXED_WIDTH_FONT	This should always be set to NO when working with double-byte langu

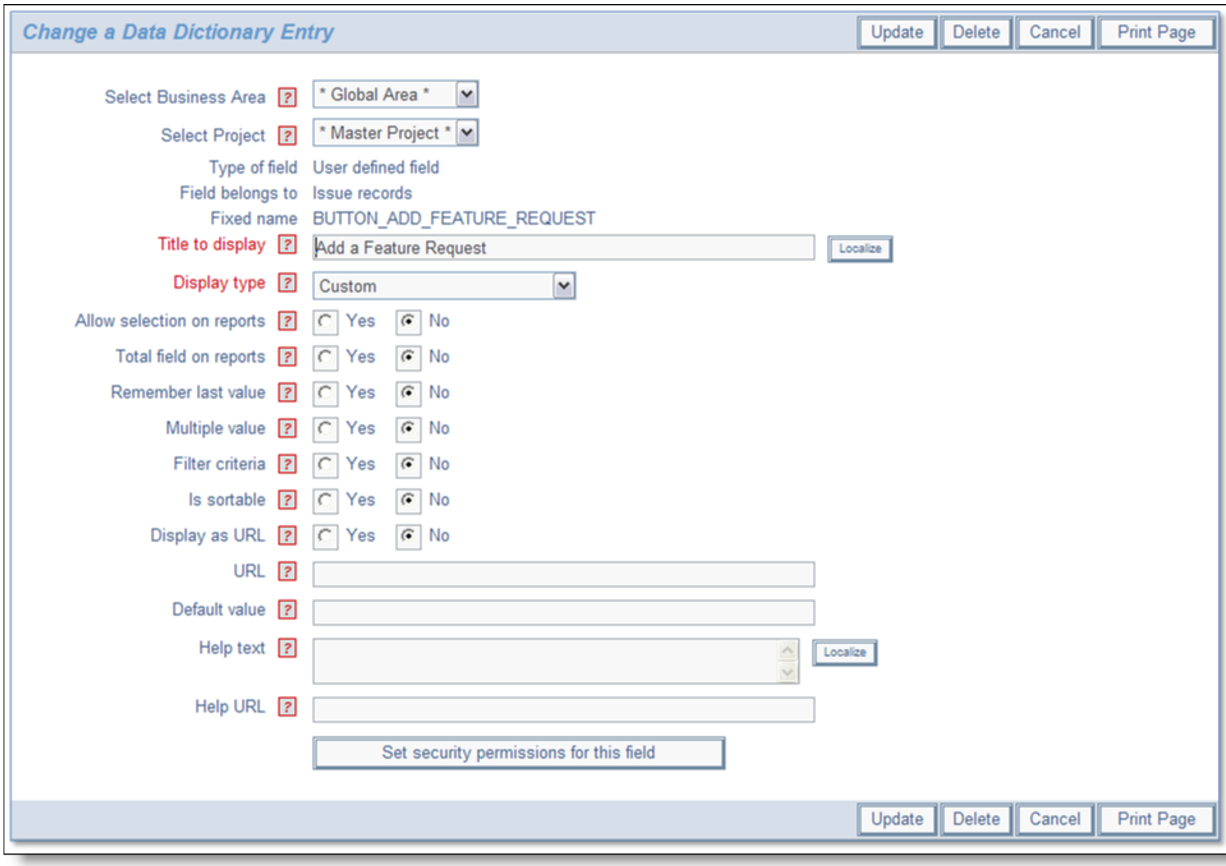
Home Page Shortcut Buttons

This feature allows any number of shortcut buttons to be placed on a layout that is part of the Home Page. The shortcu an *add* screen or run a report.

Permissions to the shortcut buttons are controlled by the permission the user has to the underlying object. For example a shortcut button to go to an *add* screen, then the user must have permission to go to the business area and project of tl you are using the shortcut button to run a report, then it is the permission the user has to that report that controls the vi button.

Creating the Button Fields

Create a field in the data dictionary for each shortcut button that you require. To create a shortcut to an *add* screen, cre the fixed name has the form **BUTTON_ADD_name**. To create a shortcut to a report, the fixed name must have the fo **BUTTON_RUN_name**. All fields should have a display type of **Custom**. The title of the button becomes the text tha button. Make sure you provide security permissions for each role that you want to use each button. This is an example data dictionary:



Shortcut Button in the Data Dictionary

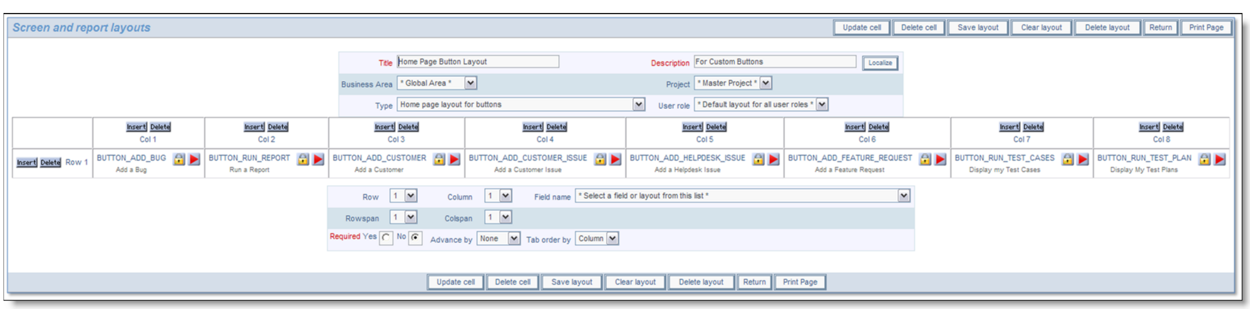
Creating the Layout Type

Go to **Administration ➧ Fields & Layouts ➧ Create and Maintain Layout Types**. Add a new layout type. This lay have a fixed name of **HOME_PAGE**. The usage must be **Screen**.

Adding the Layout to the Home Page

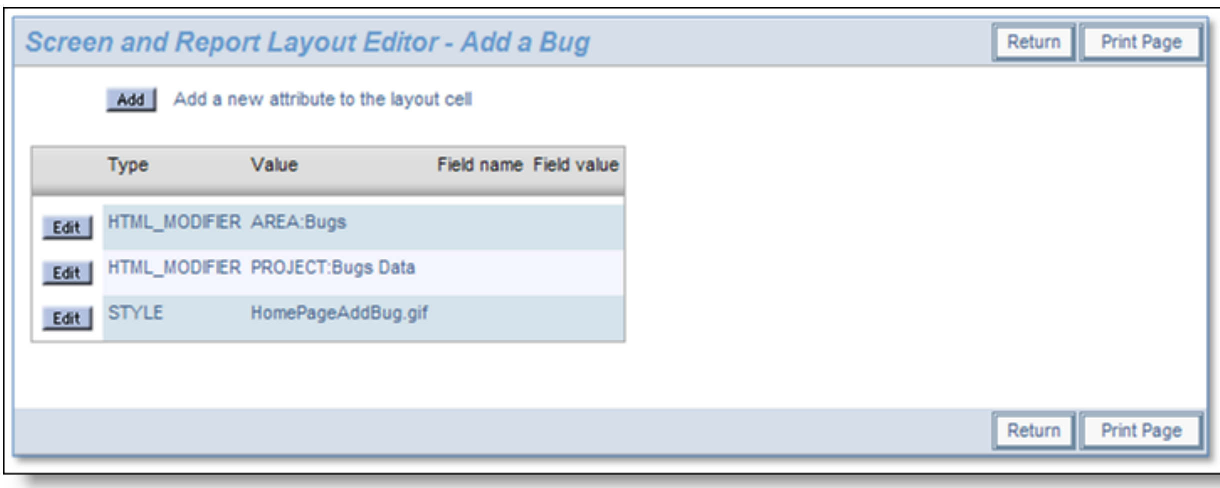
Go to **Administration ➧ Fields & Layouts ➧ Design Center**. You may create a Home Page layout in the * **Global A** will be used across all business areas and projects, or using the standard inheritance mechanism, you can create differe shortcut layouts in different business areas, projects or roles. Use the **Add a new layout for the entire system** select l layout type you just created in the previous step.

After adding the layout, you are able to place the buttons onto the layout, similar to the screen shown here:



Attribute	Example	Purpose
FIELD HTML MODIFIER	AREA:BUGS	This points the button to add an issue in the **BUG** business area. The business area provided must match the name of an existing business a user has permission. To see the names of the business areas in your in **Administration ➧ Lists ➧ Business Areas**. This modifier is required
FIELD HTML MODIFIER	PROJECT:BUGS_DATA	This points the button to add an issue in the **BUGS_DATA** project wi business area specified by the *AREA*: modifier above. This is required Project fixed name must match the one into which you want to add da this is **not** the Project with an ID of 0. If you are not certain of the Bu Project names, go to **Administration ➧ Lists ➧ Project**, select the B and you will see a list of all the Projects within the Business Area.
FIELD STYLE	HomePageAddBug.gif	This is an optional attribute. If it is provided, the button will use this i button. The image is situated within the directory pointed to by the be named IMG_NAV_BAR_HOME. If you do not provide a STYLE att button is rendered as a text style HTML button. Images for Home Pag not provided, but can easily be created with any button/image creation If ExtraView Corporation is hosting your installation, you do not have to the file system of the server upload these images to the web server.
FIELD HTML MODIFIER	CSS:font-size:20pt;background-color:#FF8888	This is an optional attribute that overrides the built-in style of buttons to set your own style. The style is expressed as CSS. Do not use this i the **STYLE** attribute

Example of the attributes for an add shortcut button.



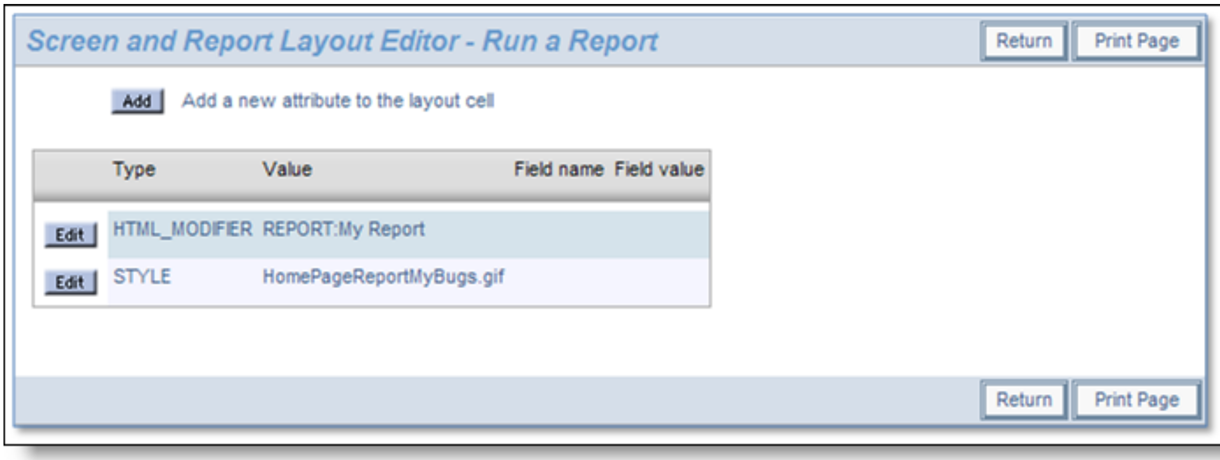
Shortcut Button Attributes

Shortcut Run Buttons

Attribute	Example	Purpose
FIELD HTML MODIFIER	REPORT:My Report	This points the button to run the report named **My Report**. The name m title of an existing report which the user has permission to run. This is r that running Container reports and Custom URL reports from shortcut b supported.

FIELD HTML MODIFIER	CSS:font-size:20pt;background-color:#FF8888	This is an optional attribute that overrides the built-in style of buttons, a set your own style. The style is expressed as CSS. Do not use this if yo **STYLE** attribute

Example of the attributes for a run report shortcut button.



Shortcut Button Attributes

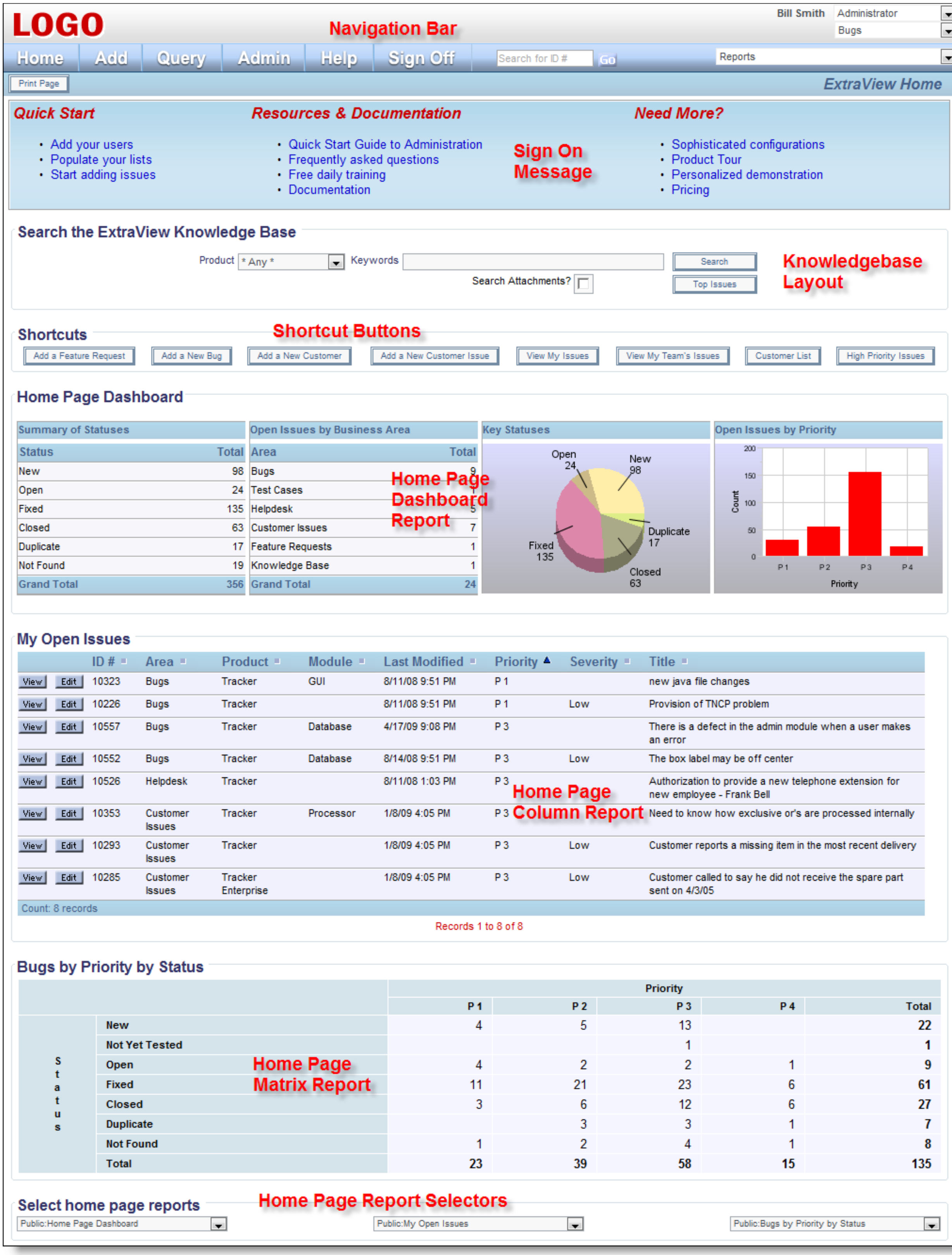
Customizing the Home Page

Different users may have different customized Home Pages. The Home Page is composed of the following sections:

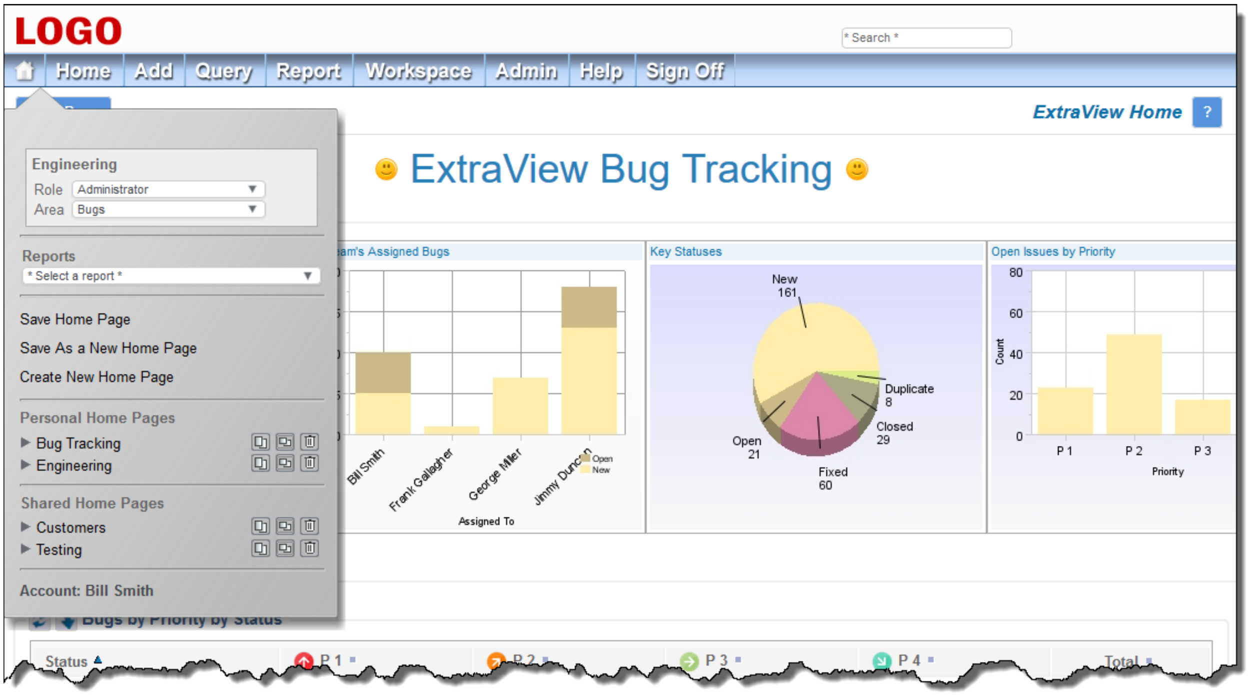
- A navigation bar with the following features:
  - Key ExtraView functions available as buttons. There are Home Page Control (for access when multiple H configured), Home, Add, Query, Admin, Help and Sign Off buttons. Depending on the security permissio buttons may be visible to all user roles
  - An input area offering quick access to any issue for which the user knows the ID
  - **Account details** – the user's account settings and options are available from a link on the user's name if tl permission to the security permission key named CF_PERSONAL_OPTIONS
  - **User role** – a list allowing the user to alter their role. This only appears if the user has the ability to chang they have permission to the security permission key named CF_ALLOW_CHANGE_ROLE
  - **Business area and project** – offers a list where a new default area and / or project may be selected. Once only displayed if the user has permission to change their Business Area or Project. The appearance of this navigation bar is controlled by the security permission keys named CF_AREA and CF_PROJECT
  - A list of reports that the user can run by simply selecting a report from the list. Note that both shared repo personal reports are available. Some report types may not be run from this list. Access to this menu is con security permission key named SR_MENUBAR_REPORTS
- A sign on message, predefined by the system administrator
- An optional dashboard, created with user custom code, turned off and on for each user role with the security pe named SR_DASHBOARD_ON_HOME_PAGE
- An optional search box for a knowledge base, turned off and on for each user role with the security permission l SR_KB_ON_HOME_PAGE
- An optional set of shortcut buttons, created with a special layout type named HOME_PAGE.
- A list of up to three predefined reports
- A section that allows the user to choose which reports are seen on their Home Page. In addition, they can run an have permission to see. This report will appear in a separate window. This section will appear if the user has pe

SR_SET_HOME_PAGE_REPORTS off

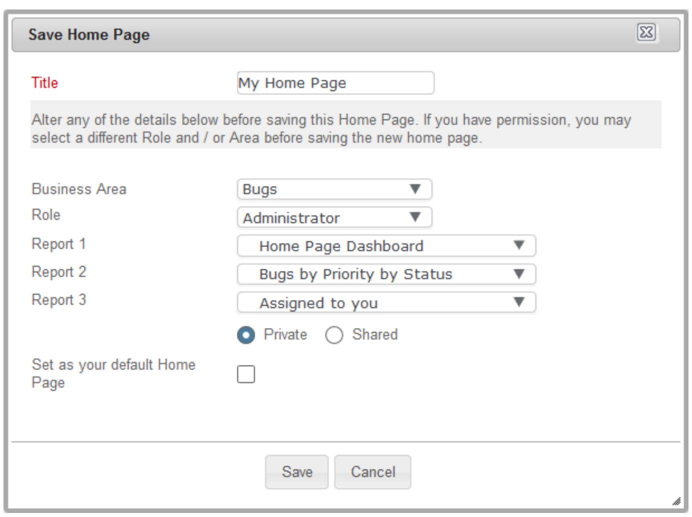
- Dashboard reports should only be configured that are extremely fast in execution
- Individual reports and charts should only be placed on the Home Page if they are also fairly fast. For example, s significant quantity of data in a chart on a daily basis over a year may take a lot longer and not offer much more the same chart displaying the data by month
- Keep the value of the behavior setting named LIMIT_HOMEPAGE_QUERY_ROWS to 20, thereby ensuring u repeatedly report hundreds or thousands of rows of data to their Home Page
- Set the value of MINIMUM_SEARCH_FIELDS to around 2 or 3, thereby ensuring that users must choose a nu addition to keywords. This will help speed reports as filters provide indexes to the data tables, thus speeding the
- Consider setting the value of HOME_PAGE_REFRESH_SECONDS to more than 900, thus only refreshing the Pages on a less frequent basis.


LOGO
Navigation Bar
Bill Smith Administrator
Bugs
Home Add Query Admin Help Sign Off
Search for ID # Go
Reports
Print Page
ExtraView Home
Quick Start
Add your users
Populate your lists
Start adding issues
Resources & Documentation
Quick Start Guide to Administration
Frequently asked questions
Free daily training
Documentation
Sign On Message
Need More?
Sophisticated configurations
Product Tour
Personalized demonstration
Pricing
Search the ExtraView Knowledge Base
Product * Any * Keywords
Search Attachments?
Search
Top Issues
Knowledgebase Layout
Shortcuts
Shortcut Buttons
Add a Feature Request
Add a New Bug
Add a New Customer
Add a New Customer Issue
View My Issues
View My Team's Issues
Customer List
High Priority Issues
Home Page Dashboard
Summary of Statuses
Status Total
New 98
Open 24
Fixed 135
Closed 63
Duplicate 17
Not Found 19
Grand Total 356
Open Issues by Business Area
Area Total
Bugs 9
Test Cases 1
Helpdesk 5
Customer Issues 7
Feature Requests 1
Knowledge Base 1
Grand Total 24
Home Page Dashboard Report
Key Statuses
Open 24
New 98
Duplicate 17
Fixed 135
Closed 63
Open Issues by Priority
Count
Priority
P 1 P 2 P 3 P 4
My Open Issues
ID # Area Product Module Last Modified Priority Severity Title
View Edit 10323 Bugs Tracker GUI 8/11/08 9:51 PM P 1 new java file changes
View Edit 10226 Bugs Tracker 8/11/08 9:51 PM P 1 Low Provision of TNCP problem
View Edit 10557 Bugs Tracker Database 4/17/09 9:08 PM P 3 There is a defect in the admin module when a user makes an error
View Edit 10552 Bugs Tracker Database 8/14/08 9:51 PM P 3 Low The box label may be off center
View Edit 10526 Helpdesk Tracker 8/11/08 1:03 PM P 3 Authorization to provide a new telephone extension for new employee - Frank Bell
View Edit 10353 Customer Issues Tracker Processor 1/8/09 4:05 PM P 3 Need to know how exclusive or's are processed internally
View Edit 10293 Customer Issues Tracker 1/8/09 4:05 PM P 3 Low Customer reports a missing item in the most recent delivery
View Edit 10285 Customer Issues Tracker Enterprise 1/8/09 4:05 PM P 3 Low Customer called to say he did not receive the spare part sent on 4/3/05
Home Page Column Report
Count: 8 records
Records 1 to 8 of 8
Bugs by Priority by Status
Priority
P 1 P 2 P 3 P 4 Total
Status
New 4 5 13 22
Not Yet Tested 1 1
Open 4 2 2 1 9
Fixed 11 21 23 6 61
Closed 3 6 12 6 27
Duplicate 3 3 1 7
Not Found 1 2 4 1 8
Total 23 39 58 15 135
Home Page Matrix Report
Select home page reports
Home Page Report Selectors
Public:Home Page Dashboard
Public:My Open Issues
Public:Bugs by Priority by Status

under this button.



- The title of the current Home Page is displayed at the top of the control menu
- You may set your role, Business Area and Project from the top prompts on the menu
- If available to you, a list of reports that you can run on the current Home Page are displayed in a select list
- You may Save, Save As and Create a New Home Page from the next set of prompts. When you select one of th similar to the following will appear, and you may alter any of the values displayed before saving your selection:



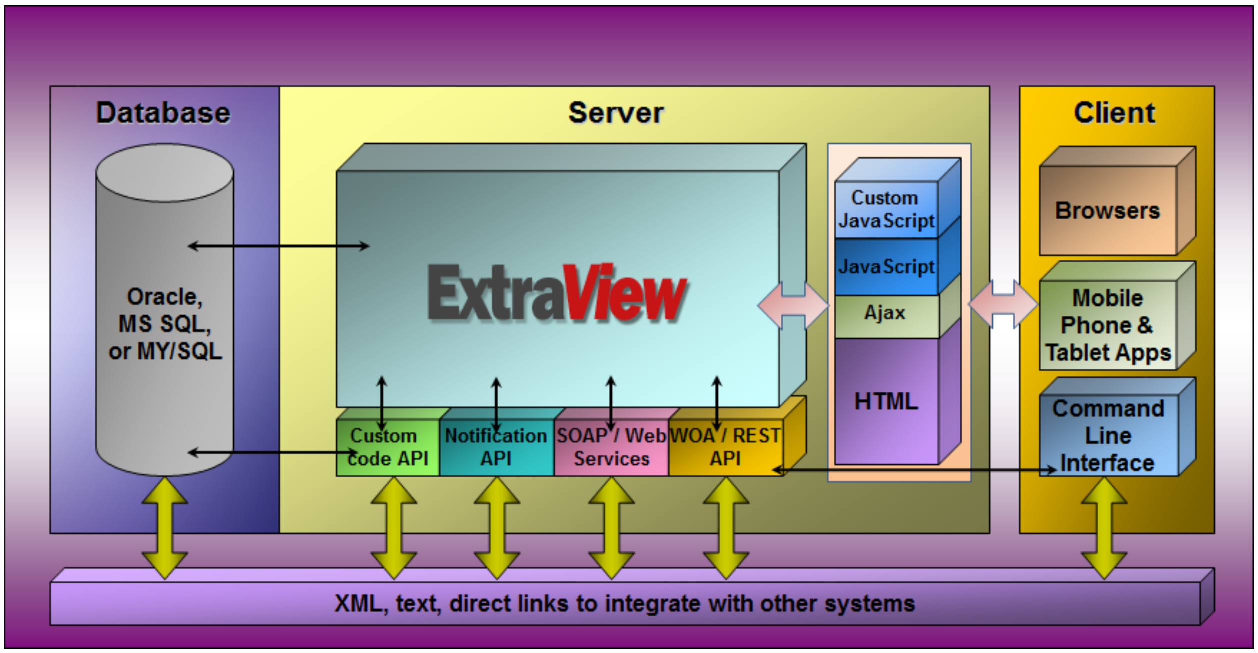
You may set the Home Page you are saving as the default, in which case this is the Home Page that will be displ Sign On

- There are options to access and store both Personal Home Pages and Shared Home Pages. Your administrator n

MENU_MULTIPLE_HOME_PAGES	This is the master key that turns the multiple Home Page featu User roles that have access to this feature should be given read access to this feature
MENU.EV_NAV_BAR_BUTTON_HOME_CTRL	This key controls the presence of the Home Page Control buttc navigation bar
SR_PUBLIC_HOMEPAGE	This key provides access to allow users to create and to access Pages, as opposed to personal Home Pages. Note that when th Home Page feature is turned on, users always have access to cı personal Home Pages

Custom Coding Extensions

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to ‹ use this feature without contacting ExtraView support. One of ExtraView's most powerful features is the ability to ext inbuilt functionality, by adding your own "user custom" code. This topic is covered in more detail in the User Custom covered briefly within this document.



The ExtraView architecture

Java custom coding

Java custom coding supplements or alters the behavior of the standard ExtraView code. Within many of ExtraView's i a code exit takes place to a method within a user custom module. If no user custom code exists within these methods, continues its operation. If user custom code exists within the method, this will be executed. Within the UserCustom.ja within ExtraView, the programmer can inherit from this class and override the methods of interest. A sample of places custom coding can be inserted is:

- Before and after the display of an object, such as a screen

Note: ExtraView strongly recommends that it be consulted about the user custom coding you wish to implement. Extr complex environment, and it takes both programming experience with the Java language as well as a thorough unders internal structure of ExtraView to successfully design and build user custom extensions to ExtraView.

Note: If you are experiencing any errors in an ExtraView environment where you have installed user custom coding, v that you check for the presence of the error with the user custom code removed, before you report the issue to ExtraVi

JavaScript custom coding

JavaScript custom coding functions are typically called from an individual field of the *add* or *edit* screen. The JavaScr many purposes, such as:

- Validation of the entry being made into the field by the user
- Complex validations that involve the comparison of many field values on the form
- Triggers to produce alerts to the user, by popping up messages according to the logic of the function

User custom JavaScript is placed in a single file named UserJavaScript.js. This file exists within your web server tree directory named /user_javascript.

JavaScript functions are downloaded into the client browser at the time the form is generated on the screen for the use efficient, in that no call to the server is needed when you invoke a function. The code will execute within the browser.

Most JavaScript custom functions are defined within layout cell attributes for a field, using the FIELD HTML MODII HTML MODIFIER calls the JavaScript function that you create in the specified place on the server. For example, if y that an entry in a field named *product_code* on the *edit* screen is always sent to the server in upper case, you may do tl

- On the field named *product_code* on the *edit* screen, define a layout cell attribute of type HTML Modifier and v *onclick='checkUpperCase()';*
- Create a user custom JavaScript function within the user_javascript file, similar to:

```
<script language=JavaScript>
function checkUpperCase() {
  var s = document.editForm.product_code.value;
  document.editForm.product_code.value = s.toUpperCase();
}
</script>
```

Email Notification

ExtraView offers a number of email notification features that are designed to facilitate maximum flexibility in managi cross-functional, and business-to-customer communication. As a general default, ExtraView automatically sends emai who Originated an issue, the person who is Assigned to the issue, and the person who is selected as the Owner of the i be altered or replaced using Email Rules.

Creating a Mailing List for an Issue

There are four types of users for email notification. All these users go through the same validation process as explaine

1. **Interest list users**. These are the users qualified to be in the mailing list based on interest list conditions and sul that if the interest list uses filters with operators such as *changed to* and *changed from* then users that are added based upon the results of these filters, then the mailing list on the *add* and *edit* issue screens will not display the because these users cannot be evaluated until the issue is updated. Of course, they will receive the notification u or update to the issue

ASSIGNED_TO
CONTACT
ORIGINATOR
LAST_CHANGE_USER
Previous OWNER
Previous ASSIGNED_TO
Previous CONTACT
Previous ORIGINATOR
Release ASSIGNED_TO
Release OWNER
Module ASSIGNED_TO
UDF list OWNER
Module default OWNER if the behavior setting named EMAIL_MODULE_OWNER_ALWAYS = YES

An overall test is made to determine whether to send email notification in the following steps:

- The behavior setting named **EMAIL_NOTIFICATION** must have a value of YES
- The setting named **EMAIL_DIRECTORY** must have a valid path into which emails may be written, and the **B** must be running
- Correct values must have been established for the settings named **EMAIL_FROM_USER_ID**, **EMAIL_FROM_USER_NAME**, **EMAIL_ADMINISTRATOR_ID** and **EMAIL_ADMINISTRATOR_US**
- If the field named NOTIFICATION_GENERATE_EMAIL is not contained within the *add* or *edit* screen layout lacks permission to the field, then the value of the behavior setting named **GENERATE_EMAIL_BOX** is usec whether to generate the email notification. This setting must then have a value of CHECKED for notification tc

When an issue is created or updated, ExtraView makes a determination of who is to be notified from the users in the a rules to process the mail notification are based on the following criteria.

- Check whether **EMAIL_CUSTOMER** = YES or NO. This comes from the check box on the *add* or *edit* screer always YES for Custom Email
- Check whether the behavior setting named **SUPPRESS_STANDARD_EMAIL_LIST** = YES or NO. Note tha a default behavior setting value, but it may be controlled PROJECT by PROJECT on the List Management scre Project.
- Check whether each user's email address and alternative email address is valid – **VALID EMAIL ADDRESS** = The program checks whether each email address has @ sign within the address and has a "." at the 3rd or 4th pc end. Examples of valid addresses are john@extraview.com and john@extraview.com.jp. If the address is not va does not halt, but the invalid address is dropped from the notification list
- A check is made to see whether the issue is available for viewing by each user. This is the **PRIVACY GROUP** result in PASS or FAILED. This test is performed by ExtraView. The result is always PASS if the email being g hoc email. The basic test results in PASS if the issues' privacy group is PUBLIC or PRIVATE or the user being issue's privacy group
- The role of the user being tested is examined. The test results in PASS or FAILED. The result is always PASS if setting named LIMITED_USER_ROLE is not defined or is blank. The result is PASS if the user's current role i the value of the behavior setting LIMITED_USER_ROLE. The result is FAILED if the user's role is the same a LIMITED_USER_ROLE. If the result was FAILED, then by definition the user is a GUEST account and the fo made – if the checkbox **EMAIL_CUSTOMER** on the *add* or *edit* screen is checked, then an email to the GUES generated if one of the following conditions is true:
    - It is an ad-hoc mail that is being sent
    - The behavior setting named ALLOW_GUEST_MAIL is set to YES. Note that this behavior setting is not the administrator and is only available with a special license key from ExtraView. The reason for this is th key could allow all users to bypass the ExtraView licensing scheme and have unlimited use of ExtraView
- A check is made on whether the user is to **RECEIVE NOTIFICATION AT PRIMARY ADDRESS** = YES or

Administrator-Controlled Email Features

- Turn system-wide email on or off
- Disable email generation control for user roles
- Control specific notification option for user roles while adding and updating issues. This may be cointrolled on PROJECT basis
- Enable or disable email to external users
- Optionally assign a module owner who will automatically receive notification upon a new or updated issue
- Optionally set a product email address to notify a product manager upon a new or updated issue
- The administrator can set up conditions which, when met, will cause an action to occur. Most often, this is used when they have remained in a specific status for longer than your process requires
- The email subject line can be tailored to contain text or any fields within the current issue
- Optionally show the email recipient the CC list for the notification
- The administrator can define email templates as either text or HTML. These templates can contain as much or a required for the standard notification of issues to ExtraView users
- The administrator can optionally define a range of email templates that can be used to communicate with custor merging data from the current issue with pre-defined text. These templates can be made available on a user role

See also the section on Scheduled Reports for information on how the administrator may control the email delivery of

Email Options

Email addresses

Each user may have two email addresses within ExtraView, a primary email address and an alternative email address. email address is maintained on the Personal Details tab of the user account maintenance screen. The alternative email controls for receiving email are on the Notification Options tab of the user account maintenance screen.

The administrator or the end user can select options for the end user to receive email at their primary and alternative e independently.

If the behavior setting named CHECK_EMAIL_ADDRESS_FORMAT has a value of YES, then the format of each e checked at the time it is entered or updated and an error message is returned if the format is not valid.

Turning System-Wide Email On or Off

1. From Administration menu, under the **Email Notification** tab, click on **Email Settings**.
2. Scroll down until you see EMAIL_NOTIFICATION.
3. Click **Edit** and change the value to YES, in order to turn on Email Notification, or set the value to NO to turn o Notification system-wide.
4. Click the **Update** button.

When EMAIL_NOTIFICATION is set to NO, no warnings are issued to users who enter or update issues, or generate way.

Disabling Access to the Email list for Specific User Roles

You can control access to the mailing list with the security permission keys named PR_ADD_PROBLEM.NOTIFICA PR_RESOLUTION.NOTIFICATION. If these keys are turned off for a combination of user role, business area and pr user will not have control over, or visibility of the email notification section of the *add / edit* screens.

Notification Permission Keys

	within any Role / Business Area / Project combination.
CC_EMAIL	This key controls the visibility of the CC Email text entry box
CC_EMAIL_BUTTON	This permission key controls access to the CC Email button to the right of the CC Email te
EMAIL_CUSTOMER	Giving permission to this key enables or disables access to the checkbox that turns notifica users in the DEFAULT_USER_ROLE. Note that this checkbox may be set programaticall business rule
EMAIL_SWITCH	This controls access to the checkbox that has the prompt **Generate Email**
INTEREST_LIST	With this key you control access to the ability to allow users to add users to an interest list they are adding or updating
MAILING_LIST	This is the control for the list of users who will be notified upon inserting or updating the i

Assign Module Owners

The System Administrator may assign *Module Owners*, such that changes on issues with given modules produce auto notification to the designated owner.

In addition, the module owner may be used to automatically populate the *assigned_to* field on the Add Issue screen, if setting named **LINK_MODULE_OWNER_ASSIGNED_TO** on the Workflow Settings screen is set to a value of Y you to create the Add Issue screen in such a way that when a module is selected from a list, the Assigned To is automa the module owner.

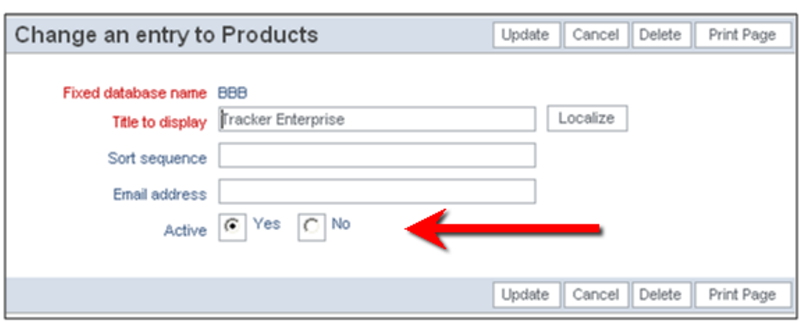
1. From the Administration menu, under the **Lists** tab or from the Data Dictionary, click **Module Names**
2. Locate the *Module* to which you would like to assign an *Owner*, and click the associated **Edit** button

Updating the module owner

- Scroll through the list of available users or else select the owner from the pop up text box
- Click the **Update** button.

Set Product Email Address

The Administrator may set an email address for specific *products*, so that ExtraView users associated with that *produc* automatic email notification about product-related issues. This is achieved from the Products list within the **Lists** tab administration menu.



ExtraView gives the Administrator the ability to customize the subject line of emails that are automatically sent when updating issues.

1. From the Administration menu, click on the **Behavior Settings** entry and then choose the **Email Settings** categ
2. Scroll down until you see the behavior setting named EMAIL_SUBJECT_TEMPLATE, and click the associatec
3. Type in the names of the fields you would like to display. Your custom email subject line can include any field f ExtraView installation. These values are generated dynamically, based on the particular issue
4. If you would like values in your email subject line you must surround them with "$$". Normal static values can the example below:

Sample Text	Subject Line Output
$$ID$$ - $$SHORT_DESC$$	12345 – Problem with List E1
$$ASSIGNED_TO$$ ($$PRODUCT_NAME$$; $$MODULE_ID$$) - This is an Email	rlloyd (Product X; Module Y Email
Issue # $$ID$$ This is Assigned to $$ASSIGNED_TO$$	Issue # 12345 This is Assign(

Notification History

There is a special field named NOTIFICATION_HISTORY which can only be placed on layouts with a type of HIST(displays a record of which users were notified when the update to the issue was made. However, if you are using the b named HISTORY_DISPLAY with values of ABBREVIATED and/or SIDE_BY_SIDE, then the notification history is part of each history entry.

- Add new comment

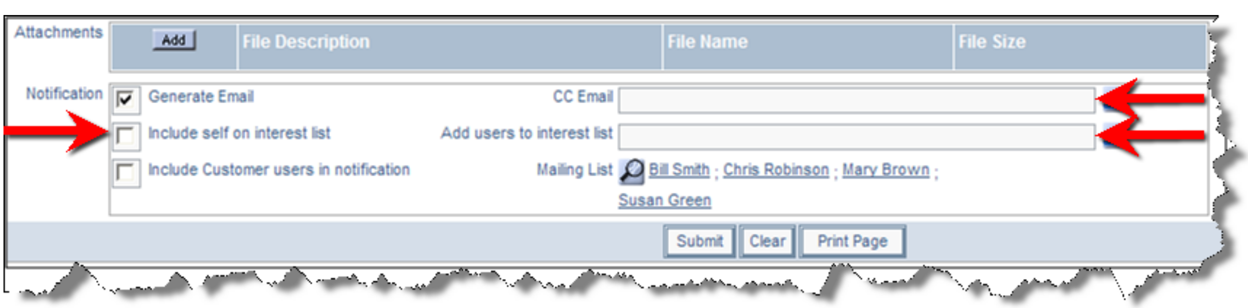
CC Email Capability

This feature gives users the opportunity to send a one-time email to people who are not directly associated with a parti

This feature is controlled by the Security Privilege Settings as follows. A different setting can be used for each user ro system.

Security Key Name	Purpose
PR_RESOLUTION.CC_EMAIL	This controls the appearance of the CC Email entry box on the Edit
PR_ADD_PROBLEM.CC_EMAIL	This controls the appearance of the CC Email entry box on the Adc
PR_RESOLUTION.CC_EMAIL_BUTTON	This controls the presence of a user popup button on the Edit Issue button gives access to a list of users within ExtraView, who can be
PR_ADD_PROBLEM.CC_EMAIL_BUTTON	This controls the presence of a user popup button on the Add Issue button gives access to a list of users within ExtraView, who can be

To utilize the CC Email functionality, type email addresses (separated by commas or semi colons) into the CC Email f updating the issue, or select named users from the list by first clicking the people icon. Unless you have a license from allows your installation to send email to non-ExtraView users, email addresses entered must belong to registered and a ExtraView users. Also note that if there is a privacy group restriction on the issue, the user whose name, ID or email a must have permission to view the issue.

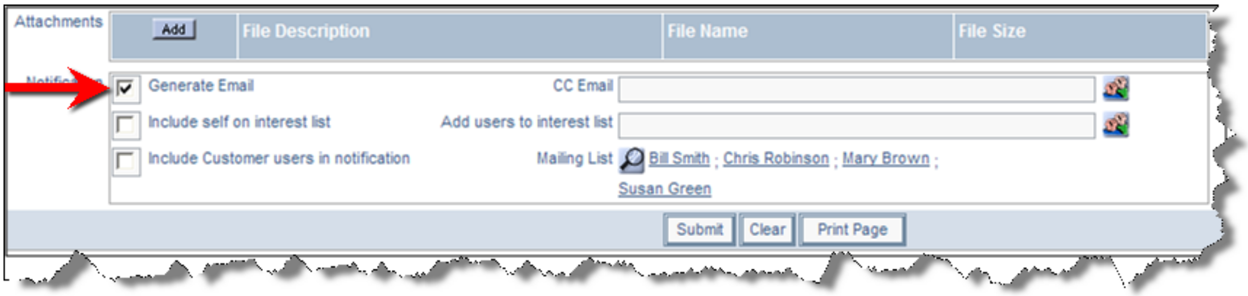


Disable Automatic Email Generation

Each time a user adds or edits an issue, he or she has the opportunity to halt all email generation by un-checking the **G** checkbox at the bottom of the Add and Edit screens.

This is controlled by the following security permission keys

Security Key Name	Purpose
PR_RESOLUTION.EMAIL_SWITCH	This controls the appearance of the Generate Email checkbox on the Edi
PR_ADD_PROBLEM.EMAIL_SWITCH	This controls the appearance of the Generate Email checkbox on the Ad



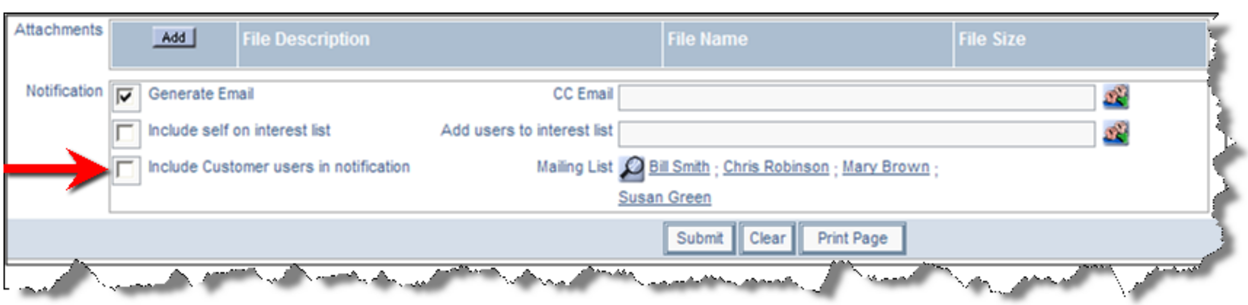
Email notification on the Add or Edit screen

Disable Generation of Email to External Users

Situations often arise where a customer may need to enter an issue, but you may not want the customer to see all of th changes that the issue goes through. When you add or update an issue, you have the option of halting email to externa controlled by security permission keys for each user role as follows:

Security Key Name	Purpose
PR_RESOLUTION.EMAIL_CUSTOMER	This controls the appearance of the Include Guests checkbox on the screen
PR_ADD_PROBLEM. EMAIL_CUSTOMER	This controls the appearance of the Include Guests checkbox on the screen

At the bottom of the Add and Edit screens you will see something similar to the screenshot below. The default setting email to external users. Note that the term "Customers" is replaced by your organizations own name for guests or cust



Email notification on the Add or Edit screen

If you would like your external users to receive an email, click the **Include Customer users in notification** check bo: update the issue.

This directory is managed by the BatchMail task or process. With ExtraView 6.0 and beyond, this task may be manag ExtraView administration utility to [configure BatchMail](). Previous to version 6.0, the BatchMail task was managed ex ExtraView.

For backwards compatibility, the task may still be operated externally. Please see this section in this guide for informa utility works.

Locale Handling

Notification and the User’s Locale

When a user receives an email notification, they will receive it in their current locale irrespective of the locale of the p updated the issue. For example, if you are on the interest list for an issue, and your locale is Japanese, you will receive using Japanese as the language. If your locale is English, you will receive the notification in English.

User-Controlled Notification Features

- Turn on and off notification of user’s own updates
- Select incoming email format to be text or HTML.
- Select from a fuller or briefer form of notification when receiving text
- Disable automatic email generation
- CC Email
- Send pre-formatted email, using templates set up by the administrator, to communicate information to customer

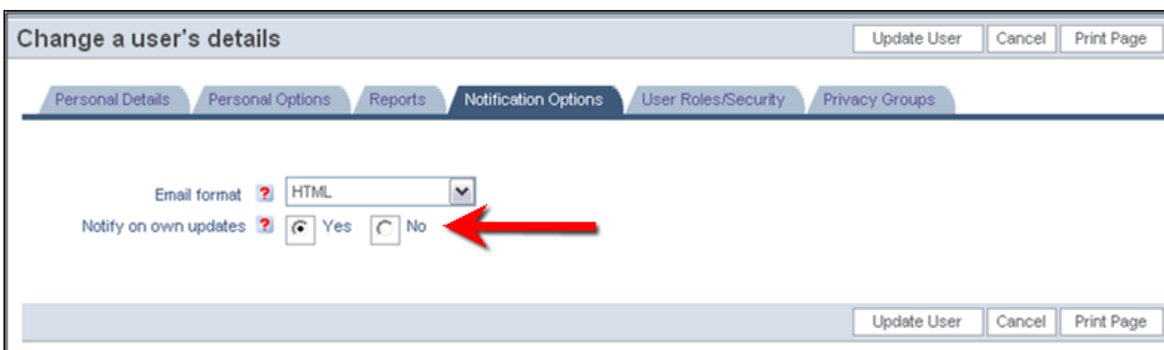
Note: This guide describes the user-controlled email features along with the administration features, as a review of thi here helps to provide a more complete overview of email functionality in ExtraView.

Notify of Own Updates

This feature gives an individual user the option to disable automatic email to their self on issues that they add or updat administrator can also apply this option on behalf of any user.

- As an individual user, click on your account name in the title bar to edit your account details, or from the User t Administration menu click on the **User Account Maintenance** option and edit the user whose account you wan on the **Notification Options** tab.

  A screen similar to the one below will appear:



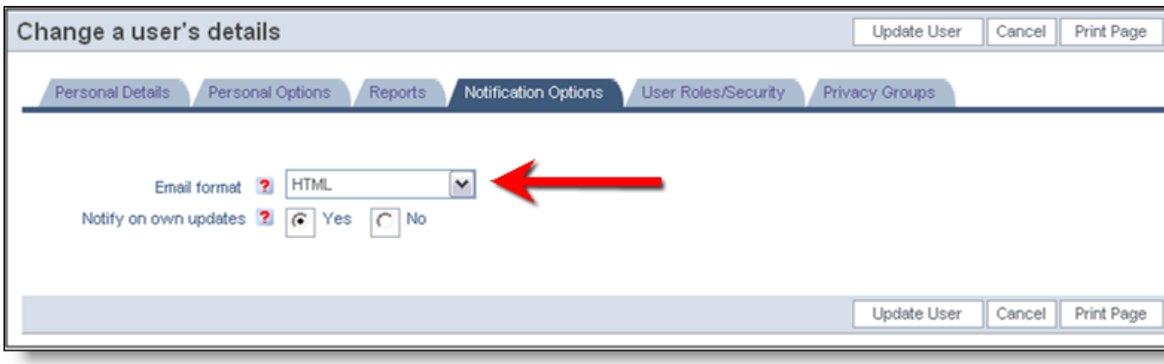
Change a User's Details

HTML, Plain Text (full) , Plain Text (brief) and Plain Text (very brief).

Type	Purpose
HTML	Notification is sent using the layout named EMAIL_FULL, and is delivered in an HTML format
Plain Text (full)	Notification is sent using the layout named EMAIL_FULL, and is delivered as plain text format
Plain Text (brief)	Notification is sent using the layout named EMAIL_BRIEF and is delivered in a plain text format
Plain Text (very brief)	No layout is used for the notification, but a plain text format email is delivered, only showing the fiel in the insert or update operation of the issue. If a field value was modified, it is preceded with a * cha value is inserted, it is preceded with a + character.

- As an individual user, click on your account name in the title bar to edit your account details, or from the **User** t Administration menu click on the **User Account Maintenance** option and edit the user whose account you wan on the **Notification Options** tab.

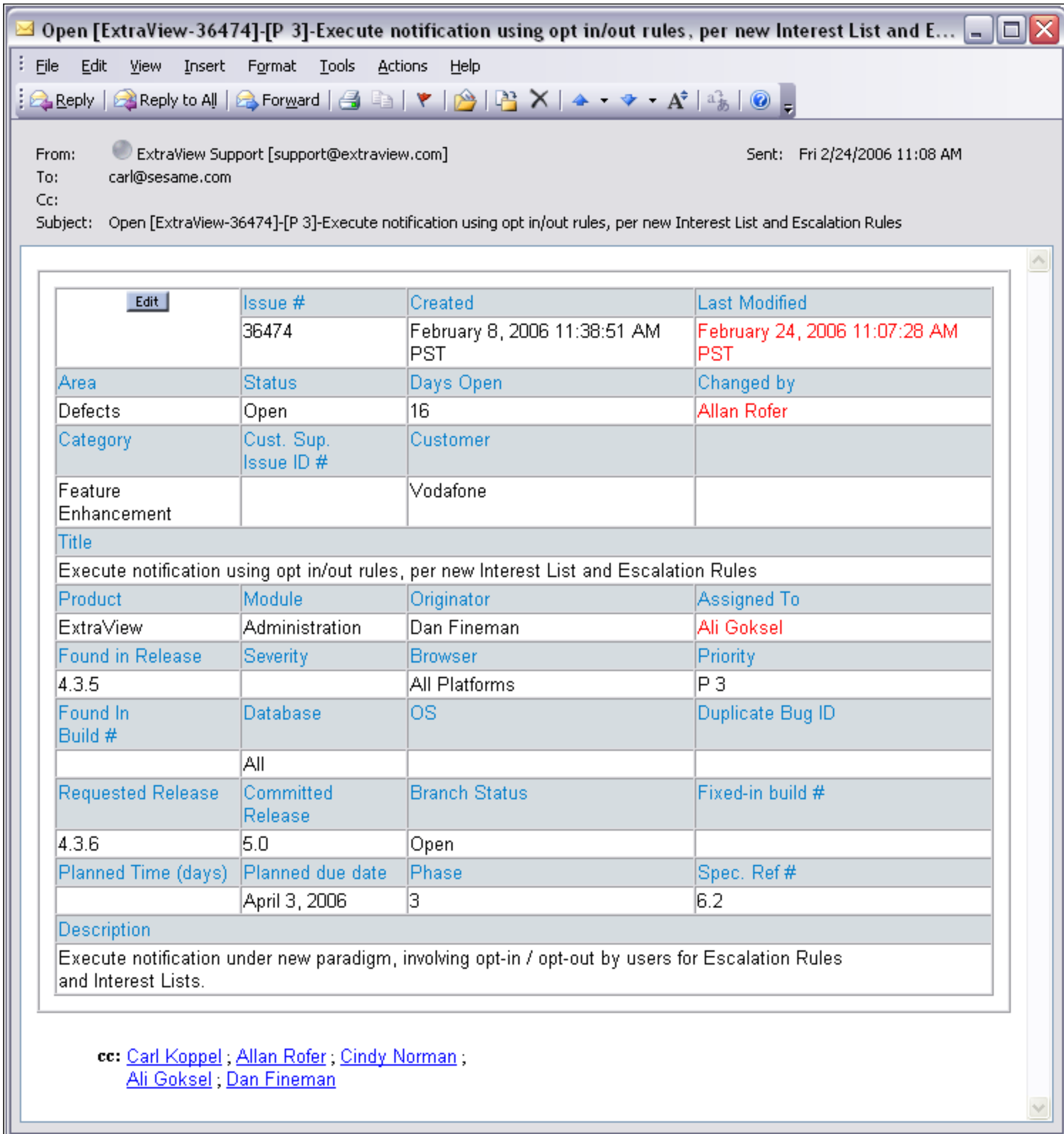
  A screen similar to the one below appears:

  Change User Details screen

- The default email format is HTML. If you would like to see your email notifications in another format, select th from the Email format list.
- Click the **Update User** button.

Below are examples of the different email formats:


Open [ExtraView-36474]-[P 3]-Execute notification using opt in/out rules, per new Interest List and E...

File Edit View Insert Format Tools Actions Help

Reply Reply to All Forward

From: ExtraView Support [support@extraview.com] Sent: Fri 2/24/2006 11:08 AM
To: carl@sesame.com
Cc:
Subject: Open [ExtraView-36474]-[P 3]-Execute notification using opt in/out rules, per new Interest List and Escalation Rules

Edit	Issue #	Created	Last Modified
	36474	February 8, 2006 11:38:51 AM PST	February 24, 2006 11:07:28 AM PST
Area	Status	Days Open	Changed by
Defects	Open	16	Allan Rofer
Category	Cust. Sup. Issue ID #	Customer	
Feature Enhancement		Vodafone	
Title			
Execute notification using opt in/out rules, per new Interest List and Escalation Rules			
Product	Module	Originator	Assigned To
ExtraView	Administration	Dan Fineman	Ali Goksel
Found in Release	Severity	Browser	Priority
4.3.5		All Platforms	P 3
Found In Build #	Database	OS	Duplicate Bug ID
	All		
Requested Release	Committed Release	Branch Status	Fixed-in build #
4.3.6	5.0	Open	
Planned Time (days)	Planned due date	Phase	Spec. Ref #
	April 3, 2006	3	6.2
Description			
Execute notification under new paradigm, involving opt-in / opt-out by users for Escalation Rules and Interest Lists.			

cc: Carl Koppel ; Allan Rofer ; Cindy Norman ; Ali Goksel ; Dan Fineman

HTML Email in Microsoft Outlook

```
   Subject: Open  [#19419]: Category doesn't seem tied to Product anymore
      Date: Wed, 2 May 2001 13:57:53 -0700 (PDT)
      From: "ExtraView" <extraview-user@customer.com>
        To: <support@sesame.com>



ExtraView Notification for Bug # 19419

*Synopsis: Category doesn't seem tied to Product anymore

Link: http://www.extraview.net/extraviewsql/SE_Signon.FrameSet?p_case_id=19419

*Product: Dev Tools
*Originator: rlloyd
*Owner: rlloyd
*Changed By: dwong
*Priority: 1
 Severity:
*View: Private
*Last Modified: 02-MAY-2001 13:57
*Category: Software
 Alt ID:
 Created: 02-MAY-01

*Module: ExtraView
 Component:
*Platform: all
 OS:
 Clarify ID:
 Test Case ID:
 Test Case Location:
 Problem Reproducible in SQA:

*Version Open: 3.1.2.1
*Status: Open
 Version Closed:
 Disposition:

*Description:
If you select Product=EV, Category=Software, you will see two modules called
"EV".  Go into Admin...Modules and one is Hardware, one is Software.


 Comments:



--------------------------------------------------------------------------------
ExtraView - Copyright Sesame Technology 1999, 2000. All rights reserved.
```

Plain Text (Full)

```
   Subject: Open  [#19419]: Category doesn't seem tied to Product anymore
      Date: Wed, 2 May 2001 13:57:53 -0700 (PDT)
      From: "ExtraView" <extraview-user@customer.com>
        To: <support@sesame.com>



ExtraView Notification for Bug # 19419

*Synopsis: Category doesn't seem tied to Product anymore

Link: http://www.extraview.net/extraviewsql/SE_Signon.FrameSet?p_case_id=19419

*Product: Dev Tools
*Originator: rlloyd
*Owner: rlloyd
*Priority: 1
 Severity:

--------------------------------------------------------------------------------
ExtraView - Copyright Sesame Technology 1999, 2000. All rights reserved.
```

Plain Text (Brief)

Note: These standard email formats can be modified using the layout editor and modifying the EMAIL_FULL or EM layouts.

Adding Issues with EVMail

Many organizations want to use email to submit new issues to ExtraView, either from their own employees or from th ExtraView enables this capability via a task named EVMail. This task may be configured to allow ExtraView to recei emails that both insert and update issues. See the section entitled Email Poller Task for instructions on how to configu task. EVMail can perform the following tasks:

- Add new issues to your database
- Update existing issues

See the section entitled Configuring EVMail for instructions on how to setup and configure the EVMail task.

Workspace Configuration

Workspaces have several configuration points of which you should be aware.

Security Permissions

MENU_WORKSPACE	This key provide the overall control of access to workspaces, rol user role does not have write access to this key, the **Workspace** entry does not appear, and there is no way for the user to access
CF_ALLOW_RETURN_FROM_WORKSPACE	Read access to this permission key places an entry in the worksp the title **Close Workspace**. Without this permissoin, the user ca the traditional ExtraView user interface. If the user's profile has start page as **Worskpace** and this permission is not provided, the

- Its Business Area within which it is saved. This becomes the default Business Area for operations within the w
- Public or Private. If you create a shared workspace, other users may use this, and if they have write access to SR_PUBLIC_WORKSPACE, they may overwrite and/or delete it. If the workspace is private, only the owner l access it.

There is no practical limit to the number of workspaces that can be configured, although it is recommended that you d many shared workspaces, as users may be confused as to the different purpose of each saved workspace.

External Authentication - LDAP, SSO and SAML

If ExtraView Corporation is hosting your installation, you do not have direct access to the file system of the server to use this feature without contacting ExtraView support.

ExtraView may be configured to work with both Lightweight Directory Access Protocol (LDAP) and Single Sign On LDAP servers include Microsoft's implementation named Active Directory. It is not necessary to configure both LDA same time, although this can be done. Security Assertion Markup Language (SAML) may be used in conjunction witl to provide authentication.

We strongly recommend that you have access to a resource that is skilled in administering these technologies to set up

You may connect directly to an LDAP server, or you may connect to an LDAP server via SSO. Typically, it is slightly configure the combination of LDAP and SSO servers, as opposed to configuring only an LDAP server.

This section discusses connecting ExtraView with both SSO and LDAP first, and then discusses a direct connection tc SSO. Finally, SAML authentication is discussed.

LDAP, SSO and SAML are not part of the ExtraView product, but are separate thirdparty applications that ExtraView with. There are many “flavors” and implementations of both these technologies and they may be configured in many different organizations. While ExtraView may connect to and use these technologies, the configuration is often differe installation to another. ExtraView’s professional services team can help with the integration, but this may not be part c installation, and may be a separate, chargeable task.

Setting up LDAP, SSO or SAML implies that you will set up the configuration in both ExtraView behavior settings ar Configuration.properties file external to ExtraView.

Note that there is also a hybrid authentication mode, where ExtraView can authenticate against an LDAP server and al internal authentication mechanism. This is ideal in an environment where you want to use the LDAP server for interna ExtraView's authentication for your customer users.

LDAP Connections

When ExtraView is configured to work directly to an LDAP server, the following functions are enabled, all without ar custom programming within ExtraView:

- Access to an unlimited number of LDAP fields
- Customized mapping of one or more fields in ExtraView to one or more fields LDAP fields
- Customized pre-population of mapped fields on the ExtraView *Add* and *Edit* Screens
- Customized pre-population of fields through a popup link
- The upsert of data to the ExtraView user table, based on a configuration value. Upsert is a combination of insert record exists, it is updated, if it does not exist, it is inserted.

Setup Access Details to your LDAP Server

LDAP_USER_LOOKUP	This is the basic on/off switch for LDAP. Set this to YES if you intend LDAP server for user lookup
LDAP_DEFAULT_AREA	This is the ID of the business area to associate with a new user who is ExtraView via the LDAP server. To find this number, look at the data AREA, and click the **List** button. By each business area you will see t essential that you provide a valid entry for this setting.
LDAP_DEFAULT_PROJECT	This is the ID of the project within the business area to associate with is added to ExtraView via the LDAP server. To find this number, look dictionary field PROJECT, and click the **List** button. Select the busin will see a list of the IDs associated with each project. Normally you w *DATA* project within the business area. It is essential that you provide this setting.
LDAP_HOST	This is the URL to your LDAP server. It is essential that you provide this setting.
LDAP_MANAGER	The “Security Principal” or user accessing LDAP
LDAP_PSWRD	The password to the LDAP server
LDAP_ROOT	The root directory of the LDAP server or search base, e.g. ou=blahW o=blah.com. It is essential that you provide a valid entry for this settin
LDAP_ALLOWED_STALE_INTERVAL	The minimum number of minutes between LDAP upsert operations o This stops ExtraView accessing the LDAP server with every operatio user information in order to optimize performance. After this interval, of the LDAP server is made. The LDAP Background Task should be r to work
LDAP_SEARCH_FILTER	LDAP filters may be defined in the behavior setting or may be define Configuration.properties file. The behavior setting takes precedence o Configuration.properties entry. LDAP filters are defined in RFC 2254 example, if you wanted to add a filter to only retrieve records with my within the email address, you could set this as the filter: (mail=*myco parentheses are essential.
LDAP_UPSERT	This setting controls upserting LDAP information to ExtraView. THe are YES or NO. When this value is NO, LDAP will not be used to add ExtraView user information. A valid LDAP user that is not already an will not be able to log in to ExtraView. If this setting is YES, then SSO_UPSERT should always be set to a v
LDAP_UPSERT_DEFAULT_USER_ROLE	If this setting contains a valid role, then this is the role a user is given upsert takes place. If this setting does not contain a value, then the rol behavior setting named LIMITED_USER_ROLE is used instead.
LDAP_USER_LOOKUP	When this behavior setting is set to YES, whenever a user performs a lookup the details of another user, ExtraView will ask the LDAP serv information. At the same time this is done, the information for the use ExtraView, will be synchronized with the information within the LDA

Setting LDAP Fields in the Configuration.properties File

In the configuration file of the application server (Configuration.properties), there is a parameter named LDAP_FIEL meta-names of the mappings to be used with LDAP. These must be comma separated, listed on one line. The followin mandatory and must be provided as the fields for the upsert operation:

LDAP_FIELDS =	LDAP_PRIMARYKEY,
	LDAP_SURNAME,

LDAP_PHONE

Other fields may be added. They should follow the same naming convention. These represent the fields for which infc retrieved. For example, you might add more fields such as:

	LDAP_MOBILE,
	LDAP_PAGER,
	LDAP_COMPANYNAME,
	LDAP_DEPARTMENT,
	LDAP_TITLE
	LDAP_ADDITIONAL_EMAIL
	LDAP_ADDRESS_LINE2
	LDAP_PHONE
	LDAP_HOME_PHONE
	LDAP_COMPANYNAME
	LDAP_FAX
	LDAP_USER_DEFINED_1
	LDAP_USER_DEFINED_2
	LDAP_USER_DEFINED_3
	LDAP_USER_DEFINED_4
	LDAP_USER_DEFINED_5
	LDAP_USER_DEFINED_6
	LDAP_USER_DEFINED_7
	LDAP_USER_DEFINED_8
	LDAP_USER_DEFINED_9
	LDAP_USER_DEFINED_10

Map the Fields in LDAP_FIELDS to Values in the LDAP Directory

These fields are mapped with a 1:1 relationship, similar to the following example:

LDAP_PRIMARYKEY	=	employeenumber
LDAP_LOGINID	=	uid
LDAP_SURNAME	=	sn
LDAP_GIVENNAME	=	givenname
LDAP_COMMONNAME	=	cn
LDAP_EMAIL	=	mail
LDAP_STREET	=	street
LDAP_CITY	=	l
LDAP_STATE	=	st
LDAP_POSTALCODE	=	postalcode
LDAP_COUNTRY	=	postaladdress
LDAP_PHONE	=	telephonenumber
LDAP_MOBILE	=	mobile
LDAP_PAGER	=	pager
LDAP_COMPANYNAME	=	displayname
LDAP_DEPARTMENT	=	department
[illegible]		[illegible]

EV_LDAP_SURNAME	=	USR_LNAME
EV_LDAP_GIVENNAME	=	USR_FNAME
EV_LDAP_COMMONNAME	=	USR_NAME
EV_LDAP_EMAIL	=	USR_EMAIL
EV_LDAP_STREET	=	
EV_LDAP_CITY	=	USR_CITY
EV_LDAP_STATE	=	USR_STATE
EV_LDAP_POSTALCODE	=	
EV_LDAP_COUNTRY	=	
EV_LDAP_PHONE	=	USR_PHONE,USR_PHONE2
EV_LDAP_MOBILE	=	USR_MOBILE
EV_LDAP_PAGER	=	
EV_LDAP_COMPANYNAME	=	
EV_LDAP_DEPARTMENT	=	USR_DEPT
EV_LDAP_TITLE	=	

List Fields to be Pre-populated

Ensure each of these is placed on ONE line:

Add Screen

This is a comma-separated list of ExtraView field names that are to be filled in on *add* screens, from values in the LD. a search for a user. Example:

ADD_SCREEN_LDAP_FIELDS = USR_NAME, USR_TITLE, USR_DEPT, USR_EMAIL, USR_PHONE, USR_PI USR_MOBILE, USR_FAX, USR_CITY, USR_STATE, USR_BUILDING

Edit Screen

This is a comma-separated list of ExtraView field names that are to be filled in on *edit* screens, from values in the LD. a search for a user. Example:

EDIT_SCREEN_LDAP_FIELDS = USR_NAME, USR_TITLE, USR_DEPT,USR_EMAIL, USR_PHONE,USR_PH

Searching on the Add and Edit Screens

This is a comma-separated list of ExtraView field names whose values are to be used as the search key for filling the f *add* or *edit* screens. Example:

LDAP_USER_FIELD_NAMES = USR_NAME, USR_TITLE

Specify if you want to Update ExtraView User Information with the Latest Information from tl Server

If you specify YES, then when each user signs in to ExtraView, the code will upsert that user's information to the Extı directly from the LDAP directory.

LDAP_UPSERT = YES

If LDAP_UPSERT is NO, a user will not be able to sign on to ExtraView if they have not already been added to the sy list of LDAP field names. The LDAP search may be filtered by these additional attributes.

For example, entering the following on a single line within the Configuration.properties file:

LDAP_SEARCH_FIELDS = SURNAME,
GIVENNAME,
PRIMARYKEY,
PHONE, COMPANYNAME

extends the search for users on user pop-ups to use the PHONE and the COMPANYNAME fields in addition to the st

User Name Lookup

There is an optional field within the Configuration.properties files named LDAP_EDIT_FIELDS_CHANGE_ON_RE there is a parent user field mapped to an LDAP field and this is placed on an *edit* screen and this field is set to a value fields that are mapped are not altered when the parent field is changed. This allows the values of a record on the LDA placed on an *edit* screen and not be altered once they have been read from the LDAP server. The default value for this allowing the child fields to be refreshed when the parent is altered.

When LDAP is configured for user lookup, and LDAP_LOGINID is configured to map to the same LDAP name as LDAP_PRIMARYKEY, the values returned for an LDAP search will contain the mapping: LDAP_PRIMARYKEY -- SECURITY_USER_ID and LDAP_LOGINID_KEY --> LOGIN_ID for the user. The primary effect of this is on user expects the LOGIN_ID to be the value returned for LDAP_LOGINID. Note that this is not the result.

User ID's

Some LDAP installations are configured to support User ID's that contain space characters. ExtraView does not suppo characters within a User ID. It is considered bad practice to use User ID's that contain space characters. User ID's that characters on the LDAP server cannot be mapped to User ID's in ExtraView.

Upsert of Users

If the Configuration.properties file contains the entry LDAP_UPSERT = YES, then you may specify which fields with updated with the upsert operation. The entry LDAP_UPSERT should be followed with an entry named UPSERT_LDA will include all or a subset of the fields in the following list:

UPSERT_LDAP_FIELDS = LDAP_COMMONNAME, LDAP_GIVENNAME, LDAP_SURNAME, LDAP_EMAIL LDAP_ADDITIONAL_EMAIL, LDAP_STREET, LDAP_ADDRESS_LINE2, LDAP_PHONE, LDAP_HOME_PH(LDAP_MOBILE, LDAP_PAGER, LDAP_COMPANYNAME, LDAP_POSTALCODE, LDAP_STATE, LDAP_CIT LDAP_COUNTRY, LDAP_FAX, LDAP_USER_DEFINED_1, LDAP_USER_DEFINED_2, LDAP_USER_DEFINE LDAP_USER_DEFINED_4, LDAP_USER_DEFINED_5, LDAP_TITLE

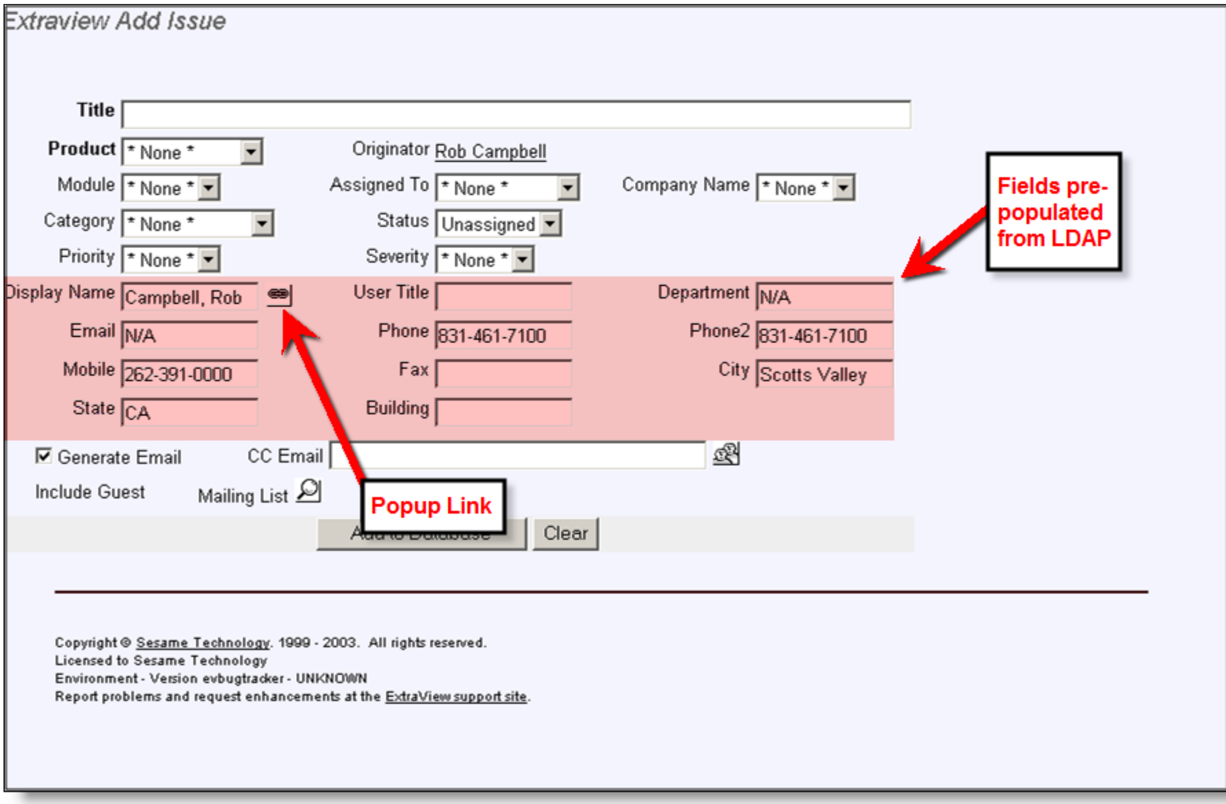
If the UPSERT_LDAP_FIELDS statement is not included then all the fields are assumed to be updated upon the upse

Timeouts

It is important that the connection from ExtraView to the LDAP server is extremely fast. A poor LDAP connection wi unacceptable performance problems into the environment. To guard against LDAP connections that do not return info timely manner, there are two timeouts:

TCP connection timeout. If there is general network slowness, there is a two-minute timeout period.

LDAP read timeout. This is set to one minute, and guards against a response not being received from the LDAP serv 1.6 (or greater) is required for this timeout to work.

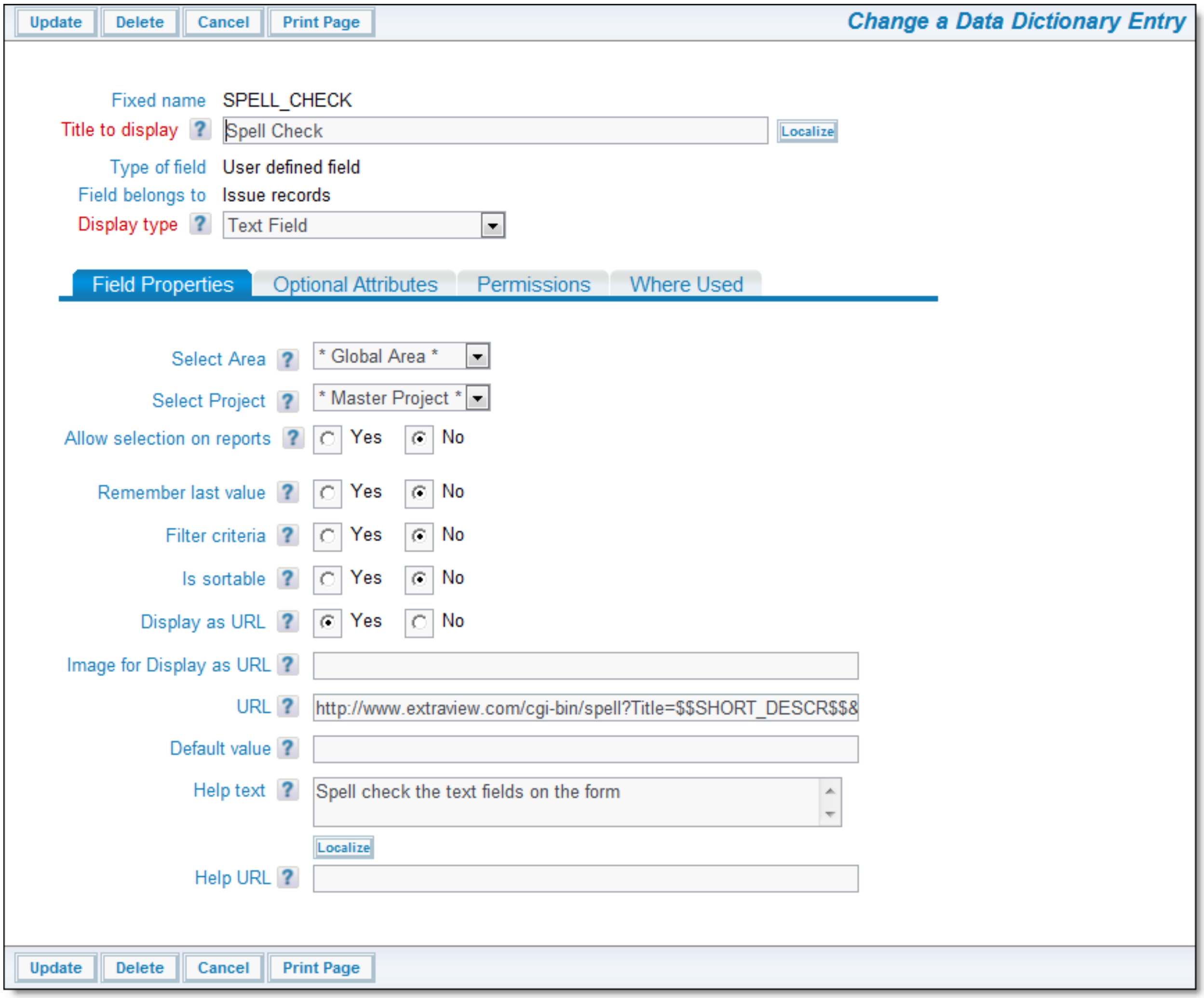


Example of fields pre-populated from an LDAP server

Popup Link Configuration

After you have decided which fields to put on your *Add* and *Edit* screen layouts, you can pick one (usually a primary i the user's name) to have a URL link popup window beside it. This popup window will allow for dynamic searching o directory. It will also populate multiple fields on the *Add* or *Edit* screen with the values for the primary identifier. Extr be populated from the LDAP directory based on the mappings you set up in Configuration.properties.

First, configure the link with the appropriate URL, within the Data Dictionary. Full instructions for this are in the Data section of this administration guide.



Data Dictionary entry where the popup link is configured

- Set Display as URL to Yes.
- Enter the first part of the URL, exactly as shown. Do not complete the field entry yet

  ?p_action=doDisplay&p_option=security.SearchLDAPDisplay

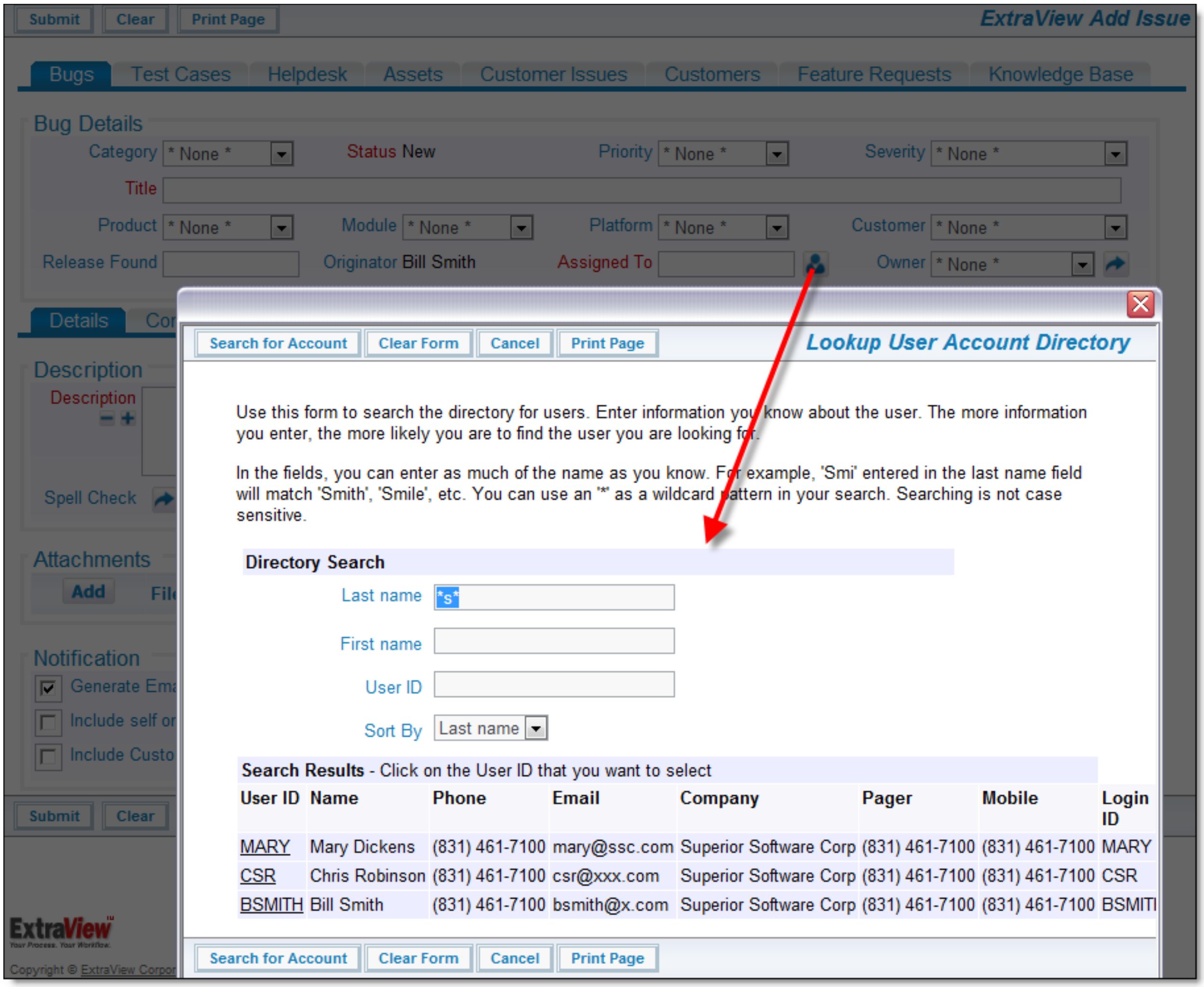
- Append to the URL the list of fields you want populated in the following pattern, but using the fields for your ir

  &FIELD=USR_NAME&FIELD=USR_TITLE&FIELD=USR_DEPT &FIELD=USR_EMAIL&FIELD=USR_
  &FIELD=USR_PHONE2&FIELD=USR_MOBILE &FIELD=USR_FAX&FIELD=USR_CITY&FIELD=USR
  &FIELD=USR_BUILDING

  where the pattern for each field is *&FIELD=DataDictionaryName*

  The final URL will look something like this:

  ?p_action=doDisplay&p_option=security.SearchLDAPDisplay &FIELD=USR_NAME&FIELD=USR_TITLE&
  FIELD=USR_DEPT &FIELD=USR_EMAIL &FIELD=USR_PHONE &FIELD=USR_PHONE2&FIELD=USI



Searching for users in the LDAP directory

After using the search criteria, click on one of the results in the ID field. The fields on the parent *add* or *edit* screen wi with all the fields you requested.

LDAPS Connections

LDAPS Connections (LDAP over SSL)

The objective of configuring ExtraView for LDAPS is to install the LDAP server SSL certificate into the JVM that is application server hosting the ExtraView web application in order for the client (ExtraView webapp) to be able to auth to the LDAP server.

Before starting the process to configure ExtraView to work in this mode, ensure the LDAP server has already been co secure LDAP with a SSL certificate, and the secure LDAP port has been confirmed to be active. Consult your LDAP s documentation for configuring your LDAP server for secure LDAP with a SSL certificate.

It is beyond the scope of this document and beyond the scope of your ExtraView support team to explain this further, a

3. You will see some Java error text:

   javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested

   and be prompted to select a certificate to add to the trusted keystore

4. Select the certificate to add to the keystore and the InstallCert program will display the entire certificate. Also, b InstallCert program creates the file jssecacerts in the current directory
5. To verify that the certificate has been added, re-run the InstallCert program as in step 2, and instead of the Java should see the following message:

   No errors, certificate is already trusted

6. Lastly, you need to add the jssecacerts file to your JDK by copying it to the JAVA_HOME/jre/lib/security/ direc

SSO Connections

The Single Sign On facility allows another application to control user access to ExtraView. When this is enabled throu behavior settings (see above), the SSO application is entirely responsible for the authentication of each user. Once the complete, the SSO application forwards the authenticated information to ExtraView, and ExtraView automatically sigı necessary, and subject to any licensing restrictions, a new user will be created within ExtraView.

When ExtraView is configured to use SSO as the user authentication mechanism, the user points their browser to the S ExtraView extracts the user ID and other pertinent data from the HTTP request header and automatically logs the user no ExtraView sign on page is displayed. During the sign on process, ExtraView will access all of the user's informatic Server, assuming this is configured. A new ExtraView user will be created, if the user does not exist. If the user exists database, their record is updated to ensure synchronization with the LDAP server.

SSO Header Mapping

The "login" HTTP header from SSO contains the authenticated user's information. ExtraView administrative data held security_user table defines the headers that are used by ExtraView and where in ExtraView each field is stored. All of to the individual fields that contain user data. This mapping is used in conjunction with the LDAP user data, bypassing administrator to add a new user specifying this information.

In the ExtraView configuration file (Configuration.properties), these fields are mapped to match the host header data a following example:

```
##############################
## SSO HEADER MAPPING      ##
##############################
SSO_PRIMARYKEY  = USER_NAME
SSO_SURNAME     = SURNAME
SSO_GIVENNAME   = GIVEN_NAME
SSO_EMAIL       = EMAIL_ADDRESS
SSO_STREET      = STREET
SSO_CITY        = CITY
SSO_STATE       = STATE
SSO_POSTALCODE  = POSTALCODE
SSO_COUNTRY     = COUNTRY
SSO_PHONE       = TELEPHONE_NUMBER
SSO_MOBILE      = MOBILE_NUMBER
SSO_PAGER       = PAGER_NUMBER
```

2. If SSO_COMPANYNAME is not configured or it has a null/blank value in the header, the app default COMPA be used to create/update the user
3. The user's company name is not used to compare the existing user with the request to sign on a user
4. If the SSO_UPSERT behavior setting is set to a value of YES, then the setting LDAP_UPSERT should always l of NO

The SSO_DN_USER_ID_ATTRIBUTE

SSO_DN_USER_ID_ATTRIBUTE - short for Distinguished Name User ID Attribute - indicates two behaviors:

1. The SSO header is in Distinguished Name format, e.g., cn=abc,dn=def,ou=ghi
2. The attribute of the user ID within the DN is the value of the SSO_DN_USER_ID_ATTRIBUTE followed by a instance number.. For example, if SSO_DN_USER_ID_ATTRIBUTE=cn, then the user ID would be abc based in the previous point.

Another example is:

cn=2055092,cn=Users,dc=dsd,dc=fmcna,dc=com

In this case, SSO_DN_USER_ID_ATTRIBUTE=cn would still work to establish 2055092 as the user_id.

If the DN is:

cn=Users,cn= 2055092,dc=dsd,dc=fmcna,dc=com

then the SSO_DN_USER_ID_ATTRIBUTE=cn#2 would establish the 2055092 as the user_id (the #2 indicates that tl instance of the attribute should be used). Note that cn#1 and cn act the same when used as configuration values for SSO_DN_USER_ID_ATTRIBUTE.

LDAP Connections with SSO

ExtraView can be configured to use an LDAP directory for details of users. This is optional, and is controlled by the s setting that signifies whether SSO is turned off or on (SSO_STATE). See the section on Single Sign On within this gu information.

LDAP Server Information

Once again, see above for the ExtraView behavior settings that control the connection. In addition, the ExtraView con Configuration.properties specifies the parameters required to access the LDAP server.

There is an assumption that only a single LDAP server will be configured. The following information also assumes th administrator is familiar with the configuration of LDAP servers.

In the ExtraView configuration file, the following fields will be mapped to matched the host LDAP data structures:

```
########################
## LDAP SEARCH MAPPING ##
########################
LDAP_PRIMARYKEY = primary_key
LDAP_SURNAME = surname
LDAP_GIVENNAME = given_name
LDAP_COMMONNAME = common_name
LDAP_DISTINGUISHEDNAME = distinguishedname
LDAP_EMAIL = email_address
```

ExtraView maps the following LDAP fields, if they are configured for use and if they are accessible in LDAP by Extr

ExtraView Field	LDAP Field	Mapped	Comments
User ID	LDAP_PRIMARYKEY	Yes	Used for login and user authentication
First name	LDAP_GIVENNAME	Yes	
Last name	LDAP_SURNAME	Yes	
Password	LDAP_PSWRD	Yes	Used for login and user authentication. Note that the passw when inserting a new user via LDAP connection, and only CUSTOM_AUTHENTICATION behavior setting is set to
Expire password	NA	No	
User Roles	NA	Optional	May use rule mapping to map this field
Privacy Groups	NA	Optional	May use rule mapping to map this field
Set Default Area	NA	Optional	May use rule mapping to map this field
Set Default Project	NA	Optional	May use rule mapping to map this field
Email address	LDAP_EMAIL	Yes	
Date Format	NA	No	
Time in 24 Hour Format	NA	No	
Drilldown Report format	NA	No	
Time zone	NA	Yes	
Notify on own updates	NA	No	
Job title	NA	Yes	
Company name	LDAP_COMPANYNAME	Yes	This is not used in the mapping
Address	LDAP_STREET	Yes	
City	LDAP_CITY	Yes	
State / Province	LDAP_STATE	Yes	
Zip / Postal Code	LDAP_POSTALCODE	Yes	
Country	LDAP_COUNTRY	Yes	
Work phone	LDAP_PHONE	Yes	
Home phone	NA	Yes	
Cell phone	LDAP_MOBILE	Yes	
Fax	LDAP_FAX	Yes	
Pager	LDAP_PAGER	Yes	
Any UDF field	A distinguished Name	Yes	

Note: Most of the ExtraView fields are accessible through the user administration screens.

Note: ExtraView user role information is not stored in the LDAP server.

LDAP and SSO Example

The following is an excerpt from a Configuration.properties file showing the entries to connect to both an LDAP and S

```
... ... ... ... ... ...
########################
## SSO HEADER MAPPING ##
########################
SSO_PRIMARYKEY = SM_USER
SSO_SURNAME = SSO_SURNAME
SSO_GIVENNAME = SSO_GIVENNAME
SSO_EMAIL = SSO_MAIL
SSO_STREET = SSO_STREET
SSO_CITY = SSO_CITY
SSO_STATE = SSO_STATE
SSO_POSTALCODE = SSO_POSTALCODE
SSO_COUNTRY = SSO_COUNTRY
SSO_PHONE = SSO_TELEPHONENUMBER
SSO_MOBILE = SSO_MOBILE
SSO_PAGER = SSO_PAGER
LDAP_FIELDS =
LDAP_PRIMARYKEY,LDAP_SURNAME,LDAP_GIVENNAME,LDAP_COMMONNAME,LDAP_EMAIL,LDA
LDAP_CITY,LDAP_STATE,LDAP_POSTALCODE,LDAP_COUNTRY,LDAP_PHONE,LDAP_MOBILE,LDAP_
LDAP_COMPANYNAME,LDAP_DEPARTMENT,LDAP_TITLE
#########################
## LDAP SEARCH MAPPING ##
#########################
LDAP_PRIMARYKEY = employeenumber
LDAP_SURNAME = sn
LDAP_GIVENNAME = givenname
LDAP_COMMONNAME = cn
LDAP_EMAIL = mail
LDAP_STREET = street
LDAP_CITY = l
LDAP_STATE = st
LDAP_POSTALCODE = postalcode
LDAP_COUNTRY = postaladdress
LDAP_PHONE = telephonenumber
LDAP_MOBILE = mobile
LDAP_PAGER = pager
LDAP_COMPANYNAME = displayname
LDAP_DEPARTMENT = department
LDAP_TITLE = title

EV_LDAP_PRIMARYKEY = USR_ID
EV_LDAP_SURNAME = USR_LNAME
EV_LDAP_GIVENNAME = USR_FNAME
EV_LDAP_COMMONNAME = USR_NAME
EV_LDAP_EMAIL = USR_EMAIL
```

```
EV_LDAP_TITLE =
… … …
… … …
```

Updating ExtraView User Information

When the LDAP_UPSERT = YES functionality is set in Configuration.properties, a user's information will be update
with the latest information found in the LDAP directory. This occurs when the user signs into ExtraView, and without
user's part.

With this feature, the ExtraView administrator needs only to create the account for a new user, using the SAME uniqu
LDAP_PRIMARYKEY in the LDAP directory. Then upon sign on, these users have their account information in Extr
All fields that are mapped are updated, and kept up to date automatically.

Note: This feature should only be used if you have licensed ExtraView with concurrent license usage, as users can co
licenses to the user table.

SAML Authentication

Security Assertion Markup Language (SAML) is an open standard that allows an identity provider (IDP) to pass auth
credentials to a service provider (SP). SAML is the link between the authentication of users' identities and the authori
service from the provider. ExtraView relies on the use of a third party IDP.

SAML is used in conjunction with SSO and often with LDAP. With an operational ExtraView installation, the config
requires these three steps:

a. The configuration of a working SSO external to ExtraView, in the ExtraView behavior settings and Configurati
b. The configuration of the third party Identity Provider (IDP)
c. The configuration of ExtraView SAML behavior settings and the storage of the certificate used by the IDP

LDAP Configuration

See the previous pages on [External Authentication - LDAP, SSO and SAML](#).

SSO Configuration

See the previous page on [LDAP Connections with SSO](#).

Identity Provider (IDP) Configuration

The components of the IDP configuration depend on the provider itself, but it is expected that the most relevant points

- The specification of the URL to which authentication responses are directed
- The assertion key-value mapping for SSO keys; the SSO_PRIMARY_KEY must have an assertion in the authe
  to identify the ExtraView user.

ExtraView Configuration

The following settings should be configured as appropriate for your installation. You should determine the parameter
settings below to be used in the authentication response before starting the configuration.

SAML_SSO_SP_ENTITY_ID	The SP Entity ID behavior setting is a URL or other identifier given by Provider (SP) that uniquely identifies it to the IDP. This is derived fror for the SP. A typical value is an XML fragment and will look similar t `<md:entitydescriptor entityid= "http://www.okta.com/exki3aihaifAHCbex0h7" xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata"> </md:entitydescriptor>`
SSO_DO_UPSERT	This is set within the Configuration.properties file if it the values from authentication are to be updated within the ExtraView database with ea authentication
SSO_PRIMARYKEY	This is the mapping for the user name that is set within the Configurati file. This parameter must include the expected ExtraView User ID
SSO_SURNAME	This is the mapping for the user's last name that is set within the Configuration.properties file
SSO_GIVENNAME	This is the mapping for the user's given name that is set within the Configuration.properties file
SSO_EMAIL	This is the mapping for the user's email address that is set within the Configu file

The IDP will typically require a valid security certificate to validate the encrypted signature in the authentication resp IDP. This certificate is stored securely within ExtraView within the Key Manager administation utility. This is locate Advanced --> Encryption Key Management The format for the certificate is known as PEM (Privacy Enhanced Mail somewhat of a misnomer as the certificates for SAML have no connection with email. The format is a Base 64 encod characters which is pasted into the **Enter certificate PEM** field within the Encryption Key Manager. If there is no en the new entry you create for the key is added as a secret key only and is not used for SAML authentication.

The entry in the key manager should look like this:

- Name for the key - this must be **SPKey**
- Key password - this must be **password**
- Certificate PEM - this is the field where you paste the contents of the certificate

The action to save a certificate in this field builds the appropriate credentials for the SAML certificate.

Bypassing SAML Authentication

There are some circumstances where you might want to bypass the SAML authentication, for example if the IDP serv operable, or you need to access the ExtraView ADMIN account directly. To achieve this, include the parameter EV_BYPASS_SSO=YES on the URL, following the ExtraView address. This will produce the standard built-in Extr screen for authorization. For example, your address might look like:

http://myserver.mycompany.com/evj/ExtraView?EV_BYPASS_SSO=YES

SAML Authentication Via the CLI

CLI calls, by their very nature, cannot support SAML authentication, so the EV_BYPASS_SSO option is used to over limitation. The **-B true** option on the CLI command line allows the user to enter a valid user ID and password for aut

SAML Logging

When first establishing a connection to an IDP to perform SAML authentication it can be useful to add additional log precise details of the transactions. To assist with this you may add a section to the `WEB-INF/configuration /Configuration.properties` file. Look for, or add a section in this file like this:

ExtraView API in a SSO Environment

When you require accessing the ExtraView API, and a Single Sign On server is in place, special needs exist to ensure are correctly authenticated, and that every access is from an authorized source. ExtraView uses the following logic to a call to the API is authentic, when a Single Sign On server is in place:

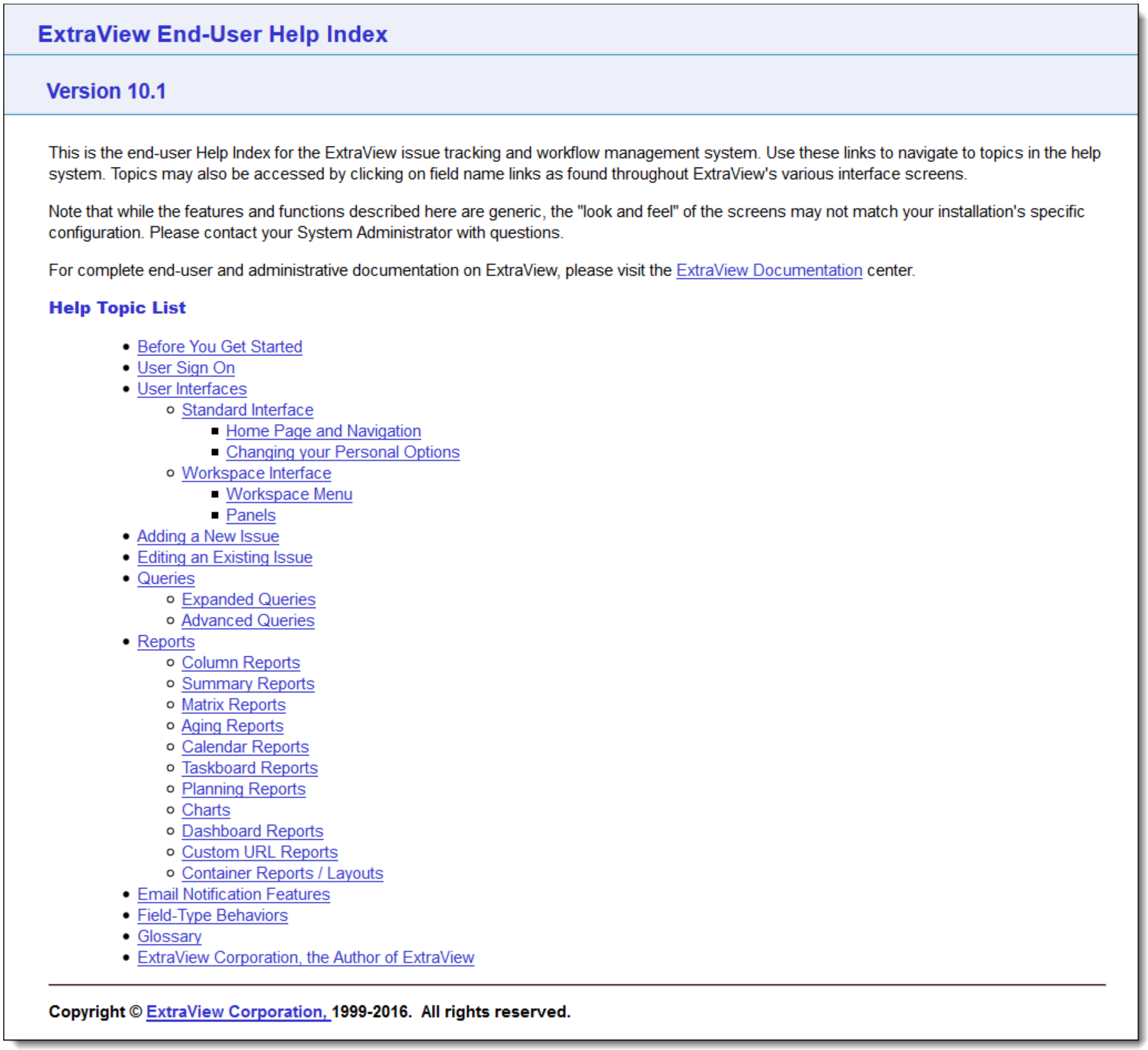
1. The API call is examined and if the parameters user_id and password exist, these are used to authenticate the us
2. If the first step does not result in a valid user, the headers returned from a SSO connection are examined. If thes user ID and password, these are used to authenticate the user
3. If there is still no authenticated user, and if the behavior setting ALLOW_ANONYMOUS_API_ACCESS is set anonymous connection is established, using the permissions of the role of the user that is set in the behavior sett ANONYMOUS_API_USER_ID.

ExtraView Help

Navigation Bar Help

The ExtraView application includes a comprehensive HTML-based help system that you can access at any time by cli button on the navigator frame. In addition, many tool tips and context-sensitive links are defined throughout the applic

When you place the mouse cursor over a screen label that has a tool tip, a small window will appear next to your mou definition of what this label does. These labels allow you to define help tips for your users. If you press the mouse but you will be taken to a specific page within the help system. If you do not have a specific page defined within the scree Administrative section, you will be taken to the Help Index page. This page consists of links to detailed information al



ExtraView Help screen

Defining Your Own Help System

It is straightforward to develop your own help system within ExtraView. This can be completely separate from ExtraV
system, or it can completely replace the inbuilt system.

Default Help System Paths

The standard Help system HTML files are stored in a directory with the path of en_US/help, within the installation di
your ExtraView installation resides. The images embedded within the Help system are stored by default in the path en
Note that the menu buttons for the Help system are stored in the standard images directory for the system.

Defining the Path to your own Help System

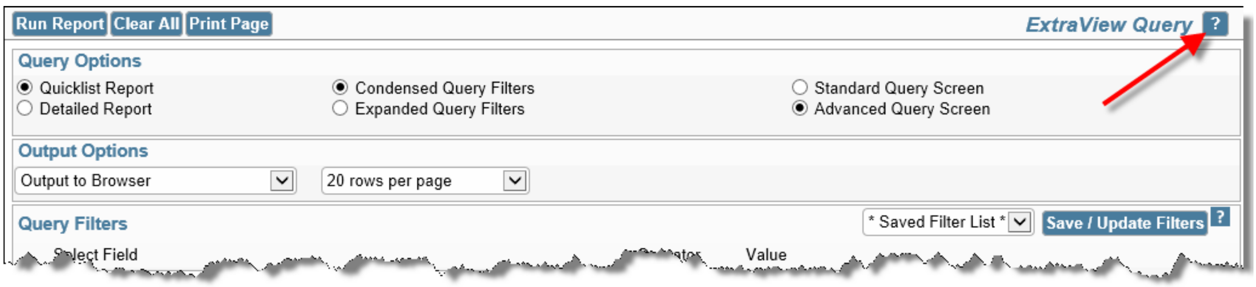
You can obviously build the help file with internal links to navigate around the pages. You can also use the Help URL of the Data Dictionary to provide context sensitive help on each field that appears on each screen such as the *Add Issu* screens. You can also use the standard html bookmark convention to provide a drilldown from the Data Dictionary to help page.

Field-Level Help

The behavior setting named ALLOW_HELP controls the link that is placed on field labels on the *add* and *edit* screens set to YES, then when a user clicks on the field label, they are taken to the help system and to the page specified in the the field in the data dictionary. If there is no value in the **Help URL**, the user is taken to the index page of the help sy

Menubar Help

All menubars may have a context sensitive help button which takes the user to the appropriate documentation page wi **Help URL**, then the user is taken to the index page of the help system.



Whilst this button always appears within Administration screens, the behavior setting named ALLOW_HELP can be s remove the button from end-user accessible screens.

Adobe PDF Report Templates & Mapping

You may configure one or more buttons on an *edit* screen to merge data with an Adobe PDF document, using any fiel current issue (and related issues) that are displayed on the *edit* screen. The Adobe PDF document is created outside Ex tools from Adobe. It is possible to further customize the contents of PDF document using custom code techniques - se Custom Guide. You will require access to, and a good working knowledge of Adobe Acrobat and/or Adobe LiveCycl create PDF forms that can be utilized with ExtraView.

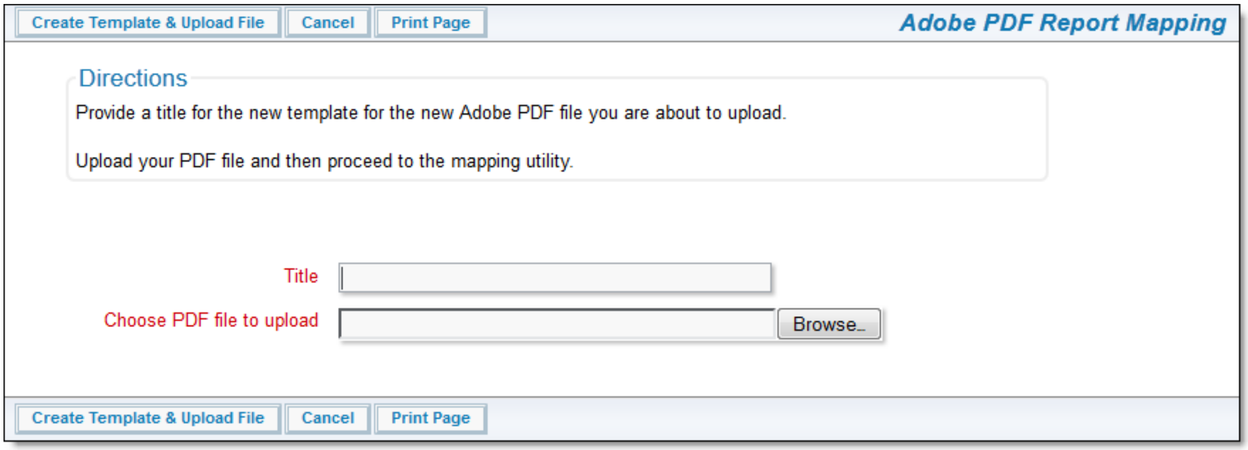
The setup involves three basic steps:

- Create a template by uploading a PDF file, and mapping fields within the PDF file to fields within ExtraView. N that have the same name within ExtraView and within the PDF document are mapped automatically. Also note, example at the bottom of the page that Adobe forms use a particularly verbose means of identifying a field. Th show the definitions of the fields which include their position within the document. The appearance of a typica something like:

  ```
  topmostSubform[0].BodyPage[0].Page1[0].BIRTH[0]
  ```

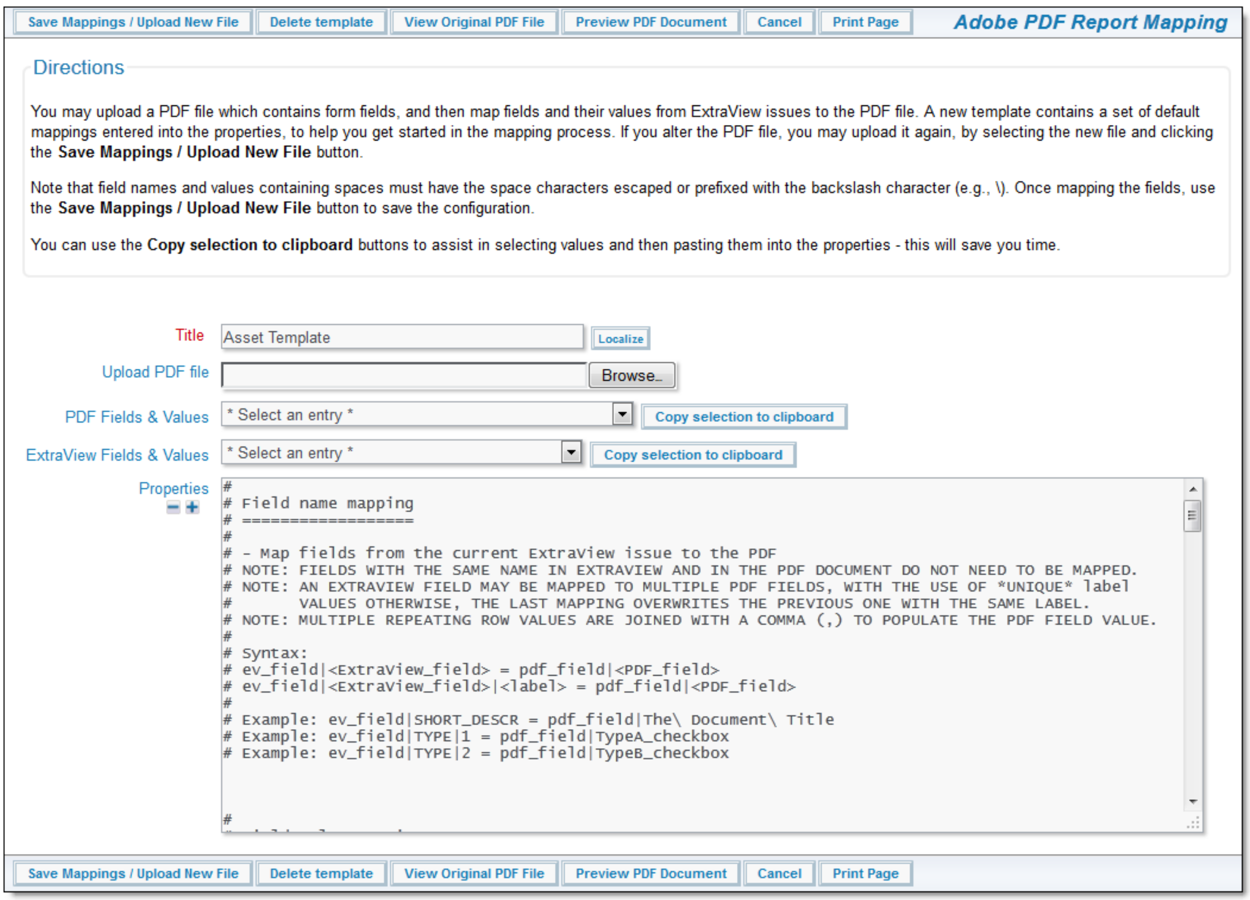
  Consult the Adobe documentation for more information.

- The PDF document file uses forms with fields, in a similar manner to which ExtraView uses layouts with fields administration menu. Within the utility, press the **Add** button to begin the process.



Creating the PDF template

Simply provide the title to the template, and browse to and select your PDF document. Then click on the **Create Tem** **File** button. You are then taken to the following screen:



Mapping fields with the PDF template

General Points about Entering Properties

- You use the Properties box to provide the mappings
- All comments are on lines that being with a # character. These lines are ignored when processing the mappings
- Fields that have the same name within ExtraView as within the PDF document are mapped automatically for yo need to include these in the mappings, unless you want to map them to different fields
- Use a \ character to escape a space character which follows
- The two rows on the screen labelled **PDF Fields & Values** and **ExtraView Fields & Values** are "helper" fields. fields and their values that can be mapped. A button allows you to copy these fields and values to the computer you can paste them into the Properties. Of course, you can simply type the fields and values as appropriate into
- For multi-valued list fields, repeating row fields, and related record fields mapped to PDF text fields, the multip concatenated with commas
- Multi-valued list fields can be mapped to multiple PDF checkbox or radio fields
- The properties file is checked for syntax & content errors when the **Save Mappings / Upload New File** button i are listed on the screen, and the mapping template is not saved to the database when there are any errors.

Property Mapping

There are several key sections to the properties. You will see some examples as comments within the properties.

- **Field name mapping**
  This is the primary method to map fields from ExtraView into a PDF document. Fields that have the same name and in the PDF document are mapped automatically. The basic construct of a mapping entry is:

  ```
  ev_field|<ExtraView_field> = pdf_field|<PDF_field>
  ```

  For example, if you want to map the ExtraView named **SHORT_DESCR** to a PDF field named **TITLE** you wo ev_field|SHORT_DESCR = pdf_field|TITLE If you want to map a single ExtraView field to multiple fields witl document, use a the label parameter as shown here:

  ev_field|<ExtraView_field>|<label_1> = pdf_field|<PDF_field_1> ev_field|<ExtraView_field>|<label_2> = pdf <PDF_field_2>

  The `<label_n>` is any string that makes the left-hand side of the expression unique. For example, if you hav **SHORT_DESCR** field in ExtraView and you want to use that as a heading on a PDF with two pages with a hea **hdr1** on page 1 and **hdr2** on page 2, you would use:

  ev_field|SHORT_DESCR|1 = pdf_field|hdr1 ev_field|SHORT_DESCR|2 = pdf_field|hdr2

  In addition to ExtraView's fields, you may also map the following:

  - SYSDATE - The current date and time
  - SYSDAY - The current date
  - USER - The current user preparing the report
- **Field value mapping**
  This section maps the values of fields in ExtraView to the values of fields in the PDF document. Once again, if field is identical in both ExtraView and the PDF document, then there is no need to provide a mapping. Further, typically provided only for enumerated list type fields, with display types such as List, Popup, Checkbox, Radic Value mappings for text, date and numeric type fields are not required. The syntax to map a value is as follows:

  ev_value|<ExtraView_field>|<value> = pdf_value|<PDF_field>|<value>

ev_value|<ExtraView_field>|<value>|<label> = pdf_value|<PDF_field>|<value>

- **Filtered field name mapping**
  Defining filtered field mapping entries is similar to field name mapping entries. They provide a mechanism to u and related issues for a specific issue that you are using to prepare a PDF document. The filter itself is defined i **Filter definition for repeating rows and/or related records**. You must define an entry in that section for every this section. The syntax for a filtered field mapping is as follows:

  filter_ev_field|<Filter>|<ExtraView_field> = pdf_field|<PDF_field>

  Use either of the above two forms, depending on whether you are mapping to a single or to multiple fields in the For example, to apply a filter named **myProjectFilter** which refers to a field named **ADDRESS** within a related have this entry for the mapping:

  filter_ev_field|myProjectFilter|ADDRESS = pdf_field|Address

- **Filtered field value mapping**
  This provides a means to map ExtraView field values where the field is on a repeating row or a related issue. Th defined in the section **Filter definition for repeating rows and/or related records**. You must define an entry in every filter you use in this section. The syntax for a filtered field value mapping is as follows:

  filter_ev_value|<Filter>|<ExtraView_field>|<value> = pdf_value|<PDF_field>|<value>

  For example, we might want to map the value of **Not Fixed** as a value in the ExtraView field named **STATUS** c to a checkbox field in a PDF document, where the checkbox field is named **Not finished_checkbox**. We want to relationship defined by the filter named **myProjectFilter**:

  ev_value|myProjectFilter|STATUS|Not\ Fixed = pdf_field|Not\ Finished_checkbox|On

  It is possible to map the one ExtraView filtered field value to multiple fields within the PDF form. The syntax is

  filter_ev_value|<Filter>|<ExtraView_field>|<value>|<label> = pdf_value|<PDF_field>|<value>

- **Default date format**
  This section defines a default date format to be used to place all ExtraView *date* and *day* display type fields on t document. The format used is known as the Java Simple Date Format. You can see a definition of the date form example of using the default date format is:

  DEFAULT_DATE_FORMAT = MM/dd/yyyy

- **Date format for specific fields**
  This section defines a date format to be use for a specific PDF document field that contains a date. The format u the Java Simple Date Format. You can see a definition of the date formatting here. An example of using the def is:

  DEFAULT_DATE_FORMAT = MM/dd/yyyy

- **Document, image fields and file attachment mapping**
  You are able to map document field, image field display types as well as issue attachments from ExtraView issu documents. The syntax to map fields from the current record is:

An example might be to map the same image in an ExtraView image field named **LOGO_IMAGE** at the begin document:

ev_doc_img|LOGO_IMAGE|start= pdf_page|0 ev_doc_img|LOGO_IMAGE|finish = pdf_page|10

- **Filter definition for repeating rows and/or related records**
  The filter expressions that you can build are similar to the links you build with the **LINK** directive in Business] expressions are additive as they are defined, and separated by commas. The basic syntax is:

  FILTER|<Filter_name> = <expression>

  This example shows how two filters can be used:

  FILTER|personFilter = AREA = Legal, PROJECT = Personnel, PERSON = USER

  You may use the special variables **$$SYSDATE$$**, **$$SYSDAY$$**, **$$USER$$**, and **$$ID$$** to match the curre day, current user, and the ID of the current issue respectively. Similar to the **LINK** business rule directive, you u **RG_NAME** and **RG_TYPE** attributes to define filters for related issues. The syntax is:

  FILTER|<Filter_name>|RG_NAME = <relationship group name> FILTER|<Filter_name>|RG_TYPE = <relatic

  The **RG_NAME** is the name of an existing relationship group. The **RG_TYPE** may be one of **CHILDREN**, **GRANDCHILDREN**, **GRANDPARENTS**, **PARENTS**, **RELATED**, **MEMBERS**, **LINKED**, or **SIBLINGS** specify **RG_NAME** or **RG_TYPE** for a filter, the default relationship group is used, with an **RG_TYPE** of **LI** can be used to define how to display the results, when many records are returned by the filter. Typically, you wi the results horizontally or vertically. The syntax for the filter is:

  FILTER|<Filter_name>|DELIMITER = delim

  where delim is the string used to delimit the records. The default delimiter is a comma. If you want to display th vertically you will use the delimiter \n to introduce a newline character between each result. The typical entries for related issues that are to be mapped to a PDF document are:

  FILTER|<Filter_name> = <expression> FILTER|<Filter_name>|RG_NAME = <relationship group name> FILT <Filter_name>|RG_TYPE = <relationship type>

  An example of a filter definition for use within related issue mappings might be:

  FILTER|myProjectFilter = AREA = Customers, PROJECT = Customer Data FILTER|myProjectFilter|RG_NAM CUSTOMER_ISSUES FILTER|myProjectFilter|RG_TYPE = CHILDREN

  When handling repeating rows, you can use the **ROW_NUM** attribute to match a specific row. The syntax is:

  FILTER|<Filter_name>|ROW_NUM = <integer>

Creating the Button Field

The button field is created within the data dictionary as a User Defined Field with the following properties:

Default Value	This is the name of the template you created in the first step. It is important to use the exact name you cı
Help Text	This is text that will be placed on the button and will be visible to the user. For example, you might put as the text
Help URL	This entry should either be the word **ATTACHMENT** to store the generated PDF document as an attacl data dictionary name of a document field to store the generated PDF document in a document field.

Configuring the Layout

Simply place the field you created in the previous step on the edit screen layout where you want to see the button. You usual layout cell attributes such as FIELD VISIBLE IF to the field on the layout.

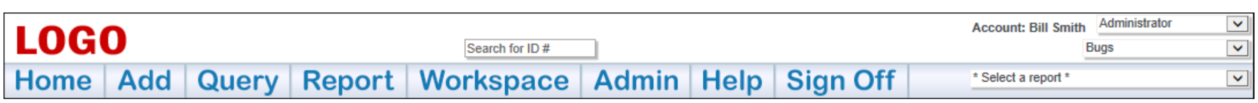
Sample Configuration

```
ev_field|MANUFACTURER_REPORT_NUMBER = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Mfr_Report[0]
ev_field|UF_IMPORTER_REPORT_NUM = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].UF_Importer_Report[0]
#
# Section A
#
ev_field|PATIENT_IDENTIFIER = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Patient_Identifier[0]
ev_field|PATIENT_AGE = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].AGE[0]
ev_field|PATIENT_DOB = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].BIRTH[0]
ev_field|PATIENT_WEIGHT = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Weight_lbs[0]
ev_field|PATIENT_GENDER|1 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Male[0]
ev_field|PATIENT_GENDER|2 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Female[0]
#
# Section B
#
ev_field|ADVERSE = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].ADVERSE[0]
ev_field|PRODUCT_PROBLEM = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].PRODUCT[0]
ev_field|OUTCOME|1 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Death[0]
ev_field|OUTCOME|2 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].DISABILITY[0]
ev_field|OUTCOME|3 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].LIFE_THREATENING[0]
ev_field|OUTCOME|4 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].CONGENITAL[0]
ev_field|OUTCOME|5 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].HOSPITAL[0]
ev_field|OUTCOME|6 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Other_Event[0]
ev_field|OUTCOME|7 = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].REQUIRED[0]
ev_field|PATIENT_DOD = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].Death_Date[0]
ev_field|EVENT_DATE = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].EVENT[0]
ev_field|DATE_REPORT = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].REPORT[0]
ev_field|DESCRIPTION = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].DESCRIBE[0]
ev_field|RELEVANT_TESTS = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].RELEVANT[0]
ev_field|OTHER_RELEVANT_HISTORY = pdf_field|topmostSubform[0].BodyPage[0].Page1[0].OTHER_RELEVANT[0]
ev_field|OTHER_REMARKS = pdf_field|topmostSubform[0].BodyPage[0].Page3Cont[0].concomitant[0]
#
```

Creating Alternative Navigation Bars

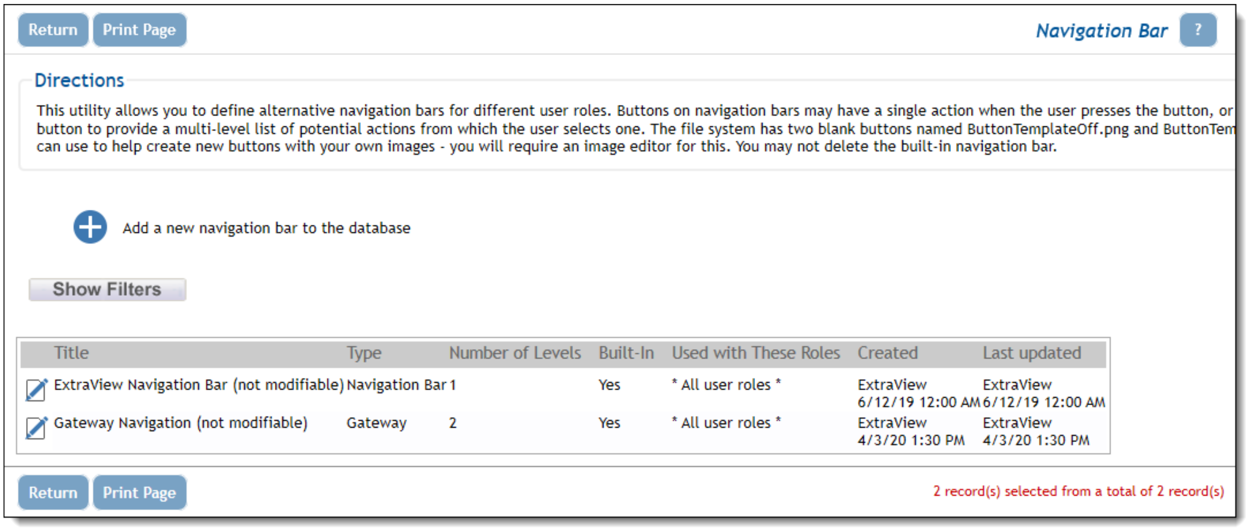
Standard Navigation Bar Configuration

ExtraView comes with a built-in navigation bar which is used for both the standard and workspace interfaces. The the navigation bar is selectable, allowing you to change the graphical style and color of the buttons. Although you may ch the built-in navigation bar, you may not change its functionality. Using the utility described on this page, you may cre navigation bars for any or all user roles that the administrator has defined and use these to override the built-in naviga built-in navigation bar appears like the following screen shots, when you have selected the pale blue theme:



Built-in Standard Navigation Bar

The administration utility that allows the definition and modification of different navigation bars is accessed through *A*
System Configuration --> Navigation Bar. This initially takes you to a screen like this:



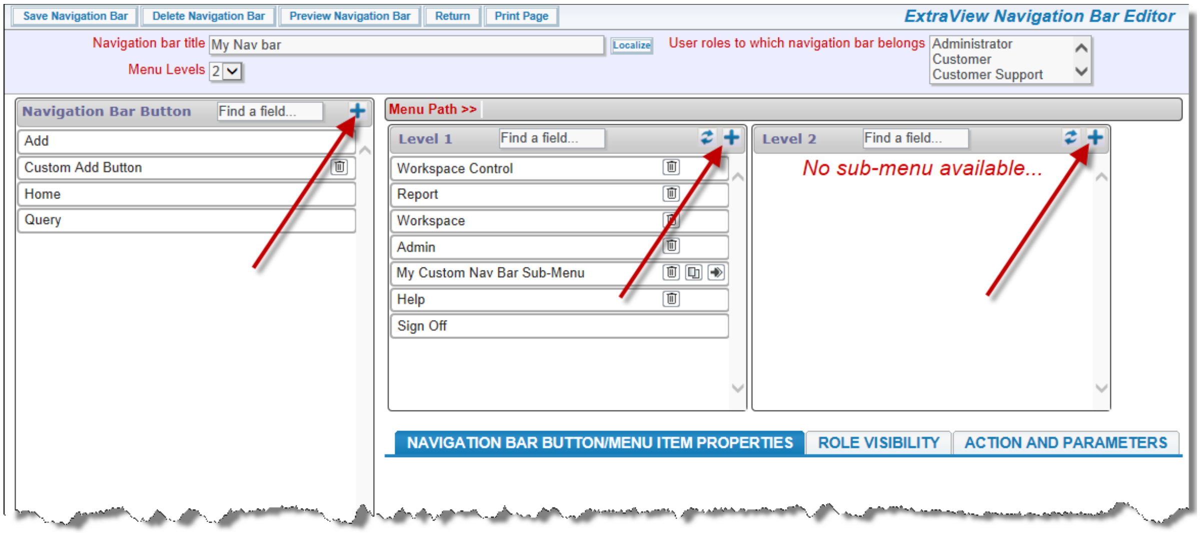
Navigation Bar Administration

The key attributes about designing your own navigation bar are as follows:

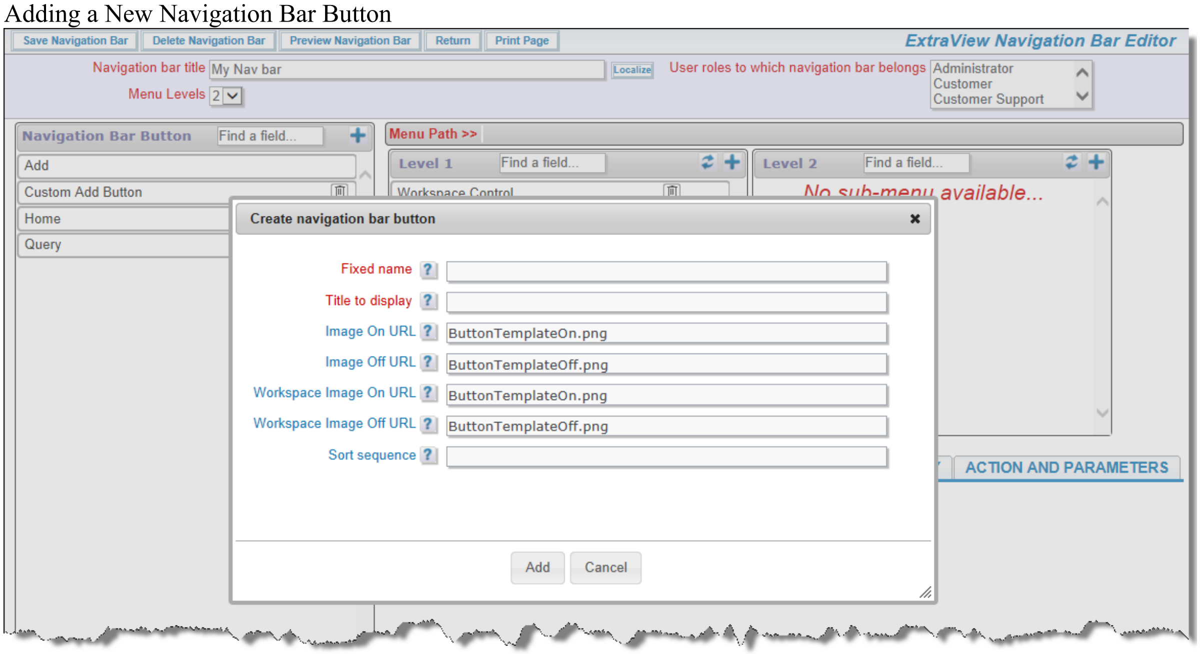
- The default standard navigation bar is named `ExtraView Navigation Bar (not modifiable)`. On most occasions you wil navigation bar, of the type **Navigation**
- You may define up to seven sub-menu levels for any navigation bar button, but for usability it is suggested that more than three levels deep.
- Any button on the navigation bar may access a function when it is clicked on by the user, or it may provide a su clicked. If a sub-menu is selected, the user can click on any entry in that sub-menu to execute a function, or to o sub-menu at a lower level.

Customized Navigation Bar with Sub-Menu

- Use the **NAVIGATION BAR BUTTON/MENU ITEM PROPERTIES** tab to define the properties for each na or each drop-down menu item placed within the individual navigation bar button
- Two blank images are provided within the directory structure of the existing buttons, named ButtonTemplateOff ButtonTemplateOn.png. These may be used as placeholders while you are designing your own buttons for the to navigation bar. They are used as the default names for the buttons you create, but you can change these defaults use for buttons you create.
- The original Adobe Photoshop files used to create the buttons are provided within the installed directory structu *extraview_installed_directory*/locales/en_US/images_nav_bar. You can use Photoshop with the file for your the matching buttons for each of the themes provided. You can also create your own navigation bar theme from scra Note that the navigation bar buttons for all workspace themes are contained in a single file, named nav_bar_wor
- Any button may be designed with any text or graphic on the button itself. The button also has a title which is us places their mouse over the button.

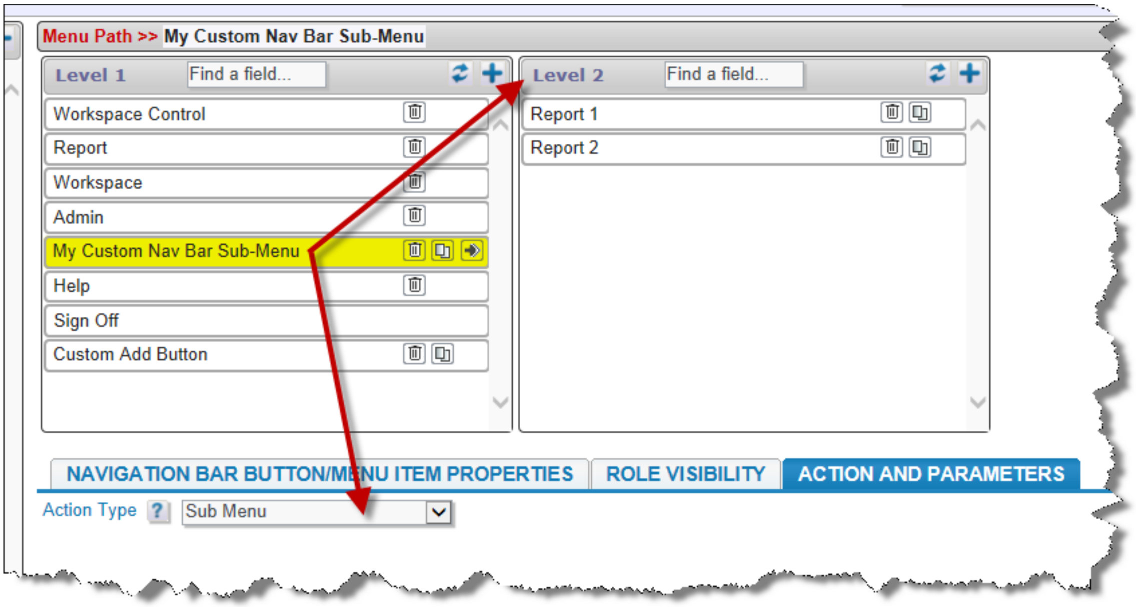


Adding a New Navigation Bar Button



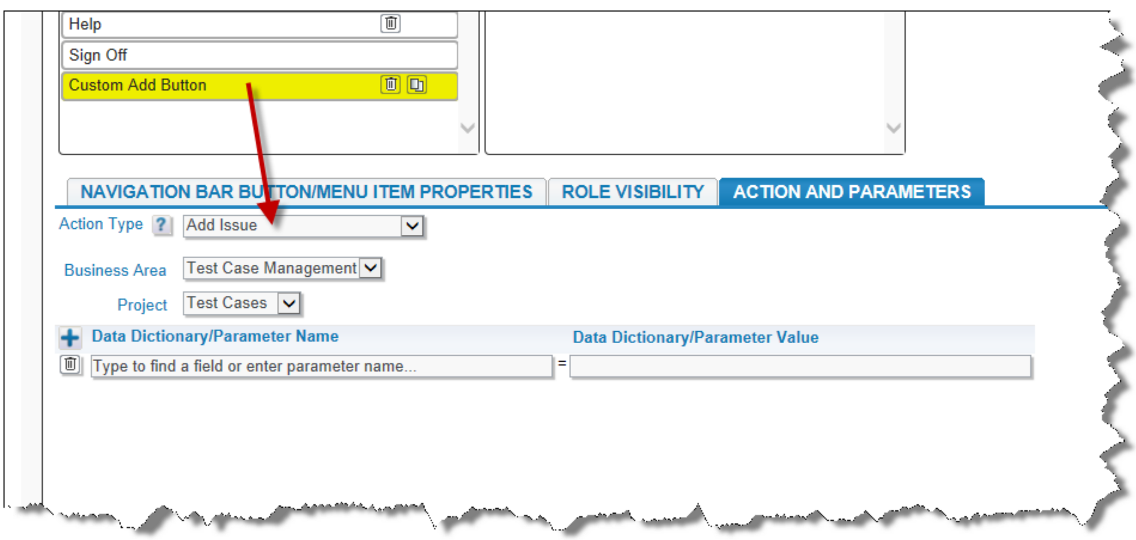
Adding a New Navigation Bar Button

- There are four possible images for each navigation bar button. Two are used on the standard interface, two on tł interface. Only two images are needed if you are only using the button on one interface. The buttons are of the ' with one image being used when the button is visible, but no mouse over it, and one image being used when the the button
- The navigation bar buttons and sub-menu items may be made visible or invisible for any of the roles to which a belongs. You use the **ROLE VISIBILITY** tab for this
- Each navigation bar button or sub-menu item has an action type that defines what happens when you click on tł menu item. The available actions on the **ACTION AND PARAMETERS** tab are:
  - **Sub-Menu**: This entry creates a sub-menu where additional actions are defined. Sub-menus may point to menus, nesting to a maximum of seven levels



Custom Sub-Menu

- **Open URL**: This action allows you to enter any valid URL. A new browser window or tab with the conte will be opened when the user selects a menu entry with this action
- **Add Issue**: This action opens an *Add Issue* screen or panel within the ExtraView window or workspace. I opening the *Add Issue* screen, you must select a Business Area and Project for the screen. You also have t choose any number of field names and initial values which will be used to populate the *Add Issue* screen. type a name, the utility will pop up a small window with matches for the name you are entering. Typically provide a field name and a value, and these will be used to populate the *Add Issue* screen when the user p



Custom Add Button

- Not all field display types are supported for use with fields that can be used to populate values onto the *A* field display types are: Checkbox, Currency, Date, Day, Decimal, List, Number, Pop-up, Radio button, Ta Text Field, and User. There are also restrictions in that the following fields may not be used to populate th PARENT_ID, AREA, PROJECT, ITEM_ID, EV_REPORT_SELECTION, RELATIONSHIP_GROUP_I

UserCustomJavaScript.js file
    - **ExtraView Home**: This action purposes the button to open the standard interface Home Page screen whe pressed by the user. This action only operates in the standard interface. It has no effect within a workspac
    - **ExtraView Add**: This action opens an *Add Issue* screen or panel. Unlike the **Add Issue** action, the screen user's current Business Area and Project. This provides the functionality of the standard, in-built *Add* butt
    - **ExtraView Query**: This action opens the standard, in-built ExtraView Query screen
    - **ExtraView Report**: This action opens the standard, in-built ExtraView Report screen
    - **Open in Edit**. ExtraView supports a mode where new issues are created and inserted into the database b the input screen to the user. The issue thus has an ID (and perhaps an ALT_ID) before the user sees the s action allows a new issue to be created and for the screen to be opened to the user in edit mode
    - **ExtraView Workspace**: This action opens the default standard, in-built Workspace for the user. This acti operable on the standard interface
    - **ExtraView Admin**: This action places the button that accesses the standard, in-built Administration scree navigation bar
    - **ExtraView Help**: This action places the button that accesses the standard, in-built Help screen on the nav
    - **ExtraView Sign Off**: This action places the button that operates the standard, in-built Sign Off button on bar. You should always place this button on the top-level menu
    - **ExtraView Workspace Menu**: This action is only operable within a workspace. It places the standard, in menu on the navigation bar.
- You should always place a Sign Off button on navigation bars that you design. It is also recommended that you Page button on the standard interface navigation bar and a Workspace menu button on the workspace navigatio

Triggering Rules from a Navigation Bar

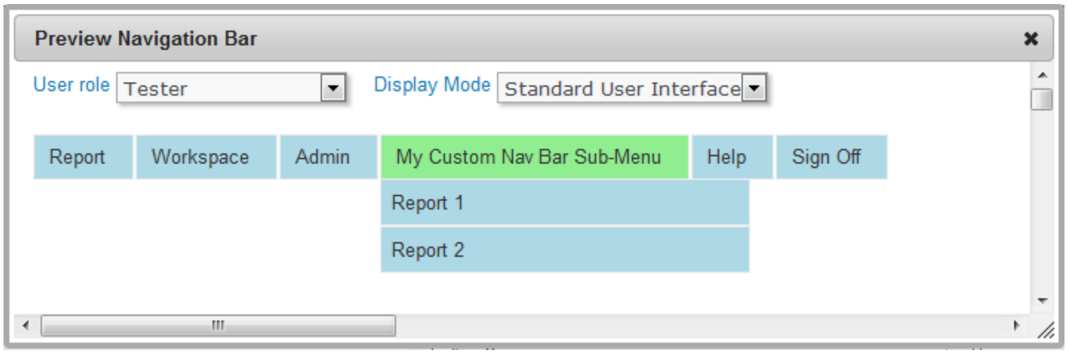
This technique only works with **Add** buttons on navigation bars. You can trigger a rule action using a business rule si

```
if (SCREEN_NAME = 'ADD' && MY_ADD_NAV_BUTTON= 'Add Task' ) {
  PRIORITY = 'P 2';   CATEGORY = 'Task';
}
```

If the user chooses the **Add Task** navigation bar item, then the PRIORITY and CATEGORY fields are set as shown a

Tips to Create a Navigation Bar

- When you first create a new navigation bar, use the multi-select list with the title **User roles to which navigatio** select all the user roles with which you want to use the navigation bar
- You have control over which buttons within the navigation bar appear for each of the selected user roles selecte **Visibility** tab within each entry on the menu. Thus, you can define a navigation bar for all or many roles, with a require, and then use the **Role Visibility** checkboxes to turn individual entries off and on for each role
- You also have control over which buttons appear within the standard user interface and within the workspace in **Display mode** selector within the properties
- The built-in ExtraView navigation bar uses the MENU_XXX security permission keys to control visibility. For MENU_ADD_PROBLEM controls the **Add** button on the built-in navigation bar
- When you create your own navigation bar, the MENU_XXX permission keys are used for built-in buttons and p named MENU.XXX are made available for your own user-defined buttons. For example, when you add built-in MY_REPORT_NAV, MY_QUERY_NAV, and MY_ADMIN_NAV to your navigation bar, you will have the fol permission keys available, to control the button role visibility:You can control the permission to your buttons ei utility documented on this page, or via the **Grant Security Privileges** administration utility.
    - MENU.MY_REPORT_NAV
    - MENU.MY_REPORT_NAV
    - MENU.MY_ADMIN_NAV
- If you use the **Sort sequence** to reorder a list, use the **Refresh** button to re-display the menu
- When designing a navigation bar, you can use the **Preview Navigation Bar** menu bar button to check exactly w for any user role and for both the standard user interface and the workspace interface. Here is an example:



Preview Mode

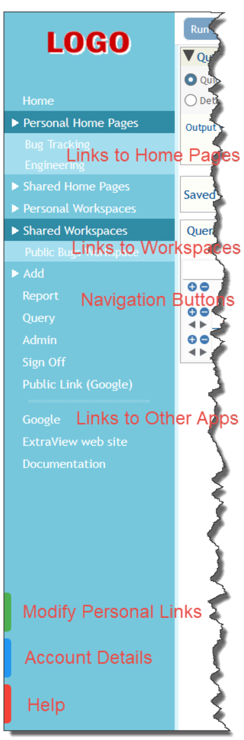
- Plan your new navigation bar from the top level downwards, and have a graphic designer use Photoshop to crea buttons before completing the configuration of the navigation bar.

[Click here for end user documentation](#)

Creating a Gateway Navigation Bar

Gateway navigation bars offer an alternative to the standard navigation bars. They have some alternative and addition they are vertical on the screen, as opposed to horizontal. Secondly, you can set up entry points into any stored persona Page, or personal or shared Workspace.

In addition, the user (as well as the administrator) has control of being able to set up additional links, either to other si organization, or other ExtraView sites. They may also add reports to their Gateway navigation bar.



The Gateway navigation bar configuration is very similar to configuring the standard navig

To configure the Gateway navigation bar, undertake these steps, and refer to the above secti add and remove links from the navigation bar.

1. It is recommended to be a user with full administrative access before configuring this make sure your user is residing in the admin role
2. The feature is initially disabled. You must turn on the security permission key named MENU_GATEWAY for the user roles who will have permission to use the feature
3. If you want to use the default Gateway navigation buttons named **Gateway Navigati modifiable)**, this step is not required. To create your own Gateway navigation bar, cl button and ensure you select the navigation bar type of **Gateway**
4. Add the appropriate buttons to your navigation bar. These buttons are different from navigation bar:

Button name	Security Permission Key	Purpose
Personal Home Pages	EV_PRIVATE_HOMEPAGE_BTN	This button allows access personal Home Pages you
Personal Workspaces	EV_PRIVATE_WORKSPACE_BTN	This button allows access personal Workspaces you
Shared Home Pages	EV_PUBLIC_HOMEPAGE_BTN	This button allows access shared Home Pages you h
Shared Workspaces	EV_PUBLIC_WORKSPACE_BTN	This button allows access shared Home Pages you h
Search	MENU_EV_SEARCH_BTN	Provides a search field on

	MENU_EV_SEARCH_BTN and you must place the Search button on the layout for Navigation Bar Note that if an end user creates a Personal Link to a second ExtraView installation, then an granted to the user for a period of time. Upon setting up the link the user is asked to authen access credentials on the second site. This provides the link with a token using the OAuth2 the user's password does not need to be passed between sites for an unexpired token. One point to be aware of is that the OAuth2 protocol is only specified to work with https co with http. However, if you or your users want to take advantage of a redirect configured wi server, from http to https, then this is allowable, as long as the remainder of the address is tl security reasons, ExtraView will not allow a redirect from an address on one domain to a di The time for which the token is valid is defined in the behavior setting named OAUTH2_TOKEN_LIFETIME_SECONDS.

Import / Export

This section of administration deals with the import and export of data and metadata with ExtraView. The available fu

- Metadata export - Exports the configuration, or part of the configuration of the installation to a local file
- Metadata import - Imports a previously exported file into an installation
- File Import - Issue Data - Imports issue data from a CSV or TSV file
- File Import - User Information - Imports and creates users from a CSV or TSV file
- File Import - Data Dictionary - Imports and create new user defined fields in the data dictionary from a tab-deli delimited file

Note: It is strongly recommend that you backup your entire database using its standard features, before you us facility. Importing metadata, layouts, reports and user data is irreversible, and it is possible that failures can oc process.

Note than exporting metadata is different from backing up your entire database. This should be performed with the too provided by your database vendor, or third party tools that are specifically developed for the task.

Data within ExtraView is split into two parts, metadata and item data. Metadata is the supporting data for the applicati information supplied as part of the product, data you supply such as the entire list of available product names, the enti status values, and the screen layouts you design. Item, or issue, data is the physical data relating to the items being trac contain the attributes of a specific issue such as its ID, its specific product name, specific status currently assigned, an information relating to the issue.

There are several reasons to export and import just the metadata, within an ExtraView instance:

- To produce a backup of all or part of the metadata in a form that can be restored. This is separate from performi the database instance itself, as the metadata is exported in XML format.
- To transfer the metadata from a test or staging environment to a production database. Upon transfer, operations update and merge can be selected.
- To obtain the data in a standardized format (XML) that can be used to interface to other systems.

When exporting the metadata, there is an import overall option to understand. You may check the option box titled **Mi information exported**. Doing so serves the purpose of leaving the data associated with users undisturbed on the prod User data such as passwords and each user’s personal options is dynamic and you most often want to leave the produc the user information alone results of adding new data, whilst updating existing data.

When an object is loaded from the saved disk image to the instance, all necessary referential integrity and uniqueness maintained. Maintaining uniqueness constraints necessarily involves incrementing or modifying the sequence values f objects in the instance appropriately. Maintaining referential integrity constraints implies that multiple tables may be u rows on which the new values depend must be added, if they are not already there.

When deleting objects in the target database, all referential integrity constraints are maintained, using a cascade deleti if an import results in the removal of an object, the metadata object references to that object must be removed as well. designed to ensure information is unlikely to be lost, since dependent objects are likely be restored during the import.

When adding new metadata, additional rules may be imposed on the data relationships for user problem data. In these issue data is checked against the new relationships.

When you move the business rules from one instance to another as part of the export / import process, the rules are ne the existing rules in the target database. The old rules are always overwritten with the new rules.

Export Family Information

Family	Tables exported	
All Metadata	ALLOWED_FUNCTIONS	LAYOUT_TYPE
	ALLOWED_VALUE_TYPE	MODULE
	ALLOWED_VALUES	MODULE_TYPE
	APPLICATION_DEFAULT	OUTPUT_TYPE
	AREA	PRIORITY
	CATEGORY	PRIVACY_GROUP
	CHART_TYPE	PRIVACY_GROUP_USER
	CUSTOMER	PRODUCT
	DATA_DICTIONARY	PRODUCT_LINE
	ESCALATION_RULE	PRODUCT_PRODUCT_LINE
	ESCALATION_RULE_ACTION	PRODUCT_RELEASE
	ESCALATION_RULE_ELEMENT	PROJECT
	ESCALATION_RULE_USER	RELATIONSHIP_GROUP
	EV_FILE_IMPORT	RESOLUTION
	EV_HIERARCHY	SECURITY_GROUP
	EV_HIERARCHY_LEVEL	SECURITY_GROUP_USER
	EV_LIST_MAP	SECURITY_MODULE
	EV_RULE_TEXT	SECURITY_PERMISSION
	EV_TEMPLATE	SECURITY_USER
	EV_TEXT_LOOKUP	SEVERITY_LEVEL
	INTEREST_LIST	START_PAGE
	INTEREST_LIST_ELEMENT	STATUS
	INTEREST_LIST_USER	STATUS_RULE
	ITEM_GROUP_TYPE	TITLE_MAP
	ITEM_TYPE	UDF
	LAYOUT	UDF_LIST
	LAYOUT_ELEMENT	
	LAYOUT_ELEMENT_ATTRIBUTE	
All metadata minus reports	ALLOWED_FUNCTIONS	LAYOUT_TYPE

	ESCALATION_RULE	PRODUCT_PRODUCT_LINE
	ESCALATION_RULE_ACTION	PRODUCT_RELEASE
	ESCALATION_RULE_ELEMENT	PROJECT
	ESCALATION_RULE_USER	RELATIONSHIP_GROUP
	EV_FILE_IMPORT	RESOLUTION
	EV_HIERARCHY	SECURITY_GROUP
	EV_HIERARCHY_LEVEL	SECURITY_GROUP_USER
	EV_LIST_MAP	SECURITY_MODULE
	EV_RULE_TEXT	SECURITY_PERMISSION
	EV_TEMPLATE	SECURITY_USER
	EV_TEXT_LOOKUP	SEVERITY_LEVEL
	INTEREST_LIST	START_PAGE
	INTEREST_LIST_ELEMENT	STATUS
	INTEREST_LIST_USER	STATUS_RULE
	ITEM_GROUP_TYPE	TITLE_MAP
	ITEM_TYPE	UDF
	LAYOUT	UDF_LIST
	LAYOUT_ELEMENT	
	LAYOUT_ELEMENT_ATTRIBUTE	
Layout	AREA	PROJECT
	DATA_DICTIONARY	SECURITY_GROUP
	LAYOUT	SECURITY_MODULE
	LAYOUT_ELEMENT	SECURITY_PERMISSION
	LAYOUT_ELEMENT_ATTRIBUTE	TITLE_MAP
	LAYOUT_TYPE	UDF
	MODULE	UDF_LIST
	PRODUCT	
Report	AREA	PROJECT
	CALCULATED_FIELD	RELATIONSHIP_GROUP
	CATEGORY	REPORT
	CHART	REPORT_ATTRIBUTE
	CHART_PROPERTY_GROUP	REPORT_GROUP
	CHART_TYPE	REPORT_LAYOUT
	DATA_DICTIONARY	REPORT_SECURITY_GROUP
	EV_HIERARCHY	RESOLUTION
	EV_HIERARCHY_LEVEL	SECURITY_GROUP
	FILTER	SECURITY_MODULE
	FILTER_CRITERIA	SECURITY_PERMISSION
	FILTER_GROUP	SECURITY_USER
	ITEM_TYPE	SEVERITY_LEVEL
	LAYOUT	SORT_ORDER
	LAYOUT_ELEMENT	SORT_ORDER_FIELD
	LAYOUT_ELEMENT_ATTRIBUTE	START_PAGE
	LAYOUT_TYPE	STATUS
	MODULE	SUBREPORT
	OUTPUT_TYPE	TITLE_MAP

List Value Migration

The default export and import of list fields and their values moves all values in all lists from the source to the target in are some circumstances where you do not want to migrate any or all of the list values within fields. For example, if y field list values through the use of the OBJECT business rule, this might be test data and not data that you want to rep system. To accommodate this requirement, two features are available.

First you may use the `DO_NOT_MIGRATE=true` parameter within an OBJECT rule. This flags the values created for sp with the XML Export / Import process. Second, the **Manage List Values** utility accessible through the administratior dictionary and the design center allows you to set any list value with a flag so that it will not be migrated.

Because values being migrated may have dependencies, such as being used in interest lists and escalations, the flagge migrated to the target system, and are then deleted, with the deletion also removing the dependencies.

Import of Item Data

There are three modes of importing item data from an XML format.

- **Batch Mode**. In this mode, an XML formatted input file is processed sequentially, creating new issues in the E database. This is driven from an administration screen.
- **API Command**. In this mode, an API command is executed, passing a single issue to ExtraView as part of the l stream. This issue is processed and with success is added to the database. The API command returns a success r failure error message.
- **API Command with Input File**. In this mode, an API command is executed. The command references an inpu more issues to be imported to ExtraView. The file is processed and results are passed back to the calling comma

The XML data to be imported must adhere to the Document Type Definition (DTD) detailed below. This is supplied w the `WEB-INF/data/xml_dtd` directory of your installation, and can be directly referenced from your XML impor stream. The file name supplied is extraview_item.dtd.

```
<?xml version="1.0" encoding="UTF-8" ?>

<!ELEMENT locale (EMPTY) >
<!ATTLIST locale region CDATA "US">
<!ATTLIST locale language CDATA "en">
<!ATTLIST locale variant CDATA " ">

<!ELEMENT item_list (item*) >
<!ELEMENT item (short_descr , severity_level , priority , status , product_name , date_created , owner , timestamp
privacy , last_change_user , alt_id , area , project , category , resolution , product_line , date_last_status_change , dat
release_found , release_fixed , contact , originator , item_id, item_udf*, item_release*, item_module*, item_attachm

<!ELEMENT item_udf (title_specifier?, name_specifier?, CDATA*)>

<!ELEMENT item_release (title_specifier?, name_specifier?, short_descr , severity_level , priority , status , product_
date_created , owner , timestamp , assigned_to , privacy , last_change_user , alt_id , area , project , category , resolut
product_line , date_last_status_change , date_closed , release_found , release_fixed , contact , originator , item_id, it

<!ELEMENT item_module (title_specifier?, name_specifier?, assigned_to ,status ,timestamp , rc_version ,last_chan
,item_module_id )>

<!ELEMENT title_specifier (CDATA)>
```

```
<!ELEMENT product_name (CDATA) >
<!ELEMENT date_created (CDATA) >
<!ELEMENT owner (CDATA) >
<!ELEMENT timestamp (CDATA) >
<!ELEMENT assigned_to (CDATA) >
<!ELEMENT privacy (CDATA) >
<!ELEMENT last_change_user (CDATA) >
<!ELEMENT alt_id (CDATA) >
<!ELEMENT area (CDATA) >
<!ELEMENT project (CDATA) >
<!ELEMENT category (CDATA) >
<!ELEMENT resolution (CDATA) >
<!ELEMENT product_line (CDATA) >
<!ELEMENT date_last_status_change (CDATA) >
<!ELEMENT date_closed (CDATA) >
<!ELEMENT release_found (CDATA) >
<!ELEMENT release_fixed (CDATA) >
<!ELEMENT contact (CDATA) >
<!ELEMENT originator (CDATA) >
<!ELEMENT item_id (CDATA) >
<!ELEMENT rc_version (CDATA) >
<!ELEMENT item_module_id (CDATA) >
<!ELEMENT item_attachment (CDATA)>
<!ATTLIST item_attachment file_desc CDATA #IMPLIED >
<!ATTLIST item_attachment file_name CDATA #IMPLIED >
<!ATTLIST item_attachment path CDATA #IMPLIED >
<!ATTLIST item_attachment content_type CDATA #IMPLIED >
<!ATTLIST item_attachment file_size CDATA #IMPLIED >
<!ATTLIST item_attachment date_created CDATA #IMPLIED >
```

- UDF's can be referred to by NAME or by TITLE. We recommend that you use the NAME wherever possible, a may not be unique across your installation. Furthermore, the TITLE may vary with the locale specified in the D create different DTD's for each locale, and use the localized TITLE within the XML files being imported.
- We recommend that all character data is embedded within CDATA tags.
- Certain constructs are required in the XML, following the web interface rules. For example, a file-name-attribut appear in the item-attachment-attributes list.
- UserCustom methods prAddPreInsert and prAddPostInsert are executed on each item insert.
- Allowed values between fields are ignored when you import a record via this interface. If you mistakenly create – child relationship, this will be indicated when you try to update the record via the web interface.
- The ITEM_ID is allocated to the new issue at the time the ExtraView code validates the issue being read from tl the record is rejected for any reason, the ITEM_ID is discarded, and an issue with this ID will never be created. to be imported will be allocated the next number in the sequence.
- If a field is read-only, on the add screen layout (as defined by the user role, business area and project of the issu be respected with the item import function. Further, if this field has a default value defined in the data dictionary be inserted.
- Attachments must be encoded using the Base64 algorithm.
- Values in other CDATA sections may be encoded in Base64 if desired or required. Whether or not the string is e signaled by a sentinel ("%25S") in the front of the CDATA string. Encoding is required if any of the following a
    a. The string value starts with the sentinel value ("%25S"), or
    b. The string value contains the CDATA end marker ("]]>"), or
    c. The string value contains any non-CDATA-permissible characters. CDATA-permissible characters are def following production with Unicode character values as derived from the web page at http://www.w3.org/T NT-Char

    ```
    Char ::= #x9 | #xA | #xD | [#x20-#xD7FF] | [#xE000-#xFFFD] | [#x10000-
    ```

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE extraview_item SYSTEM "file:///C:/path_to_my_dtd/extraview_item.dtd"> <ITEM_LIST>
<ITEM>
<AREA><![CDATA[Bugs]]></AREA>
<PROJECT><![CDATA[&Bugs Data&]]></PROJECT>
<CATEGORY><![CDATA[Software]]> </CATEGORY>
<PRODUCT_NAME><![CDATA[ExtraView]]></PRODUCT_NAME>
<ITEM_UDF>
<TITLE_SPECIFIER><![CDATA[OS]]></TITLE_SPECIFIER>
</ITEM_UDF>
<ITEM_RELEASE>
<RELEASE_FOUND><![CDATA[1.2.3.4]]></RELEASE_FOUND> </ITEM_RELEASE>
<ITEM_RELEASE>
<ITEM_UDF>
<TITLE_SPECIFIER>
<![CDATA[This is text in a field]]>
</TITLE_SPECIFIER>
<![CDATA[BILL.SMITH]]>
</ITEM_UDF>
</ITEM_RELEASE>
</ITEM>
<ITEM>
<CATEGORY>
<![CDATA[Software]]>
</CATEGORY>
<PRODUCT_NAME>
<![CDATA[ExtraView]]>
</PRODUCT_NAME>
```

```
<ITEM_UDF>
<NAME_SPECIFIER>RELEASE_COMMITTED_RELEASE
</NAME_SPECIFIER>
<![CDATA[5.2.2.1]]>
</ITEM_UDF>
<RELEASE_FOUND>
<![CDATA[2.5.6]]>
</RELEASE_FOUND>
</ITEM_RELEASE>
<ITEM_ATTACHMENT FILE_DESC='Current log file' FILE_NAME='EVJ.log' PATH='C:/t/' CONTENT_TYPE='
<ATA[VEhJUyBJUyBBIEZJTEU=]]>
</ITEM_ATTACHMENT>
</ITEM>
</ITEM_LIST>
```

Export of Item Data

To achieve the export of data from ExtraView, the user should use the Command Line Interface (CLI) commands, evh evsearch. These commands are covered in depth in the Command Line Interface Guide.

Note: For this version of ExtraView, the above import and export functions use different DTD's. Thus, records export ExtraView cannot be imported with the functions documented here directly. A future version will offer compatibility c export XML data, by changing the CLI commands.

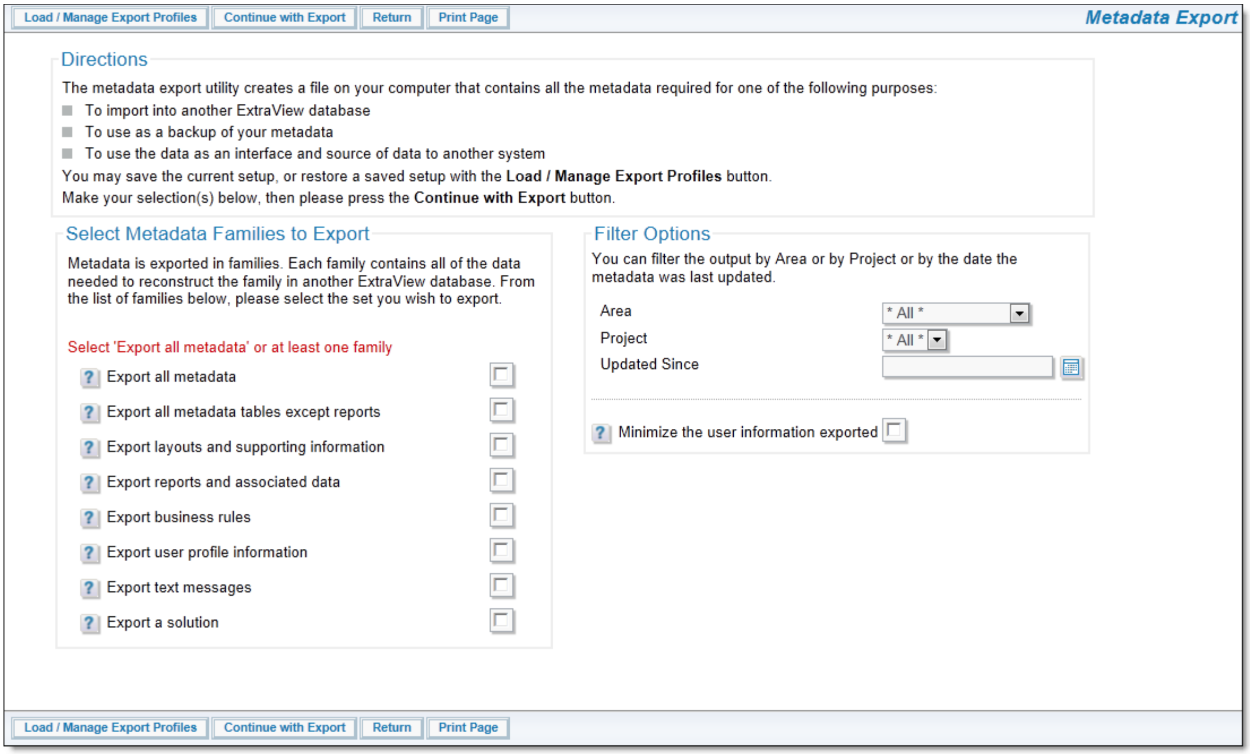
Metadata Export

The export creates a flat file containing the metadata in an XML format that can be read by the Metadata Import admi This file can be moved between different platforms and different instances of ExtraView. The order of objects in the fi the requirements of ExtraView, not by the user. The data export is defined satisfying the requirements of being able to import of the data, to build new objects. In short, all dependent data must follow the data upon which it is dependent.

There are a wide range of options, allowing you to perform exports of all or subsections of the metadata within an Ext installation.

Each option that defines a subset of the database is termed a family. This option is available from the **Import/Export** administration.

Note: If you are using ExtraView with the Apache Derby database, the metadata export feature is significantly limited perform a metadata export of the complete database, and cannot use the features described below to constrain the expo of the database.



Exporting ExtraView Families

The following are the metadata families that may be exported. Note that any filters you set will also apply to the expo

- Export all metadata - a complete export is created of all the metadata
- Export all metadata tables except reports - a complete export less the reports within the source system is created production system may have reports which differ from your source system, and you may not want to touch the r production system. An exception to this is that reports associated with any navigation bars within your installat as these are likely to be global and required within the target database. These will be imported into the target da new report replaces them
- Export layouts and supporting information - this will provide the layouts within the filters you apply, along with information such as the data dictionary fields
- Export reports and associated data - this option only exports the reports and their supporting information, such a source system
- Export business rules - only the business rules in the souce system will be exported
- Export user profile information- only the user information in the source system will be exported
- Export text messages - this will export all the message tables for one or more locales. If you are working within behavior setting MULTI_LOCALE set to YES, a select list showing all the allowed locales will appear on the a screen. The default is that all locales will be exported, but you can use the multi-select list to export just one or the allowed locales. The typical use of this feature allows the administrator to migrate the messages for just a s upgrading a system and several language translations are happening in parallel. Only one or more languages m ready to migrate so you may control which locales are migrated. Note that the base locale of the system is alwa

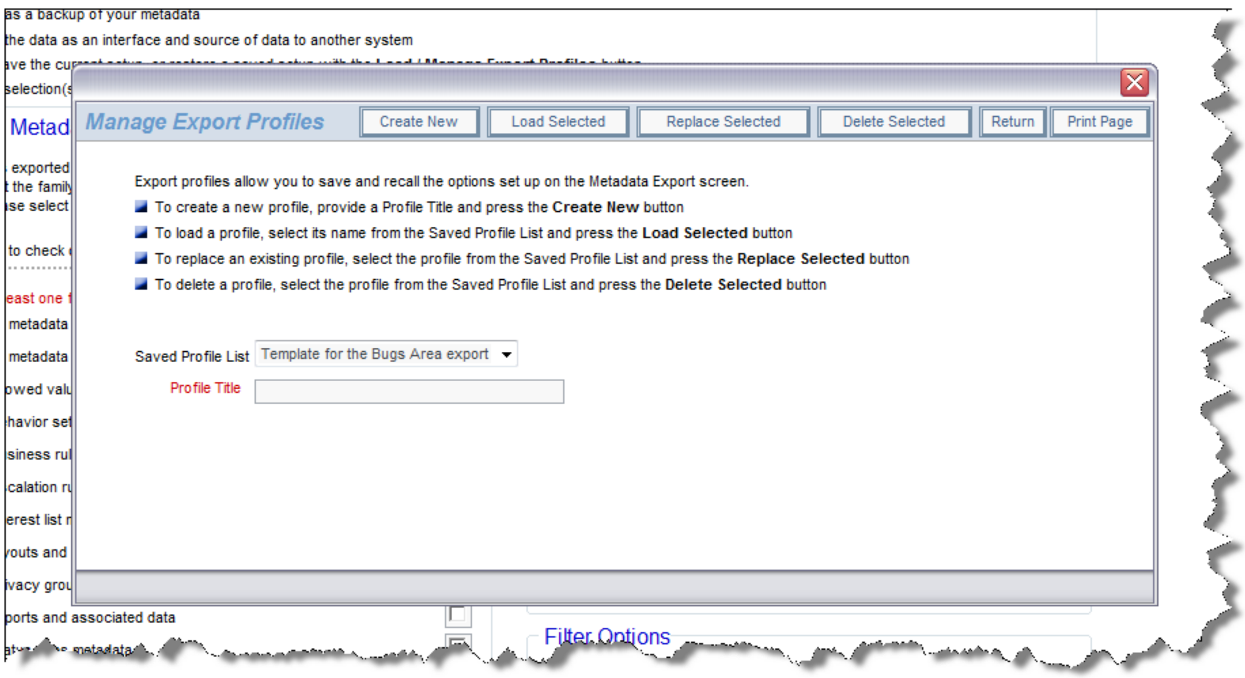
exported is confined to the following:

- Only the layouts within the source system that are within the Business Area(s) you select as filters. Layou area will not be exported
- Only the fields and their permissions that are used by layouts within the source system will be exported
- Allowed values for any fields within the layouts will be exported
- Relationships used by the layouts will be exported
- Only reports within any folders you select will be exported

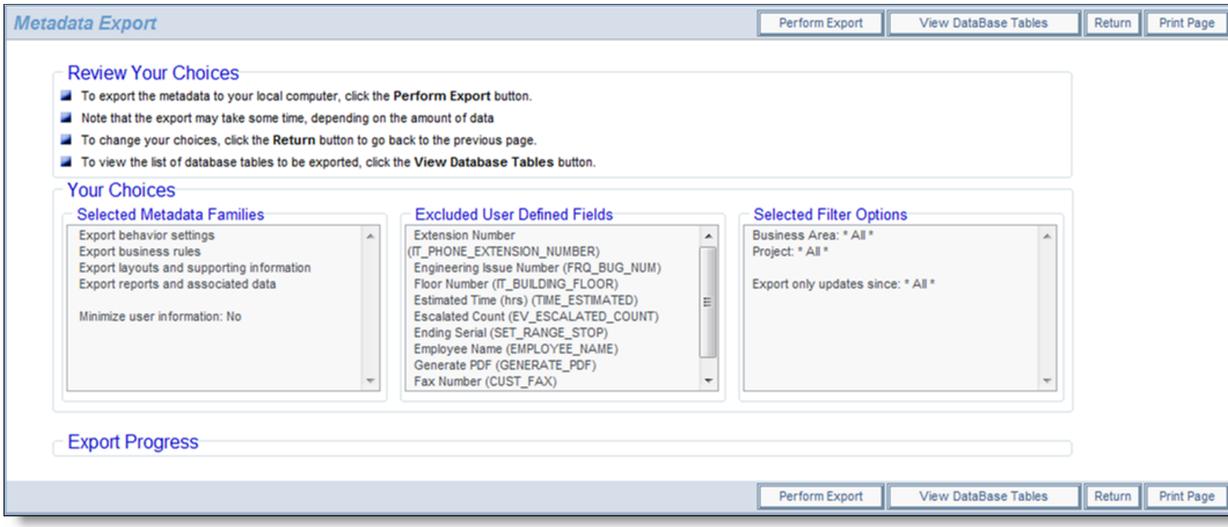
If you click the option **Minimize the user information exported**, then only the essential user information to export tl written to the export file. This may solve a number of issues. For example, user information is often dynamic, and use change passwords, or administrators may activate and deactivate accounts on a production system or the references to information must always be taken from an LDAP or Active Directory server. While you may want the metadata from system to be migrated to a production system, you often may want to leave the production data related to users in plac said, users who are referred to within metadata such as filter values, interest lists, escalation rules, etc. are exported, sc can be reproduced in the target system when the import occurs. Users only referred to within metadata such as the dat date last modified fields are not exported when the user information is minimized.

You may choose some overriding filters for the export. As opposed to exporting the data across all Business Areas anc may select a single Business Area and Project to export. You may also choose to only export data updated since a spec time.

Once you have set up an export profile, you may decide to save the combination for future use. This is accomplished t **/ Manage Export Profiles** button on the menu bar. This will display a popup as follows:



You may create new profiles and save them, load an existing template, replace an existing template or delete an existir the popup window. Once you have set up the profile to export, click the **Continue with Export** button. You are taken similar to this:



Continuing with the metadata export process

Confirm your choices on this screen, before clicking the **Perform Export** button.

You will be prompted to enter a file name for the export. This file will be saved on your local file system of your clien

An export can take some time, based upon the amount of metadata in your system. Files generated vary in size from a 50MB in size, dependent on the amount of metadata. As the export starts, one of the first steps is to compare the datab known reference set of data that describes what the database should look like. In a perfect world, this step would not b databases can accumulate defects caused by any one of a number of factors. A previous update script might have faile not being noticed by the administrator; there might have been an incorrect command executed by a database administr other potential sources of failure as well. The metadata export process examines the database to ascertain if there is an problem that will interfere with the process. The most typical problem encountered is that there is a missing database (a problem such as this is found, you will see an alert message warning of the event. You will be able to elect to continu process. It is recommended that you do not continue if you are not sure of the ramifications of the error.

An export file can be imported into the same or a different instance of ExtraView. The file can also be used to integrat applications.

Migrating Text Messages

It is worth discussing how text is migrated from one instance to another and how it is handled in a multi-lingual syster several options that can be used, but are dependent upon how you export the metadata.

There are two principal options available when you want to migrate messages from one instance to another.

- Use the **Export system messages** family option to prepare the XML file. This results in a format which can be target installation without regard to the context of metadata messages. For example, if you have a single term ir (usually English) that occurs more than once within different metadata items such as list or field titles and the tr different terminology to localize the term for each occurrence, then the import process ignores this, and the targ have the same localized term wherever it occurs. The advantage is that this is a relatively fast migration path
- Use the **Export all metadata** family option to prepare the XML file. This results in a format which retains the and every term. For example, if you have used different terms in a language that all correspond to the same terr locale (usually English), then the target system will retain the separate values. When importing the metadata fil choose the **Localization Update/Merge** option to migrate only the text messages from the export file. The disa this migration may take longer to execute than the first option. You may still perform a full **Update/Merge** or N

- ATTACHMENT_REPOSITORY_ROOT
- CSS_HOME
- DEBUG_MODE
- DEFAULT_LANGUAGE
- DEFAULT_REGION
- DEFAULT_VARIANT
- EMAIL_DIRECTORY
- ENVIRONMENT
- HELP_HOME
- HTTP_CHARSET
- IMG_HOME
- LOG_DIR
- NOSPILL_SESSION_COUNT
- SCHEMA_VERSION
- SITE_URL
- URL_PATH
- USER_ACCEPTS_LICENSE

Metadata Import

Note: Again, we strongly recommend that you backup your data before you use the import facility, using your standard facilities. Importing metadata, layouts, reports and user data is irreversible, and it is possible that a fa during the process.

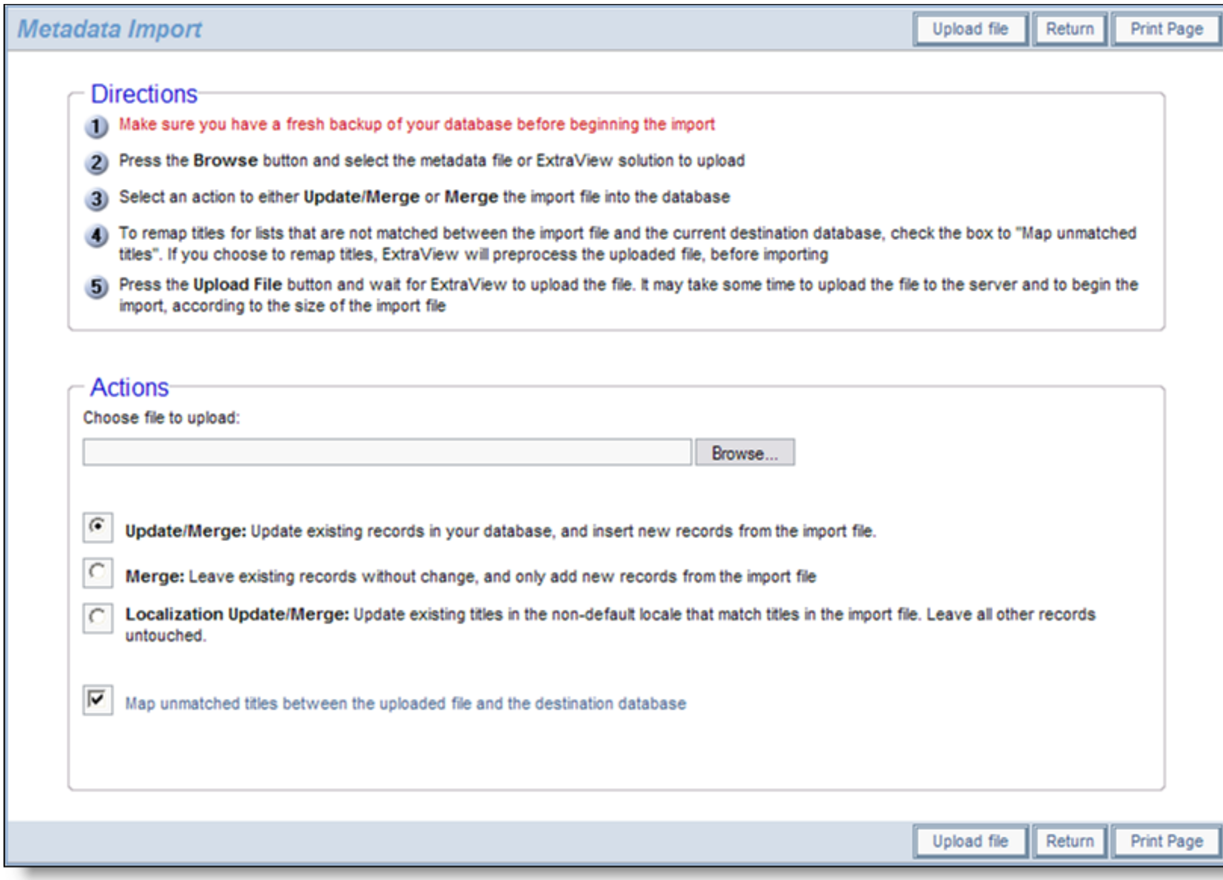
The import menu is situated within the Import/Export tab of the administration menu, and allows the administrator to load.

The import function reads a flat image file (which is in XML format) and updates the tables as required by the admini of objects to load. The utility takes into account the relational dependencies and all internal sequence renumbering as consistent and correct instance updates.

Validity checking for data adherence to new rules is performed as early as possible, thereby minimizing the impact of failure that may cause termination of the import.

Most imports will utilize the Update / Merge operation. This will update records that exist, and merge into the databas that were part of the file being imported.

Although it is possible to create your own file to be used as an import file to ExtraView, extreme care should be taken attempting to do this, and it is essential that you have a complete and thorough knowledge of the ExtraView schema. appear straightforward to compose an XML file, or to edit an existing file that was created by ExtraView's own Expor there are many relationships described in the file that are not obvious and that must be maintained for an import to be suggest that before attempting to create your own import file by modifying an existing file or creating it from scratch, with ExtraView support. In any case, **always back up your target database before performing any import.**



Starting the importing process

Follow the instructions on the screen. As displayed, the principal import methods are:

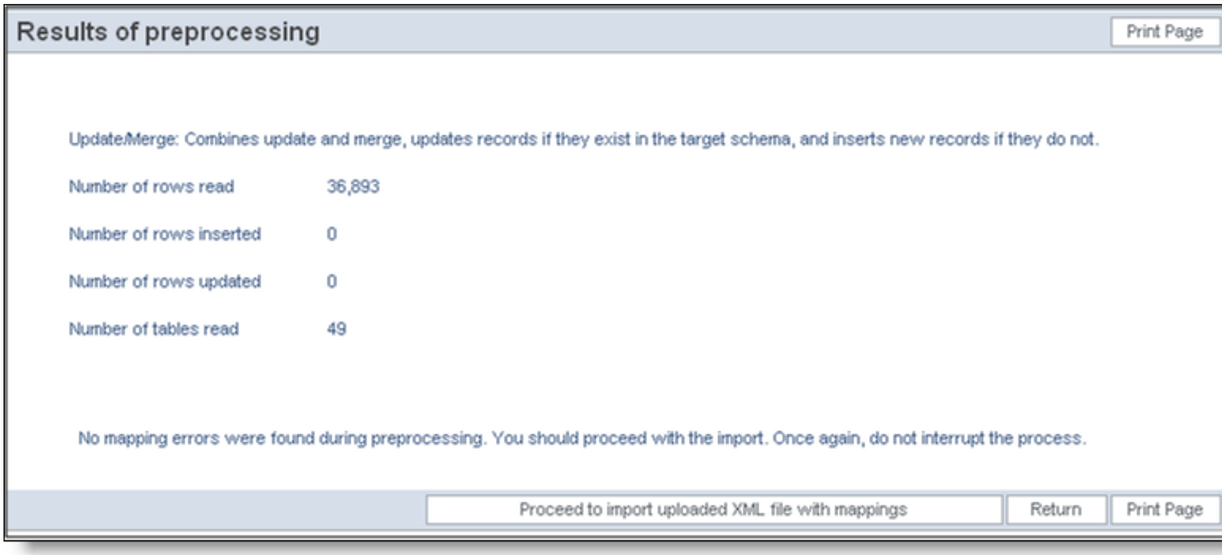
Update / Merge	This combines operations of update and merge, Records that already exist in the target schem and a new record is inserted if record being imported does not exist.
Merge	This leaves existing records in the target schema alone, and adds new ones from the file that i imported. ExtraView will use new sequence numbers for the operation within the database.
Localization Update/Merge	This mode only imports the localized messages from the import file, and does not touch the re metadata. This is typically used to move localized messages from one installation to another, the updated localized messages to the target installation.

If you have altered metadata such as the titles of objects in lists, within the destination database, and these same modi data were not made in the source database from which the export was taken, ExtraView gives you an opportunity to re opposed to creating new fields from the import file, and inserting these into the destination database. To perform this the **Map unmatched titles** prompt is checked.

When you perform the check, the import is split into two parts. First the uploaded file is preprocessed, and each list va is checked against the target destination database. If there are any values in the import file that do not exist in the desti then you will be shown the values from the import file that do not have a matching value, and you will be able to selec in the target database that do not have a value specified in the import file. After selecting the values to map, if there ar you then proceed to the second part of the import. The file is processed again, the destination database is updated, and you selected are applied.

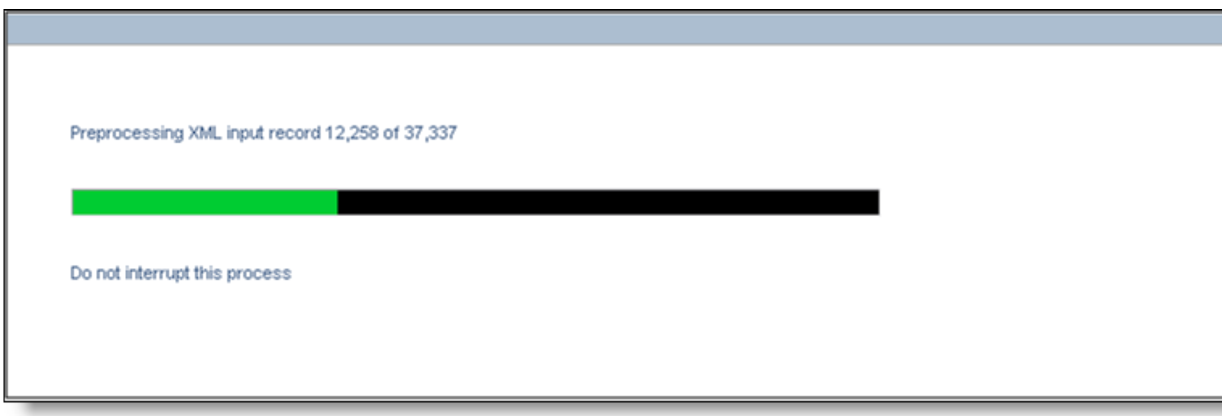
importing user data, and the information in the import file contains references to users that do not exist in the target da
import errors may result. This is especially noticed if the missing user was the person who created or last updated iten
These will not be imported, as ExtraView must maintain referential integrity of the users who are connected to its inte

In general, allowed value lists that have an invalid current value in parent or child will cause an import error and will ı
This may result in incomplete allowed value lists.



Results from preprocessing the import file

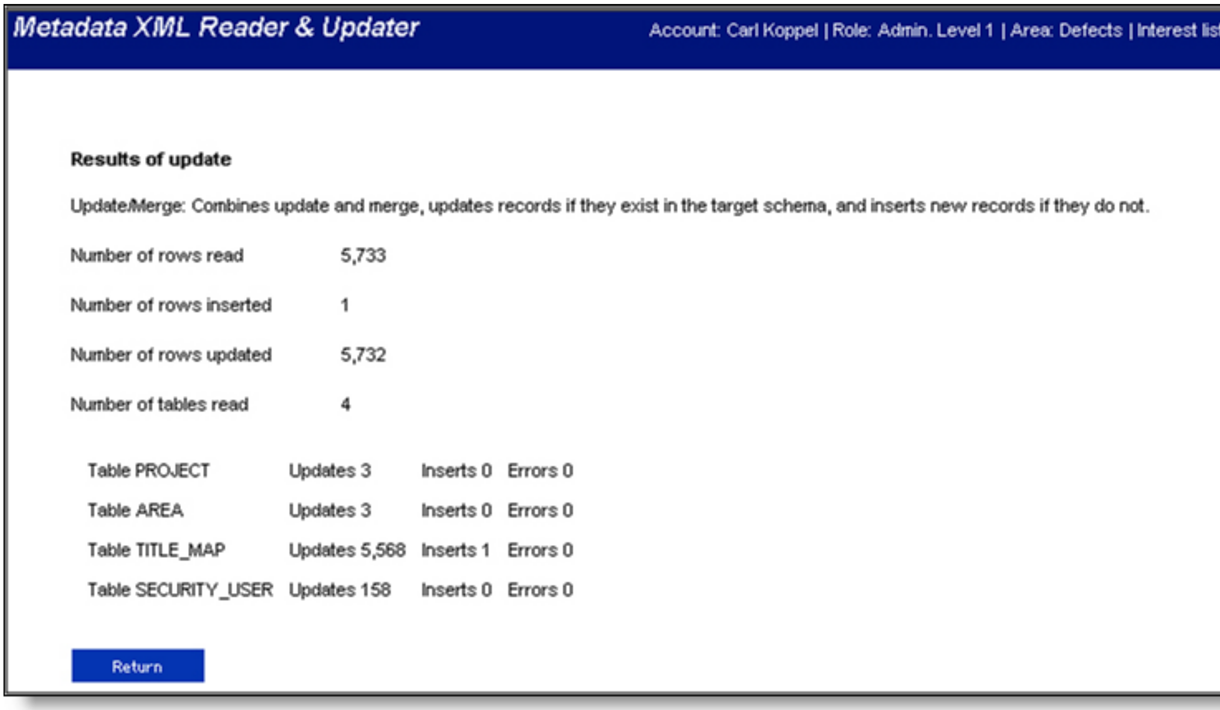
While data is being preprocessed or imported, a status bar is shown as follows:



Progress bar during the importing process

Note: Importing the data can take some time, from ten minutes in smaller installations, to thirty minutes or more in laı
It is dependent upon the size of the file being processed, factors such as the number of fields, layouts and permissions,
the server loading the data. Due to the inherent limitations of browsers, there is little feedback during the initial part oı
when the browser is uploading the import file from the client machine to the server. It is recommended that you prohit
using ExtraView during this time, especially if you are importing layouts. You can do this by locking users out of the s
are importing the data. You can achieve this with the **Disable and Enable User Access** on the **Users** tab of the admin

After the import is complete, you will see a summary screen that shows the number of records imported into each data errors encountered will be displayed here. Note that the results of the import vary according to the exact tables import you uploaded. There may be anything from a few to more than one hundred tables displayed in the results.



Summary screen of the imported data

Handling User Data

Users frequently change their personal settings when using ExtraView. For example, users may change their Home Pa display format for the timestamp, their password, or one of many other attributes. If you export the metadata from a d system, wait some time and then import this metadata to a production system, you may overwrite recent changes mad personal data. A behavior setting named OMITTED_IMPORT_USER_COLUMNS allows the administrator to set up that will be ignored upon the import of the metadata. The value of this field is a comma-separated list of column name set this in the target system, not the system from which you are exporting the data. The possible values you can add to follows:

Column Name	Meaning	N
ADDITIONAL_EMAIL	The user's secondary email address	R fi
ADDITIONAL_EMAIL_ON	Switch to indicate whether the user's secondary email address is turned on or off	R fi
ADDRESS_LINE1	Address line 1	R fi
ADDRESS_LINE2	Address line 2	R fi
CELL_PHONE	Cell phone number	R fi
CHART_FONT	Chart font	R

DATE_FORMAT	Format to display dates	R fi
DRILLDOWN_REPORT	Where does the user drill down to for reports?	R fi
EMAIL	The user's email address	R fi
EMAIL_CHARSET	The character set of the email	R fi
EMAIL_FORMAT	Format for received email	R fi
EMAIL_ON	Switch to indicate whether a user's email is turned on or off	R fi
ENABLED_USER	Indicates whether the user is enabled or disabled	R fi
FAX	Fax number	R fi
FILE_ATTACH_CHARSET	The user's default character set for their attachments	R fi
FIRST_NAME	User’s first name	R fi
HOME_TELEPHONE	Home telephone number	R fi
HTTP_CHARSET	Browser character set	R fi
JOB_TITLE	User’s job title	R fi
LANGUAGE	Display language	R fi
LAST_ACCESS_DATE	Timestamp the user last accessed ExtraView	R fi
LAST_DATE_UPDATED	The date of the last update to the user's record	R fi
LAST_NAME	User’s last name	R fi
LAST_UPDATED_BY_USER	The user ID of the person who last updated the record	R fi
LDAP_UPSERT_TIME	The last date / time the user's account was synchronized with a LDAP server	R fi
LOGIN_ID	The alternative user ID	R fi
LOGIN_MSG_DT	Not used	R fi
MS_OFFICE_CHARSET	Character set output to MS Office applications	R fi
NEW_PANELS	Selects whether user created a new workspace panel or uses the same panel for each new Quicklist report when drilling down from queries and reports	R fi
NOTIFY_ON_OWN_UPDATES	User notification when making an update	R fi
		R

PASSWORD2	The current, encrypted password of the user. All password changes use this field. There is a field named SECURITY_PASSWORD which contains the legacy password, if it has not been updated since version 7.0	R fi
POSTAL_CODE	Postal code or Zip code	R fi
RECORDS_PER_PAGE	The default number of records on each report output page	R fi
REGION	Locale region	R fi
REPORT_1_ID	Home page report 1	R fi
REPORT_2_ID	Home page report 2	R fi
REPORT_3_ID	Home page report 3	R fi
SCROLL_PANELS	Allows the user to scroll the workspace canvas or any workspace panel or element within that panel when the mouse pointer is over the respective area	R fi
SECURITY_PASSWORD	User's password. Note that since version 7.0, the field PASSWORD2 is used for the purpose of holding the encrypted password	R fi
SECURITY_USER_ID	The User's ID	
SOUNDEX_LAST_NAME	The soundex code for the user's last name	R fi
START_PAGE_ID	The ID of the start page the user is using	R fi
STATE	State	R fi
STYLESHEET	Size of text in browser	R fi
TIMEZONE	User's time zone	R fi
TWENTY_FOUR_HOUR_TIME	Display of times in 12 or 24 hour format	R fi
USER_FIELD_1 to USER_FIELD_10	The user defined fields	R tl o
USER_ROLE	User's current role	R fi
VARIANT	Locale variant	R fi
WORK_TELEPHONE	Work telephone number	R fi
WORKSPACE_1_ID	The ID of the default workspace of the user	R fi

Allowed Value Conflicts

Importing allowed values presents some challenges, when the data in the target database has changed significantly fro source database. An entry in allowed values is unique for a given Title, Parent and Child value.

matching row. If none is found, the imported entry is inserted. If a matching row is found, it is updated and the v merged

- The allowed value lists for allowed value types are only added to; they are never reduced
- Given the import of an enabled allowed value type is not allowed if another allowed value type is enabled in the import wants to change which entry is enabled, it must first disable the currently enabled entry and then import from the import file. This implies that the export process should export its disabled entries before exporting its e When imported they will then be in the correct order. The values list is merged in either case

		Imported Value of Allowed Value Type *Enabled*	
		Disabled	Enabled
Current Value of Allowed Value Type *Enabled*	Disabled	OK	OK only if enabled cou = 0
	Enabled	OK – AVT will become disabled	OK

Importing List fields with Aliases

If an existing list field is not an alias of another list field, the import logic maintains this, and keeps the list field non-a target database. The import cannot make a non-aliased list field an aliased field during the import because it cannot gu lists are intended to be the same. For this same reason, the import will not change an aliased list field to be the aliase c field. In normal operation, ExtraView checks these conditions and only allows valid operations, therefore the import n the same checks. In the context of this section, list fields include all fields with a display type of list, popup, tab, and r

The import rules for the *Alias of* field values are as follows:

- If the list field entry being imported is not an aliased field, it is imported and the list remains non-aliased after ir imported list values are merged for these fields
- If the list field entry being imported is an aliased field, it is imported only if the imported aliased field definitior both the file being imported and in the target database. The imported list values are merged
- A non-aliased list cannot be aliased by the import process
- The values within an aliased list cannot be changed by the import process

		Imported Alias Field Name	
		None	*List A*
Current Alias Field Name	None	OK	No
	List A	OK	OK
	List B	OK	No

Error Logging During Import

A text log of errors is created on the server, as the XML updater executes. Each error entry will contain as much usefu possible, including the table, row number, the data being used at the time, and the exception message, if any. This erro the summary screen in the browser.

The error file is stored in the system temp directory under the name: <time_in_ms>_<user_id>_XML_ERRORS.txt

for example:

1026520070671_JEFF.SYKES_XML_ERRORS.txt

All error messages begin with

::XML_UPDATE_ERROR::

```
::XML_UPDATE_ERROR::
An error occurred updating row 126 of ITEM_MODULE with this data: {blah = blah, this = those, you = me} Excep
java.sql.SQLException: ORA-00904: invalid column name
::END_XML_UPDATE_ERROR::
```

In order to be able to store multi-byte characters within the error file, note that the error file is not created as standard the file in a standard editor, you will notice that what looking at most of the metadata in the file, every second characte

Handling rejected records during the import of metadata

As ExtraView processes the XML import file and fires the updating routines, if errors prevent an update are generated XML nodes' data is captured, and used to generate a new XML file. This file is of the same structure as the original fil includes those items that could not be properly updated. If there are no errors generated during the upload process, this the end of the update process, as it is empty.

This file is saved under the system temp directory under the name:

<time_in_ms>_<user_id>_XML_REJECTS.xml

for example

1026520070671_JEFF.SYKES_XML_REJECTS.xml

- Add new comment

Using Export and Import to Update Instances

The Metadata Export and Metadata Import procedures are designed to make it straightforward to update your producti ExtraView. The update may be required for a number of reasons –

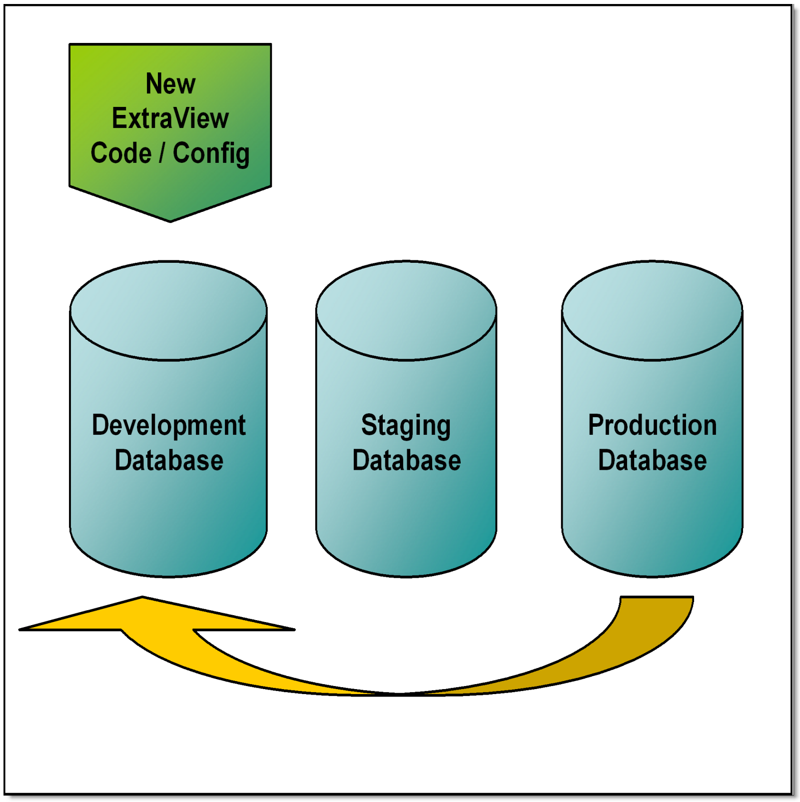
- You are developing new functionality in the form of business areas, projects, layouts, logic, reports, etc. and do this in your production, live instance of ExtraView
- You have a new release of ExtraView software and want to upgrade your production system, after testing the ne your application

It is important to have a repeatable, recoverable process to perform these tasks, and the following recommendations sh robust method to fulfill these tasks. The recommendations below can be simplified somewhat, according to your circu level of risk you are willing to carry. If you want to simplify these steps, you may move your development instance di production instance, without going through the staging instance.

The instances

- **Production environment** – this is the server instance of ExtraView that is used for the live processing of your i
- **Staging environment** – this is an intermediate server which will have a copy of production data and a copy of t ExtraView system. No changes should be made to ExtraView metadata on this instance. It is purely used to chec functionality of ExtraView before applying the changes to the production environment
- **Development environment** – this is the instance of ExtraView where you will carry out all changes to the conf applying the changes to the staging environment

Step 1 – Create a development instance



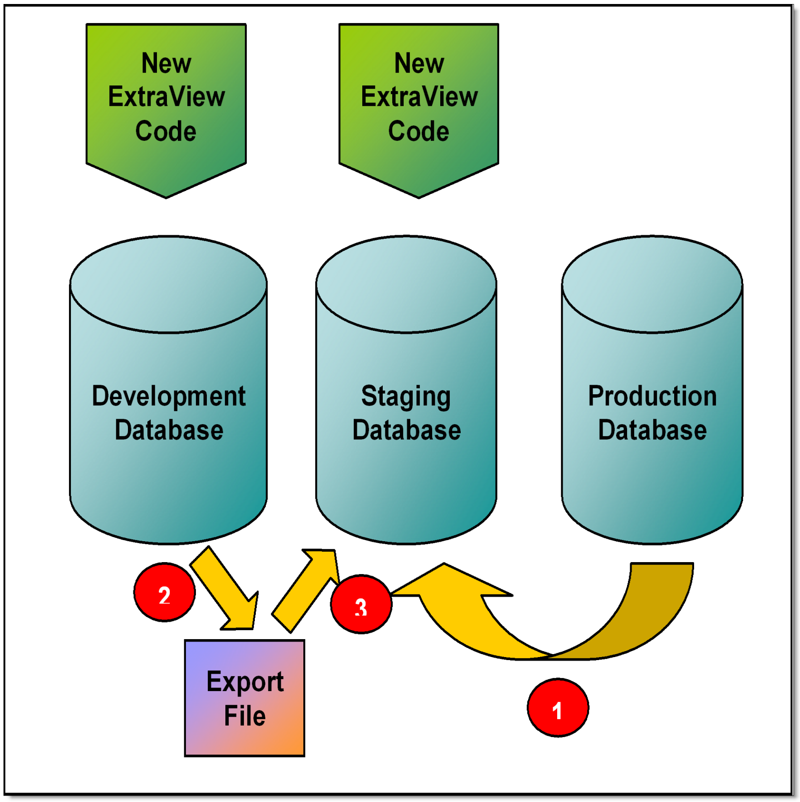
Step 2 – Perform the configuration work

Within the development environment, perform all you configuration and testing, to develop the completed system you

Step 3 – Move the development environment to the staging environment

The purpose of this step is to obtain a full working system on which you can perform all your quality assurance and fi

- Take another backup copy of the production database
- Create a new staging database, and import the production data into this new database
- If you are upgrading ExtraView and there is a database upgrade script to run, do this now against the staging dat **critically important that the version number of the ExtraView database in the staging environment be th version number you are about to import from the development environment**
- Use the Metadata Export feature to export the ExtraView metadata
- Use the Metadata Import feature to import the ExtraView metadata into the staging database
- If you are upgrading the ExtraView code, install this now and restart the application server



Moving the development instance to the staging instance

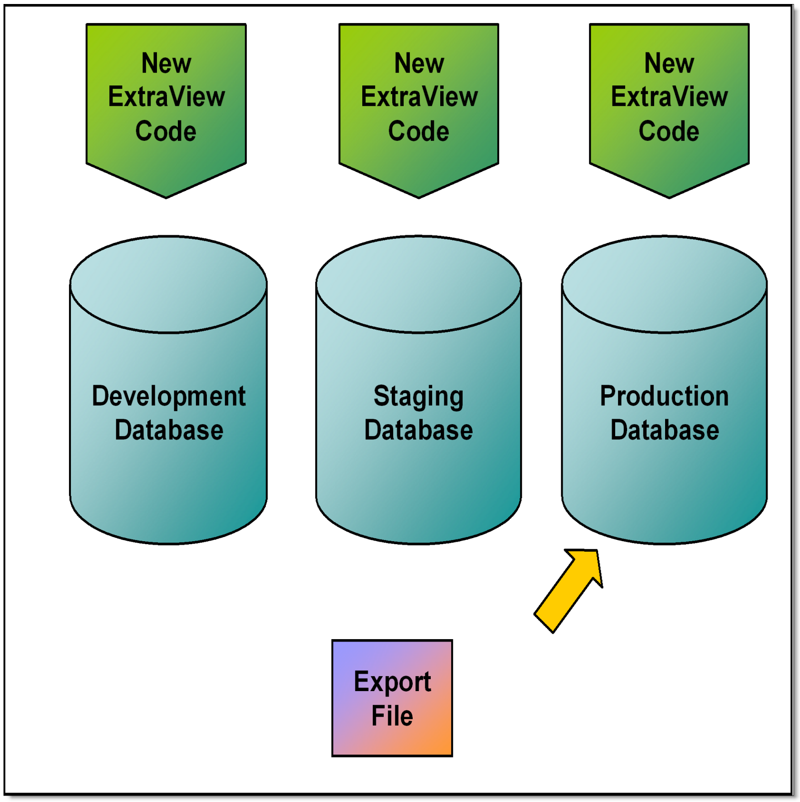
Step 4 – QA the entire ExtraView environment in the staging database

This is an essential part of the process to ensure that you gain the expected results, and that you can accurately predict
will obtain in the final production environment.

Note: You should not make any configuration changes to ExtraView here. If you find problems, you should repeat the
step 1.

Step 5 – Upgrade the Production database

- Turn off the production database so users cannot access this during the upgrade process
- Take a backup of the production database
- If you are upgrading ExtraView and there is a database upgrade script to run, do this now against the production
**critically important that the version number of the ExtraView database in the staging environment be the
version number you are about to import from the development environment**
- Use the Metadata Import feature in the production database to import the export file that was created in Step 3
- If you are upgrading the ExtraView code, install this now and restart the application server
- With administrative access, check that the production environment is working correctly



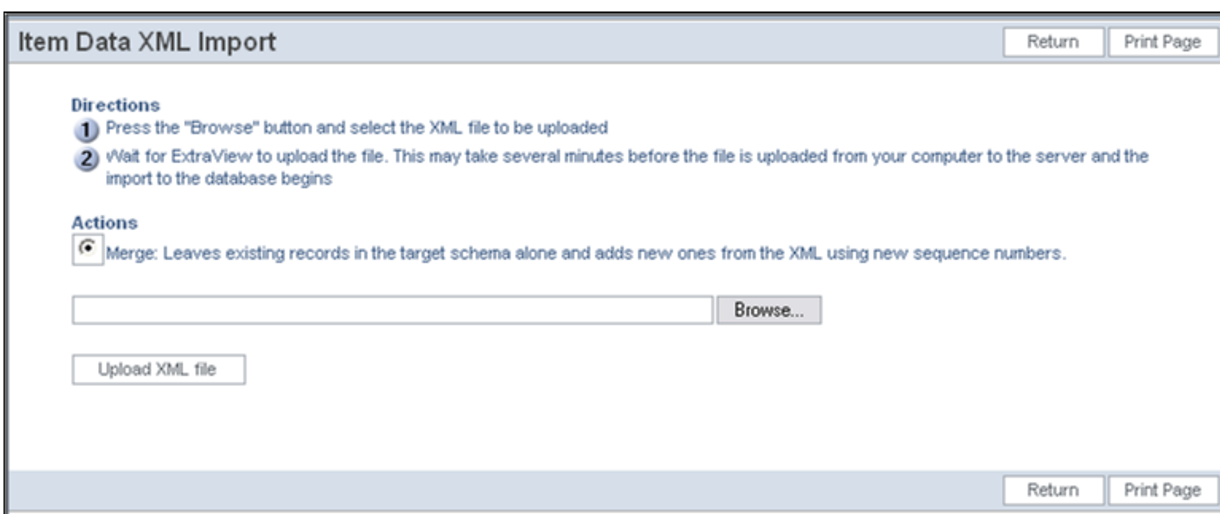
Updating the production instance

The process to upgrade your production ExtraView instance is now complete.

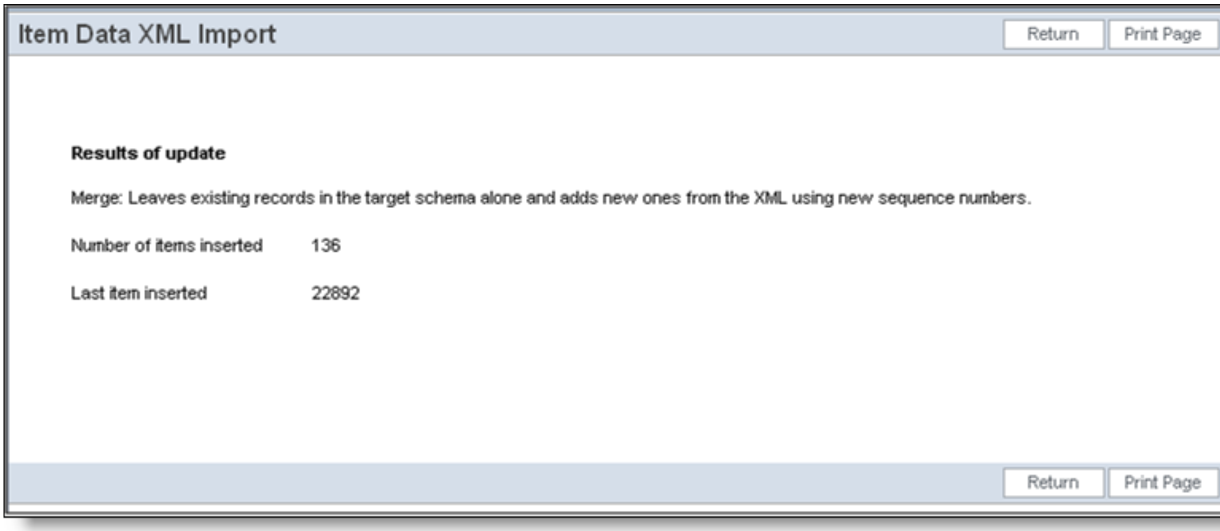
Item Data XML Import

Batch Mode

This function is driven from the **Import/Export** tab of the **Administration** menus, in the function named **Item Data** When you access this function, you will see a screen similar to the following:



Note: To save time on a large import, you may zip the input file and upload the zipped file. ExtraView will automatica
uploaded file.



Results screen from a batch XML import

While the file is being processed, you will see a status bar informing you of progress. Once complete, you will see a s
the one above. If there are any errors in the import file, you will see these on the results screen.

API Commands

These commands are also explained in the ExtraView CLI & API Guide.

An API action named xml_insert creates a new record or records in the ExtraView database from input formatted as X
can be made as part of the HTTP data stream, or can be input from a file in XML format.

Syntax:

http://*www.myserver.com/evj/ExtraView*/ev_api.action?
user_id=*username*
&password=*password*
&statevar=insert_xml
&xml_file_name=*filename* | &xml_string=*xml_data*
&template_file=*file.html*

- Provide either the xml_file_name or xml_string, but not both. You provide xml_file_name if the input is from a
the time of the execution of the command. You provide xml_string, if the data for the insert is provided as part c
request. This string contains the XML data to be parsed.
- template_file is the name of the template to be used for return value string generation. Generally, this template f
the server in the WEB-INF/user_templates directory. On normal completion of the operation, this template unde
substitution with the following variable names:

Tag	Explanation
__ID__	The item number of the last item inserted
__NUMBER_ITEMS_INSERTED__	The number of inserted items
__ITEM_TITLE__	The title of the ITEM_ID dictionary entry

As an example, the following message may be returned:

```
"The end-tag for element type "ITEM" must end with a '>' delimiter at line=
column number=9"
```

- Only one record should be inserted with the XML_STRING in one call to the API. When the input is in a file, tl restriction to the number of records in a single operation.

Item Data Import Errors

Error Message	Explanation
Ambiguous Area title: *title*	The business area title in the XML is not unique within the da name instead.
Ambiguous Module title: *title*	The module with the title is not unique. Use the module name avoid conflicts
Ambiguous Project title: *title*	The project title in the XML is not unique within the database instead.
Ambiguous Repeating record title: *title*	The repeating record with the title is not unique. Use the nam avoid conflicts
Ambiguous UDF title: *title*	The UDF with the title is not unique. Use the UDF name in th conflicts
Bad zip file or invalid XML tag at beginning of file	ExtraView cannot read the zip file with the XML data, or the beginning of the file is invalid
Cannot dereference list entry for ddname [*value*]	There is no list value corresponding to the *value* for the data d
End Attachment tag outside Attachment	The end attachment tags must be at the end of the attachment
End item tag outside item	The end item tags must be at the end of the item data
End module tag outside module	The end module tags must be at the end of the module data
End *name* tag outside *name*	The end name tags must be at the end of the name data
End Repeating record tag outside Repeating record	The end repeating row tags must be at the end of the repeating
End UDF tag outside UDF	The end UDF tags must be at the end of the UDF data
Illegal NAME construct ignored	Provide valid name constructs
Invalid characters in the title value: [*value*]	The title value contains illegal characters
No ddentry for dereferenced name: *dd_name*	There is no data dictionary entry corresponding to *dd_name*
No Area with title: *title*	The business area with the *title* does not exist in the database
No Module with title: *title*	The module with the title does not exist
No product name for module: *name*	You must always provide the product_name field in the XML modules
No product name for release: *name*	You must always provide the product_name field in the XML repeating records which are dependent upon this field
No Project with title: *title*	The project with the *title* does not exist in the database
No Repeating record with title: *title*	The repeating record with the title does not exist
No such XML file: *file_name*	Indicates the input XML file does not exist
No UDF with title: *title*	The UDF with the title does not exist in the data dictionary
Nothing to convert from XML to DB; quitting	Input XML file appears to be empty
Unrecognized end element tag: *name*	The end tag for the name does not match the beginning tag fo
[illegible]	[illegible]

fields and values within this file to be mapped to ExtraView values, to validate the data and to finally import the data. uploaded as new issues, or can be used to update existing issues. Access to this feature is via the security permission k CF_FILE_IMPORT. The import works as a separate process for each business area and project, therefore your import target a single business area and project. For a record to be imported and inserted as new, it must exist on the appropri one of its embedded layouts for the business area and project. For a record to be imported and update an existing recoı on the appropriate *edit* layout or one of its embedded layouts for the business area and project.

Note: The Add / Update task must be configured and running for the file import utility to work. This is because the pe optimized when the utility is running in the background. Further, this allows multiple copies of the utility to run at on increasing the performance of the import.

Typically, the files to be imported will contain data from other systems that is to be inserted into ExtraView. Microsoft tool that can be used to prepare data in the appropriate format for the import. The process followed is:

- Create a template for the import and upload the file
- ExtraView automatically provides mappings for fields that are both in the uploaded file and within the ExtraVie
- ExtraView automatically provides mappings for field values that are both in the uploaded file and within the Ex
- You can see the results of the mapping and alter the mapping of any field or field value
- You may then validate the uploaded data, ensuring the file is error free before performing the upload
- On the validation screen, there is an alternative to download the file that was uploaded. This is in addition to bei observe the errors on the screen. If there were errors in the uploaded data found by the validation process, these shown within the file you can download. This simplifies the process of finding, fixing, re-uploading and re-vali before you perform the import
- Finally, you can perform the import and insert the records.

Note: ExtraView will ignore whether fields are or are not mandatory when importing data. It will also ignore whether correct allowed value relationships when importing data. It will not ignore read-only fields and later in this section, yc to import fields that are read-only on your *edit* screen layout. However, when you edit any of these records in the web the CLI, and attempt to update, the appropriate validations will be performed and you must correct any errors of these time. Fields with default values defined in the data dictionary will have the default value created, unless there is a valu import file.

Import Templates

When you use the File Import Utility, you create a template that may be reused as many times as needed. This aids the repetitive process of validating and correcting your data. You can set up the field and value mappings once, and uploa as often as is required, validating the data as you progress. This also aids the routine uploading and importing of data f sources, as the same mappings can be used each time, without the need to set these up.

There are three import modes from which to select, when you create the import template:

1. **Insert Issues** - New issues are created from each record in the import file.
2. **Update Issues** - Existing issues are updated from each record in the import file. There must be an **ID** column w file, and this must contain the **ID** of the issue to be updated
3. **Update and Insert Issues** - New issues may be created and existing records may be updated. To facilitate this, **ID** column within the import file, and this must contain the **ID** of issues to be updated. If the field is left blank, will be inserted. Note that the corresponding *add* layout for the business area and project is used for validation p inserting issues, and the *edit* layout is used when updating issues

Large Volume Imports

Special consideration may be made when you have tens of thousands or more records that must be imported in a short You may configure multiple import files and these can be imported in parallel. Please see the section on large volume information.

than one input value to a list value
- You may not want to carry over all users from a legacy system to ExtraView. For example, you may not want to ExtraView license for an ex-employee who was the creator of an issue in ExtraView. You can either create a use ExtraView and deactivate the account, or you can map the name to a different person in ExtraView
- To take advantage of all the exciting features in ExtraView, you may be changing your workflow and data items in a significant way. Not all legacy data will have value in these circumstances, but you may want to import it fo purposes. ExtraView allows you to do this
- If you want to import data that is read-only when in the mode of updating an issue, temporarily alter the field to import your data, then reset the field to be read-only.
- One field of particular note when importing data from a legacy system is the ID field. ExtraView licensees may legacy number. ExtraView must use its own sequence of numbers. To facilitate this requirement, a text field nan defined in the ExtraView data dictionary. Map your legacy field to this ExtraView field and retain it on the layou make the transition. Eventually, you may remove this field from the ExtraView layout.

Fields with Special Treatment Upon Import

When a record is inserted into ExtraView or updated by ExtraView there are several fields which are maintained autor cannot be inserted or updated via the web-based interface, the API or the CLI. However, when importing legacy data, import values from these fields. ExtraView supports this. However, the fields must be on the add screen layout, and m access to accommodate the import utility. This table specifies the treatment of these fields:

Data Dictionary Field Name	Treatment
DATE_CREATED	If this exists in the import file and is mapped, the value provided will be insert current date and time will be used
DATE_CLOSED	If this exists in the import file and is mapped, and the STATUS of the issue equ STATUS defined in the behavior setting named STATUS_CLOSED_NAME, t provided will be inserted, else no value will be inserted
DATE_LAST_STATUS_CHANGE	If this exists in the import file and is mapped, the value provided will be insert current date and time will be used
ID	The ID field is always created by ExtraView, without exception. It is provided value when the issue is first created. When you are using the file import utility this is normally used as the key field upon which you map the record being im existing issue within ExtraView. If your installation is configured to use ALT_ID as the primary means of ident then you can expect ExtraView to create this from records within the import fi use this as the key field upon which to map issues being updated
LAST_CHANGE_USER	If this exists in the import file and is mapped, the value provided will be insert current user ID will be used
ORIGINATOR	If this exists in the import file and is mapped, the value provided will be insert current user ID will be used
TIMESTAMP	This field cannot be mapped when importing data. If you want to preserve the an issue's last date updated, it is suggested you create a user defined field and i into this field.

Business Areas and Projects

The import utility will only import data into a single business area and project. It is not possible to map and import dat business areas and projects, or into the main item structure and the repeating record structure at the same time with the Other methods exist within ExtraView to handle complex structures; the utility described here is intended for the impo structures (this method handles about 80% of requirements), and it is quick and simple to use. For complex data migra consider the XML import utility or the CLI evimport function. The strategy to import data into multiple areas and proj

- The current role of the user performing the import. Normally this is an administrative role, such as admin.

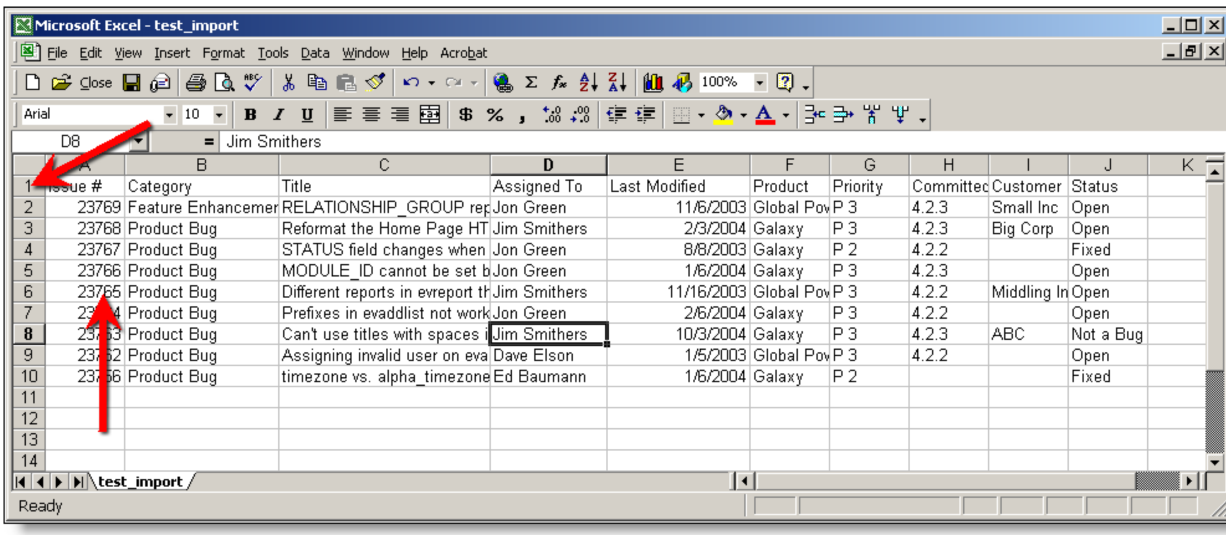
Import Strategy

If you have a straightforward file to import, simply use the add screen layout you have created, and create an import fi reflects its contents. However, if your administrative role does not have all the fields on the add screen and they are nc you have a relatively complex system with multiple Business Areas and Projects, the following strategy is good to fol especially true for companies needing to import data from other sophisticated tracking systems which contain a good (about each issue:

- Create a new user role named *import* or similar
- For this new user role create a new add screen layout. The speediest way of doing this is to choose the an *add* or layout for a role with a layout close to what you need, to then alter the user role on the *edit* screen for the layout role, then save the layout as the *add* screen for this role
- Make sure that the fields are writeable on this new layout
- Alter your current role to the new user role
- Perform the import

If you have a very large volume of data to import, ExtraView supports some advanced features which allow you to im parallel. These features are described here.

The upload file



Sample upload file in Excel

The top arrow in the diagram points to row 1 of the spreadsheet. Here you see that each column contains the field nam the input. The remaining rows of the spreadsheet contain the data that corresponds to the field names. Note:

- Fields in the import file may have different names to the fields in ExtraView. However, if they have the same na compared on a case insensitive basis), ExtraView will automatically map the field from the import file to its ow
- ExtraView will attempt to map, automatically, values that are in fields that are of display type List, Tab, Popup a on a case insensitive basis. For example, a status in the import file named *open* will be automatically mapped to status value of *Open*. If the value cannot be mapped by ExtraView, you must provide a mapping before the reco uploaded

import file.

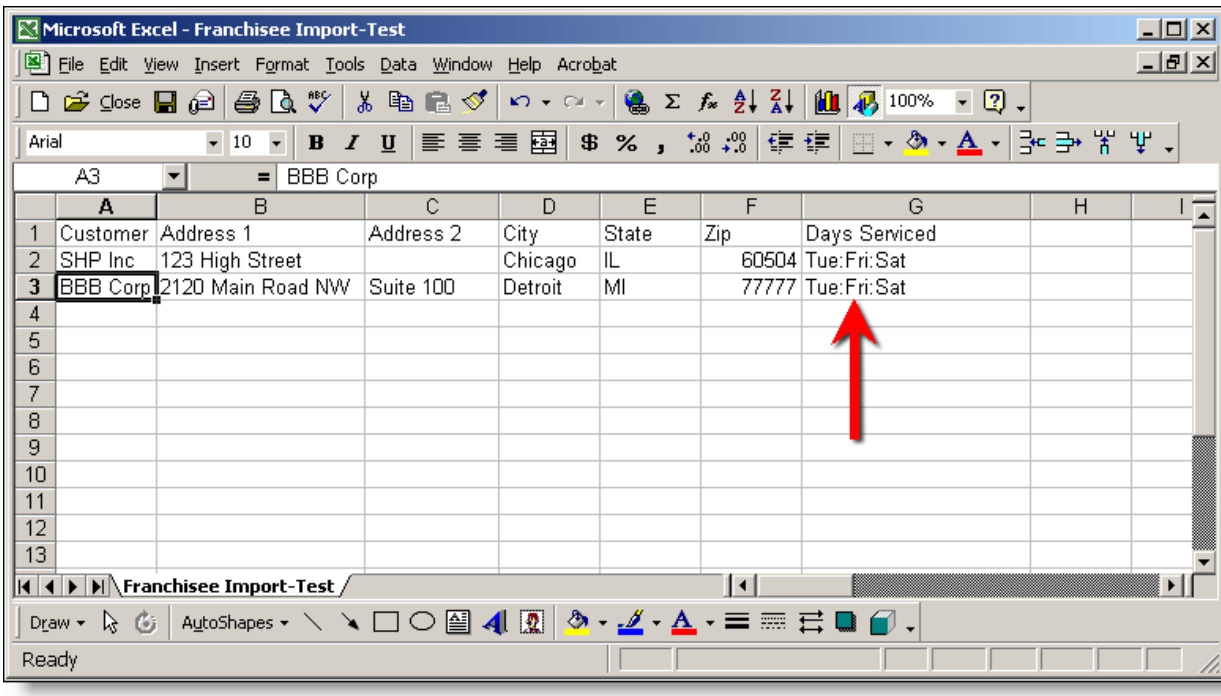
Once the spreadsheet is prepared, use the File, Save As menu within Excel, and choose either Text (Tab Delimited) or Delimited) as the type.

Note: There is a limit of 500 Mbytes and 300 fields per record to the size of files that can be imported. If you have a v of data to import, it is often more efficient to break it down into several import files, and to process these individually.

Fields

Multi-Valued Fields

Fields to be imported that are of a multi-value type require special preparation within the import file. All the values to must exist in between the delimiters of the file (tabs or commas), yet ExtraView must be able to distinguish between tl values. This is accomplished by using the system-wide delimiter in the behavior setting named DEFAULT_TEXT_REPORT_DELIMITER. This has a default value of the colon character ":". Use this delimiter to c For example, you may have a list with days of the week (*Sun, Mon, Tue, Wed, Thu, Fri, Sat*). If you need to indicate tl values of data within the record are *Tue, Fri* and *Sat*, you would use an entry of *Tue:Fri:Sat* on your spreadsheet:



Importing multi-valued fields

Text Fields

Fields that are to be mapped to Text Area, Log Area and Print Text display types have special treatment, to allow you that contain a return character (ASCII 13). This character is normally used by many applications to indicate the end of This implies that the data following the return character is a new record. Unfortunately, when you export a comma or from Excel or other applications, these return characters are treated as an end of record. To counteract this in a way ac and the import facility in ExtraView:

User Name Fields

ExtraView expects to find user name in the import file in the same format as specified by the behavior setting USERN
For example, this may be FIRST, LAST or ID. We recommend that for large imports where there may be more than o
the same first and last name, that you import data using the ID setting. This will ensure that all users can be identified

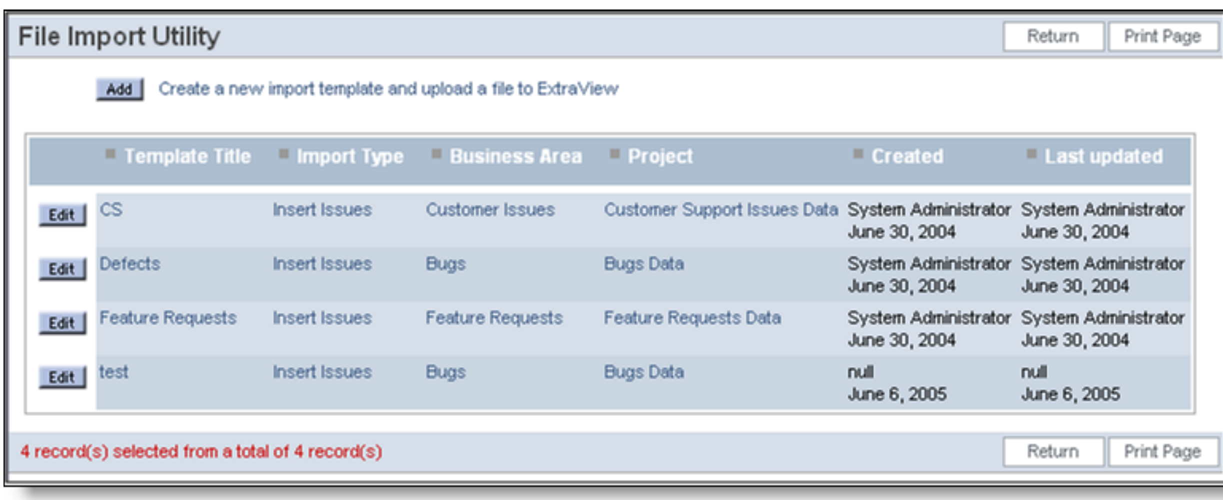
Maximum Field Sizes

Fields that are imported are subject to the maximum size constraints of their field types, and are as follows –

Field / Field Type	Maximum size
List field titles (loaded as metadata)	100 bytes
User ID (loaded as metadata)	30 bytes
User First Name (loaded as metadata)	128 bytes
User Last Name (loaded as metadata)	128 bytes
SHORT_DESCR	255 bytes
ALT_ID	128 bytes
UDF text field display types	256 bytes
UDF text area, log area, print text display types	Approx 10MBytes. Note that if you are using Microsoft Excel to prepare yo there is a 31k limit on the size of a cell.

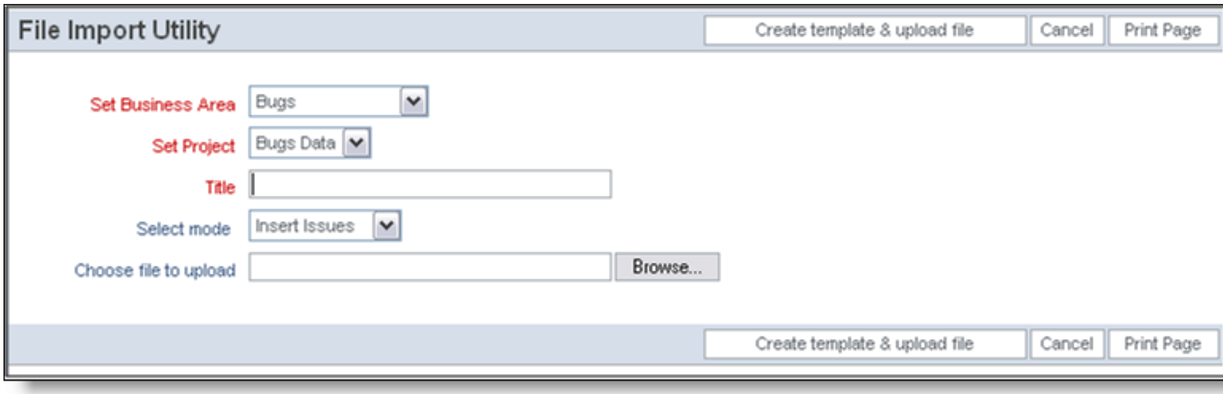
Mapping your data

Within ExtraView administration, enter the File Import Utility. The following screen appears:



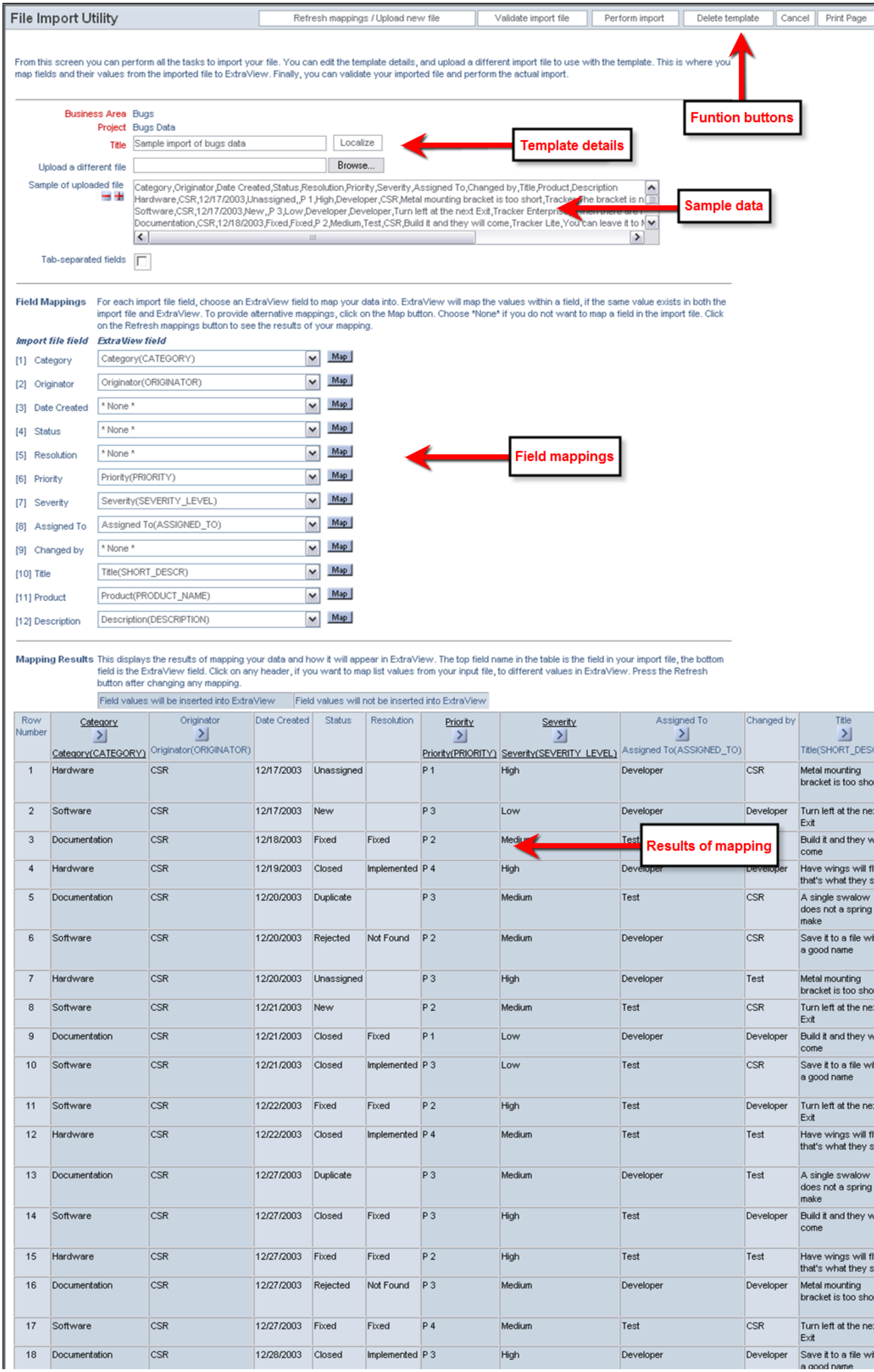
File Import Utility

Create a new import template and the following screen appears. Simply provide a name for the template, and select th
uploaded. Note that if your installation uses Business Areas and Projects, select lists for these will appear on the scree
template has been created for a specific Business Area and Project, these cannot be altered. Note that you select wheth



Creating the import template

Now you will see the main import screen, as follows:


File Import Utility
Refresh mappings / Upload new file
Validate import file
Perform import
Delete template
Cancel
Print Page
From this screen you can perform all the tasks to import your file. You can edit the template details, and upload a different import file to use with the template. This is where you map fields and their values from the imported file to ExtraView. Finally, you can validate your imported file and perform the actual import.
Funtion buttons
Business Area Bugs
Project Bugs Data
Title Sample import of bugs data
Localize
Template details
Upload a different file
Browse...
Sample of uploaded file
Category,Originator,Date Created,Status,Resolution,Priority,Severity,Assigned To,Changed by,Title,Product,Description
Hardware,CSR,12/17/2003,Unassigned,,P 1,High,Developer,CSR,Metal mounting bracket is too short,Tracker
Software,CSR,12/17/2003,New,,P 3,Low,Developer,Developer,Turn left at the next Exit,Tracker Enterpris
Documentation,CSR,12/18/2003,Fixed,Fixed,P 2,Medium,Test,CSR,Build it and they will come,Tracker Lite,You can leave it to
Sample data
Tab-separated fields
Field Mappings For each import file field, choose an ExtraView field to map your data into. ExtraView will map the values within a field, if the same value exists in both the import file and ExtraView. To provide alternative mappings, click on the Map button. Choose "None" if you do not want to map a field in the import file. Click on the Refresh mappings button to see the results of your mapping.
Import file field ExtraView field
[1] Category Category(CATEGORY) Map
[2] Originator Originator(ORIGINATOR) Map
[3] Date Created * None * Map
[4] Status * None * Map
[5] Resolution * None * Map
[6] Priority Priority(PRIORITY) Map
[7] Severity Severity(SEVERITY_LEVEL) Map
[8] Assigned To Assigned To(ASSIGNED_TO) Map
[9] Changed by * None * Map
[10] Title Title(SHORT_DESCR) Map
[11] Product Product(PRODUCT_NAME) Map
[12] Description Description(DESCRIPTION) Map
Field mappings
Mapping Results This displays the results of mapping your data and how it will appear in ExtraView. The top field name in the table is the field in your import file, the bottom field is the ExtraView field. Click on any header, if you want to map list values from your input file, to different values in ExtraView. Press the Refresh button after changing any mapping.
Field values will be inserted into ExtraView
Field values will not be inserted into ExtraView
Results of mapping

Row Number	Category / Category(CATEGORY)	Originator / Originator(ORIGINATOR)	Date Created	Status	Resolution	Priority / Priority(PRIORITY)	Severity / Severity(SEVERITY_LEVEL)	Assigned To / Assigned To(ASSIGNED_TO)	Changed by	Title / Title(SHORT_DESC
1	Hardware	CSR	12/17/2003	Unassigned		P 1	High	Developer	CSR	Metal mounting bracket is too shor
2	Software	CSR	12/17/2003	New		P 3	Low	Developer	Developer	Turn left at the nex Exit
3	Documentation	CSR	12/18/2003	Fixed	Fixed	P 2	Medi	Test		Build it and they w come
4	Hardware	CSR	12/19/2003	Closed	Implemented	P 4	High	Developer	Developer	Have wings will fly that's what they s
5	Documentation	CSR	12/20/2003	Duplicate		P 3	Medium	Test	CSR	A single swalow does not a spring make
6	Software	CSR	12/20/2003	Rejected	Not Found	P 2	Medium	Developer	CSR	Save it to a file wit a good name
7	Hardware	CSR	12/20/2003	Unassigned		P 3	High	Developer	Test	Metal mounting bracket is too shor
8	Software	CSR	12/21/2003	New		P 2	Medium	Test	CSR	Turn left at the nex Exit
9	Documentation	CSR	12/21/2003	Closed	Fixed	P 1	Low	Developer	Developer	Build it and they w come
10	Software	CSR	12/21/2003	Closed	Implemented	P 3	Low	Test	CSR	Save it to a file wit a good name
11	Software	CSR	12/22/2003	Fixed	Fixed	P 2	High	Test	Developer	Turn left at the nex Exit
12	Hardware	CSR	12/22/2003	Closed	Implemented	P 4	Medium	Test	Test	Have wings will fly that's what they s
13	Documentation	CSR	12/27/2003	Duplicate		P 3	Medium	Developer	Test	A single swalow does not a spring make
14	Software	CSR	12/27/2003	Closed	Fixed	P 3	High	Test	Developer	Build it and they w come
15	Hardware	CSR	12/27/2003	Fixed	Fixed	P 2	High	Test	Test	Have wings will fly that's what they s
16	Documentation	CSR	12/27/2003	Rejected	Not Found	P 3	Medium	Developer	Developer	Metal mounting bracket is too shor
17	Software	CSR	12/27/2003	Fixed	Fixed	P 4	Medium	Test	CSR	Turn left at the nex Exit
18	Documentation	CSR	12/28/2003	Closed	Implemented	P 3	High	Developer	Developer	Save it to a file wit a good name

Import screen

Function buttons – these perform the following functions:

- *Refresh mappings / Upload new file* – if you alter the mapping of any field in the field mappings section, or use to alter a value mapping, or upload a new file, pressing this button will refresh the screen, redisplaying the resul
- *Validate import file* – this function checks each row of the import file and displays any errors in the input file. T should be corrected in the source file and the file uploaded again before performing the import. This can be don the import screen. You may validate the import file, correct errors within the file and re-upload the file as often the import file is error free
- *Perform import* – once the mappings are complete and the data validated, this button will perform a final valida the data into ExtraView. ExtraView will create new issues for each row of the uploaded, including new ID's
- *Delete template* – this deletes the current template and all mappings
- *Cancel* – this returns you to the initial file import screen with the list of templates.

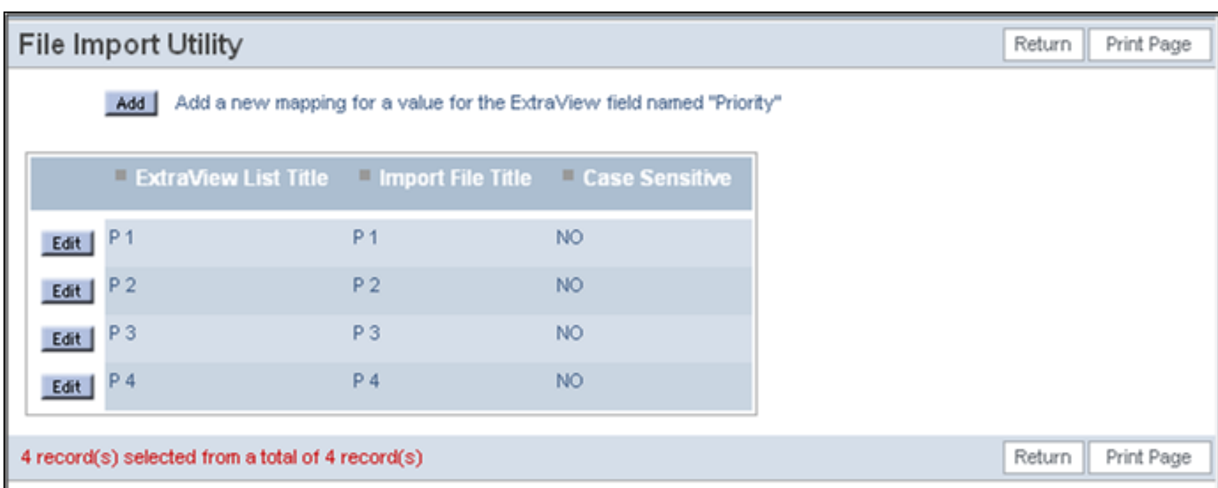
Template details – shows the title of the template and allows you to upload another file into the template. Note that if utilizes Business Areas and Projects, these will be shown for the current import template.

Sample data – this section shows a sample of data from the file that has been uploaded. You cannot edit the data with but must return to your source data to make any amendments.

Field mappings – Here you will see a fixed field name for each field header in the import file and a select list offering fields within ExtraView to which you can map that column. To be a valid field for the import, the field must exist on t layout or one of its embedded layouts for the appropriate business area and project, if these are in use and for the curre user performing the import. The field must have its security permissions set so the field can be updated. Further, you c ID field. The ID field is maintained by ExtraView, and no value can ever be assigned to this from an external source. S section on how to deal with read-only fields on your add screen layout. If you are trying to preserve the key identifyin previous system, the usual practice is to map the record identifier to the ALT_ID field.

ExtraView will attempt to map the field in the import file to a field on the *edit* screen layout, by comparing the field n file to the data dictionary titles of the fields on the *edit* screen layout. This comparison is case insensitive. When a mat ExtraView sets the ExtraView field as the selected field for the mapping. You can override this selection, and you can selection for any field. This includes mapping a field to * None *, thereby skipping it during the import.

In a similar way that fields are mapped, ExtraView will attempt to map the values within any field that has a display ty popup.. User fields cannot be mapped at this point. Performing a validation will show which field values are not mapp values within a field, press the Map button to the right of the field. The screen that appears will be similar to the follo



You may press **Add** to create a new mapping, or you can edit an existing mapping. Note that you have a choice as to v the mapping to be case sensitive or case insensitive. One point of note is that you can map fields with null values to a ExtraView, and you can map values to different values than set as default. This gives you flexibility in altering the dat importing.

Note: Field mappings are retained within your template. This means that if you set up a number of mappings and wan with a different import file, you simply need to re-use the same template.

Results of mapping – This section of the screen shows which values will be inserted on which records, when you per The color-coding shows the fields that will be skipped when importing the data and shows the specific values that wil specific fields in the ExtraView database.

The Business Area and Project

If you provide the Business Area or the Project field in your input file, then you must provide both of these.

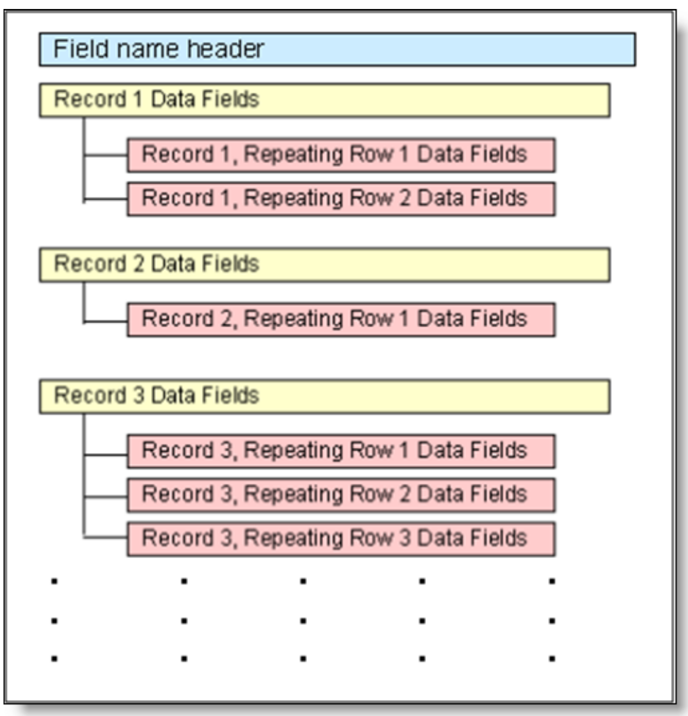
If you do not include these, then the File Upload Utility will use those specified in the template for the upload.

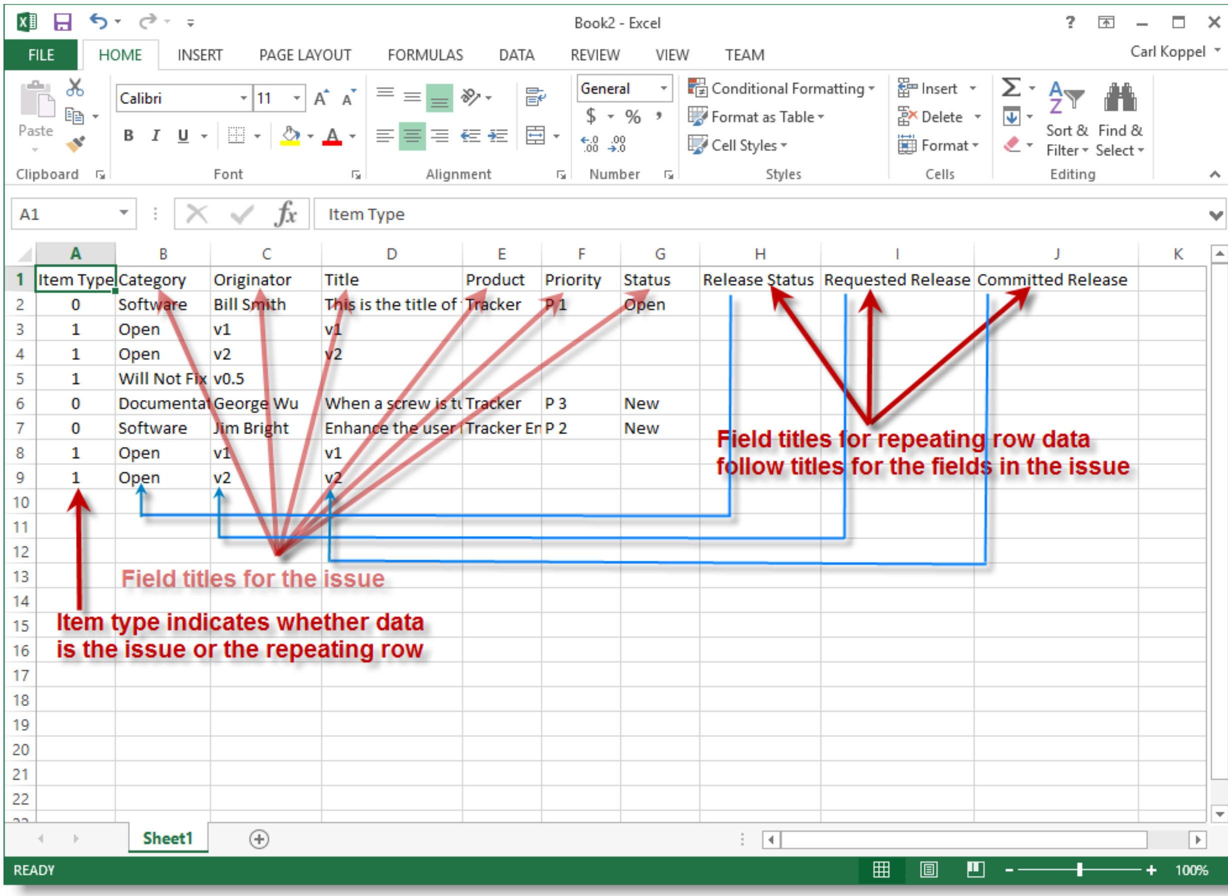
Updating Existing Issues

The file import utility has the capability to upload a file and to then update existing issues within ExtraView. To achie must be made of a key field within the import file, with an existing key field within ExtraView. The only two key fielc used are either the ID field, or the ALT_ID field. Further, as ExtraView does not impose a unique value limitation on t the user must ensure that the values are unique. In practice this is usually achieved with the ALT_ID field by using use

Importing Repeating Row Data

If your ExtraView installation is configured to use repeating rows within the defined process, special consideration mu preparing the input file, to describe the repeating row fields, and to provide the data for the repeating rows. This diagr structure if there is a single repeating row within each issue:





Import file with repeating row data

Note the presence of the first column with the title of **Issue Type.** A value of 0 indicates the row contains the issue fi of 1 indicates that the row contains data for a repeating row. The 1 value is used for the built-in RELEASE repeating provide a different (arbitrary) number for repeating row layout types that you have created.

The red arrows point to the field titles, first for the issue itself, and then for the repeating row field titles. The blue arr the repeating row data values are then inserted into the spreadsheet as rows following the issue. There may be any nu rows inserted for any issue.

Note these differences when preparing a file for import that contains repeating rows compared to a file that only has is

- **Header Row**
  - The header row with the field names must begin in the first column with the value **Item Type** or **ITEM_** **Type** is the title and **ITEM_TYPE_ID** is the name. These terms are synonymous for the purpose of prep file and can be used interchangeably
  - You place each of the field names (or titles) to be imported on the first row of the spreadsheet. First, you field names / titles for the main issue data in the order that the data will appear within the data rows
  - Next you will have all the field names / titles for each of the fields within the repeating row, in the same o appear within the data rows of the spreadsheet. Placing these once on the header row negates the need to each series of repeating rows within the data rows of the spreadsheet
- **Data Rows**
  - Each row in the data must begin with the type of data on the row. The valid entries are either:
    - a **0** to represent **Issue Item** rows or

issue. You begin the value data for each repeating row in column B of the spreadsheet, and place the valu order as the field names / titles were entered into the Header Row
- For each issue you are inserting, with its set of repeating rows, repeat the steps in this section starting in tl of the spreasheet.

Repeating row data stored within ExtraView issues may or may not have a unique identifier for each row of data. This with the behavior setting named ENFORCE_UNIQUE_RELEASES. When this is set to YES, you must:

- Map one field in the repeating row data of ITEM_GROUP_TYPE_ID **1** to be imported to the ExtraView field n RELEASE_FOUND
- Have a unique value of the field being mapped to RELEASE_FOUND for each row in the import file, within ea
- Have write permission to the RELEASE_FOUND field

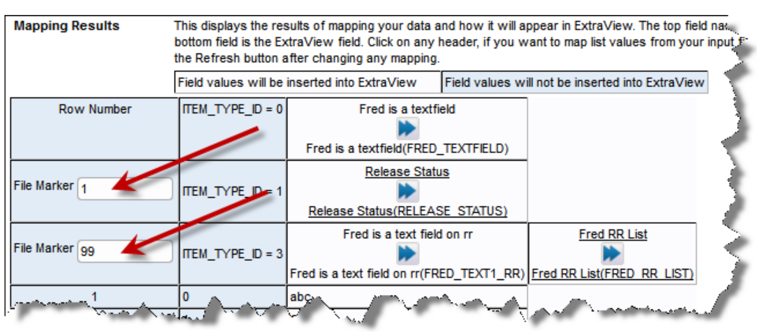
Importing Files Which Contain Data for Multiple Repeating Row Types

The preceding information relates to the importing of data which contains a single repeating row **Item Type**. ExtraVi files which contain multiple repeating rows within a single file, using an extension of the above methodology.

You adjust the spreadsheet format for each repeating row type you wish to import by simply adding the field titles for row type in the header row, and then creating a data row for each repeating row type. The **Issue Type** column provide to the repeating row to which the data belongs.

Each repeating row in an ExtraView database has an internal identifier which is not readily seen or displayed to the ad creating the import file, therefore an intermediate *File Marker* is used to provide the connection between the field data import file and the data being stored within the ExtraView database. Follow this procedure to prepare your import file

- **Header Row**
  - Follow the instructions in the preceding section, but simply continue the entries in the header row with th the fields for each repeating row type within the data to be imported. Again, these should appear in the or value data will appear within the spreadsheet
- **Data Rows**
  - You arbitrarily select a number for each repeating row type that is to be uploaded. **0** is always the number the **Issue Item** rows of data. 1 is always used for the inbuilt RELEASE releating row layout type
  - The remaining rows will have their arbitrary number in column A of the spreadsheet. Obviously, each rep specific type should use the same arbitrary number within the input data values
  - You simply use the arbitrary number to identify which repeating row fields are to be associated with the d within the spreadsheet; these numbers can be mapped to the internal ITEM_GROUP_TYPE numbers repr repeating row types
  - When you see the mapping results within the File Import screen, you will see a connector field for each re type. This has the title **File Marker.** You see the fields for each repeating row type within the mapping r screen, and you place the number you used within the spreadsheet you uploaded, within the **File Marker** which data rows in the spreadsheet belong to which fields in the header row.



setting ATTACHMENT_REPOSITORY_OPT.

The fields to be imported into your database are specified with either the first row of the imported file or through the r described in the previous section. If an image or document display type field is defined as an imported field, then the c column in each row is a filename that points to a file accessible to the ExtraView application server. The file is used tc image or document field contents in the target issue.

Image and document fields have the following metadata fields associated with them:

- File name
- Alternate text
- Character set
- Created by user
- Last updated by user
- MIME type

These metadata fields may be set from the row data that updates the image or document field.

To set the metadata field, the associated dictionary fields, named **EVFI_xxx** are used to define a column where the me exist. There are 12 dictionary entries that represent the image/document metadata: 6 for item fields, and 6 for repeatin those ending in **_RR**:

- File name: EVFI_FILE_NAME[_RR]
- Alternate text: EVFI_ALT_TEXT[_RR]
- Character set: EVFI_CHARSET[_RR]
- Created by user: EVFI_CREATED_BY_USER[_RR]
- Last updated by user: EVFI_LAST_UPDATED_BY_USER[_RR]
- MIME type: EVFI_MIME_TYPE[_RR]

These field names may be chosen in the File Import Utility to indicate where the metadata values in the row(s) reside. one set of metadata per row may be specified, and hence importing more than one image/document per row will not p values unique to the different fields.

Example

Header record (on a single row of the import file)

Description, FRED_MULTI, FRED_IMAGE, EVFI_ALT_TEXT, EVFI_CHARSET, EVFI_CREATED_BY_USER, EVFI_LAST_UPDATED_BY_USER, EVFI_FILI EVFI_MIME_TYPE

Data record (on a single row of the import file)

freddie description,frd2, C:\Users\Public\Pictures\Sample Pictures\desert.jpg, "Alternate Description", "Shift-JIS", gary.rather, gary.rather, theDesert.jpg, image/jpeg

Note: The reader will note that the header record contains data dictionary names instead of titles to illustrate the exam import, the header record should contain dd titles to assure correct mapping.

In this example, the metadata fields will populate the image field “FRED_IMAGE” when the issue is created.

Default Metadata Values

When metadata is not specified in the field mapping for an IMAGE/DOCUMENT field, the following defaults are ap

- File name: the file name portion of the full path name of the input image/document file
- Alternate text: the file name

Update Option

Images and documents may be imported using either the INSERT option or the UPDATE option of the File Import uti

Validation Option

The validation operation of the File Import function performs the following tests on imported images and documents:

- The file's existence and readability
- If an Image field, whether the file contains an image (a thumbnail can be created)
- For metadata
  - the MIME type must be recognized as a valid type
  - the CHARSET must be a valid recognized character set name

The same validation tests are done on the import operation. Validation errors will cause the import of that row to fail. (not affected, unless they also have errors.

Importing Attachments

You may import file attachments via the File Import utility. This page describes the way in which you prepare a structu system of the server where you will place the files to be loaded into the ExtraView database. This structure must be ac ExtraView application server. The image and document files will be loaded from there into ExtraView - either into the a part of the file system maintained by ExtraView, dependent on the value of the behavior setting ATTACHMENT_REPOSITORY_OPT.

Attachment metadata may be specified using similar metadata entries as for importing image and document fields. Th specified in the import file by using the data dictionary name **ATTACHMENT** as a mapped field, and defining the fil value for that column. The remaining metadata entries that can be used are optional, and are defined as follows:

- EVFI_ALT_TEXT - the description of the attachment, with a default of the file name
- EVFI_CHARSET - the character set used for displaying the attachment, with a default of UTF-8
- EVFI_CREATED_BY_USER - the User ID of the user creating the attachment. The default is the User ID of th the import
- EVFI_UPDATED_BY_USER - the last updated user of the attachment, with a default of the User ID of the use import
- EVFI_FILE_NAME - the file name of the attachment, with the default of the actual file name
- EVFI_MIME_TYPE - the mime type of the attachment. The default is computed by ExtraView from the file's e

These metadata fields may be set from the row data that describes the attachment to be imported.

To set the metadata field, the associated dictionary fields, named **EVFI_xxx** are used to define a column where the me exist.

These field names may be chosen in the File Import Utility to indicate where the metadata values in the row(s) reside. one set of metadata per row may be specified, and hence importing more than one image/document per row will not p values unique to the different fields. Import document and image fields is similar to importing file attachments. You m example on that page as a model on how to use this feature.

Importing Multiple Attachments for a Single Issue

You may import multiple attachments for a single issue, by delimiting the attachment metadata within the appropriate delimiter used is defined by the behavior setting named DEFAULT_TEXT_REPORT_DELIMITER. Normally, this is character. For example, the EVFI_FILE_NAME field for an issue may contain:

Validation Option

The validation operation of the File Import function performs the following tests on imported images and documents:

- The file's existence and readability
- If an Image field, whether the file contains an image, so that a thumbnail can be created
- For metadata
  - the MIME type must be recognized as a valid type
  - the CHARSET must be a valid recognized character set name

The same validation tests are done on the import operation. Validation errors will cause the import of that row to fail. (not affected, unless they also have errors.

Large Volume Imports

Overview

Using the file import utility for the bulk import of tens of thousands (or more) issues currently requires a large investn primarily to the sequential processing of the records being imported. ExtraView supports parallelism of the file impor spawning multiple add/update requests to be processed simultaneously.

Current File Import Processing

There are two components to the overall processing. The File Import Utility is invoked from the Administration inter is responsible for:

- Interacting with the user to set up and performing the file import
- Uploading the file to be imported and saving it internally
- Creating the mapping of fields and rows to item sub-objects
- Starting the background File Import Worker task
- Reporting on the progress of the File Import process
- Formatting, displaying and downloading errors and results to the user.

The File Import Worker is the second component and is responsible for:

- Reading the internal file
- Performing the necessary field and row mapping to item objects
- Adding or updating records to the database
- This is a background task, is not interuptable, and only communicates its progress to the user interface compone

Each of these entities performs its responsibilities in a sequential, non-parallel manner.

Parallelization

The user can create multiple files to be uploaded within the File Import utility. With configuration of multiple File Im background tasks, the import operations are then performed in parallel, increasing the number of simultaneous operati processed in a given period of time.

Configuring ExtraView to Handle Parallel Imports

Each input file is processed separately as a background operation by a File Import Worker task. If there is more than (Worker task, the input files are processed simultaneously, in parallel, improving performance. In a multi-node installa configure at least one File Import Worker task running on each node. Generally, it makes no difference on which nod

Note that there is no direct relationship between the number of File Import Worker tasks and the number of Add Upda are also limits to the number of each tasks that you should configure as there are diminishing returns, dependent upon the speed of the hardware.

The optimization process is somewhat arbitrary and there are no hard and fast rules as to the optimal configuration. A these factors have proven useful in configuring large imports of data:

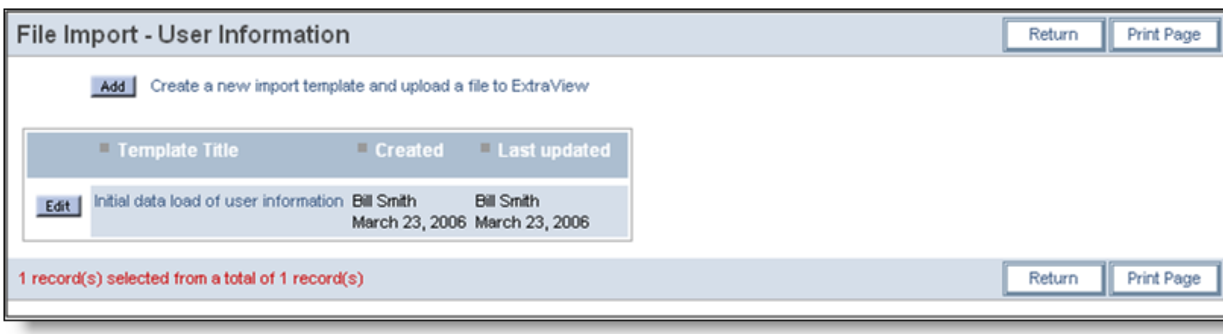
- For less than 30,000 records on a single node installation, only configure a single File Import Worker task and p import file. You might consider configuring a second Add Update task
- If you are working with larger data sets, and you have a multi-node installation, the parallelization configuratior worthwhile. Consider implementing a File Import Worker task for each import file and a similar number of Ad
- A limitation is that if you are importing images/documents/attachments, you must have a shared file system or l to a single node, as the file system is used to hold the temporary copy of the file so the tasks must both reside or physical server.

The CF_RUN_AS_ADMIN Security Permission Setting

This permission setting enables a checkbox on the file import screen. When this checkbox is set, the import utility wi ADMIN user account and will ignore security permissions when importing the records. This proves to be a useful me significantly speeding the import. It should be understood by the user performing the import that this is happening an level permission checking is happening while they import the data.

File Import - User Information

The import utility for user data allows the administrator to upload a tab-delimited or comma-delimited file from their for the fields and values within this file to be mapped to ExtraView values, to validate the data and to finally import th being uploaded is imported as new user data. You cannot use this utility to update existing user data. Access to this fe security permission key named CF_USER_FILE_IMPORT. Much of the user data file import utility is similar to the p importing issue data, so this section focuses on the differences. When you choose to import user data, similarly to imp you will create a template that can be reused with different uploaded files. This is shown in the next screenshot.



Adding a new user upload template

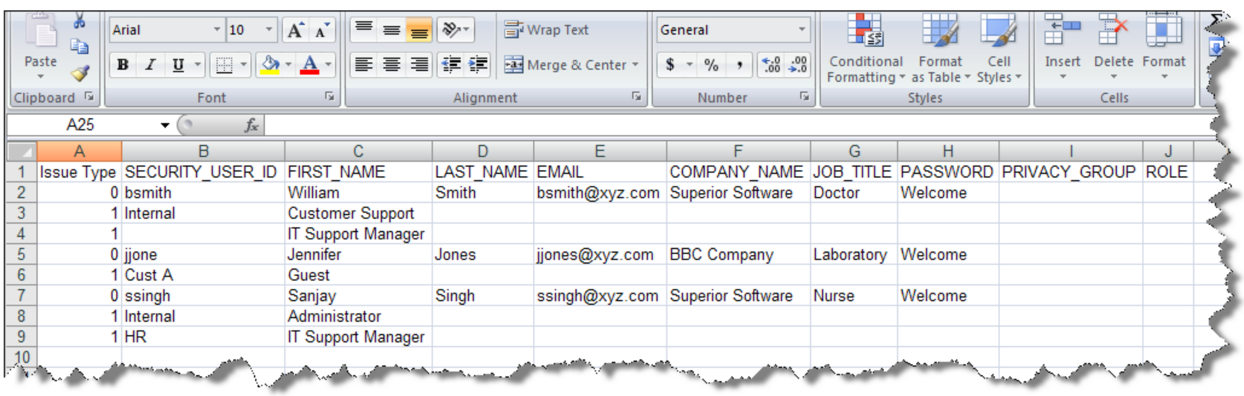
Once you have created a template, the process is to:

- Upload the data file containing the user data
- Map the fields in the import file to fields in ExtraView
- Make sure you have write permission to all the user fields that you are creating. The security permission fields f are all prefaced with USER
- Validate the data
- Import the data.

AREA_ID	The default business area for the user. If none is supplied, the user will current business area of the user performing the import
CELL_PHONE	The cell phone number of the user. If none is specified, this is left blan
CHART_FONT	The user's font they will use on charts they produce. If none is specifie the behavior setting named DEFAULT_CHART_FONT is used
CITY	The City of the user. If none is specified, this is left blank
COMPANY_NAME	The user's company name. If none is specified, this is left blank
COUNTRY	The Country of the user. If none is specified, this is left blank
DATE_FORMAT	The user's date format If none is specified, the value in the behavior se DEFAULT_DATE_FORMAT is used
DRILLDOWN_REPORT	This has the value *QUICKLIST* by default. The two valid values are *Q* *DETAILED*
** EMAIL	The user's email address If none is specified, the value is left blank
EMAIL_FORMAT	The default for this field is the value HTML. The list of valid values is *BRIF* and *VERY_BRIF*, corresponding to HTML, text, brief text and v
ENABLED_USER	The default for this field is the value *Enabled*. If you want to create the disabled state, then use the value of *Disabled*.
FAX	The fax number of the user. If none is specified, this is left blank
** FIRST_NAME	The first name of the user. If none is specified, this is left blank
HOME_TELEPHONE	The home telephone number of the user. If none is specified, this is lef
HTTP_CHARSET	The user's character set If none is specified, the value in the behavior s HTTP_CHARSET is used
JOB_TITLE	The job title of the user. If none is specified, this is left blank
LANGUAGE	The language defaults to the setting in DEFAULT_LANGUAGE. Note be in lower case. If you set another value, then ensure you have create locale
* LAST_NAME	The last name of the user. Note this is a required field in the import fil
LOGIN_ID	The alternative User ID. If none is specified, the SECURITY_USER_
MS_OFFICE_CHARSET	The user's character set to use when outputting information to Microso products. If none is specified, the value in the behavior setting named MS_OFFICE_CHARSET is used. Note this is only useful if you are ru of Microsoft Office prior to the Office 2003 versions
NOTIFY_ON_OWN_UPDATES	The default for this value is *Y*. You can also give it the value of *N*.
PAGER	The pager number of the user. If none is specified, this is left blank
* PASSWORD	The password, in plain text, for the user. The password is not stored in encrypted within the database as the user is created.
PASSWORD_EXPIRY_DATE	The date you want the user's account to expire. Note that if you do not value, the password will never expire
PASSWORD_INTERVAL	The number of days between password expirations for the user. If this the default is zero which means the password will not expire
POSTAL_CODE	The postal code of the user. If none is specified, this is left blank
PRIVACY_GROUP	Each user may belong to multiple privacy groups; therefore importing requires a different syntax than for most other user fields. Refer to the titled **Importing Repeating Row Data**. This shows how to construct t data to import user roles into ExtraView. Use *Privacy Group* as the titl
PROJECT_ID	The default project for the user. If none is supplied, the user will be pla current project of the user performing the import. The project must be AREA_ID specified
RECORDS_PER_PAGE	This defaults to *20* and is the number of records that will be displayed

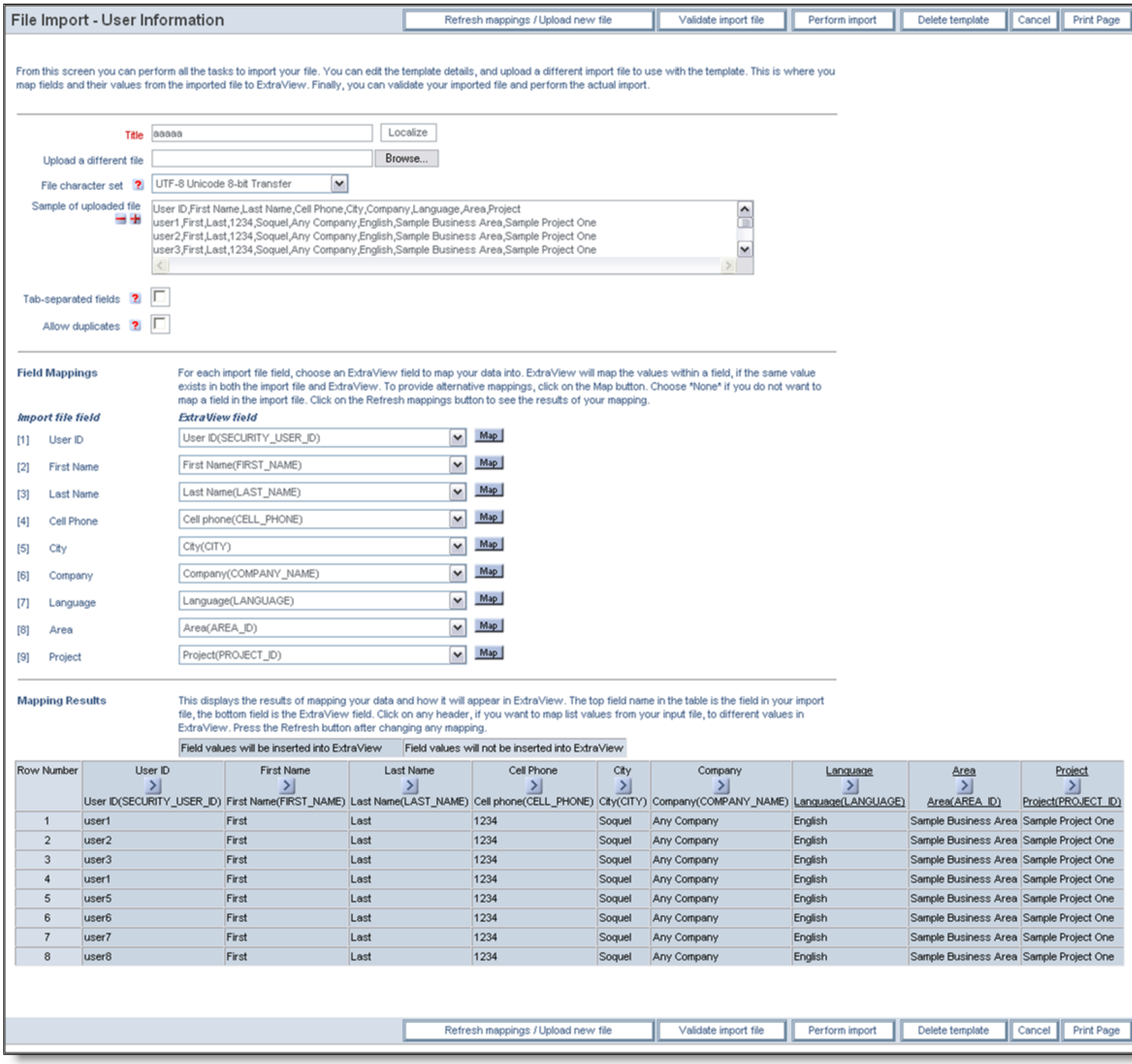
* SECURITY_USER_ID	This is a required field and is the key field for the entire user record. It alphanumeric, and be from one to thirty characters in length. As well a characters, the user ID may also contain periods ('.') and underscores (
START_PAGE_ID	By default this has a value of zero. The potential values for this are: 0 Home Page 1 Query Screen 2 Add Issue Screen Note that it is possible for the administrator to add additional values to
STATE	The state of the user. If none is specified, this is left blank
STYLESHEET	The default value for this field is *small*. Other valid values are *medium* These correspond to the font size for the user's account
TWENTY_FOUR_HOUR_TIME	This defaults to *N*. You may also provide a value of *Y* if you want the u twenty-four hour clock
USER_FIELD_1 USER_FIELD_2 USER_FIELD_3 USER_FIELD_4 USER_FIELD_5	These are user defined fields that may be imported into ExtraView. Th in the data dictionary, and you may import values into these fields fron file.
USER_ROLE	Each user may have multiple roles; therefore importing roles requires a syntax than for most other user fields. Refer to the section above titled **Repeating Row Data**. This shows how to construct the spreadsheet da user roles into ExtraView. Use *Role* as the title to the field. See below information
VARIANT	The user's region variant. If none is specified, the value in the behavio is used. This is not commonly used.
WORK_TELEPHONE	The work telephone number of the user. If none is specified, this is left

** indicates that the field is always required. * indicates that the field may be required, depending on the value of the ENFORCE_DETAILED_USER_INFO. This screenshot displays a sample import file. Note how the PRIVACY_GRC fields may be mapped to multiple values, for a single user. The fields with the multiple values are defined in the first r values are placed in rows following each user, using an **Issue Type** of **1** as opposed to the user details which have an **I**



	A	B	C	D	E	F	G	H	I	J
1	Issue Type	SECURITY_USER_ID	FIRST_NAME	LAST_NAME	EMAIL	COMPANY_NAME	JOB_TITLE	PASSWORD	PRIVACY_GROUP	ROLE
2	0	bsmith	William	Smith	bsmith@xyz.com	Superior Software	Doctor	Welcome		
3	1	Internal	Customer Support							
4	1		IT Support Manager							
5	0	jjone	Jennifer	Jones	jjones@xyz.com	BBC Company	Laboratory	Welcome		
6	1	Cust A	Guest							
7	0	ssingh	Sanjay	Singh	ssingh@xyz.com	Superior Software	Nurse	Welcome		
8	1	Internal	Administrator							
9	1	HR	IT Support Manager							
10										

The following screen shot displays the screen where you map the fields, validate the data and perform the import. Aga the previous section for full details. The one difference to importing issue data is the prompt **Allow duplicates**. When any duplicate combinations of **First Name** and **Last Name** or duplicate values of **Email Address** will be allowed. If t checked, then whenever a duplicate is found, the value will be rejected during the import phase.



Validating and Importing Users

When validating the data and performing the import you will receive feedback in the same way as described in the pre

Note: For security purposes, the initial password of the user is set to a random value and is not defaulted to any value. will need to be set by the administrator individually, or via a custom-designed process.

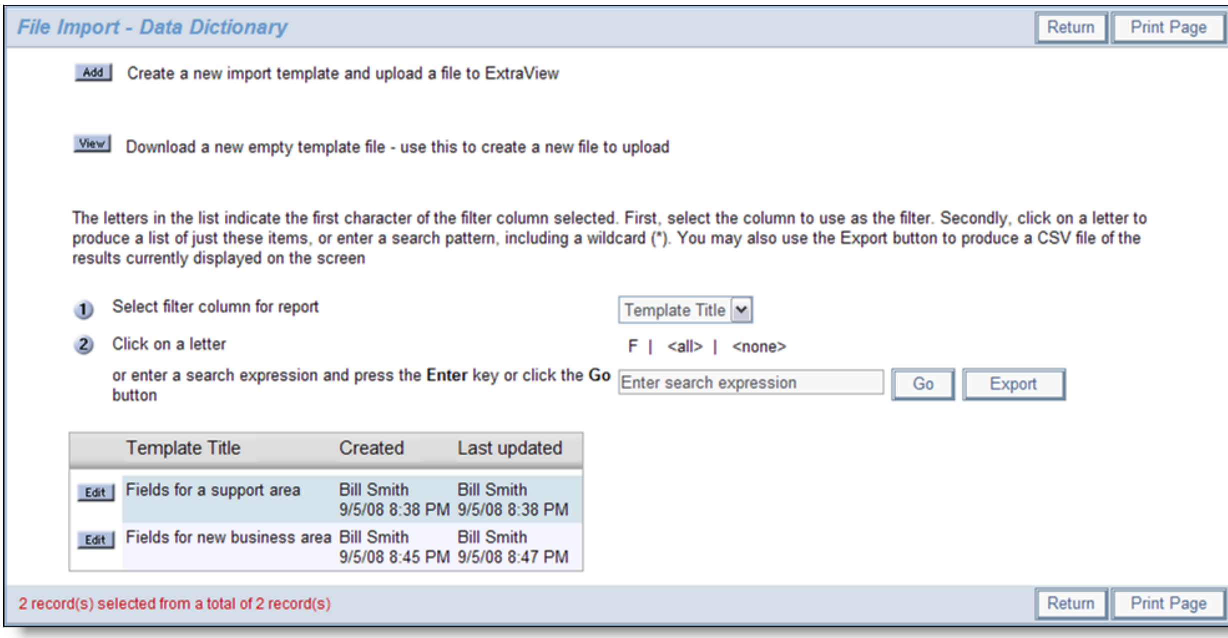
Note: If inserting a new user will violate the number of licensed users, then an error is generated, and no update to the made. However if you do not specify the license type for a user, then they will be set to be concurrent, and this most p avoid any license constraints when loading the user. You may also load users in the disabled state by setting the ENAI field to a value of **D**.

Note: If your input file contains, or would cause a user to be created with a duplicate email address, or with a duplicat first and last name, an error is also generated and the record is rejected.

File Import - Data Dictionary

The purpose of this feature is to create new fields in the data dictionary from a spreadsheet. When creating a large Ext installation, there is often a significant amount of replication with similar fields, but with different **names**. You are abl spreadsheet with a set of fields plus their attributes from a comma- or tab-delimited file, and upload this file into Extra the template that you download is a Microsoft Excel spreadsheet. This allows the use of validation within the spreadsh preparing the input file. **You must save the file as a comma-delimited or tab-delimited file before you import it ba ExtraView.**

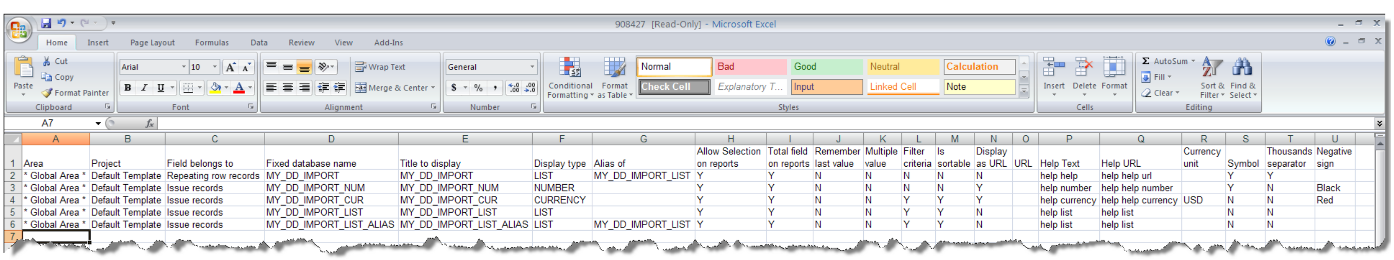
Significant validation is performed on the file you upload, with a similar two-step process as in uploading issue data. ` to save the templates you create for future use, allowing you to prepare fields in batches, and upload them as and whe prepared.



Importing fields from a spreadsheet

Preparing the import file

Use Microsoft Excel or a similar spreadsheet tool to create your input data. An empty spreadsheet for use as an input f downloaded from within the utility. **You must save the file as a comma-delimited or tab-delimited file before you i into ExtraView** See the previous screenshot for details of how to download an empty spreadsheet.



Area	Project	Field belongs to	Fixed database name	Title to display	Display type	Alias of	Allow Selection on reports	Total field on reports	Remember last value	Multiple value	Filter criteria	Is sortable	Display as URL	URL	Help Text	Help URL	Currency unit	Symbol	Thousands separator	Negative sign
* Global Area *	Default Template	Repeating row records	MY_DD_IMPORT	MY_DD_IMPORT	LIST	MY_DD_IMPORT_LIST	Y	Y	N	N	N	N	N		help help	help help url		Y	Y	
* Global Area *	Default Template	Issue records	MY_DD_IMPORT_NUM	MY_DD_IMPORT_NUM	NUMBER		Y	Y	N	N	N	N	Y		help number	help help number		Y	N	Black
* Global Area *	Default Template	Issue records	MY_DD_IMPORT_CUR	MY_DD_IMPORT_CUR	CURRENCY		Y	Y	N	N	Y	Y	Y		help currency	help help currency	USD	N	N	Red
* Global Area *	Default Template	Issue records	MY_DD_IMPORT_LIST	MY_DD_IMPORT_LIST	LIST		Y	Y	N	N	Y	Y	N		help list	help list		N	N	
* Global Area *	Default Template	Issue records	MY_DD_IMPORT_LIST_ALIAS	MY_DD_IMPORT_LIST_ALIAS	LIST	MY_DD_IMPORT_LIST	Y	Y	N	N	Y	Y	N		help list	help list		N	N	

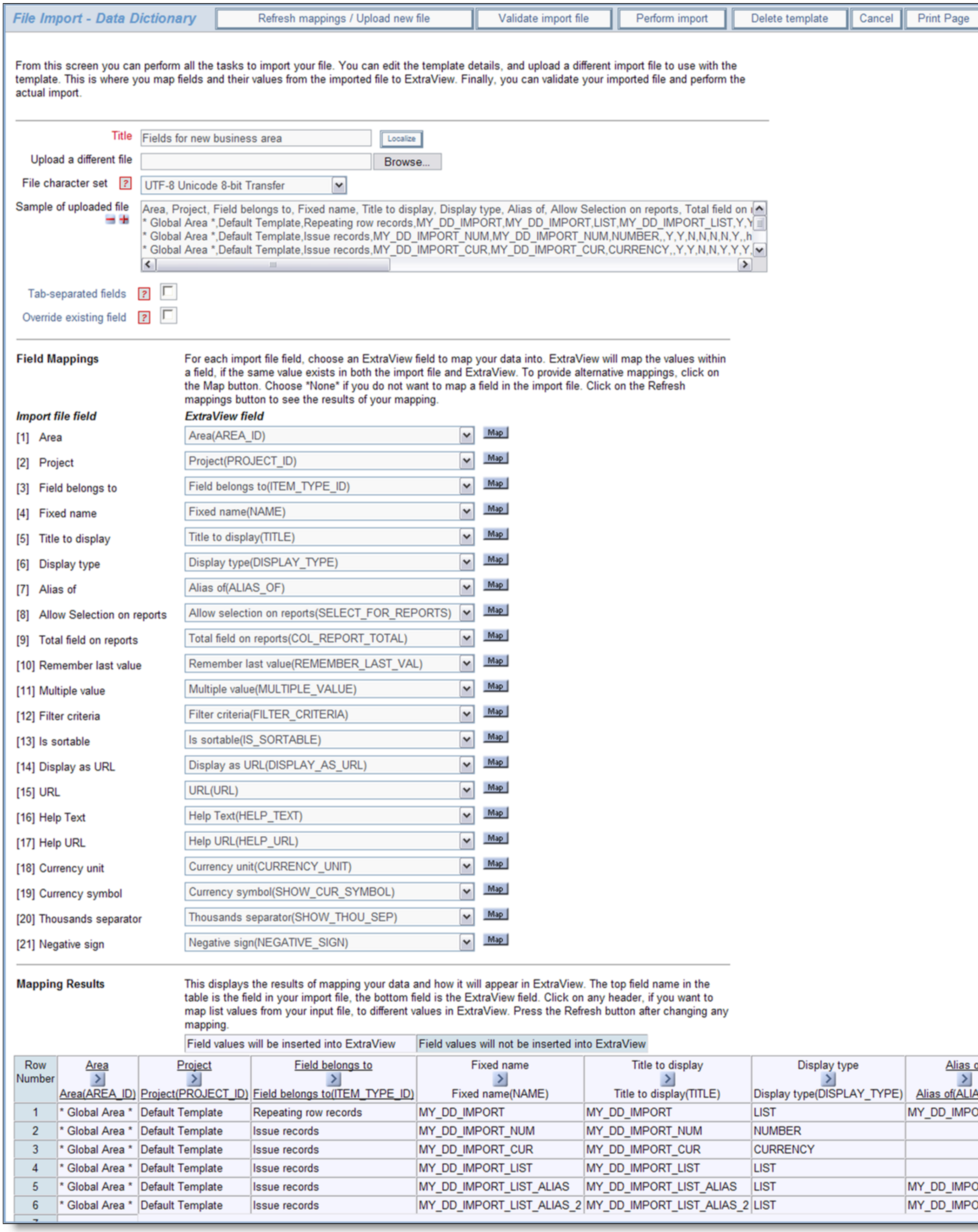
Similar to the web-based input for the data dictionary, the following fields are available for input:

Fixed name	This is the fixed name for the field. Names can only consist of the characters A to Z, 0 to 9, and '_' character of a fixed name must be alphabetic and the name can be up to 30 characters in length. Na contain characters from non-English alphabets. A further restriction is that you may not have two u characters together in a name. This field is required
Title to display	The display title for the field. This may be up to 100 characters long and may contain any character punctuation. This field is required
Display type	This must map to a valid display type within ExtraView. This field is required. The valid entries are • Button • Checkbox • Currency • Custom • Date • Day • Decimal • HTML Area • Image • Label • List • Log Area • Number • Pop-up • Print Text • Radio Button - Horizontal • Radio Button - Vertical • Tab • Text Area • Text Field • Time Interval • User
Alias of	If the field is to be created as an alias of another field, and the other field is of type list, tab, or radio place the other field name in this column
Allow Selection on reports	Create as Yes or No
Total field on reports	Create as Yes or No
Remember last value	Create as Yes or No
Multiple value	Create as Yes or No
Filter criteria	Create as Yes or No
Is sortable	Create as Yes or No
Display as URL	Create as Yes or No
URL	If you are using the field as a display as URL, then provide the URL here
Help Text	The help text for the tooltip on the field
Help URL	The URL to use if you are providing your own help on the field
Currency unit	The currency unit for the field
Currency symbol	The currency symbol to be used for the field
Thousands	

	• Round Down • Round Floor • Round Half Up • Round Half Down • Round Half Even
Percentage type	Create as Yes or No

Uploading the File and Providing any Mappings

This utility is very similar in usage to importing issue data. Please see the previous section in this guide for full instruc



Importing fields into the data dictionary

- ExtraView Licenses – the End User License Agreement (EULA) for ExtraView
- Allowed Locales – If this is enabled in your system, this utility allows you to add a new language locale to the i
- Translate System Messages and Prompts – If this is enabled in your system, this utility allows you to translate a messages and metadata in your system to an allowed locale
- Upload Server-side templates for use with ExtraView API – If you are creating server-side templates for use wit pages, this utility allows you to upload the templates, without having access to the file system of the server
- Statistics – Key statistics of ExtraView usage
- System Log Types – Maintains the list of items that are logged within the System Log
- System Security Keys – This displays and allows you to create security keys within the installation, to which pe attached by the Grant Security Privileges routine
- View Allowed Functions – This displays all the functions within your installation and shows the difference betw functions in the ExtraView Standard version and the ExtraView Global Compliance version
- Start Page Management – This controls the list of pages that can be addressed directly when a user first signs or
- Pre-cache Layouts at System Startup – This controls the list of layouts that can be loaded when the application s providing improved performance when users first sign onto the system
- Edit the labels of the Administration tabs – This allows the editing of the labels on the tabs of the administratior purpose for this utility is to localize the labels on the tabs
- Access Tokens for OAUTH2 Authentication / Authorization - This utility allows for the creation and maintenan tokens provided by remote servers
- Encryption Key Management - This utility allows the administrator to create and maintain encryption keys used ExtraView application

Version Information

This function, found under the **Advanced Menu** tab within Administration, provides the system user with all the vital maintenance, and troubleshooting information available about their specific ExtraView installation. Companies that ar ExtraView on their own servers may use this feature as a convenient way to find information regarding their environm ExtraView build number, third party software versions, operating system details, Java environment details, etc.

A screen similar to the following appears:

ExtraView Version Information Return Print Page

Build label	UNKNOWN
Build date	Mon 02/27/2006 16:07:53.73
Build OS	Windows_NT
Build DB Host	127.0.0.1
Build DB SID	nerdvana
Build DB User	best_data
Build DB Url	jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(HOST=127.0.0.1)(PROTOCOL=tcp)(PORT=1521))(CONNECT_DATA=(SID=nerdvana)))
Build Instance	/evj5.0
Build Domain	.extraview.net
Build Connection Pool Size	20
Build Connection Pool Max	200
Build Connection Use Count	500
Build Connection Timeout	10
Build Connection Pool Timeout	20
License expiration date/time	NEVER
Database product name	Oracle
Database product version	Oracle9i Enterprise Edition Release 9.2.0.1.0 - Production With the Partitioning, OLAP and Oracle Data Mining options JServer Release 9.2.0.1.0 - Production
JDBC version	9.2.0.3.0
java.runtime.name	Java(TM) 2 Runtime Environment, Standard Edition
sun.boot.library.path	C:/JBuilderX/jdk1.4/jre/bin
java.vm.version	1.4.2_01-b06
java.vm.vendor	Sun Microsystems Inc.
java.vendor.url	http://java.sun.com/
path.separator	;
java.vm.name	Java HotSpot(TM) Client VM
file.encoding.pkg	sun.io
user.country	US
sun.os.patch.level	Service Pack 2
java.vm.specification.name	Java Virtual Machine Specification
user.dir	C:/Documents and Settings/Carl/My Documents/ExtraView/projects/evj5.0
java.runtime.version	1.4.2_01-b06
java.awt.graphicsenv	sun.awt.Win32GraphicsEnvironment
java.endorsed.dirs	C:/JBuilderX/jdk1.4/jre/lib/endorsed
os.arch	x86
java.io.tmpdir	C:/DOCUME~1/Carl/LOCALS~1/Temp/
line.separator	
java.vm.specification.vendor	Sun Microsystems Inc.
user.variant	
java.naming.factory.url.pkgs	org.apache.naming
os.name	Windows XP
sun.java2d.fontpath	
log4j.configuration	file:c:/ApacheGroup/jakarta-tomcat-4.1.30/conf/log4j.properties
java.library.path	C:/JBuilderX/jdk1.4/bin;.;C:/WINDOWS/system32;C:/WINDOWS;C:/WINDOWS/system32;C:/WINDOWS;C:/WINDOWS/system32/WBEM;C:/oracle/ora92/bin;C:/Program Files/Oracle/jre/1.3.1/bin;C:/Program Files/Oracle/jre/1.1.8/bin;C:/Program Files/ATI Technologies/ATI Control Panel;C:/Program Files/Intel/Wireless/Bin/;C:/Program Files/Microsoft SQL Server/80/Tools/Binn/;C:/Program Files/UltraEdit;C:/Program Files/SecureCRT/;C:/Program Files/Perforce;C:/Program Files/Intel/Wireless/Bin/;C:/Program Files/Intel/Wireless

Version Information screen

This information is useful for support purposes. ExtraView support personnel may ask you to review information on tl debugging problems.

which themselves are subject to licenses provided by the authors of these components. ExtraView only uses these ope components in their original, binary form, and does not alter the code. The licenses for these open source components the ExtraView distribution. These can be found within your deployed tree within the directory at /locales/en_US/licen

Allowed Locales

This function allows you to define the locales that users may select with the Language prompt on the user administrati this option appears within administration, you must set the behavior setting named MULTI_LOCALE to YES, and the permission key named CF_ALLOWED_LOCALES must give you read and write permissions.

When you first access this function, you will see a list of the locales that are set up, and you can choose to modify the with the **Edit** button, or you can add a new locale.

List of Allowed Locales

When you add a new language package, you instantly allow any user to switch to that language, but localized message for that language. You can use the **Translate System Messages and Prompts**, or the **Localize** buttons that appear to p messages in any new language you define.

Adding a new locale does more that giving the capability to translate the messages into that language. All date formats specific features will use different defaults. For example, the default locale is en_US (English US), but you may add a en_GB for British English. When you do this, the default date formats will be those to which a British user is familiar, traditional ones familiar to a user in the USA.

When no localized messages are available, or if the program is missing some localized messages in any specific langu will display the language entry for the behavior setting named in DEFAULT_LOCALE. This is normally en_US. Note country such as Britain can override a few localized messages, to eliminate any US English spelling.

Note: Once the setting named MULTI_LOCALE has been set to YES in an ExtraView database, and any changes to a has been made, the setting should not be reset to NO. Doing so may result in seeing text in a variety of locales being d user.

Localization

If the option to **Translate System Messages & Prompts** is enabled, the end user is able to select, as a personal prefer language in which he wants to operate. There are three fundamental areas where localized messages can be entered an

- The user interface of ExtraView, including all system messages and prompts. Typically, these messages are the s

Note: If a particular term or message is not translated into a specific language, ExtraView will choose to display the it default locale (normally US English). This can be used with advantage, for example, to provide a UK English localiza minimum of effort, only translating messages and metadata that have different spellings between the two languages.

Note: No matter what setting is used for a user's language preference, data can be entered and updated in any languag user's character set and browser provide the necessary support. For this reason, ExtraView recommends that the defau used in the installation of an Oracle database be set at UTF-8, and that for a Microsoft SQL Server database, the chara UCS-2.

Note: Before performing any localization, you should check your browser is set to use the UTF-8 character set. Failur result in corrupting previously saved messages that contain accented or double-byte characters. If you are not sure wh browser is correctly configured, make sure you take a backup of your database before you start. Testing is extremely i of localizing ExtraView metadata and prompts into any language. Please thoroughly check your work before deployin production environment.

Entering Accented Characters

As stated above, your browser should be set to use the UTF-8 character set. However, there are still some issues to be entering characters. The characters that present the most problems are the quote (') and the double quote ("). The reas these characters are often used within a computer program to specify a string value being sent to the user interface. Fo statement –

```
document.write('Today is Wednesday')
```

may be written by a JavaScript function to a screen. When this is translated to French, this would look like –

```
document.write('Aujourd'hui est Mercredi')
```

The additional quote in the middle of the text will cause a syntax error when the browser attempts to display the chara reason, you may need to substitute the character value of the quote as so –

```
document.write('Aujourd&#39;hui est Mercredi')
```

or as

```
document.write('Aujourd&#x27;hui est Mercredi')
```

The first method uses the decimal value of the quote; the second method uses the hexadecimal value.

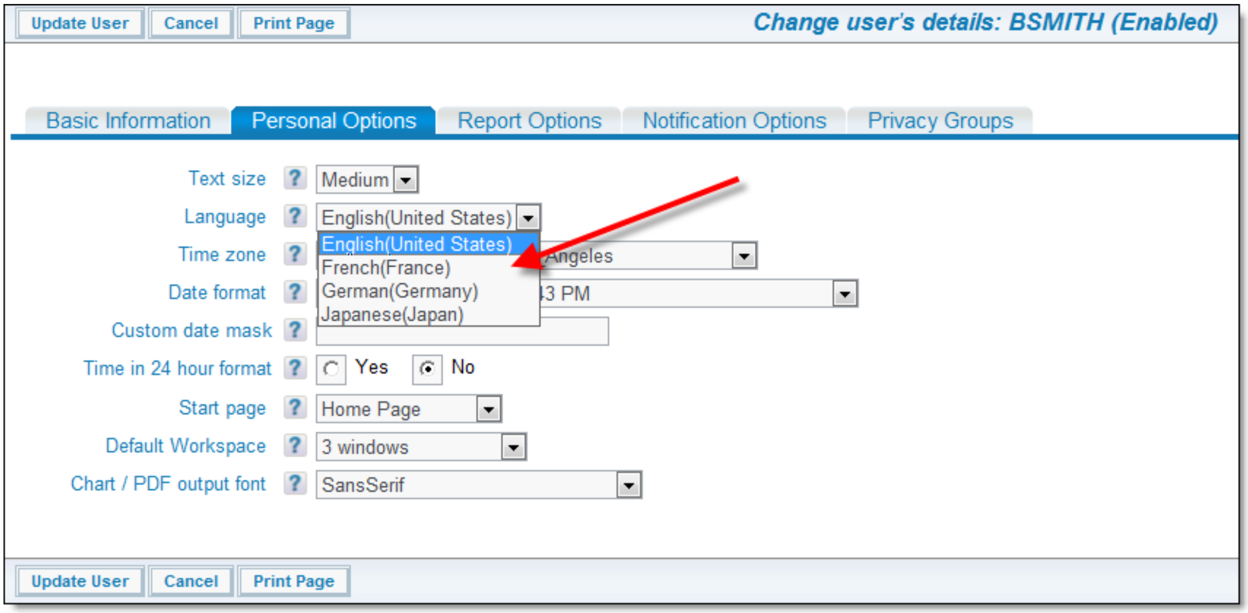
This same principle can be used for all characters. Please see the Appendix on Character Set Values for a list of charac decimal and hexadecimal values. Some characters, such as the double quote also have a form like –

```
&quot;
```

End-User Selection of Language

Each user can select the language in which he wants to operate, by updating his account options. From the title bar at t screen, the user clicks on the Account: link, enters their password and then sees a screen similar to the following, after **Personal Options** tab.

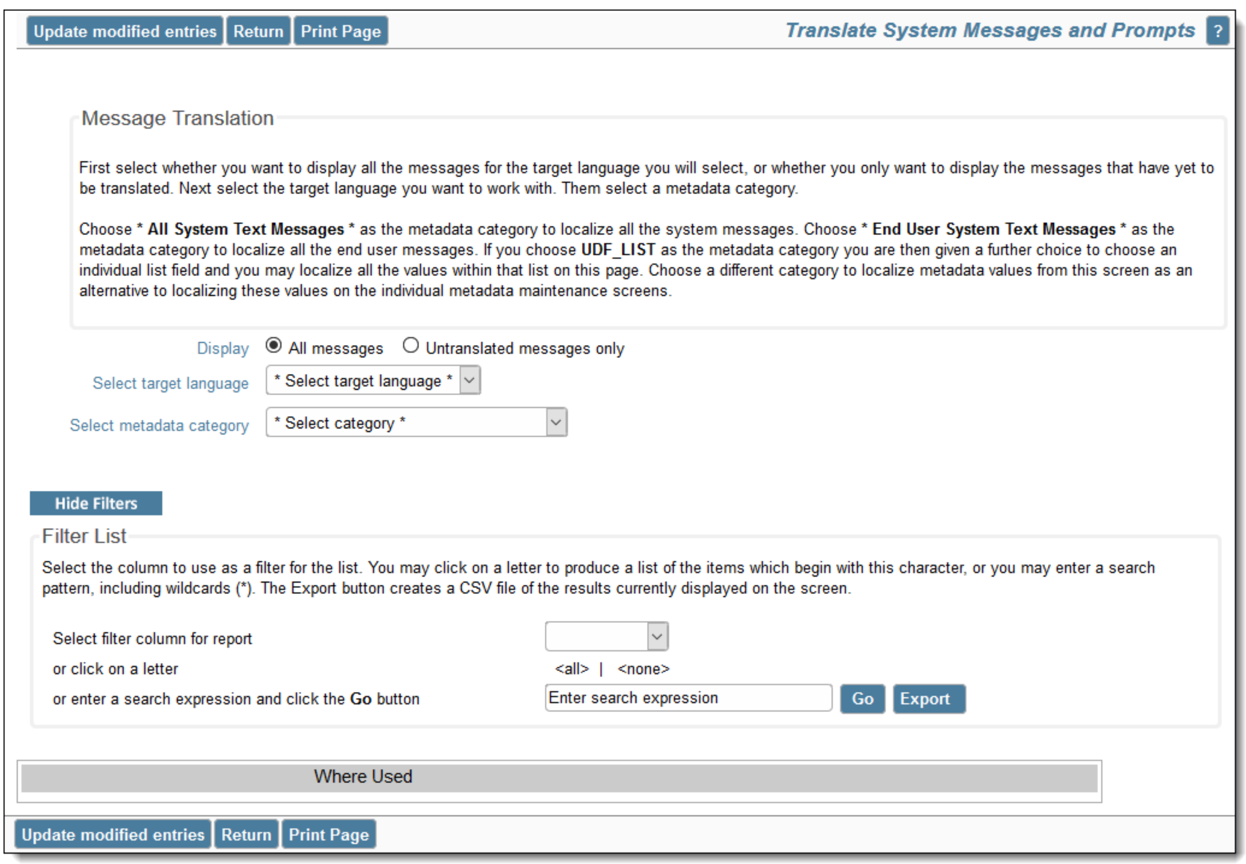
The pull-down list labeled *Language* displays the available languages for this installation. Once the language is chose updated and this language will be used for the display of all system messages, prompts and metadata.



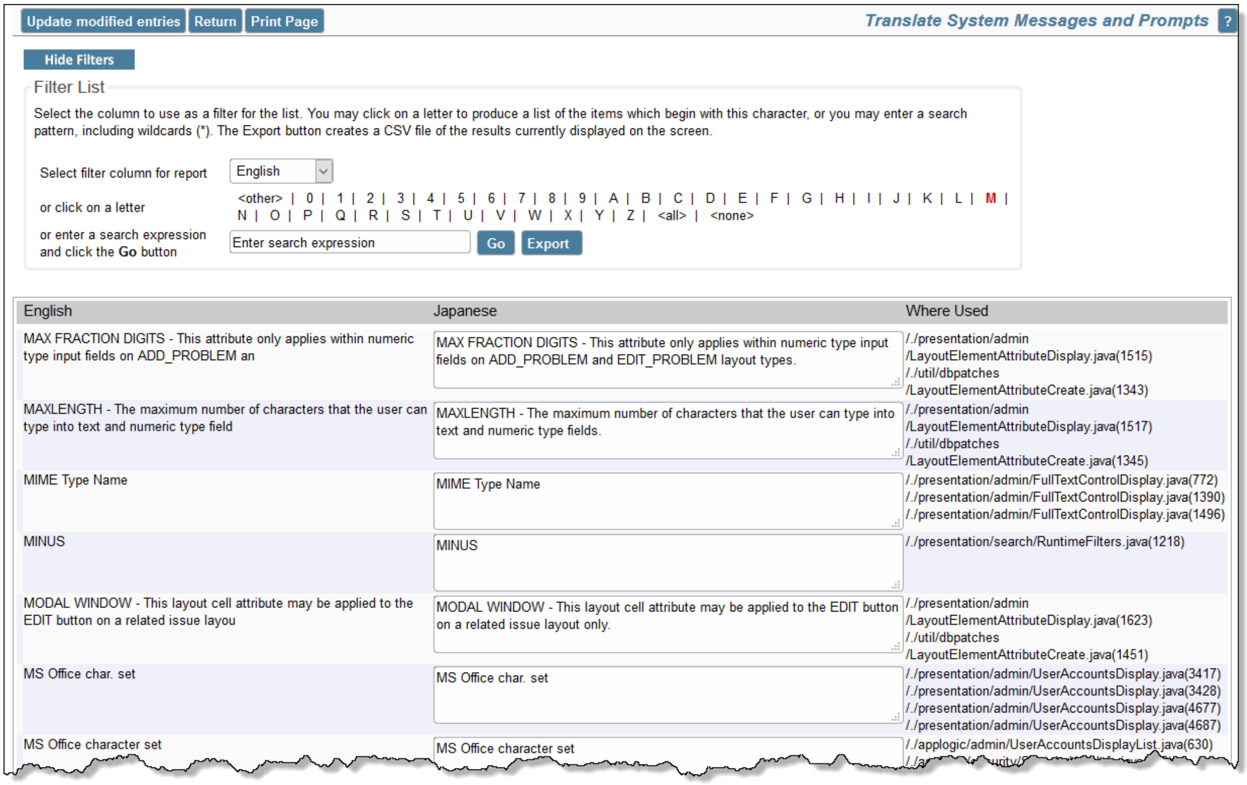
User Accounts Screen

Localizing Screen Messages

This function is accessed from the Administration tab named **Advanced**, and is named **Translate System Messages a** When you select this link, you will see a screen similar to the following:



choose these options, the screen refreshes, similar to the following:



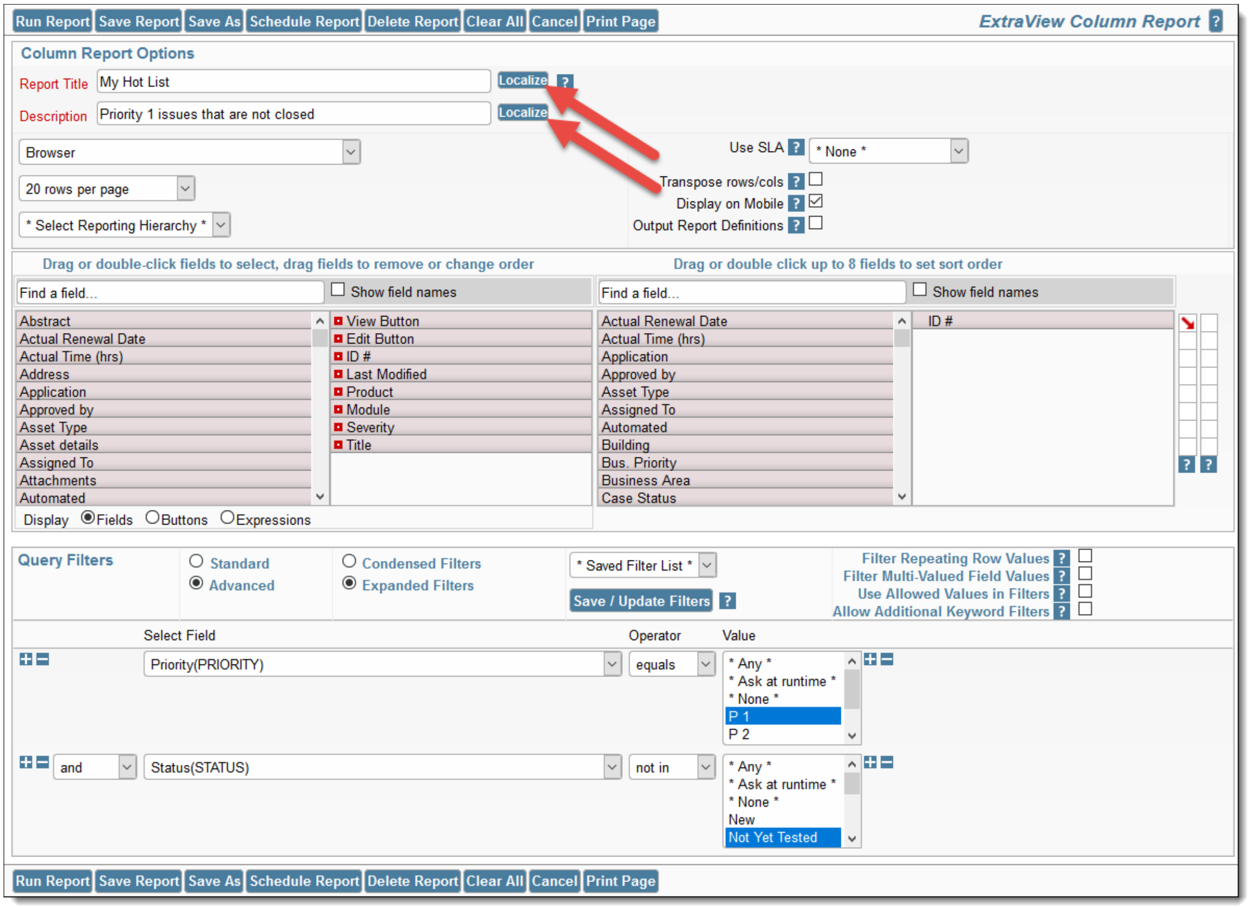
Screen where messages are localized

Note the option with the radio button that allows you to display all messages, or to only display the messages that hav translated. This gives you the ability to home in on the remaining messages to be localized, as opposed to viewing all messages appear in alphabetic order of the 'from' language. Edit any of the messages or prompts and then press the u foot of the screen.

- Messages may contain one or more numbers within braces such as **Add entry to the {0} for {1}** or **Currently, {0,number,integer} user(s) connected.** Do not remove the numbers and information within braces from the l The numbers within braces may be placed anywhere within the localized message
- Occasionally, messages in English may contain a numeric representation of a character. An example might be **ID's must be unique.** Again, do not alter the representation, which is **'** in the example
- If there is HTML formatting tags within the message, such as: **<i>ExtraView</i> will not function correctly** You can safely alter the HTML tags, but it is recommended that you leave them unaltered
- Messages that are longer than 100 characters in length are not displayed in full, but the full message to be transl displayed. Place your mouse over the shortened message and a tooltip will appear that displays the entire mess
- The Java file names at the right hand side of the screen represent which file(s) the messages appear within, and which the message occurs within the file. This gives an indication of where about on the user interface that any

Localization of Reports

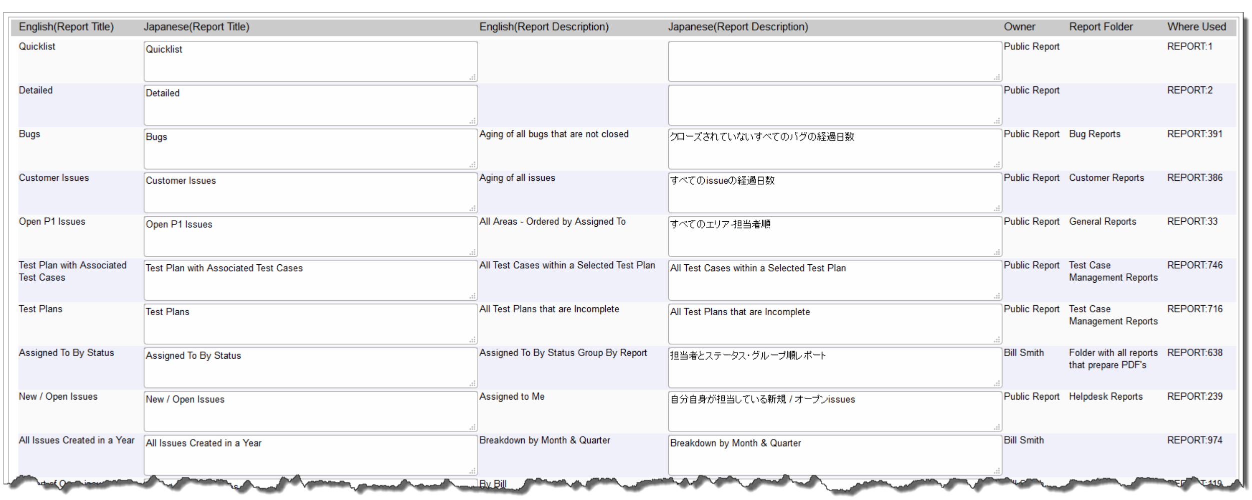
When localization is turned on within a site, there are additional prompts at the top of the report editors:



Localizing a Report Description

The **Localize** button is used to provide a localized title and / or description of the report for each locale you have defir

Within the **Translate Messages and Prompts** administrative utility, it is possible to translate all the report titles and d single screen. After entering the utility, choose the target language and then **Select Metadata Category** of REPORT. screen similar to the one below:



English(Report Title)	Japanese(Report Title)	English(Report Description)	Japanese(Report Description)	Owner	Report Folder	Where Used
Quicklist	Quicklist			Public Report		REPORT:1
Detailed	Detailed			Public Report		REPORT:2
Bugs	Bugs	Aging of all bugs that are not closed	クローズされていないすべてのバグの経過日数	Public Report	Bug Reports	REPORT:391
Customer Issues	Customer Issues	Aging of all issues	すべてのissueの経過日数	Public Report	Customer Reports	REPORT:386
Open P1 Issues	Open P1 Issues	All Areas - Ordered by Assigned To	すべてのエリア-担当者順	Public Report	General Reports	REPORT:33
Test Plan with Associated Test Cases	Test Plan with Associated Test Cases	All Test Cases within a Selected Test Plan	All Test Cases within a Selected Test Plan	Public Report	Test Case Management Reports	REPORT:746
Test Plans	Test Plans	All Test Plans that are Incomplete	All Test Plans that are Incomplete	Public Report	Test Case Management Reports	REPORT:716
Assigned To By Status	Assigned To By Status	Assigned To By Status Group By Report	担当者とステータス・グループ順レポート	Bill Smith	Folder with all reports that prepare PDF's	REPORT:638
New / Open Issues	New / Open Issues	Assigned to Me	自分自身が担当している新規 / オープンissues	Public Report	Helpdesk Reports	REPORT:239
All Issues Created in a Year	All Issues Created in a Year	Breakdown by Month & Quarter	Breakdown by Month & Quarter	Bill Smith		REPORT:974

has the value of **US** which represents the value for the United States of America. Note that these values are case sensi to alter these values, but it is usual to define other locales and assign users to these locales. The **Translate System M Prompts** utility allows for the translation of messages into any locale, which is the combination of the language and r allowable locales for any system are defined within the administration utility named **Allowed Locales**.

In order to localize business rules, special consideration needs to be given and rules for the alternative languages need

The following business rule actions may need to be localized, as they typically contain text which is displayed to the e

- ERROR
- STOP
- REAUTHORIZE

Consider a business rule in US English, such as this:

```
{STOP: Your entry is in error.  Please correct and submit again}
```

If you also want to support French and Spanish langauge alternatives that have been added as allowed locales, you ma

```
if (USER.{language}) = 'en') {
    {STOP: Your entry is in error.  Please correct and submit again}
}
if (USER.{language} = 'fr') {
    {STOP: Votre entrée est erronée. Veuillez corriger et soumettre de nouveau
}
if (USER.{language}) = 'es') {
    {STOP: Su entrada está en error. Corrija y envíe de nuevo }
}
```

If you want to add variants of languages, you will also need to use the user's region within the logic. For example, if y support variants for different versions of English, you might do this:

```
if (USER.{language}) = 'en' && USER.{region} = 'US') {
    {STOP: Your entry for the field named Color is in error.  Please correct.}
}
if (USER.{language}) = 'en' && USER.{region} = 'GB') {
    {STOP: Your entry for the field named Colour is in error.  Please correct.}
}
```

Note the different spellings for the word Color.

Localizing Custom Code

In order to be able to localize messages that appear to users and that are coded within Java in ExtraView's custom cod messages must be correctly coded to conform to the output requirements. Assuming the messages are correctly coded procedure will integrate the messages into the appropriate message tables within the database. Thereafter, the messag into the translation screens and can be translated into any allowed locale.

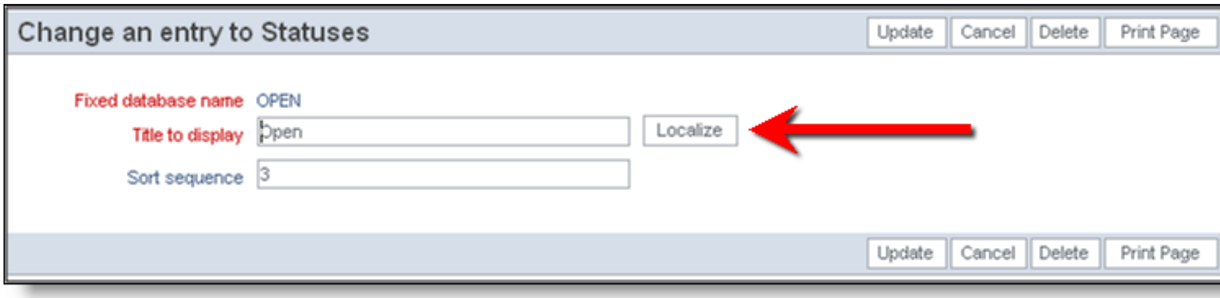
This process should only be carried out by a developer who has good knowledge of ExtraView's internal structure and coding.

- Check out the **UCMessageTest.java** from your source code repository, and make sure it is writeable
- Select and run the **build fapUC** build target within the **build.xml** script. This generates a new version of **UCM**
- Run the script **WEB-INF/data/UpgradeMessage.sh -u** or **WEB-INF/data/UpgradeMessage.bat -u** to insert/u messages within the database.

Note: You may localize all the metadata values on the same screen as that which localizes system messages. The two r complement each other. You may either localize the metadata values when you access the underlying item, or in a sing system metadata screen.

It is partiucularly convenient to localize all the titles of user defined fields using the **Translate System Messages and**

Once again, if you do not provide a localized equivalent for a value, ExtraView will revert to displaying the default lo Usually this is US English. When you edit a status value, for example, the screen will look something similar to:

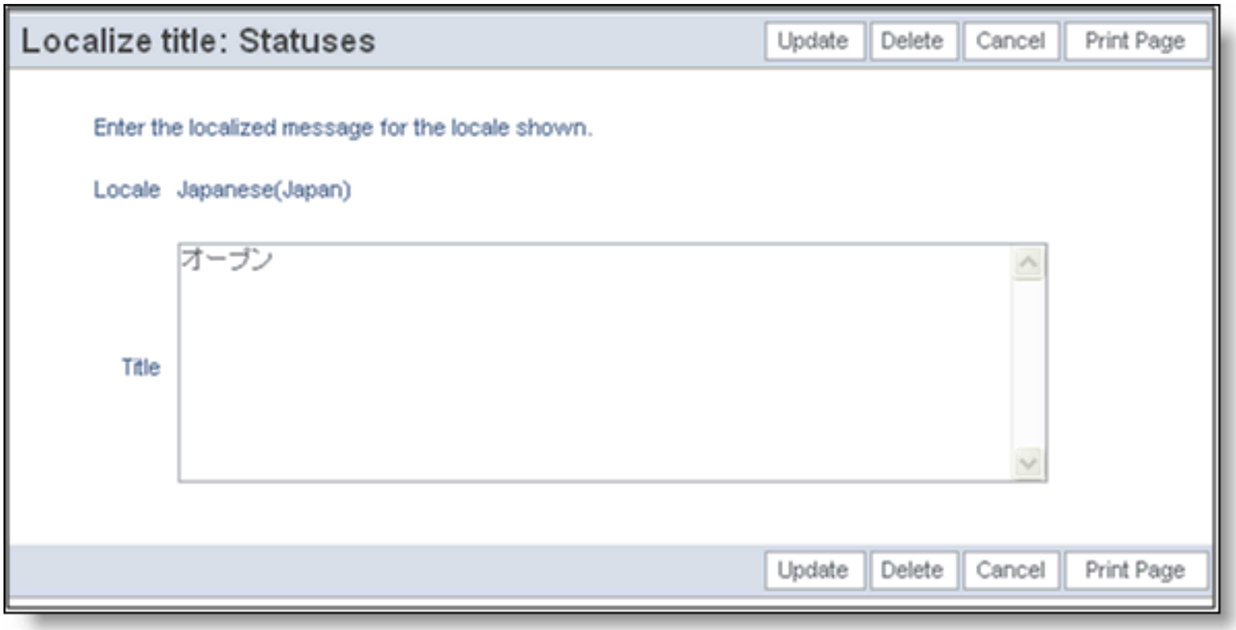


Localization button for metadata

When you first press the Localize button, you see a screen similar to the following:

Localizing metadata

Notice that as no localization has yet been completed for this value, all available languages show the term “Open” as t display. Editing the Japanese value will show a screen like:



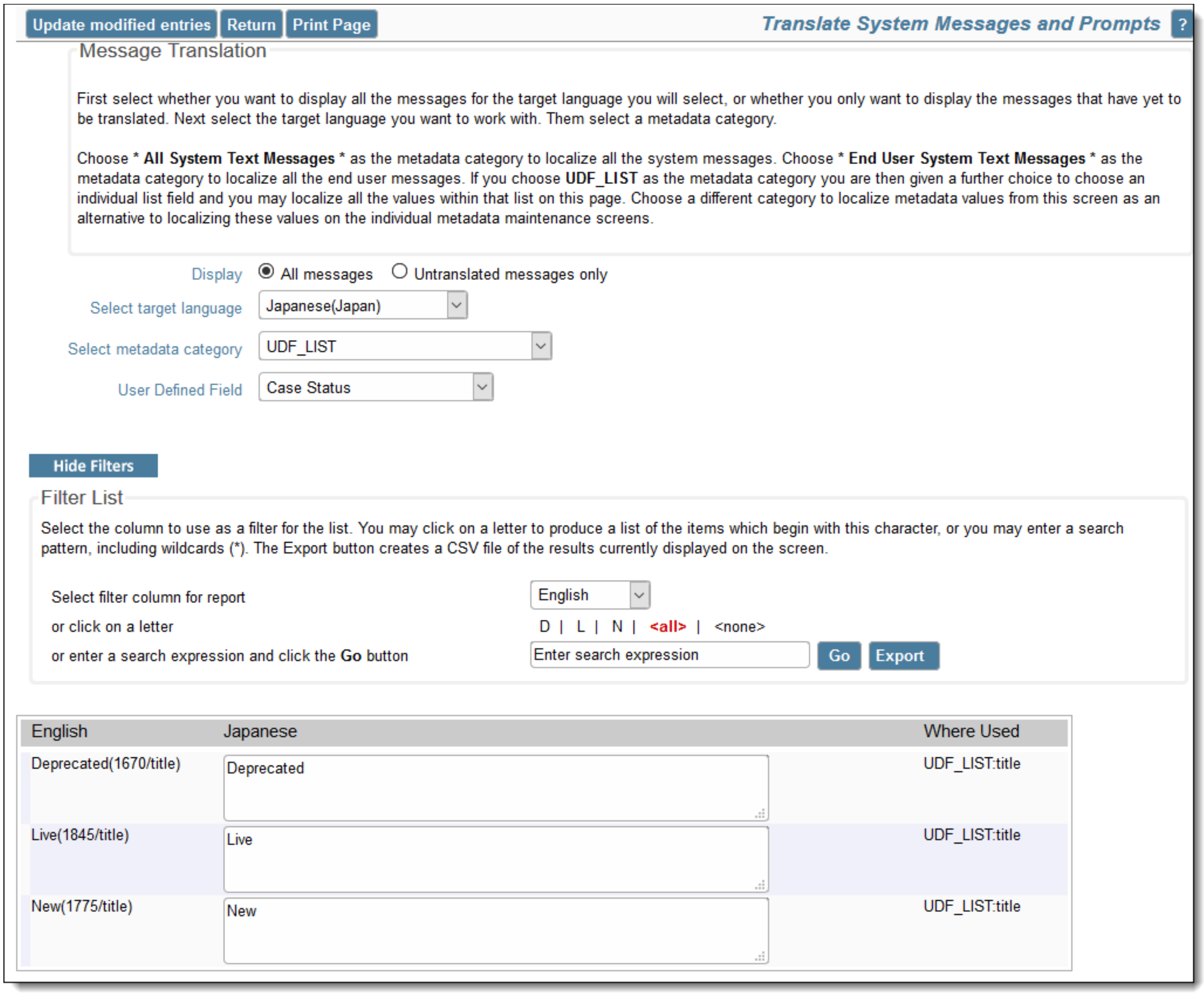
Creating a Japanese Status entry

When you have completed editing all the localized value for the status fields, the screen for the values will look simila

Completed localized text for a Status entry

Localizing User Defined Field Titles

From the **Translate System Messages and Prompts** administration screen, select the *target language*, and the metad **UDF_LIST**. You may then select the specific User Defined Field for which you want to localize the titles. You will c to which you have write permission. This produces a screen similar to the following from which you can translate the you selected:



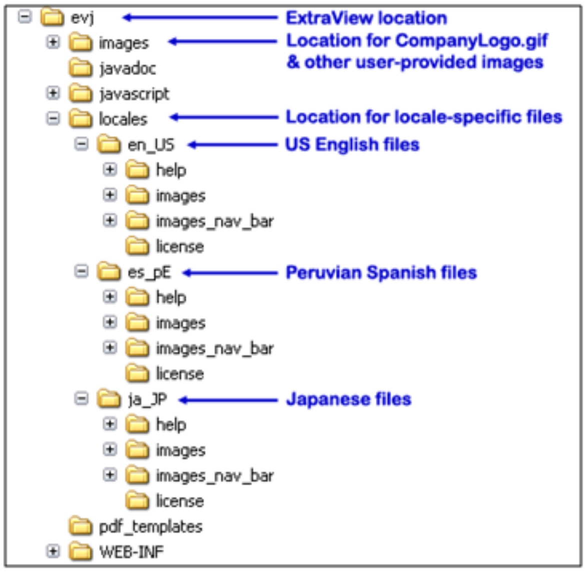
Localizing Popup Calendars

The popup calendars seen on *add* and *edit* screens have a series of files that should be localized for each language. A languages have predefined calendars, but should you need to localize a langauge not supplied, follow this procedure:

- Navigate to the web\javascript\zpcal\lang directory within your ExtraView installation
- You will see that the naming convention for the language files is **calendar-xx.js** where **xx** is the 2 character cou **es** for the Spanish language
- Copy the **calendar-en.js** file to a file named **calendar-xx.js**, replacing **xx** with the appropriate 2 character coun
- Edit the new file and replace each character string for day names, month names and the tooltips with the approp language equivalents
- Save the file.

Globalization File Structure

The following tree structure shows the location of directories on a Microsoft Windows server.



Localization directory structure

- The image with your company logo is placed within the directory named /images . Its name is CompanyLogo.g only be a single company logo file for an instance.
- The /images directory also contains a directory named /tab_corners . This contains the images used to construct within ExtraView.
- The /locales directory is where all the locale specific image and help files are stored. ExtraView is always shipp one set of files within this directory. This is named /en_US and contains US English image and help files. /en_U locale for the installation. Other locale specific directories can be created and will contain the appropriate image

Metadata Migration of Localized Data

The administrative utilities **Metadata Export** and **Metadata Import** are used to move localized data from one Extra another. The migration of localized data may be independent of the movement of other metadata or may be part of th movement of data.

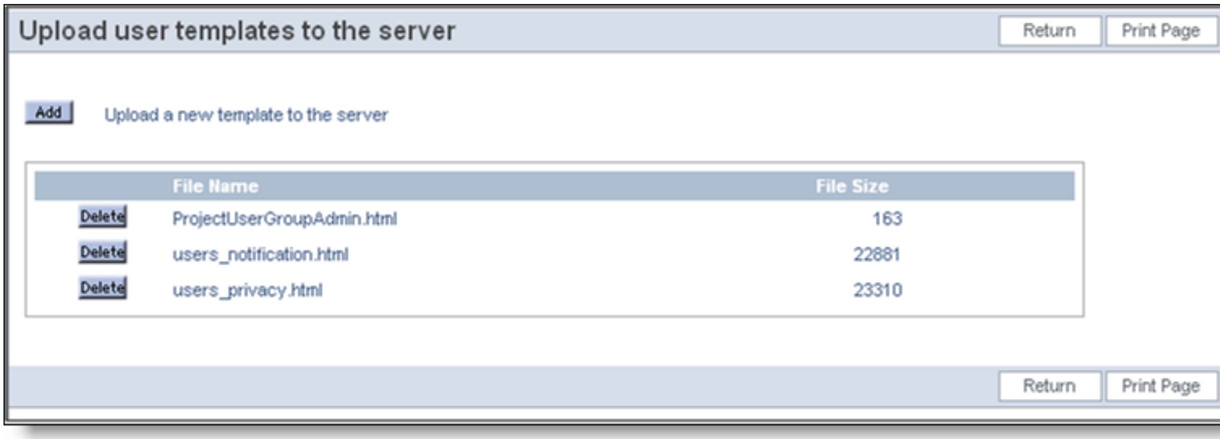
For further details consult the pages on these utilities here.

Manage Server-Side Templates

Server-side templates are used to format information returned from the API to a client browser or script. For example, new issue from the API to ExtraView, you can format the information returned by the command (the ID of the issue o command failed) with a template, perhaps to style the output in the same form as your company's website.

This is fully explained in the **Application Programming Interface Guide**. Templates are typically stored in the direc WEB-INF/user_templates. To aid in placing templates on the server, when you may not have access to the directory st server, this administrative function allows you to upload server-side templates, and allows you to delete them. They m your client computer.

Access to this feature is controlled by the security key named CF_UPLOAD_USER_TEMPLATES.



Managing Server-side templates

The **Add** button allows you to add a new template. Once templates have been uploaded to the server, you can delete tl **Delete** button.

Note: You cannot use this feature if you are running ExtraView from within a deployed War file.

Statistics

ExtraView maintains statistics on key information. Statistics are accessed via the Administration menu, under the Syst

Click **Statistics** to view the statistics.

The page is divided into 5 main sections: User Statistics, Issue Statistics, File Attachments, Background Time Counts, Frequencies

User Statistics	
Total number of users (active and inactive)	15
Number of active users	14
Number of active customer users	2
Number of internal (non customer) users	12
Number of active users in user role *Administrator*	4
Number of active users in user role *Customer*	7
Number of active users in user role *Customer Support*	5
Number of active users in user role *Customer Support Manager*	2
Number of active users in user role *Development Engineer*	7
Number of active users in user role *Engineering Manager*	3
Number of active users in user role *IT Support*	5
Number of active users in user role *IT Support Manager*	3
Number of active users in user role *Quality Assurance*	6

LIMITED_USER_ROLE. If a user is allocated to both LIMITED_USER_ROLE and any other group, they will total.

- **Number of active users in user role *group_name***. This is the number of active users in the user role named *gr*

Issue Statistics	
Total number of issues in database	347
Number of issues created to date this month	0
Number of issues created last month (January)	0
Number of issues created in last 30 days	0
Number of updates applied to date this month	0
Number of updates applied last month (January)	0
Number of updates applied in last 30 days	0

Issue Statistics section

File attachments	
Number of attachments in system	29
Average size of attachment (kB)	126
Maximum size of an attachment (kB)	1602

File Attachments section

Background Time Counts	
Database data manipulation language	0
Database connection allocation	0

Background Time Counts

Background Frequencies	
Database data manipulation language	15
Database connection allocation	1

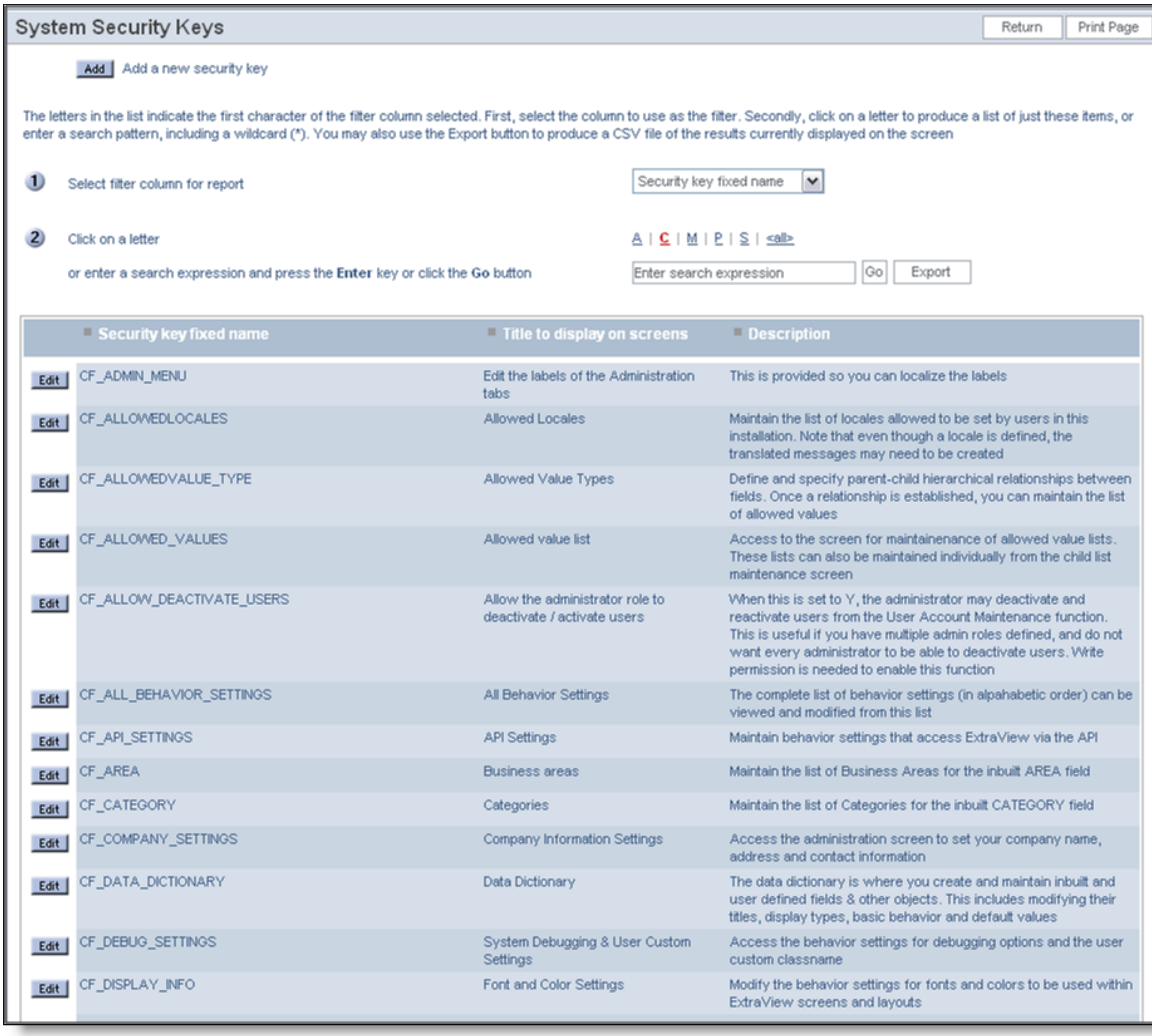
Background Frequencies

The Background Time Counts and Frequencies match those shown in EVSTATS for individual services, but they are a any task that runs in the background, such as SESSION_MONITOR, TASK_CONTROL, FULL_TEXT_SYNCHRON BATCHMAIL when run as a background task.

The values are accumulated for the period of time from the most recent instance start of your application server (boot current time. The database manipulation language (DML) statistics are those used to access or modify the database, in SELECT. UPDATE or DELETE SOL statements.

Security Privileges section under the **Fields & Layouts** tab, you are able to control the visibility of the elements cont keys, thereby restricting the access to these fields, buttons, and features.

Note: Changes in the system security keys area have system-wide implications. ExtraView Corporation strongly recor other than editing the display titles (which appear in the grant security privileges screens) you not attempt to make cha without first contacting ExtraView Support. It is unlikely that you will need to create new keys.



System Security Keys Summary screen

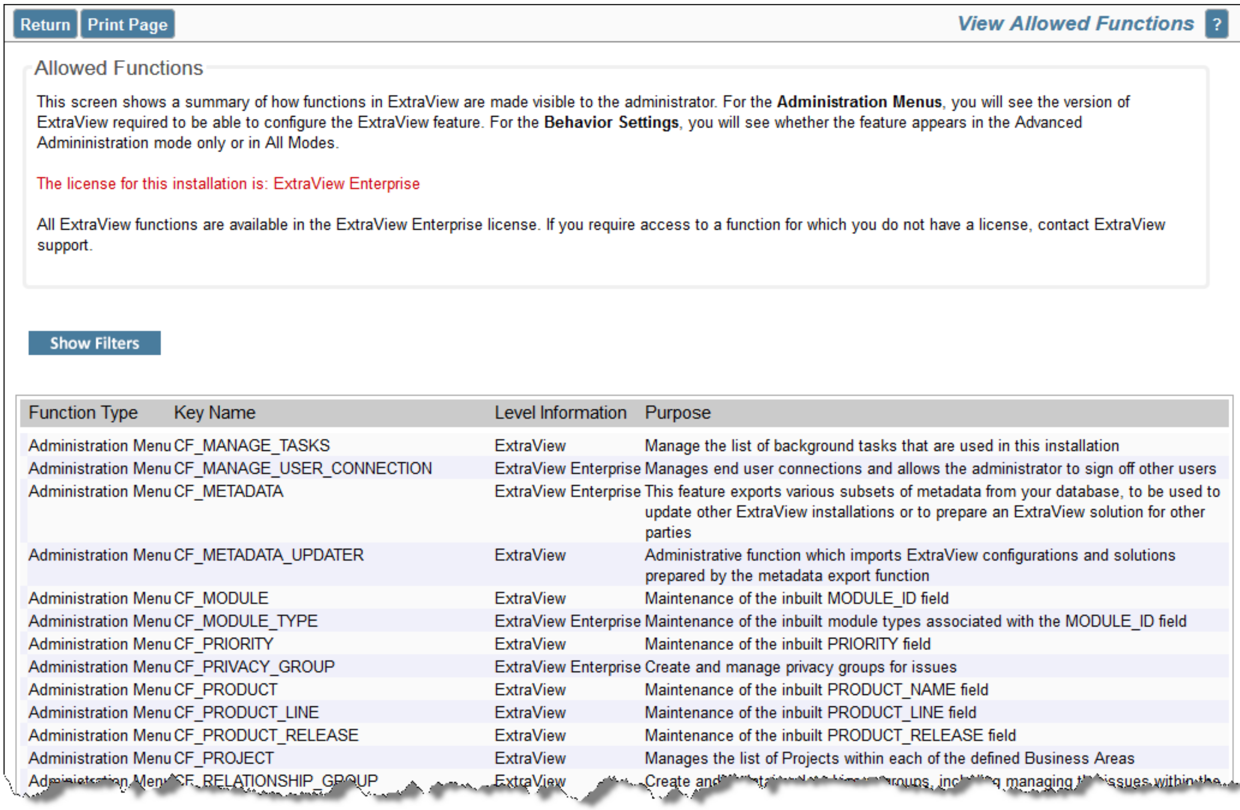
Edit an Existing Security Key

1. Click on the **System Security Keys** option on the ExtraView Administration menu, under the **Advanced** tab.
2. Click on **Edit** and change the description or title as needed.

System Log Types

encrypted, security device. This screen shows which features are available with each of the different license levels.

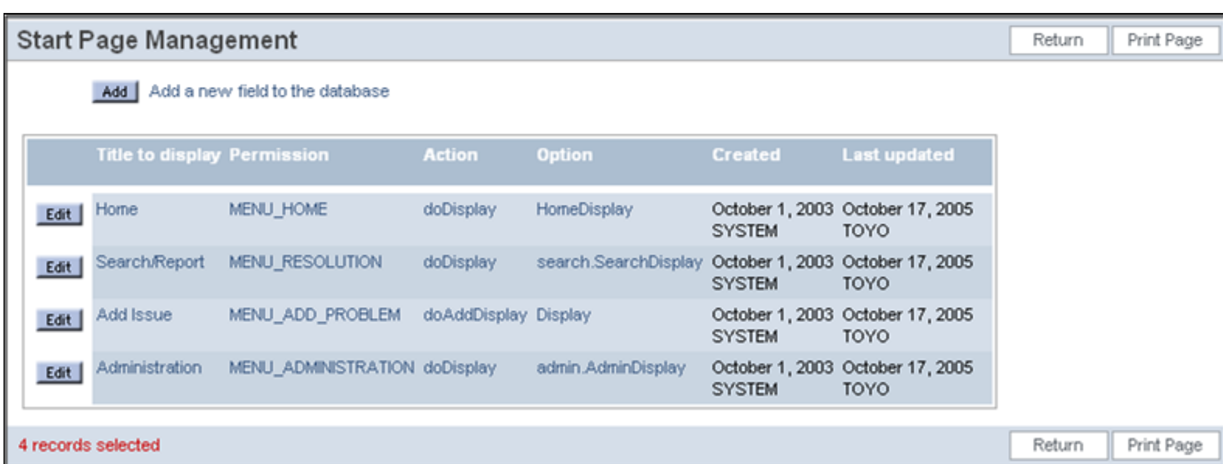
Access the screen via **Admin**, **Advanced**, **View Allowed Functions**. You will see a screen similar to this:



Function Type	Key Name	Level Information	Purpose
Administration Menu	CF_MANAGE_TASKS	ExtraView	Manage the list of background tasks that are used in this installation
Administration Menu	CF_MANAGE_USER_CONNECTION	ExtraView Enterprise	Manages end user connections and allows the administrator to sign off other users
Administration Menu	CF_METADATA	ExtraView Enterprise	This feature exports various subsets of metadata from your database, to be used to update other ExtraView installations or to prepare an ExtraView solution for other parties
Administration Menu	CF_METADATA_UPDATER	ExtraView	Administrative function which imports ExtraView configurations and solutions prepared by the metadata export function
Administration Menu	CF_MODULE	ExtraView	Maintenance of the inbuilt MODULE_ID field
Administration Menu	CF_MODULE_TYPE	ExtraView Enterprise	Maintenance of the inbuilt module types associated with the MODULE_ID field
Administration Menu	CF_PRIORITY	ExtraView	Maintenance of the inbuilt PRIORITY field
Administration Menu	CF_PRIVACY_GROUP	ExtraView Enterprise	Create and manage privacy groups for issues
Administration Menu	CF_PRODUCT	ExtraView	Maintenance of the inbuilt PRODUCT_NAME field
Administration Menu	CF_PRODUCT_LINE	ExtraView	Maintenance of the inbuilt PRODUCT_LINE field
Administration Menu	CF_PRODUCT_RELEASE	ExtraView	Maintenance of the inbuilt PRODUCT_RELEASE field
Administration Menu	CF_PROJECT	ExtraView	Manages the list of Projects within each of the defined Business Areas
Administration Menu	CF_RELATIONSHIP_GROUP	ExtraView	Create and [illegible]

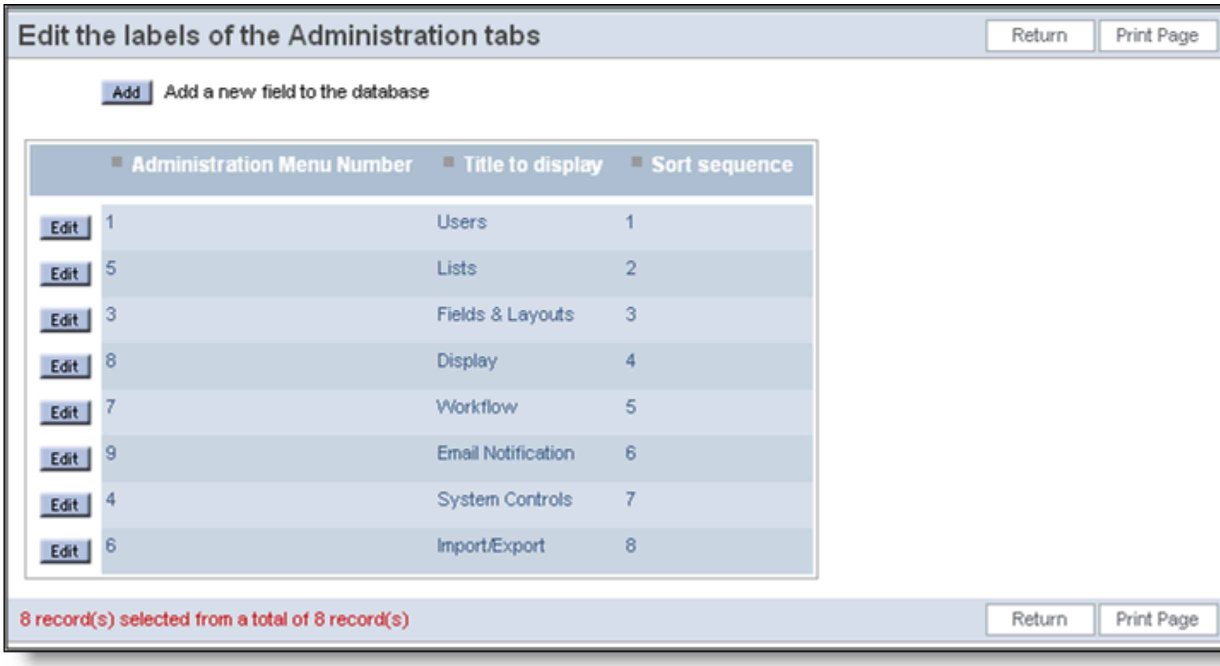
Managing Start Pages

The behavior setting named USER_DEFINED_START_PAGE must be set to YES before this feature is used. This fea administrator to add additional start pages to be available. A start page is the location on which a user lands, after they on. The default pages available are the Home Page, the Add Issue screen, the Search / Report screen and the Administ is unlikely that you will need more than these, but they can be added through this screen if necessary. Before adding a will need to know the calling convention to be used. These are internal to ExtraView and are defined in terms of the A Option. We suggest that if you need a new start page, you should consult with ExtraView support to define these valu



	Title to display	Permission	Action	Option	Created	Last updated
Edit	Home	MENU_HOME	doDisplay	HomeDisplay	October 1, 2003 SYSTEM	October 17, 2005 TOYO
Edit	Search/Report	MENU_RESOLUTION	doDisplay	search.SearchDisplay	October 1, 2003 SYSTEM	October 17, 2005 TOYO
Edit	Add Issue	MENU_ADD_PROBLEM	doAddDisplay	Display	October 1, 2003 SYSTEM	October 17, 2005 TOYO
Edit	Administration	MENU_ADMINISTRATION	doDisplay	admin.AdminDisplay	October 1, 2003 SYSTEM	October 17, 2005 TOYO

the security permission key named CF_ADMIN_MENUS if you do not wish to see this on your screen.



Altering the titles of the options within Administration

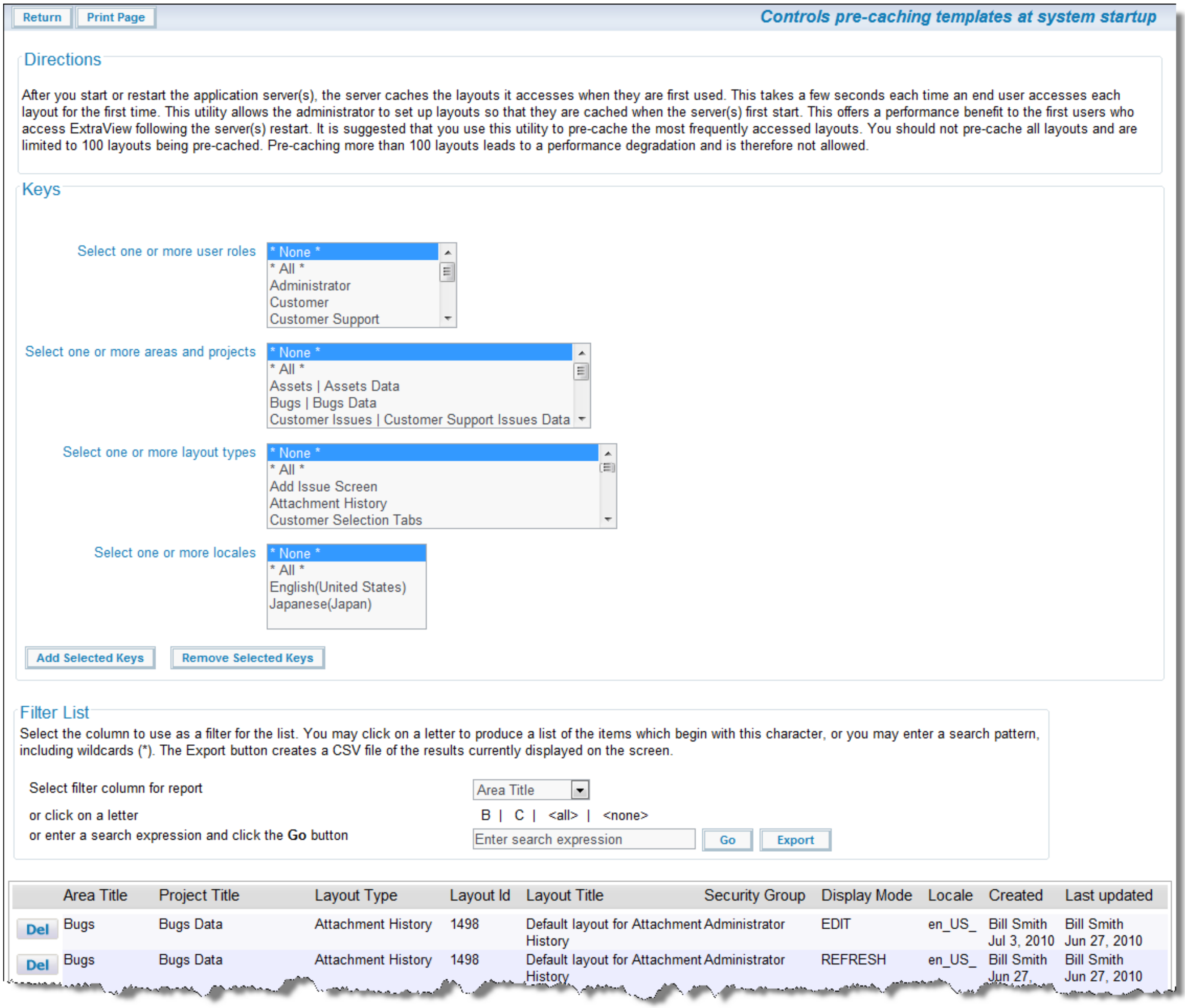
To alter or localize a title, access this function, then press the Edit button. There you may alter the title, or provide a lo
Update after you alter the title and you will immediately see your new title within the administration screen.

Pre-Caching Layouts Upon System Restart

When a layout is first accessed, either upon a restart of the application server, or upon a change to the layout by the ad
read by ExtraView, and compiled into a form that can be rendered speedily. This action may take a half-second for sin
many seconds for complex layouts.

This feature is controlled by the security permission key named SE_TEMPLATE_PRECACHE.

If you do not want an end-user to face this delay when they are the first person to access a layout, you can use the utili
Layouts --> **Controls pre-caching templates at system startup** to compile and cache layouts when the application s



Pre-caching Layouts

ExtraView has an overall limit of 100 layouts held in the cache at one time, and if this number is exceeded, then the ol removed from the cache. At the same time, there is a cost in time to pre-cache layouts, therefore the recommendation cache layouts if a user is likely to complain about the time taken to reach the layout if they are first person to use it.

To pre-cache layouts, use the filters at the top of the screen to select the layout(s) you want to cache. This will be a co role, business area, project, layout type and the locale with which the layout is to be displayed. Once you select the fil **Selected Keys** button to add the layouts to the pre-cache list. You can remove layouts individually using the **Del** butto up keys and remove a list of layouts at one time.

The caching is controlled by a system task named TEMPLATE_LOADER. This task must be started in order for the c place. Go to the **Manage Tasks and Threads** administrative utility and **Add** the task. The task should be set up to rur a clustered system. It is recommended that you set the poll interval to zero. This causes the task to run once upon syste not to be run again.

- On a sizeable system, there can be many, many layouts when you look at the combination of the layouts, the bu: projects, the user roles and the locales. Look to cache only the most frequently used combinations, because of tl being able to pre-cache 100 layouts.

- Add new comment

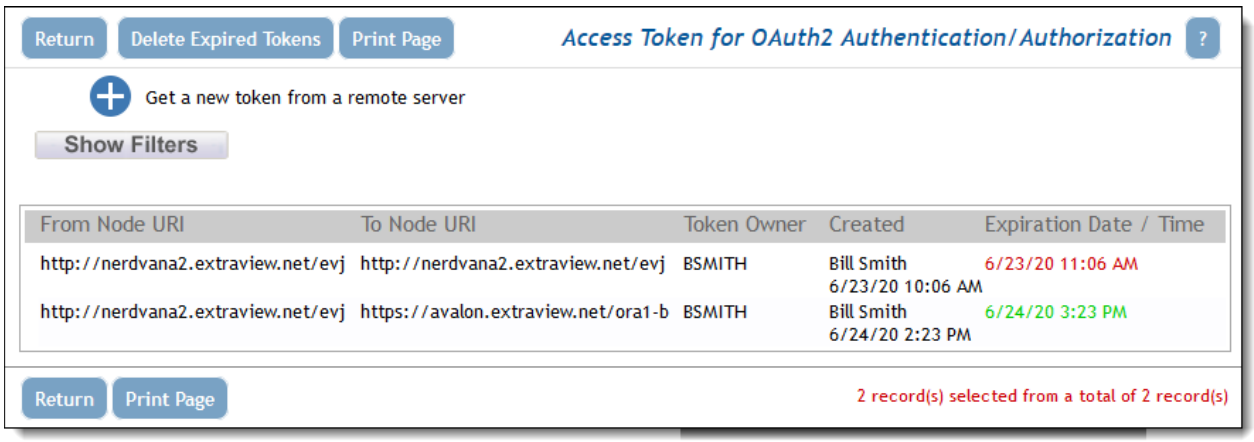
OAuth2 Client Access Tokens

This administrative utility allows for the maintenance of OAuth2 authentication tokens received from remote servers.

The key purpose of OAuth2 authentication is to provide additional security when accessing remote sites, without the r authentication credentials such as your user name and password with every request for data. The authentication is per a token is provided to the calling application to use for subsequent calls. Each token is expected to have a lifetime def remote server. This provides for automatic expiration of the tokens. Following expiration, action must be taken by th program to reauthenticate and receive a fresh token.

You enter the utility via the **Ciient Access Tokens** which is under the **Advanced** administration tab..

You will see a list of existing tokens and their expiry time.



Note that expired tokens show with their expiration date in red, while valid tokens appear in green.

To set up a new token, click the add button and simply insert the URL to the remote server, including the name of the example, if you access your installation with a URL of **https://www.mycompany.com/evj/ExtraView**, the entry to cr will be **https://www.mycompany.com/evj**. The new token will be displayed along with its expiration date and time.

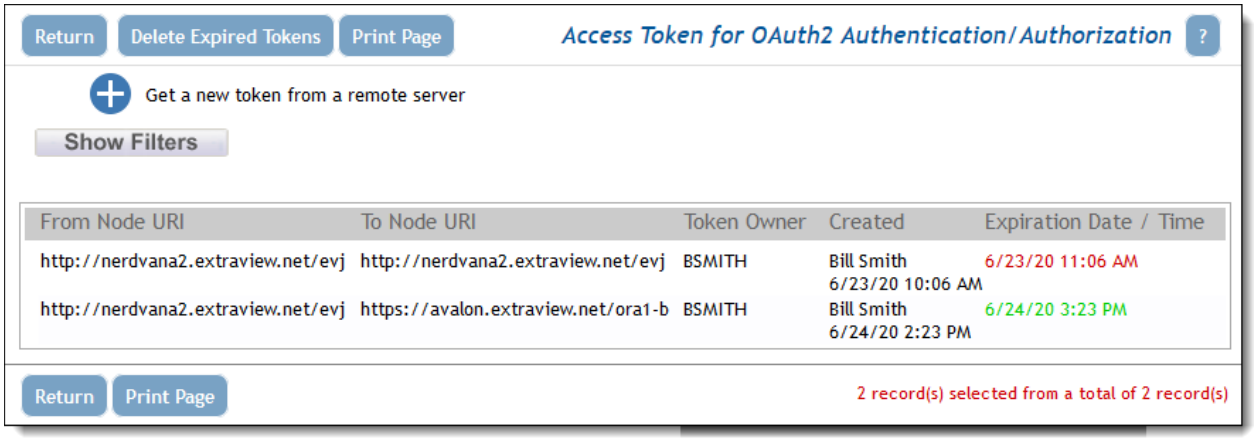
One point to be aware of is that the OAuth2 protocol is only specified to work with https connections, not with http. I or your users want to take advantage of a redirect configured within the web server, from http to https, then this is allo the remainder of the address is the same. For security reasons, ExtraView will not allow a redirect from an address on different domain.

Also on this screen is a button with the title **Delete Expired Tokens**. This allows the administrator to delete all the ex the database. Tokens have no purpose once they have expired, and this option simply cleans up the database entries fc tokens.

OAuth2 Server Access Tokens

You enter the utility via the **Server Access Tokens** which is under the **Advanced** administration tab..

You will see a list of existing tokens and their expiry time.



Note that expired tokens show with their expiration date in red, while valid tokens appear in green.

One point to be aware of is that the OAuth2 protocol is only specified to work with https connections, not with http. I
or your users want to take advantage of a redirect configured within the web server, from http to https, then this is allo
the remainder of the address is the same. For security reasons, ExtraView will not allow a redirect from an address on
different domain.

Also on this screen is a button with the title **Delete Expired Tokens**. This allows the administrator to delete all the ex
the database. Tokens have no purpose once they have expired, and this option simply cleans up the database entries fo
tokens.

The administrator may also use the delete button by each active token to immediately expire the token to which it refe

When a site is being used as a server to provide tokens to client users who connect to the site, you should ensure the b
named AUTO_SIGNOFF_ON_USER_EXIT is set to YES. If you do not do this, the user's tokens that have been gra
valid will still allow a user to access the server site until their session expires, even if the user's account is disabled. Fo
good practice to cut off a user's access immediately if their access is disabled.

Encryption Key Management

ExtraView is a secure application and has been developed to adhere to the strictest standards. Additional security is ir
should be deployed by ensuring the environment within which ExtraView resides is secure, using firewalls and encryp
network traffic with SSL, etc.

It is possible to protect sensitive data within the database using a further level of encryption. This protects against you
unauthorized access, and unauthorized users using SQL commands to extract data. This encryption is provided for fie
type of text, and is applied on a field-by-field basis. This can be used, for example, to provide added protection for fie
security numbers and bank account numbers.

The precise name of the method used to encrypt this data is termed AES/ECB/PKCS5Padding (128-bit). This is wide
state-of-the-art algorithm that provides a very high level of protection.

AES = Advanced Encryption Standard

ECB = Electronic CodeBook blocking of data certificates that grant access to SAML authentication servers.

These keys must be stored safely by the administrator, and **there is no way to ever retrieve a lost key**. This is critica and neither the ExtraView application nor ExtraView Corporation personnel can ever retrieve a lost key. It cannot be how important it is to have a process to record the keys used, and to keep them safe.

Further, here are items that should be considered before implementing encrypted fields:

- Only text fields that do not have data stored as yet may be encrypted
- Once encrypted, you cannot revert a field to being non-encrypted
- You cannot use an encrypted field as a filter in a query or report
- Encrypted fields cannot be sorted within reports

The above limitations may be relaxed within future versions of the product.

There are 3 possibilities of how the secret keys may be used to unlock the data, dependent upon your requirements:

1. The secret key(s) must be entered manually by the administrator on each and every occasion after starting the ap is accomplished by the administrator going to the **Encryption Key Management** utility and entering the passw the secret keys
2. The passwords may be entered into the `Configuration.properties` file which is read by ExtraView upon star application. This is more convenient than entering the passwords manually, but not quite as secure. Of course, with the `Configuration.properties` (and other) files should be protected
3. You can encrypt the entries within the `Configuration.properties` file using the technique described in the ENCRYPT_PROPERTIES section of the Installation & Configuration Guide.

Setting Up Encryption

1. Enter the administrative utility, **Encryption Key Management**, on the **Advanced** administration tab
2. Carefully read the directions, remembering lost keys can never be retrieved
3. Click **Add a new encrpytion key to the keystore**
4. Provide a fixed name for the key. This follows the usual naming conventions of all ExtraView names
5. Enter the secret key password
6. Re-enter the secret key password
7. Now, use the **Data Dictionary** to add the field whose contents you wish to encrypt. It must have a display type must select the option to **Encrypt this Field.** Note that encrypted fields may not be used as filters, nor may the sortable fields
8. You will be prompted for the secret key to use for the encryption. Enter the password you entered into the keys
9. From this point, the field is configured like all other fields and may be placed on any applicable layout or report

Unused keys may be deleted from the database, and the keys within the keystore may be updated by the administrator the current key.

Recommendations

- Only encrypt fields that contain sensitive data. There is an overhead to encrypt and decrypt their contents and y impact performance negatively
- Only provide multiple secret keys if different administrators each maintain the field contents that are encrypted field. You do not want to create an excessive administrative burden
- Again - make sure you keep the passwords safe. ExtraView Corporation cannot retrieve lost passwords. This is security, and there is no "back door" to work around this.

Certificate Storage for SAML Authentication

SAML authentication schemes typically require a certificate in a specific format known as PEM (Privacy Enhanced Mail). The name is somewh

```
-----BEGIN CERTIFICATE-----
MIIDlDCCAnygAwIBAgIGAV2nMG7UMA0GCSqGSIb3DQEBCwUAMIGKMQswCQYDVQQGEwJVUzETMBEG
A1UECAwKQ2FsaWZvcm5pYTEWMBQGA1UEBwwNU2FuIEZyYW5jaXNjbzENMAsGA1UECgwET2t0YTEU
MBIGA1UECwwLU1NPUHJvdmlkZXIxCzAJBgNVBAMMAnJiMRwwGgYJKoZIhvcNAQkBFg1pbmZvQG9r
dGEuY29tMB4XDTE3MDgwMzA4MjEzNVoXDTI3MDgwMzA4MjIzNVowgYoxCzAJBgNVBAYTAlVTMRMw
EQYDVQQIDApDYWxpZm9ybmlhMRYwFAYDVQQHDA1TYW4gRnJhbmNpc2NvMQ0wCwYDVQQKDARPa3Rh
MRQwEgYDVQQLDAtTU09Qcm92aWRlcjELMAkGA1UEAwwCcmIxHDAaBgkqhkiG9w0BCQEWDWluZm9A
b2t0YS5jb27VP3R1EFzO6pcu+g2+gmnothqTaQlHOQO4RwtUW7BF5qwDkQpLhn4M4CHN7U0+/M2R
ygn6wKuzIGv+Jqm0AyJebcPC/TrEs6TT/DuPjmTma8iex36qmtTTYbYi7pVIYtIEDjY814HiKJOB
MjX6lTwuNF0wggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQCpvHDMWonGJpUrNq9ck2ot
IyM8HlyjhT3Ipkg2cwABwDlyN2d4PuggL3eYGcJk3MSFoYnVEAY21ilWKCpl4OECHBKF+xPDW0N8
77OeqAHBlJ6ff/nkAF+IPi/Fp/ggJR8WwVKT22L5cZNSrZ6iXURTj6DfwxlQjbQXPQ+qQ+SsyP58
pXGv+3RhhVDUPRUPAgMBAAEwDQYJKoZIhvcNAQELBQADggEBAHQkUVqE1GQAgE/16L+GceNRgJa+
Y13RIZHoKnqrjE9/ntaJteA6l8R86s7GAcQEEIMTVDYgmY0gWT+Wwn5Vtx6upFMX/YXzIzhra2U8
ZDn33MnbGZxQkiSvse3fa9W30QDeUaOoo2dUphmvf6J1aPG94br4hAGOJ/q/1LrqvHuJk2FQk9hM
2NbF1t4ejgVaTVusC5Eh/q8UlKaD/y8CH86W2gYJy8AhT+Hb4bkjQvo2tzMQdEcJBa4fdhyREyW+
2HbuA3UxZTYspdKtVg08tJAEiYpHuzjxAft6QbJepuwCDy/rPY0f3G+/gmmfpPZuWNiD50XQl4vI
Cx4zjTfRRrw=
-----END CERTIFICATE-----
```


The action to save a certificate in this field builds the appropriate credentials for the SAML certificate.

Appendices

Date and Time Formats

Overview

Each ExtraView user has the capability to set their date and time format. The date and time formats determine how da displayed in output text or html and how they are parsed when entered by the user. The user can select their date and t Personal Options screen. Either one of the in-built formats can be selected, or the user can set the **Date Format** to the **Date Mask** and then provide their own mask in the field labeled **Date Mask**.

Localizable Date and Time Formats

Dates and times are represented differently around the world. An ExtraView user may choose one of the date/time for sensitive to the specific locale they are using. The following date and time formats will be represented differently dep user's current locale setting. The following table shows the date format names used in ExtraView, with an example of in English/US locale representation:

Format Name	Description	Example
SHORT	Short without time	12/30/02
MEDIUMDATE	Medium without time	Dec 30, 2002
LONGDATE	Long without time	December 30, 2002
FULLDATE	Full without time	Monday December 30, 2002
SHORTDATETIME	Short with time	12/30/02 1:15 PM
MEDIUMDATETIME	Medium with time	Dec 30, 2002 1:15 PM
LONGDATETIME	Long with time	December 30, 2002 1:15 PM
FULLDATETIME	Full with time	Monday December 30, 2002 1:15 PM

Standard Date/Time Parsing Formats

Certain date and time formats are built in to ExtraView as patterns to be used for parsing dates. If a date is entered in c standard formats, it will be parsed without any errors. Use of a custom date mask extends the possible date/time entry

dd-MMM-yy	21-April-03
dd-MMM-yyyy	21-April-2003
yyyy/MM/dd HH:mm:ss z	2003/04/21 10:23:34 PST
yyyy/MM/dd HH:mm:ss	2003/04/21 10:23:34
yyyy/MM/dd	2003/04/21
yyyy-MM-dd HH:mm:ss	2003-04-21 10:23:34
yyyy MM dd HH:mm:ss	2003 04 21 10:23:34
MM-dd-yyyy HH:mm	04-21-2003 10:23
yyyy-MM-dd	2003-04-21
MM/dd/yy HH:mm	04/21/03 10:23
MM/dd/yy HH	04/21/03 10
yy-MM-dd	03-04-21
MMM dd yyyy	April 21 2003
MMM dd, yyyy	April 21, 2003
MMM. dd yyyy	Apr. 21 2003
MMM. dd, yyyy	Apr. 21, 2003

Custom Date Masks

A custom date mask provides the ExtraView user with the maximum of flexibility, but the representation of dates and custom date mask are formatted similarly regardless of the user's current locale setting. Text strings such as month na week within the representation are locale-sensitive.

Entry of date values into forms can use one of the ExtraView standard date formats or whatever format the user has de custom date mask.

Custom date masks consist of a sequence of characters consisting of punctuation or pattern letters that are chosen fron

Letter	Date or Time Component	Usage	Examples
`G`	Era designator	`G`	`AD`
`y`	Year	`yyyy, yy`	`1996; 96`
`Y`	Week Year (context sensitive)	`YYYY, YY`	`2015; 15`
`M`	Month in year (standalone	`MMMM, MMM, MM`	`July; Jul; 07`
`L`	Month in year	`LLLL, LLL, LL`	`July; Jul; 07`
`w`	Week in year	`ww`	`29`
`W`	Week in month	`W`	`3`
`D`	Day in year	`DDD`	`219`
`d`	Day in month	`dd`	`10`
`F`	Day of week in month	`F`	`3`
`E`	Day in week	`EEEE, EE`	`Tuesday; Tue`
`a`	Am/pm marker	`a`	`PM`
`H`	Hour in day (0 - 23)	`HH`	`24`
`k`	Hour in day (1-24)	`kk`	`24`
`K`	Hour in am/pm (0 - 11)	`KK`	`10`
`h`	Hour in am/pm (1-12)	`hh`	`12`
`m`	Minute in hour	`mm`	`30`
`s`	Second in minute	`ss`	`55`
`S`	Millisecond	`SSS`	`834`

this amount. For parsing, the number of pattern letters is ignored unless it's needed to separate two adjacent fiel

- **Year**: For formatting, if the number of pattern letters is 2, the year is truncated to 2 digits; otherwise it is interpr For parsing, if the number of pattern letters is more than 2, the year is interpreted literally, regardless of the num using the pattern "MM/dd/yyyy", "01/11/12" parses to “Jan 11, 12 A.D”. For parsing with the abbreviated year p "yy"), ExtraView must interpret the abbreviated year relative to some century. In ExtraView, the year on a date p input is always checked to see if it is greater than 1000. If not, the year is adjusted to a more “rational” value by 1900 or 2000 to the specified year. 2000 is added if the result would be less than or equal to the current year, oth added. For example, using a pattern of "MM/dd/yy" and a date presented on Jan 1, 1997, the string "01/11/03" v interpreted as Jan 11, 2003 while the string "05/04/64" would be interpreted as May 4, 1964.
- **Month**: If the number of pattern letters is 3 or more, the month is interpreted as text; otherwise, it is interpreted
- **General time zone**: Time zones are interpreted as text if they have names. For time zones representing a GMT following syntax is used: GMTOffsetTimeZone: GMT Sign Hours : Minutes Sign: one of - Hours: Digit Digit D Digit Digit Digit: one of 0 1 2 3 4 5 6 7 8 9. Hours must be between 0 and 23, and Minutes must be between 0 a format is locale independent and digits must be taken from the Basic Latin block of the Unicode standard. For p time zones are also accepted.
- **RFC 822 time zone**: For formatting, the RFC 822 4-digit time zone format is used: RFC822TimeZone: Sign Tw Minutes TwoDigitHours: Digit Digit TwoDigitHours must be between 00 and 23. Other definitions are as for ge For parsing, general time zones are also accepted.

Security Permission Keys

CF_ALLOWEDLOCALES	Maintain the list of locales allowed to be set by users in installation. Note that even though a locale is defined, t messages may need to be created. Write access is need
CF_ALLOWEDVALUE_TYPE	Define and specify a parent-child hierarchical relations fields. Write access is needed to control this
CF_ALLOWED_FUNCTIONS_DISPLAY	Access to the Allowed Functions screen. This is for vi properties of each of the ExtraView versions, but no ch made
CF_ALLOWED_VALUES	Access to the screen for maintenance of allowed value can also be maintained individually from the child list screen
CF_ALLOW_CHANGE_ROLE	Display the Role: change option on the menu bar
CF_ALLOW_RETURN_FROM_WORKSPACE	Allow users to close the workspace and return to the st
CF_ALL_BEHAVIOR_SETTINGS	The complete list of behavior settings (in alphabetic or viewed and modified from this list. Write access is nee this
CF_API_SETTINGS	Access to the configuration screen to maintain behavio access ExtraView via the API. Write access is needed t
CF_AREA	Maintain the list of Business Areas for the inbuilt ARE access is needed to control this
CF_CATEGORY	Maintain the list of Categories for the inbuilt CATEGC access is needed to control this
CF_COMPANY_SETTINGS	Access the administration screen to set your company n and contact information. Write access is needed to cont
CF_DATA_DICTIONARY	Access to the data dictionary where you create and mai and user defined fields & other objects, including modi display type, basic behavior and default values. Write a to control this
CF_DATE_TIME_LABEL_MAP	Manage date time label mappings
CF_DD_ATTRIBUTE	Allows the administrator to manage data dictionary att

CF_DISPLAY_SETTINGS	Control and set behavior settings that affect how screer are presented. Write access is needed to control this
CF_EMAIL_SETTINGS	Setup and administer email behavior settings. Write ac control this
CF_ENABLE_DISABLE_USER _ACCESS	Access the administrative option to quiesce the ExtraV maintenance. Write access is needed to control this
CF_ENVIRONMENT	Access the behavior settings that maintain physical pat information for accessing ExtraView. Write access is n this
CF_ESCALATION_RULES	Escalation Rules
CF_EXPIRE_PASSWORD	This key controls access to allow the administrator to e in user accounts. Write access is needed to control this
CF_FILE_IMPORT	Access to the File Import Utility to upload and import a or comma-delimited data file containing records. Write needed to control this
CF_FULL_TEXT_CONTROL	This key controls access to the Quickfind settings
CF_GET_PROJECTS_API	This key controls access to the API function named *ge*
CF_HIERARCHY	Reporting Hierarchies
CF_HIERARCHY_LEVEL	Reporting Hierarchy Levels
CF_INSTALLATION_DETAILS	Setup the basic behavior settings of the ExtraView inst access is needed to control this
CF_INTEREST_LIST	Interest List access. Note that giving read and write acc will allow non-administrative users access to maintain This access is from a prompt on the Notification sectio Personal Options screen. Be aware that the end-user wi access to interest list maintenance if they are given this
CF_KEYSTORE	Controls access to the encryption utility where keys are
CF_ITEMDATA	Access the administrative function to export item data formatted file. The file can be used for import to a diffe schema. Read access is needed to control this
CF_LAYOUT_TYPE	Maintain the list of types of screen and report layouts t defined. Write access is needed to control this
CF_LICENSE	The End User License Agreement (EULA) for ExtraVi is needed to control this
CF_LICENSE_UPLOAD	This key controls access to allow administrators to uplo keys
CF_LOCALIZE	Access to this key allows locale-specific titles to be ad field values. Write access is needed to control this
CF_MANAGE_TASKS	This is the key to allow access to the Manage Tasks uti
CF_MANAGE_USER_CONNECTION	Manage and disconnect users connection to ExtraView licenses back to the common pool. This is only used fo license installations. Write access is needed to control t
CF_METADATA	Provide access to the export function where system me dumped in XML format. Read access is needed to cont
CF_METADATA_UPDATER	Imports XML from a formatted file created with the XI utility, and updates ExtraView with the information. Pl you backup your installation before using! Write acces control this
CF_MODULE	Access to maintain the list of modules (MODULE_ID) (PRODUCT_NAME). Write access is needed to contro

CF_PERSONAL_OPTIONS	This key controls access to each user role's personal op appears in the title bar of the screen. Write access is ne this
CF_PRIORITY	Maintain the list of values for the inbuilt PRIORITY fi access is needed to control this
CF_PRIVACY_GROUP	Management of privacy groups by the administrator
CF_PRODUCT	Maintain the list of values for the inbuilt PRODUCT_N Write access is needed to control this
CF_PRODUCT_LINE	Maintain the list of values for the inbuilt PRODUCT_L Write access is needed to control this
CF_PRODUCT_RELEASE	Manages the **Release Found** field
CF_PROJECT	Access and maintain the list of Projects (PROJECT) w Areas (AREA). Write access is needed to control this. ' case to have read or write access to this key unless the given to the CF_AREA permission key
CF_RANKING	Set up and maintain ranking fields
CF_RELATIONSHIP_GROUP	This key controls access to the global settings and nam relationship groups. Write access is needed to control t
CF_RELATIONSHIP_GROUP_DELETE _BUTTON	This key controls access to delete an issue from within group. Write access is needed to control this
CF_RELATIONSHIP_GROUP_EDIT	This key controls whether a user role may modify an e relationship group of issues. Write access is needed to
CF_RELATIONSHIP_GROUP_EDIT _PROBLEM_BUTTON	This permission key controls the presence of the "Edit the relationship group screen. Write access is needed to
CF_RELATIONSHIP_GROUP_PROBLEM _ADD_PROBLEM_BUTTON	This key controls whether a user role may add an issue relationship group of issues. Write access is needed to
CF_RELATIONSHIP_GROUP_VIEW _PROBLEM_BUTTON	This permission key controls the presence of the "View relationship group screen. Write access is needed to co
CF_REPORT_DOCUMENT	Controls access to the administration of the document r
CF_REPORT_SETTINGS	This key grants permissions to alter the behavior settin reports and queries. Write access is needed to control tl
CF_REPORT_USER	Create and manage reports created by individual users
CF_RESOLUTION	Maintain the list of values for the inbuilt RESOLUTIO access is needed to control this
CF_RULE_CONFIGURATION	Access to create and maintain business rules
CF_RUN_AS_ADMIN	This permission setting allows the user who is perform to ignore field level permissions. The primary purpose speed up the importation of extremely large volumes o unlikely that this setting is needed with less than 25,00 the import file
CF_SESSION_SETTINGS	This key controls access to the maintenance screen for behavior settings. Write access is needed to control this
CF_SEVERITY	Maintain the list of values for the inbuilt SEVERITY_l Write access is needed to control this
CF_SLA	Access to the Service Level Agreement maintenance fu
CF_SSO_SETTINGS	Set up ExtraView to work with SSO and LDAP servers
CF_START_PAGE	Controls the ability for users to alter the start page seen on to ExtraView
CF_STATISTICS	This provides access to summary information about us and usage patterns. Read access is needed to control th

CF_SYSTEM_LOG_TYPE	The list of activities in the administration log. New ent supported by program changes at the source code level
CF_SYSTEM_SIGNON	Controls access to view the log entries that track the si off activities of all users. Read access is needed to cont
CF_TEMPLATE	Controls access to create and edit email templates to us communication with internal and external users when u
CF_THEME_SETTINGS	Access to allow administators to change the user interf
CF_TRANSLATOR	Controls access to translate all system messages and pr different languages. Write access is needed to control t
CF_UDF_LIST	Allows individual users to add values to UDF lists, wh for fields
CF_UDF_LIST_ADMIN	Controls access to maintain the list of values for User I stored within ExtraView. This is a single key that contr lists. Write access is needed to control this
CF_UPLOAD_COMPANY_LOGO	Controls access to the feature that allows an administra Company Logo
CF_UPLOAD_USER_TEMPLATES	Write access to this key allows the uploading of Server for use with the ExtraView API
CF_USER_FILE_IMPORT	Controls access to the File Import - User Information f access allows the administrator to create new users wit
CF_USER_GROUP	Allows administrators to control user groups within the section
CF_USER_ROLES	Maintenance of user roles within administration
CF_USER_SETTINGS	This key controls access to the behavior settings and o with user names and users. Write access is needed to c
CF_VERSION_INFO	This key controls access to version information for Ext supporting software. Read access is needed to control t
CF_VIEW_APP_SERVER_LOG	Read access to this permission key will place a button Log administration screen. Pressing this button will dis application server log in a new window.
CF_WORKFLOW_DEFAULTS	This key controls access to the behavior settings and o with workflow. Write access is needed to control this
MENU.EV_NAV_BAR_BUTTON_ADMIN	This key controls access to the inbuilt Administration b inbuilt navigation bar
MENU.EV_NAV_BAR_BUTTON_HELP	This key controls access to the inbuilt Help button on t navigation bar
MENU.EV_NAV_BAR_BUTTON_HOME	This key controls access to the inbuilt Home button on navigation bar
MENU.EV_NAV_BAR_BUTTON_QUERY	This key controls access to the inbuilt Query button on navigation bar
MENU.EV_NAV_BAR_BUTTON_REPORT	This key controls access to the inbuilt Report button on navigation bar
MENU.EV_NAV_BAR_BUTTON_SIGN_OFF	This key controls access to the inbuilt Sign Off button navigation bar
MENU.EV_NAV_BAR_BUTTON_WS_CONTROL	This key controls access to the inbuilt Workspace contr inbuilt navigation bar
MENU.EV_NAV_BAR_BUTTON_WORKSPACE	This key controls access to the inbuilt Workspace butto navigation bar
MENU_ADD_PROBLEM	This setting controls access to the Add issue layout fro navigation bar Add button. Write access is needed to c

MENU_HOME	This key controls access to the Home button on the Na Read access is needed to control this
MENU_MOBILE_NAV_BAR	This controls the visibility of the navigation bar within client. You require read permission to see the nvigatio
MENU_MULTIPLE_HOME_PAGES	This key enables the feature that allows users to create multiple home pages. This key turns the entire feature each user role
MENU_RESOLUTION	This key controls access to the Query (Search & Repor access is needed to control this
MENU_WORKSPACE	Providing access to this key allows users to access wor
PR_ADD_PROBLEM.ALT_ID	Alternate ID
PR_ADD_PROBLEM.AREA	Business Area
PR_ADD_PROBLEM.ASSIGNED_TO	Assigned To
PR_ADD_PROBLEM. ATTACH_CONTENT_TYPE	This controls the presence of the content type on an att This can be seen with read access, but cannot be writte
PR_ADD_PROBLEM. ATTACH_CREATED_BY_USER	This controls the presence of the user's name who crea attachment. This can be seen with read access, but cann
PR_ADD_PROBLEM. ATTACH_DATE_CREATED	This controls the presence of the date an attachment wa can be seen with read access, but cannot be written to
PR_ADD_PROBLEM. ATTACH_DELETE	This allows users to delete attachments from the *ADD_* screen layouts. If the ATTACH_SELECT button is pla layout and the user role has permission to this, then it a button that allows the user to select and delete multiple one time
PR_ADD_PROBLEM. ATTACH_FILE_DESC	This controls the presence of the attachment descriptio entering the file name to be uploaded to an attachment. needed to control this
PR_ADD_PROBLEM. ATTACH_FILE_NAME	This controls the presence of the attachment file name attachment record. This can be seen with read access, b written to
PR_ADD_PROBLEM. ATTACH_FILE_SIZE	This controls the presence of the file size on an attachn can be seen with read access, but cannot be written to
PR_ADD_PROBLEM. ATTACH_HIST_TIMESTAMP	Controls the presence of a timestamp that shows when was accessed, This is viewable with the read permissio History screen of an attachment
PR_ADD_PROBLEM. ATTACH_LAST_UPDT_COMPANY	Controls the presence of the name of a user's company an attachment, and viewable with the read permission l History screen of an attachment
PR_ADD_PROBLEM. ATTACH_PATH	This controls the presence of the original client attachn attachment file, on an attachment record. This can be s access, but cannot be written to
PR_ADD_PROBLEM. ATTACH_THUMBNAIL	Controls the presence of a thumbnail of an attachment type, when the record that contains the attachment is vi edit screen or on a report containing the ATTACHMEN
PR_ADD_PROBLEM. ATTACHMENT	This is the controlling key for attachments. Without rea permission to this key, attachments will not appear on t screen layout. Once this key gives permission to the us remaining attachment keys control the read / write perr individual fields
PR_ADD_PROBLEM. ATTACHMENT_ADD	This controls the Add button on attachments. Write acc

PR_ADD_PROBLEM. CC_EMAIL_BUTTON	Controls the presence of a button by the CC Email inpu add screen. The user role should have read permission allow the user to pop up a list of users that can be adde Email box
PR_ADD_PROBLEM.COMMENTS	Comments
PR_ADD_PROBLEM.CONFIRM_ALLOW_EDIT	This permission key controls the visibility of the Edit b Add Confirmation screen
PR_ADD_PROBLEM.CONTACT	Contact
PR_ADD_PROBLEM.DATE_CREATED	Date Created
PR_ADD_PROBLEM.DESCRIPTION	Description
PR_ADD_PROBLEM.EMAIL_CUSTOMER	If the user role has Read permission to this field, the ch email to be sent to external users will be visible
PR_ADD_PROBLEM.EMAIL_SWITCH	This key enables or disables the Generate Email checkl role. If there is no Read access to this key, the Generate checkbox is not visible, and its setting is obtained from behavior setting named GENERATE_EMAIL_BOX.
PR_ADD_PROBLEM.ID	Controls access to the inbuilt field named ID
PR_ADD_PROBLEM.INTEREST_LIST	If the user role has write access to this permission key, checkbox in the notification area of the add screen and add themselves to an interest list for the issue they are user will also be able to add other users to an interest li via an input box
PR_ADD_PROBLEM.ITEM_ID	Controls access to the inbuilt field named ITEM_ID
PR_ADD_PROBLEM.MAILING_LIST	Controls access to the distribution email list for the issu user has Read access to this permission key, an icon is refresh the list
PR_ADD_PROBLEM.MODULE_ID	Module ID - this is the main key that should be used to Module field on a form
PR_ADD_PROBLEM.ORIGINATOR	Originator of the problem
PR_ADD_PROBLEM.OWNER	The owner of the issue
PR_ADD_PROBLEM.PRIORITY	The priority of the issue
PR_ADD_PROBLEM.PRIVACY	The Privacy of the issue
PR_ADD_PROBLEM. PROBLEM_RELEASE_DELETE	This key controls the presence of a check box on a repe record, that allows you to delete the current row. Write needed to control the checkbox
PR_ADD_PROBLEM.PRODUCT_LINE	Product Line
PR_ADD_PROBLEM.PRODUCT_NAME	Product name
PR_ADD_PROBLEM.PROJECT	Project
PR_ADD_PROBLEM.RELEASE	This is the controlling key for repeating row records. If and write permission to this key, the entire repeating ro be available to the user role, and access to the individu repeating row structure is controlled by the security pe for each field
PR_ADD_PROBLEM. RELEASE_ASSIGNED_TO	Release Assigned To
PR_ADD_PROBLEM. RELEASE_DATE_CREATED	Release Date Created
PR_ADD_PROBLEM.RELEASE_FIXED	Release Fixed
PR_ADD_PROBLEM.RELEASE_FOUND	Release Found
PR_ADD_PROBLEM.RELEASE_OWNER	Release Owner
PR_ADD_PROBLEM. RELEASE_PRIORITY	Release Priority

PR_ADD_PROBLEM.SEVERITY_LEVEL	Severity Level
PR_ADD_PROBLEM.SHORT_DESCR	Short description or Title of an issue
PR_ADD_PROBLEM. SHOW_PRIVATE_IN_PRIVACY_LIST	When you give a user role write access to this key, they enter Private issues within the privacy field
PR_ADD_PROBLEM. SHOW_PUBLIC_IN_PRIVACY_LIST	When you give a user role write access to this key, they enter Public issues within the privacy field
PR_ADD_PROBLEM.STATUS	Status
PR_ADD_PROBLEM.TIMESTAMP	Last date modified
PR_RESOLUTION. ALLOW_EDIT_CLOSED	Access to this key controls whether a user role can edit as defined by the behavior setting named STATUS_CL
PR_RESOLUTION. ALLOW_EDIT_NEXT_PREVIOUS	Access to this key controls whether a user role can mov issue in a list created from a report, to the next or the p the report list, reviewing and updating each issue in tur enabled for a role, there will be two additional buttons screen of each issue allowing the user to move back an the list of issues on the current page of the report in wh started to edit issues.
PR_RESOLUTION.ALT_ID	Alternate ID
PR_RESOLUTION.AREA	Business Area
PR_RESOLUTION.ASSIGNED_TO	Assigned To
PR_RESOLUTION. ATTACH_CONTENT_TYPE	This controls the presence of the content type on an att This can be seen with read access, but cannot be writte
PR_RESOLUTION. ATTACH_CREATED_BY_USER	This controls the presence of the user's name who creat attachment. This can be seen with read access, but cann
PR_RESOLUTION.ATTACH_DATE _CREATED	This controls the presence of the date an attachment wa can be seen with read access, but cannot be written to
PR_RESOLUTION.ATTACH_DELETE	This allows users to delete attachments from the *EDIT_* screen layouts. If the ATTACH_SELECT button is pla layout and the user role has permission to this, then it a button that allows the user to select and delete multiple one time
PR_RESOLUTION. ATTACH_FILE_DESC	This controls the presence of the attachment descriptio entering the file name to be uploaded to an attachment. needed to control this
PR_RESOLUTION.ATTACH_FILE_NAME	This controls the presence of the attachment file name attachment record. This can be seen with read access, b written to
PR_RESOLUTION.ATTACH_FILE_SIZE	This controls the presence of the file size on an attachn can be seen with read access, but cannot be written to
PR_RESOLUTION.ATTACH_PATH	This controls the presence of the original client attachn attachment file, on an attachment record. This can be s access, but cannot be written to
PR_RESOLUTION.ATTACHMENT	This is the controlling key for attachments. Without rea permission to this key, attachments will not appear on t screen layout. Once this key gives permission to the us remaining attachment keys control the read / write perr individual fields
PR_RESOLUTION.ATTACHMENT_ADD	This controls the Add button on attachments. Write acc control this
PR_RESOLUTION. ATTACHMENT_DELETE	This is to enable and disable the delete attachment butt

PR_RESOLUTION.CC_EMAIL_BUTTON	Controls the presence of a button by the CC Email inpu *edit* screen. The user role should have read permission allow the user to pop up a list of users that can be adde Email box
PR_RESOLUTION.CLONE	Controls the presence of a Clone button on the *edit* scr user should have write permission to be able to clone is
PR_RESOLUTION.COMMENTS	Comments
PR_RESOLUTION.CONTACT	Contact
PR_RESOLUTION.DATE_CREATED	Date Created
PR_RESOLUTION.DELETE_BUTTON	Controls the presence of the Delete button on the *edit* s role has write access to this key they will be able to del
PR_RESOLUTION.DESCRIPTION	Description
PR_RESOLUTION.EDIT_BUTTON	Controls whether a user role has access to an Edit butto and email. Write access is needed for this control
PR_RESOLUTION. EDIT_LOGAREA_FIELDS	Controls whether a user role is allowed to edit historic such as COMMENTS. Normally only administrators w control, through write access to the key
PR_RESOLUTION.EMAIL_BUTTON	Determines whether a user role has the Email button o the Edit screen
PR_RESOLUTION.EMAIL_CUSTOMER	If the user role has Read permission to this field, the ch email to be sent to external users will be visible
PR_RESOLUTION. EMAIL_FILTER_SCREEN	Read permission to this key controls access to the searc for ad hoc email
PR_RESOLUTION.EMAIL_SWITCH	This key enables or disables the Generate Email checkl role. If there is no Read access to this key, the Generate checkbox is not visible, and its setting is obtained from behavior setting named GENERATE_EMAIL_BOX.
PR_RESOLUTION.HISTORY_BUTTON	Read access to this key gives access to the history (aud issue. History buttons can be placed on the *edit* screen
PR_RESOLUTION.ID	Controls access to the inbuilt field named ID
PR_RESOLUTION.INTEREST_LIST	If the user role has write access to this permission key, checkbox in the notification area of the edit screen and add themselves to an interest list for the issue they are user will also be able to add other users to an interest li via an input box
PR_RESOLUTION.ITEM_ID	Controls access to the inbuilt field named ITEM_ID
PR_RESOLUTION.KEYWORD	Determines whether a user role may perform searches through the KEYWORD field on a filter layout. Read a
PR_RESOLUTION. LAST_CHANGE_USER	Last user to update an issue
PR_RESOLUTION.MAILING_LIST	Controls access to the distribution email list for the issu user has Read access to this permission key, an icon is refresh the list
PR_RESOLUTION.MASS_DELETE_ISSUES	This controls access to the feature that allows users to p deletions of issues from the database. Read and write a required. Normally this facility is only given to key pe
PR_RESOLUTION.MASS_DELETE_ISSUE_HISTORY	Write access to this key is needed in order to be able to history of issues. Note that permission to PR_RESOLUTION.MASS_DELETE_ISSUES is need to this key.
PR_RESOLUTION. MASS_UPDATE_ISSUES	Controls access to the Mass Update button on report ou

PR_RESOLUTION. PROBLEM_RELEASE_DELETE	This key controls the presence of a check box on a repe record, that allows you to delete the current row. Write needed to control the checkbox
PR_RESOLUTION.PRODUCT_LINE	Product Line
PR_RESOLUTION.PRODUCT_NAME	Product name
PR_RESOLUTION_PROBLEM. PROBLEM_RELEASE_DELETE	This key controls the presence of a check box on a repe record, that allows you to delete the current row. Write needed to control the checkbox
PR_RESOLUTION.PROJECT	Project
PR_RESOLUTION. RELATIONSHIP_GROUP	Relationship Groups on Edit Screen
PR_RESOLUTION. RELATIONSHIP_GROUP_ID	Controls visibility of the relationship group ID on the e
PR_RESOLUTION. RELATIONSHIP_GROUP_OWNER	Read access to this key provides the user role with visi owner of relationship groups
PR_RESOLUTION. RELATIONSHIP_GROUP_TITLE	Read access to this key provides the user role with visi of relationship groups
PR_RESOLUTION. RELATIONSHIP_GROUP_TYPE	Read access to this key provides the user role with visi of relationship groups
PR_RESOLUTION. RELATIONSHIP_GRP_ADMIN	This permission key controls access to the Manage Rel Groups button that is placed on the menubar of edit scr permission is granted to this key, users can access the r screen for relationship groups directly from the edit scr
PR_RESOLUTION. RELATIONSHIP_GRP_PARENT_ID	Read access to this key provides visibility to the parent relationship group
PR_RESOLUTION.RELEASE	This is the controlling key for repeating row records. If and write permission to this key, the entire repeating ro be available to the user role, and access to the individu repeating row structure is controlled by the security pe for each field
PR_RESOLUTION. RELEASE_ASSIGNED_TO	Release Assigned To
PR_RESOLUTION. RELEASE_DATE_CREATED	Release Date Created
PR_RESOLUTION.RELEASE_FIXED	Release Fixed
PR_RESOLUTION.RELEASE_FOUND	Release Found
PR_RESOLUTION.RELEASE_OWNER	Release Owner
PR_RESOLUTION.RELEASE_PRIORITY	Release Priority
PR_RESOLUTION.RELEASE_PRODUCT	Release Product
PR_RESOLUTION. RELEASE_RESOLUTION	Release Resolution
PR_RESOLUTION.RELEASE_SEVERITY	Release Severity
PR_RESOLUTION.RELEASE_STATUS	Release Status
PR_RESOLUTION. RELEASE_TIMESTAMP	Release Timestamp
PR_RESOLUTION.RESOLUTION	Resolution
PR_RESOLUTION.RG_EMAIL_BUTTON	Provides access to the email button on the Relationship Screen.
PR_RESOLUTION.RG_MERGE_BUTTON	Provides access to the merge button on the Relationshi Screen
PR_RESOLUTION.RG_SPLIT_BUTTON	Provides access to the split button on the Relationship Screen
PR_RESOLUTION. SEARCH_ATTACHMENTS	This key controls the searching of attachments on the q screens. When this key has Write access, a checkbox a underneath the KEYWORD field, giving the ability to

PR_RESOLUTION.START_DATE	This key offers the user role the ability to enter the Cre lower value in a query filter when searching for an issu used in conjunction with PR_RESOLUTION.STOP_D
PR_RESOLUTION.START_UPDATE	This key offers the user role the ability to enter the Las as the lower value in a query filter when searching for a Typically used in conjunction with PR_RESOLUTION.STOP_UPDATE. Note that the da setting "**Filter criteria**" must be set to **Yes** for this field
PR_RESOLUTION.STATUS	Status
PR_RESOLUTION.STATUS_HIST	Status History
PR_RESOLUTION.STOP_DATE	This key offers the user role the ability to enter the Cre upper value in a query filter when searching for an issu used in conjunction with PR_RESOLUTION.START_
PR_RESOLUTION.STOP_UPDATE	This key offers the user role the ability to enter the Las as the upper value in a query filter when searching for a Typically used in conjunction with PR_RESOLUTION.START_UPDATE. Note that the d setting "**Filter criteria**" must be set to **Yes** for this field
PR_RESOLUTION.TIMESTAMP	Last date modified
PR_RESOLUTION.VIEW_BUTTON	Controls the visibility of the View button on reports. R required for this
SE_LOGIN_MESSAGE	Provides access to alter the sign on message that appea Home Pages. Write access is required for this function
SE_PRIVACY_GROUP	Write access allows the creation and management of th groups
SE_SECURITY_GROUP	Create and manage the list of user roles with this key. V needed
SE_SECURITY_MODULE	Create and maintain the list of security objects. Norma created automatically by ExtraView. Write access is rec
SE_SECURITY_PERMISSION	This key controls access to update the security permiss the installation. Write access is required. Without acces security permissions can be altered
SE_SECURITY_USER	Provides access to create and maintain user accounts an details. Write access is needed
SE_TEMPLATE_PRECACHE	This key controls access to allow the caching of templa startup of the application server
SE_USER_ATTRIBUTES	If the user's role has permission to this key, then they a the user defined attributes that have been configured w dictionary, as fields for a custom operation on the user administration screens. The use of this feature is alway by user custom code
SR_ALLOWED_VALUES_CHK	Enables and disables the Allowed Values checkbox on queries
SR_ALLOW_ADVANCED_QUERIES	When this setting is YES, the user role can create, edit, and execute reports composed with the Advanced Quer this is set to NO, reports composed with Advanced Qu run, and only if the user role has permission to the appr SR_PUBLIC_COLUMN_REPORT and SR_PERSONAL_COLUMN_REPORT permission key
SR_ALLOW_EXPANDED_QUERIES	When the user role has read access to this key, the user between condensed and expanded queries. When this k

SR_DASHBOARD_ON_HOME_PAGE	Read access provides the user role with access to an ex dashboard report on the home page. Note that this repo configured in user custom code
SR_FILTER_BUTTON	Controls access to the Filter button on the menubar out
SR_KB_ON_HOME_PAGE	Read access provides the user role with access to searc Knowledgebase business area from the home page
SR_MENUBAR_REPORTS	This key enables the appearance of a user's reports on t
SR_SET_HOME_PAGE_REPORTS	Read access to this key allows the user to select and se Page reports
SR_PERSONAL_ADMIN	This key enables access to personal admin reports. Re required to run the reports and write access is required modify the reports
SR_PERSONAL_AGING	Read access determines access to save personal aging r place personally created aging report on the user's hom
SR_PERSONAL_CALENDAR	Read access determines access to save personal calend place personally created candar reports on the user's hc
SR_PERSONAL_CHART	Read access determines access to save personal charts personally created charts on the user's home page
SR_PERSONAL_COLUMN_REPORT	Determines the ability to create and run personal colun Read and Write access can be used to determine the fu required
SR_PERSONAL_CONTAINER	Determines the ability to create and run personal Conta Both Read and Write access can be used to determine t required
SR_PERSONAL_DASHBOARD	Determines the ability to create and run personal Dashl Both Read and Write access can be used to determine t required
SR_PERSONAL_GEOSPATIAL	Read access for this key gives the ability to view and ru Geospatial reports. Write access gives the ability to cr personal Geospatial reports
SR_PERSONAL_LINKED_REPORT	Determines the ability to create and run personal linke reports. Both Read and Write access can be used to det functionality required
SR_PERSONAL_MATRIX	Determines the ability to create and run personal Matri Read and Write access can be used to determine the fu required
SR_PERSONAL_PAGE_LAYOUT	Determines the ability to create personal Page Layout r Read and Write access can be used to determine the fu required
SR_PERSONAL_SUMMARY_REPORT	Determines the ability to create and run personal summ Both Read and Write access can be used to determine t required
SR_PERSONAL_TASKBOARD	Determines the ability to create and run personal Taskb Both Read and Write access can be used to determine t required
SR_PERSONAL_TREEGRID	Determines the ability to create and run personal Treeg Read and Write access can be used to determine the fu required
SR_PUBLIC_ADMIN	This key enables access to public admin reports. Read required to run the reports and write access is required modify the reports

SR_PUBLIC_COLUMN_REPORT	Determines the ability to create and run public Columr Read and Write access can be used to determine the fu required
SR_PUBLIC_CONTAINER	Determines the ability to create and run public Contain Read and Write access can be used to determine the fu required
SR_PUBLIC_DASHBOARD	Determines the ability to create and run public Dashbo Both Read and Write access can be used to determine t required
SR_PUBLIC_GEOSPATIAL	Read access for this key gives the ability to view and r Geospatial reports. Write access gives the ability to cr personal Geospatial reports
SR_PUBLIC_LINKED_REPORT	Determines the ability to create and run public linked c Both Read and Write access can be used to determine t required
SR_PUBLIC_MATRIX	Determines the ability to create and run public Matrix Read and Write access can be used to determine the fu required
SR_PUBLIC_PAGE_LAYOUT	Determines the ability to create public Page Layout rep and Write access can be used to determine the function
SR_PUBLIC_PLANNING	Determines the ability to create and run public Plannin Read and Write access can be used to determine the fu required
SR_PUBLIC_SUMMARY_REPORT	Determines the ability to create and run public summa Read and Write access can be used to determine the fu required
SR_PUBLIC_TASKBOARD	Determines the ability to create and run public Taskbo Read and Write access can be used to determine the fu required
SR_PUBLIC_TREEGRID	Determines the ability to create and run public Treegri Read and Write access can be used to determine the fu required
SR_PUBLIC_WORKSPACE	This permission key controls end user access to view a the list of public workspaces to which the user has per Typically, this means the user must have access to the project and user role in which the workspace is saved
SR_RELATIONSHIP_GROUP	This key controls access to the Group Issues button on and Quicklist reports. Write access is needed to control
SR_REPORT_GROUP	Allows users to create and maintain ad hoc reporting g
SR_REPORT_REPOSITORY_ACCESS	Controls access to the document repository
SR_REPORT_SCHEDULE	This key provides access to set up and control the repo from within all report editors
SR_SAVE_PERSONAL_FILTERS	This provides the ability to allow the user role to save personal report filters on the Query screen and report e
SR_SAVE_PUBLIC_FILTERS	This provides the ability to allow the user role to save shared report filters on the Query screen and report edi
SR_SCHEDULE_ALLOW_ROLE_SELECT	Enables access to select entire roles from within the re
SR_SET_HOME_PAGE_MOBILE_REPORT	Allows users to add a Home Page report to their mobil
SR_SET_HOME_PAGE_REPORTS	Allows users to add Home Page reports to their deskto
SR_USERGROUP_ADMIN	Access for administrators ro the User Group reports m

	create these charts
SR_USERROLE_CHART	Read access for this key gives the ability to see and rur for the current user role. Write access gives the ability charts
SR_USERROLE_COLUMN_REPORT	Read access for this key gives the ability to see and rur reports created for the current user role. Write access g to create these reports
SR_USERROLE_CONTAINER	Read access for this key gives the ability to see and rur reports created for the current user role. Write access g to create these reports
SR_USERROLE_DASHBOARD	Read access for this key gives the ability to see and rur reports created for the current user role. Write access g to create these reports
SR_USERROLE_GEOSPATIAL	Read access for this key gives the ability to view and r Geospatial reports for the current user role. Write acce ability to create new Geospatial reports for the current
SR_USERROLE_LINKED_REPORT	Read access for this key gives the ability to see and rur reports created for the current user role. Write access g to create these reports
SR_USERROLE_MATRIX	Read access for this key gives the ability to see and rur created for the current user role. Write access gives the these reports
SR_USERROLE_PAGE_LAYOUT	Read access for this key gives the ability to see Page L created for the current user role. Write access gives the these reports
SR_USERROLE_PLANNING	Read access for this key gives the ability to see and rur reports created for the current user role. Write access g to create these reports
SR_USERROLE_SUMMARY_REPORT	Determines the ability to create and run summary repo current user role. Both Read and Write access can be u the functionality required

Language and Locale Codes

The following is a list of language and locales supported by Java, and therefore by ExtraView.

Language	Country	Locale ID
Arabic	Saudi Arabia	ar_SA
Chinese (Simplified)	China	zh_CN
Chinese (Traditional)	Taiwan	zh_TW
Dutch	Netherlands	nl_NL
English	Australia	en_AU
English	Canada	en_CA
English	United Kingdom	en_GB
English	United States	en_US
French	Canada	fr_CA
French	France	fr_FR

Swedish	Sweden	sv_SE
Thai (Western digits)	Thailand	th_TH
Thai (Thai digits)	Thailand	th_TH_TH

The following list is provided, and believed to work, but is not part of the testing done by Oracle with their Java releas

Language	Country	Locale ID
Albanian	Albania	sq_AL
Arabic	Algeria	ar_DZ
Arabic	Bahrain	ar_BH
Arabic	Egypt	ar_EG
Arabic	Iraq	ar_IQ
Arabic	Jordan	ar_JO
Arabic	Kuwait	ar_KW
Arabic	Lebanon	ar_LB
Arabic	Libya	ar_LY
Arabic	Morocco	ar_MA
Arabic	Oman	ar_OM
Arabic	Qatar	ar_QA
Arabic	Sudan	
Arabic	ar_SD	
Arabic	Syria	ar_SY
Arabic	Tunisia	ar_TN
Arabic	United Arab Emirates	ar_AE
Arabic	Yemen	ar_YE
Bulgarian	Bulgaria	bg_BG
Belorussian	Belorussia	be_BY
Catalan	Spain	ca_ES
Chinese	Hong Kong	zh_HK
Croatian	Croatia	hr_HR
Czech	Czech Republic	cs_CZ
Danish	Denmark	da_DK
Dutch	Belgium	nl_BE
English	India	en_IN
English	Ireland	en_IE
English	New Zealand	en_NZ
English	South Africa	en_ZA
Estonian	Estonia	et_EE
Finnish	Finland	fi_FI
French	Belgium	fr_BE
French	Luxembourg	fr_LU
French	Switzerland	fr_CH
German	Austria	de_AT
German	Luxembourg	de_LU
German	Switzerland	de_CH
Greek	Greece	el_GR
Hungarian	Hungary	hu_HU

Portuguese	Portugal	pt_PT
Romanian	Romania	ro_RO
Russian	Russia	ru_RU
Serbian (Cyrillic)	Yugoslavia	sr_YU
Serbo-Croatian	Yugoslavia	sh_YU
Slovak	Slovakia	sk_SK
Slovenian	Slovenia	sl_SI
Spanish	Argentina	es_AR
Spanish	Bolivia	es_BO
Spanish	Chile	es_CL
Spanish	Colombia	es_CO
Spanish	Costa Rica	es_CR
Spanish	Dominican Republic	es_DO
Spanish	Ecuador	es_EC
Spanish	El Salvador	es_SV
Spanish	Guatemala	es_GT
Spanish	Honduras	es_HN
Spanish	Mexico	es_MX
Spanish	Nicaragua	es_NI
Spanish	Panama	es_PA
Spanish	Paraguay	es_PY
Spanish	Peru	es_PE
Spanish	Puerto Rico	es_PR
Spanish	Uruguay	es_UY
Spanish	Venezuela	es_VE
Turkish	Turkey	tr_TR
Ukrainian	Ukraine	uk_UA

Time Zones

Offset to GMT	Time Zone
GMT -12:00	Etc/GMT +12
GMT -11:00	Etc/GMT+11
	MIT
	Pacific/Apia
	Pacific/Midway
	Pacific/Niue
	Pacific/Pago_Pago
	Pacific/Samoa
	US/Samoa
GMT -10:00	America/Adak
	America/Atka
	Etc/GMT+10
	HST

Offset to GMT	Time Zone
GMT +1:00	Africa/Ceuta
	Africa/Douala
	Africa/Kinshasa
	Africa/Lagos
	Africa/Libreville
	Africa/Luanda
	Africa/Malabo
	Africa/Ndjamena
	Africa/Niamey
	Africa/Porto-Novo
	Africa/Tunis
	Africa/Windhoek
	Arctic/Longyearbyen

GMT -9:30	Pacific/Marquesas
GMT -9:00	AST
	America/Anchorage
	America/Juneau
	America/Nome
	America/Yakutat
	Etc/GMT+9
	Pacific/Gambier
	SystemV/YST9
	SystemV/YST9YDT
	US/Alaska
GMT -8:00	America/Dawson
	America/Ensenada
	America/Los_Angeles
	America/Tijuana
	America/Vancouver
	America/Whitehorse
	Canada/Pacific
	Canada/Yukon
	Etc/GMT+8
	Mexico/BajaNorte
	PST
	PST8PDT
	Pacific/Pitcairn
	SystemV/PST8
	SystemV/PST8PDT
	US/Pacific
	US/Pacific-New
GMT -7:00	America/Boise
	America/Cambridge_Bay
	America/Chihuahua
	America/Dawson_Creek
	America/Denver
	America/Edmonton
	America/Hermosillo
	America/Inuvik
	America/Mazatlan
	America/Phoenix
	America/Shiprock
	America/Yellowknife
	Canada/Mountain
	Etc/GMT+7
	MST
	MST7MDT
	Mexico/BajaSur
	Navajo

	Europe/Bratislava
	Europe/Brussels
	Europe/Budapest
	Europe/Copenhagen
	Europe/Gibraltar
	Europe/Ljubljana
	Europe/Luxembourg
	Europe/Madrid
	Europe/Malta
	Europe/Monaco
	Europe/Oslo
	Europe/Paris
	Europe/Prague
	Europe/Rome
	Europe/San_Marino
	Europe/Sarajevo
	Europe/Skopje
	Europe/Stockholm
	Europe/Tirane
	Europe/Vaduz
	Europe/Vatican
	Europe/Vienna
	Europe/Warsaw
	Europe/Zagreb
	Europe/Zurich
	MET
	Poland
GMT +2:00	ART
	Africa/Blantyre
	Africa/Bujumbura
	Africa/Cairo
	Africa/Gaborone
	Africa/Harare
	Africa/Johannesburg
	Africa/Kigali
	Africa/Lubumbashi
	Africa/Lusaka
	Africa/Maputo
	Africa/Maseru
	Africa/Mbabane
	Africa/Tripoli
	Asia/Amman
	Asia/Beirut
	Asia/Damascus
	Asia/Gaza
	Asia/Istanbul

	America/Costa_Rica
	America/El_Salvador
	America/Guatemala
	America/Managua
	America/Menominee
	America/Merida
	America/Mexico_City
	America/Monterrey
	America/North_Dakota/Center
	America/Rainy_River
	America/Rankin_Inlet
	America/Regina
	America/Swift_Current
	America/Tegucigalpa
	America/Winnipeg
	CST
	CST6CDT
	Canada/Central
	Canada/East-Saskatchewan
	Canada/Saskatchewan
	Chile/EasterIsland
	Etc/GMT+6
	Pacific/Easter
	Pacific/Galapagos
	SystemV/CST6
	Mexico/General
	SystemV/CST6CDT
	US/Central
GMT -5:00	America/Bogota
	America/Cayman
	America/Detroit
	America/Eirunepe
	America/Fort_Wayne
	America/Grand_Turk
	America/Guayaquil
	America/Havana
	America/Indiana/Indianapolis
	America/Indiana/Knox
	America/Indiana/Marengo
	America/Indiana/Vevay
	America/Indianapolis
	America/Iqaluit
	America/Jamaica
	America/Kentucky/Louisville
	America/Kentucky/Monticello
	America/Knox_IN
	Europe/Bucharest
	Europe/Chisinau
	Europe/Helsinki
	Europe/Istanbul
	Europe/Kaliningrad
	Europe/Kiev
	Europe/Minsk
	Europe/Nicosia
	Europe/Riga
	Europe/Simferopol
	Europe/Sofia
	Europe/Tallinn
	Europe/Tiraspol
	Europe/Uzhgorod
	Europe/Vilnius
	Europe/Zaporozhye
	Israel
	Libya
	Turkey
GMT +3:00	Africa/Addis_Ababa
	Africa/Asmera
	Africa/Dar_es_Salaam
	Africa/Djibouti
	Africa/Kampala
	Africa/Khartoum
	Africa/Mogadishu
	Africa/Nairobi
	Antarctica/Syowa
	Asia/Aden
	Asia/Baghdad
	Asia/Bahrain
	Asia/Kuwait
	Asia/Qatar
	Asia/Riyadh
	EAT
	Etc/GMT-3
	Europe/Moscow
	Indian/Antananarivo
	Indian/Comoro
	Indian/Mayotte
	W-SU
GMT +3:30	Asia/Tehran
	Iran
GMT +4:00	Asia/Aqtau
	Asia/Baku
	Asia/Dubai

	America/Port-au-Prince
	America/Porto_Acre
	America/Rio_Branco
	America/Thunder_Bay
	Brazil/Acre
	Canada/Eastern
	Cuba
	EST
	EST5EDT
	Etc/GMT+5
	Jamaica
	SystemV/EST5
	SystemV/EST5EDT
	US/East-Indiana
	US/Eastern
	US/Indiana-Starke
	US/Michigan
GMT -4:00	America/Anguilla
	America/Antigua
	America/Aruba
	America/Asuncion
	America/Barbados
	America/Boa_Vista
	America/Caracas
	America/Cuiaba
	America/Curacao
	America/Dominica
	America/Glace_Bay
	America/Goose_Bay
	America/Grenada
	America/Guadeloupe
	America/Guyana
	America/Halifax
	America/La_Paz
	America/Manaus
	America/Martinique
	America/Montserrat
	America/Port_of_Spain
	America/Porto_Velho
	America/Puerto_Rico
	America/Santiago
	America/Santo_Domingo
	America/St_Kitts
	America/St_Lucia
	America/St_Thomas
	America/St_Vincent

	Indian/Reunion
	NET
GMT +4:30	Asia/Kabul
GMT +5:00	Asia/Aqtobe
	Asia/Ashgabat
	Asia/Ashkhabad
	Asia/Bishkek
	Asia/Dushanbe
	Asia/Karachi
	Asia/Samarkand
	Asia/Tashkent
	Asia/Yekaterinburg
	Etc/GMT-5
	Indian/Kerguelen
	Indian/Maldives
	PLT
GMT +5:30	Asia/Calcutta
	IST
GMT +6:00	Antarctica/Mawson
	Antarctica/Vostok
	Asia/Almaty
	Asia/Colombo
	Asia/Dacca
	Asia/Dhaka
	Asia/Novosibirsk
	Asia/Omsk
	Asia/Qyzylorda
	Asia/Thimbu
	Asia/Thimphu
	BST
	Etc/GMT-6
	Indian/Chagos
GMT +6:30	Asia/Rangoon
	Indian/Cocos
GMT +7:00	
	Antarctica/Davis
	Asia/Bangkok
	Asia/Hovd
	Asia/Jakarta
	Asia/Krasnoyarsk
	Asia/Phnom_Penh
	Asia/Pontianak
	Asia/Saigon
	Asia/Vientiane
	Etc/GMT-7
	Indian/Christmas

	Chile/Continental
	Etc/GMT+4
	PRT
	SystemV/AST4
	SystemV/AST4ADT
GMT -3:30	America/St_Johns
	CNT
	Canada/Newfoundland
GMT -3:00	AGT
	America/Araguaina
	America/Belem
	America/Buenos_Aires
	America/Catamarca
	America/Cayenne
	America/Cordoba
	America/Fortaleza
	America/Godthab
	America/Jujuy
	America/Maceio
	America/Mendoza
	America/Miquelon
	America/Montevideo
	America/Paramaribo
	America/Recife
	America/Rosario
	America/Sao_Paulo
	Antarctica/Rothera
	BET
	Brazil/East
	Etc/GMT+3
GMT -2:00	America/Noronha
	Atlantic/South_Georgia
	Brazil/DeNoronha
	Etc/GMT+2
GMT -1:00	America/Scoresbysund
	Atlantic/Azores
	Atlantic/Cape_Verde
	Etc/GMT+1
GMT +0:00	Africa/Abidjan
	Africa/Accra
	Africa/Bamako
	Africa/Banjul
	Africa/Bissau
	Africa/Casablanca
	Africa/Conakry
	Africa/Dakar

	Asia/Kashgar
	Asia/Kuala_Lumpur
	Asia/Kuching
	Asia/Macao
	Asia/Macau
	Asia/Makassar
	Asia/Manila
	Asia/Shanghai
	Asia/Singapore
	Asia/Taipei
	Asia/Ujung_Pandang
	Asia/Ulaanbaatar
	Asia/Ulan_Bator
	Asia/Urumqi
	Australia/Perth
	Australia/West
	CTT
	Etc/GMT-8
	Hongkong
	PRC
	Singapore
GMT +9:00	Asia/Choibalsan
	Asia/Dili
	Asia/Jayapura
	Asia/Pyongyang
	Asia/Seoul
	Asia/Tokyo
	Asia/Yakutsk
	JST
	Japan
	Etc/GMT-9
	Pacific/Palau
	ROK
GMT +9:30	ACT
	Australia/Adelaide
	Australia/Broken_Hill
	Australia/Darwin
	Australia/North
	Australia/South
	Australia/Yancowinna
GMT +10:00	AET
	Antarctica/DumontDUrville
	Asia/Sakhalin
	Asia/Vladivostok
	Australia/ACT
	Australia/Brisbane

	America/Danmarkshavn
	Atlantic/Canary
	Atlantic/Faeroe
	Atlantic/Madeira
	Atlantic/Reykjavik
	Atlantic/St_Helena
	Eire
	Etc/GMT
	Etc/GMT+0
	Etc/GMT-0
	Etc/GMT0
	Etc/Greenwich
	Etc/UCT
	Etc/UTC
	Etc/Universal
	Etc/Zulu
	Europe/Belfast
	Europe/Dublin
	Europe/Lisbon
	Europe/London
	GB
	GB-Eire
	GMT
	GMT0
	Greenwich
	Iceland
	Portugal
	UCT
	UTC
	Universal
	WET
	Zulu
GMT +1:00	Africa/Algiers
	Africa/Bangui
	Africa/Brazzaville

	Australia/Victoria
	Etc/GMT-10
	Pacific/Guam
	Pacific/Port_Moresby
	Pacific/Saipan
	Pacific/Truk
	Pacific/Yap
GMT +10:30	Australia/LHI
	Australia/Lord_Howe
GMT +11:00	Asia/Magadan
	Etc/GMT-11
	Pacific/Efate
	Pacific/Guadalcanal
	Pacific/Kosrae
	Pacific/Noumea
	Pacific/Ponape
	SST
GMT +11:30	Pacific/Norfolk
GMT +12:00	Antarctica/McMurdo
	Antarctica/South_Pole
	Asia/Anadyr
	Asia/Kamchatka
	Etc/GMT-12
	Kwajalein
	NST
	NZ
	Pacific/Auckland
	Pacific/Fiji
	Pacific/Funafuti
	Pacific/Kwajalein
	Pacific/Majuro
	Pacific/Nauru
	Pacific/Tarawa
	Pacific/Wake
	Pacific/Wallis

Character Set Values

The following table represents the ISO Latin 1 Character Entities as defined by the ASCII-ISO 8859-1 standard. Note browsers can display all these characters accurately.

Decimal	Symbol	HTML Code
32		&#32
33	!	&#33
34	"	&#34
35	#	&#35

Decimal	Symbol	HTML Code
144		&144
145	‘	&145
146	’	&146
147	“	&147

44	,	&#44
45	-	&#45
46	.	&#46
47	/	&#47
48	0	&#48
49	1	&#49
50	2	&#50
51	3	&#51
52	4	&#52
53	5	&#53
54	6	&#54
55	7	&#55
56	8	&#56
57	9	&#57
58	:	&#58
59	;	&#59
60	<	&#60
61	=	&#61
62	>	&#62
63	?	&#63
64	@	&#64
65	A	&#65
66	B	&#66
67	C	&#67
68	D	&#68
69	E	&#69
70	F	&#70
71	G	&#71
72	H	&#72
73	I	&#73
74	J	&#74
75	K	&#75
76	L	&#76
77	M	&#77
78	N	&#78
79	O	&#79
80	P	&#80
81	Q	&#81
82	R	&#82
83	S	&#83
84	T	&#84
85	U	&#85
86	V	&#86
87	W	&#87
88	X	&#88
89	Y	&#89

156	œ	&#156
157		&#157
158	ž	&#158
159	Ÿ	&#159
160		
161	¡	&#161
162	¢	&#162
163	£	&#163
164	¤	&#164
165	¥	&#165
166	¦	&#166
167	§	&#167
168	¨	&#168
169	©	&#169
170	ª	&#170
171	«	&#171
172	¬	&#172
173		&#173
174	®	&#174
175	¯	&#175
176	°	&#176
177	±	&#177
178	²	&#178
179	³	&#179
180	´	&#180
181	µ	&#181
182	¶	&#182
183	·	&#183
184	¸	&#184
185	¹	&#185
186	º	&#186
187	»	&#187
188	¼	&#188
189	½	&#189
190	¾	&#190
191	¿	&#191
192	À	&#192
193	Á	&#193
194	Â	&#194
195	Ã	&#195
196	Ä	&#196
197	Å	&#197
198	Æ	&#198
199	Ç	&#199
200	È	&#200
201	É	&#201

98	b	&#98
99	c	&#99
100	d	&#100
101	e	&#101
102	f	&#102
103	g	&#103
104	h	&#104
105	i	&#105
106	j	&#106
107	k	&#107
108	l	&#108
109	m	&#109
110	n	&#110
111	o	&#111
112	p	&#112
113	q	&#113
114	r	&#114
115	s	&#115
116	t	&#116
117	u	&#117
118	v	&#118
119	w	&#119
120	x	&#120
121	y	&#121
122	z	&#122
123	{	&#123
124	|	&#124
125	}	&#125
126	~	&#126
127		&#127
128	€	&#128
129		&#129
130	‚	&#130
131	ƒ	&#131
132	„	&#132
133	…	&#133
134	†	&#134
135	‡	&#135
136	ˆ	&#136
137	‰	&#137
138	Š	&#138
139	‹	&#139
140	Œ	&#140
141		&#141
142	Ž	&#142
143		&#143

210	Ò	&#210
211	Ó	&#211
212	Ô	&#212
213	Õ	&#213
214	Ö	&#214
215	×	&#215
216	Ø	&#216
217	Ù	&#217
218	Ú	&#218
219	Û	&#219
220	Ü	&#220
221	Ý	&#221
222	Þ	&#222
223	ß	&#223
224	à	&#224
225	á	&#225
226	â	&#226
227	ã	&#227
228	ä	&#228
229	å	&#229
230	æ	&#230
231	ç	&#231
232	è	&#232
233	é	&#233
234	ê	&#234
235	ë	&#235
236	ì	&#236
237	í	&#237
238	î	&#238
239	ï	&#239
240	ð	&#240
241	ñ	&#241
242	ò	&#242
243	ó	&#243
244	ô	&#244
245	õ	&#245
246	ö	&#246
247	÷	&#247
248	ø	&#248
249	ù	&#249
250	ú	&#250
251	û	&#251
252	ü	&#252
253	ý	&#253
254	þ	&#254

As you enter text / images into an HTML Area field, it will grow in height to allow you to see as much of the informa
to a maximum height which is set to be a little less than most screens.

A behavior setting named EDITOR_TOOLBAR_BUTTONS controls the visibility of the toolbar buttons when HTMI
first displayed. If this is set to NO, the toolbar is empty and only becomes visible when the user clicks on the icon at t
edge of the field. If this is set to YES, the user will see all the toolbar buttons when the field becomes available, but c
buttons by clickong on the icon.

You may select one of three available toolbars or you may customize a toolbar solely for your company's use. The bu
shown in the following screenshots. The HTML Area utility makes use of scripts that run within the browser, and acc
security settings of the browser, you may need to acknowledge that it is OK to run these scripts. If you are using a mc
the basic toolbar is initialized, to conserve space on the screen.

Images and Embedded Files

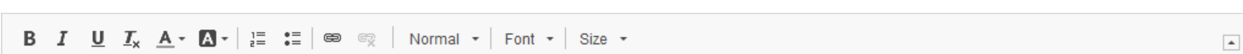
There are several methods of including images and files within your HTML Area fields:

- Paste an image into the field from your computer clipboard. Simply place the cursor at the point where you wa
included, right-click with your mouse and choose the paste option. Ctrl-V accomplishes the same action. Depe
browser settings you may see a popup window and be asked to paste the image again. You will see a message t
been uploaded and the image will appear within the field
- You can include an image that resides on any server by knowing the URL path to the image. In this case, use th
the toolbar and enter the URL of the image. You will see the image at the point where you inserted it in the fiel
- There is a behavior setting named MAX_EMBEDDED_IMAGE_WIDTH that can be used to resize large imag
reasonable size when they are displayed on *add*, *edit* screens and reports. This aids the usability of these screen
not need to scroll horizontally to view the images when they are embedded on these screens. The images withi
stored exactly as they were uploaded and are not resized
- You can copy a document type file, such as a word processing or spreadsheet file from the computer clipboard i
When pasted, you will see an icon as a placeholder within the field. When viewing the issue, you can click on t
download and view the file.

IE 11 Note: There are known issues with embedding document files in an HTML Area field when using the Microsof
Explorer version 11 browser. Dragging-and-dropping or copying and pasting a file (directly from the file system) is o
This is a problem within the Microsoft browser software which ExtraView cannot work around. The most reliable wa
feature is as follows, although it may also fail on occasion:

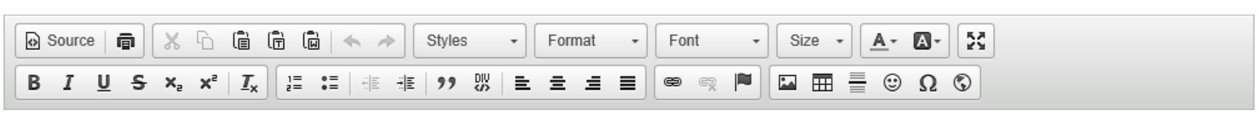
- Click within the HTML Area field within the browser window so that the cursor appears at the location where y
embed the document
- Select the file within a Windows Explorer window and drag it into the HTML Area field
- You should see the document appear within the HTML Area field and see the message **File Successfully Upoa**

MODERATE Toolbar



Basic Toolbar

Standard Toolbar



The use of the HTML Area field is intuitive. Just enter text and use the buttons on the toolbar to provide the formattir

Note that there are some limitations when entering and updating text within the utility. A key limitation is that you ca link when the field is being updated. This functionality only works when the field is in read-only mode.

The available toolbar buttons are:

Basic	Standard	Full	Button	Function
✓	✓	✓		Toggle bold on and off for the selected text
✓	✓	✓		Toggle italic text on and off for the selected text
✓	✓	✓		Toggle underlined text on and off for the selected text
✓	✓	✓		Remove text formatting from the selected text
✓	✓	✓		Toggle a numbered list for the selected text
✓	✓	✓		Togle a bulleted list for the selected text
✓	✓	✓		Add a link to the selected text
✓	✓	✓		Remove the link from the selected text
✓	✓	✓		Print the contents of the HTML Area
	✓	✓	Source	Toggle the display mode between "what-you-see-is-what-you-get" and I source views
	✓	✓		Cut the selected text to the clipboard
	✓	✓		Copy the selected text to the clipboard
	✓	✓		Paste the text from the clipboard to the cursor position
	✓	✓		Paste the text, as plain unformatted text, from the clipboard to the cursoı
	✓	✓		Paste text from Microsoft Office documents - this will remove the obscu formatting that Microsoft Office documents often contain
	✓	✓		Undo the last operation
	✓	✓		Redo the last operation that was undone
			Styles	Use a style from the list. Note that there are interdependencies with the Format, Font and Size lists. Not all combinations work with all comput your browser, or computer operating system may not support the combi you choose
	✓	✓	Format	Format the text from the selections within the list. Note that there are interdependencies with the Style, Format, Font and Size lists. Not all combinations work with all computers, as your browser, or computer op system may not support the combination you choose
	✓	✓	Font	Select a font from the selections within the list. Note that there are interdependencies with the Style, Format, Font and Size lists. Not all combinations work with all computers, as your browser, or computer op system may not support the combination you choose
	✓	✓	5	Set a size for the text from the selections within the list. Note that there interdependencies with the Style, Format, Font and Size lists. Not all combinations work with all computers, as your browser, or computer op system may not support the combination you choose
	✓	✓		Set a color for the selected text
	✓	✓		Set a background color for the selected text
	✓	✓		Mximize / Restore the size of the HTML Area within the browser
	✓	✓		Strikeout the selected text

Basic	Standard	Full	Button	Function
	✓	✓		Center-justify the selected text
	✓	✓		Right-justify the selected text
	✓	✓		Full-justify the selected text
	✓	✓		Insert an HTML text anchor tag
	✓	✓		Insert an image
	✓	✓		Insert a table
	✓	✓		Insert a horizontal rule
	✓	✓		Insert a smiley face
	✓	✓		Insert a character symbol
				Insert an HTML Iframe
		✓		Search for text within the HTML Area field
		✓		Search and replace text within the HTML Area field
		✓		Select all the text within the HTML Area field
		✓		Text direction goes from left-to-right (the default)
		✓		Text direction goes from right-to-left
		✓		Insert a page-break for printing

Spell Checker

The ExtraView Spell Checker is an alternative to the spell checking built into most browsers. It offers these advantag

- Consistency of use for all your users
- A central dictionary with the same vocabulary for all users
- Many languages and variants
  - US English
  - UK English
  - Canadian English
  - Australian English
  - Spanish
  - French
  - Dutch
  - English Medical Dictionary
- The ability to add words to the central dictionaries

The dictionary is enabled with the behavior setting named ENABLE_SPELLCHECK. When this is turned on, all text print area and text fields are spell checked as the user types, when the user enters or modifies data within them. You c check HTML area fields, by clicking on the spell check button on the toolbar. Spell checking as the user types is not s HTML Area fields.

There are occasions when you might not want to spell check a field. For example, if the field contains an account nun arbitrary text that never spells a word, you might want to skip the spell check for that field. This is achieved by addin Modifier layout cell attribute to the field on its layout within the Design Center. The HTML Modifier is:

```
nospell=true
```

Attachment Migration

copied to the final location on the external file system, the system marks that attachment as now being stored “externa the migration process to be done as a background task, without impacting the availability of ExtraView or its attachme users.

This provides flexibility – the Administrator can choose to have all files stored internally in the database, all files stor the file system, or have a mixture of some file types stored within the database, and some file types stored on the file s

Configuring External Storage

Note: It is strongly recommend that you back up your database prior to performing any of the procedures described be

To configure attachment storage options, log in to ExtraView with the Administrator role. Click on the **Admin** naviga the **System Controls** tab, then select **All Behavior Settings**, and edit the following settings:

- **ATTACHMENT_REPOSITORY_OPT** - This setting controls whether attachments, document field and imag internally within the database, externally on the file system, or in some combination of the two methods.

  If the value of this setting is **INTERNAL** (the default value), then all attachments, document fields and image f internally within the database. If the value is set to **EXTERNAL**, then all the attachments, document fields and stored on the external file system.

  Alternatively, you may provide a comma separated list of file extensions and then all files with these extensions database while all others are stored externally in the file repository.

  For example, if you set the value of this setting to **txt, doc, docx, htm, html** then files of these types will be sto database. This strategy leaves the files stored internally in the database, while image and video files with extens and **mp4** are stored externally.

  Regardless of the setting, ExtraView will continue to store dynamically generated thumbnail-sized image files i these are relatively small files and for performance reasons must be more readily available.

- **ATTACHMENT_REPOSITORY_ROOT** – This setting defines the location outside the database where attac fields and image fields will be stored. You must ensure that the path is valid from the application server(s) that ExtraView and that you have all the permissions to read and write to the storage. In a clustered or load-balance you must ensure that all instances of ExtraView can read and write to the same file system using this path.

  Please note – if you change this setting, new attachments, document field and image fields will be saved to the existing attachments, document fields and image fields will still reference the old location. You will need to ens previous file path is still accessible by the ExtraView instance, or these existing attachments will not be availabl

  Set up a separate backup method for this external storage as backing up your database will no longer backup th

- **ATTACHMENT_REPOSITORY_DMAX** - This setting defines the maximum number of files or directories t created under one node of the external directory structure. The default for this value is 999. It is not likely that t be altered.

Sizing the file system

You should ensure that there is adequate space for future growth when sizing the file system to be used for storing atta externally. To do this, have your DBA connect to your ExtraView database using Query Analyzer (MSSQL) or SQL P run the following queries:

-- bring back the total size of the attachments stored in the database, in bytes.
select sum(file_size) from attachment;
-- bring back the number of attachments in the database

- Move a batch of attachments by providing a range of attachment IDs:

  doAttachmentMigration instanceName -from 10000 -to 50000

- Move attachments according to their content type:

  doAttachmentMigration instanceName -type *content-type* ...

  The content type may contain valid database wildcard characters. This typically means that a percentage sign (% multiple characters and an underscrore (_) will match a single character. Further, you can specify multiple -type single command. For example, the following will migrate all the files that contain **binary** and **zip** within their c

  doAttachmentMigration instanceName -type %binary% -type %zip%

- Migrate a list of attachments, from a file containing the list of ID's:

  doAttachmentMigration instanceName -id_list *filename*

  The filename contains a list of the IDs that are to be migrated.

Attachment ID values can be found by having your DBA run the following SQL query against the ExtraView databas

select min(attachment_id), max(attachment_id) from attachment;

Optional parameters can be added inside the double quotes:

-report <filename> - Generates a specific location for the report file. By default the report will be dumped into ExtraV

-delete - If specified, deletes the attachment content blob from the database after migration. We would not generally re you have a large number of attachments, as it is much more efficient to simply have your DBA truncate the table whe completed the migration and you have validated your results.

-testOnly - This allows a dry run migration of the attachments without any modification to the database or the reposito

-noValidation - This prevents the CRC-32 check on the stored migrated attachments, and will be somewhat faster. Use is not recommended, because the extra time to validate the file content vis-à-vis the blob content is nominal, and the c storing a blob in the file system incorrectly due to I/O error or network error could include a loss of valuable data. If tl validation fails, the attachment is not migrated and an error is posted to the log and/or report file.

Running the Migration Utility

The migration command line utility is included in the ExtraView application package. It requires Java be installed on t server to run. We provide shell and batch file scripts that you can use to run the utility.

If you have deployed ExtraView in a WAR/EAR file, you will need to set up an exploded directory to run this script. T located in the evj/WEB-INF/data folder on your application server.

Microsoft Windows with Apache Tomcat

Edit the doAttachmentMigration.bat file

Locate the lines

doAttachmentMigration instanceName "parameters"

where "parameters" is a double-quote enclosed list of parameters as per the options listed above.

Linux / Unix with Tomcat

Edit the doAttachmentMigration.sh file

Locate the lines

TOMCAT_HOME=/usr/local/extraview/tomcat
JAVA_HOME=/usr/local/extraview/java
EV_BASE = $TOMCAT_HOME/webapps/evj

Set TOMCAT_HOME, JAVA_HOME and EV_BASE to the correct paths for your installation.

Save and exit the edit session.

At the command prompt, type the following command:

sh doAttachmentMigration.sh instanceName "parameters"

where "parameters" is a double-quote enclosed list of parameters as per the options listed above.

For All Platforms

Run the script you just edited. You must provide some additional parameters as shown here:

```
REM required:
REM -from (the starting attachment id for the migration) and -to (the ending attachment
id for the migration)
REM or
REM -id (an attachment id for the migration)
REM or
REM -type content_type [-type content_type2[ ...]] (content type may be a wild card using
 database wild cards -- i.e. '%')
REM or
REM -id_list <file> (the name of a file containing attachment id's - one per line)
```

If you do not know the attachment IDs you may run this query:

```
select min(attachment_id), max(attachment_id) from attachment;
```

You might also simply substitute 1 and a very high number.

Linux / Unix with Weblogic

Edit the doAttachmentMigrationWeblogic.sh file

Locate the lines JAVA_HOME=/usr/local/extraview/java
WL_HOME=/usr/local/bea/weblogic81
EV_BASE=/path/to/extraview/application/evj52-x.jar

Set JAVA_HOME, WL_HOME and EV_BASE to the correct paths for your installation.

Save and exit the edit session.

evj/WEB-INF/log folder or to the file defined in the -report parameter option. Once the process has completed, you ca file to determine if there were any problems.

If all attachments were migrated, you can verify that the attachments are available to download and view through the I interface. Once you are satisfied, you can have your DBA remove the binary attachments from the database.

If you have selected the option to have all attachments stored in the file system, your DBA can simply run the comma

update attachment set thumbnail_id = null where thumbnail_id is not null;
truncate table attachment_content;

Note: this will remove all thumbnails. The thumbnail will be regenerated dynamically the next time the attachment is as part of a detailed report.

If you have selected the option of having some types of file stored in the database and some files stored externally, you to run some variant of

delete from attachment_content
where attachment_id in
(select attachment_id from attachment where STORED_INTERNAL = 'N');

Note: We strongly recommend that you back up your database prior to performing any of the procedures described ab before deleting any attachments). Please contact support@extraview.com if you would like assistance with this step.

Document & Image Field Migration

This appendix describes an ExtraView command-line utility named DocumentImageMigration that moves fields with of *document* and *image* from internal storage within the database, to the file system. The utility will typically be run w doDocumentMigration.bat (Windows) or doDocumentMigration.sh (Linux).

By default, the contents of document and image fields uploaded to ExtraView are stored as binary objects in the datab ExtraView Administrator has the choice to configure the system to store the uploaded field contents on the file system be accessible by the application server.

The program must be run stand-alone, and the ExtraView application server(s) should be stopped while the documents being migrated.

Configuring External Storage

Note: It is strongly recommend that you back up your database prior to performing any of the procedures described be

To configure the storage options, log in to ExtraView with the Administrator role. These settings are shared with storin attachments on the file system. Click on the **Admin** navigation button, then the **System Controls** tab, then select **All I Settings**, and edit the following settings:

- **ATTACHMENT_REPOSITORY_OPT** - This setting controls whether attachments, documents and images ar internally within the database, externally on the file system, or in some combination of the two methods.

  If the value of this setting is **INTERNAL** (the default value), then all attachments, documents and images are st within the database. If the value is set to **EXTERNAL**, then all the attachments, documents and images are stor file system.

  Alternatively, you may provide a comma separated list of file extensions and then all files with these extensions database while all others are stored externally in the file repository.

reference the old location. You will need to ensure that the previous file path is still accessible by the ExtraView these existing attachments will not be available to end users.

Set up a separate backup method for this external storage as backing up your database will no longer backup the

- **ATTACHMENT_REPOSITORY_DMAX** - This setting defines the maximum number of files or directories t created under one node of the external directory structure. The default for this value is 999. It is not likely that tl be altered.

Running the Migration Utility

The DocumentImageMigration utility is a Java program. This is run from Windows with the doDocumentMigration.ba Linux with the doDocumentMigration.sh file. You should stop the application server (usually Apache Tomcat) before utliity and restart it once the utility has completed its task.

The migration command line utility is included in the ExtraView application package. It requires Java be installed on t server to run. We provide shell and batch file scripts that you can use to run the utility.

If you have deployed ExtraView in a WAR/EAR file, you will need to set up an exploded directory to run this script. T located in the evj/WEB-INF/data folder on your application server. **Syntax:**

doDocumentMigration [-instanceName] [-testOnly] [-migrate] [-updateSize]

You must provide one of the optional parameters. The meaning of the parameters is:

- -instanceOnly - the name of your ExtraView instance, e.g. *evj*. This parameter is required
- -testOnly - perform a dry run of the migration, but without making any changes to the database or to the file sys
- -migrate - perform the migration
- -updateSize - update the size of the external attachments in the database (not normally used)

Microsoft Windows with Apache Tomcat

Edit the doDocumentMigration.bat file.

Locate the lines

set JAVA_HOME=%1
set TOMCAT_HOME=%2
set EV_BASE=%3

replace %1 with your path to Java, e.g. D:ExtraView\java\jdk-1.4.2
replace %2 with your path to Tomcat, e.g. D:ExtraView\jakarta-tomcat-5.0.28
replace %3 with your path to ExtraView, e.g. D:ExtraView\jakarta-tomcat-5.0.28\webapps\evj

Save and exit the edit session.

Open a Command window in the evj\WEB-INF\data folder and type the following command:

doDocumentMigration instanceName "parameter"

where

instanceName and "parameter" are defined by the options listed above.

Linux / Unix with Tomcat

At the command prompt, type the following command:

sh doDocumentMigration.sh instanceName "parameter"

where

instanceName and "parameter" are defined by the options listed above.

Completing the Migration

You must use the Java utility named runPatches when you have completed the above steps. The setup for this is identi for doDocumentMigration, except you edit the file named either runPatches.bat or runPatches.sh. Once you have set u run the runPatches from the command line.

Again: We strongly recommend that you back up your database prior to performing any of the procedures described al contact support@extraview.com if you would like assistance with this step.

VPAT for ExtraView

ExtraView Corporation is committed to the delivery of software that meets or exceeds the requirements of Section 508

In January 2009, the Information Technology Industry Council (ITI) asked for the development of a specification that ITI's Voluntary Product Accessibility Template (VPAT). This VPAT has been embraced by the U.S. General Services a way to simplify government market research on IT products with accessible features. This page indicates how the V by ExtraView's web-based, end-user application.

The first table of the Template provides a summary view of the section 508 Standards. The subsequent tables provide views of each subsection. There are three columns in each table. Column one of the Summary Table describes the sub subparts B and C of the Standards. The second column describes the supporting features of the product or refers you t corresponding detailed table, "e.g., equivalent facilitation." The third column contains any additional remarks and exp regarding ExtraView. In the subsequent tables, the first column contains the lettered paragraphs of the subsections. Th describes the supporting features of the product with regard to that paragraph. The third column contains any addition explanations regarding the product.

ExtraView is reliant on the correct functioning and support of an Internet browser. Supported browsers are Microsoft I 11. Microsoft Edge, Mozilla Firefox, Google Chrome and Apple Safari. If there are exceptions to any of the VPAT cri of these browsers, then ExtraView will only meet the criteria to the extent that the browser meets the criteria. The VPA browsers should be consulted for any and all limitations that may exist.

***Summary Table* VPAT™** **Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
Section 1194.21 Software Applications and Operating Systems		
Section 1194.22 Web-based Internet Information and Applications		
Section 1194.23 Telecommunications Products		
Section 1194.24 Video and Multi-media		

Section 1194.21 Software Applications and Operating Systems – Detail VPAT™ **Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.	Supports with exceptions that may exist within the browser software that is required for ExtraView to function	ExtraView supports all sta operations of the user inte by the browser software tl operate ExtraView.
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	ExtraView does not interfere with any keyboard accessibility features built into the operating system or the browser that supports ExtraView.	ExtraView does not interfe Keys, Sticky Keys, Filter Keys
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	ExtraView utilizes a visual focus indicator that moves among interactive objects as in the input focus changes is provided. This visual focus indicator is provided by the browser that supports ExtraView and ExtraView is therefore subject to limitations and extensions of any individual browser type.	
(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text.	ExtraView provides information to the extent that the underlying browser provides this information and is subject to any limitations that may exist in the supported browser required for operation.	ExtraView extends functic providing a means to docu element of the user interfa data is entered and stored The ExtraView administra define a context and funct message which appears or is available to assistive tec
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	There is a consistent set of bit map images used throughout the user interface.	There are a number of con images, or themes, that are the administrator, to offer ExtraView. All images tha of a set are consistent thro in regard to color, style an
(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes	Again, ExtraView is compliant with this criteria to the extent that the required browser is compliant.	

	an animation and with text-based numeric counters that show how far the operation has progressed and how far there is to go to reach completion.	
(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Firstly, ExtraView works within any constraints imposed by the supported browsers. Secondly, ExtraView uses color to differentiate different elements of information on the screens generated to end users. However, this color embellishment is for aesthetics only and does not impart any essential information to the end user. When there is a requirement to distinguish information, ExtraView uses non-color elements such as underlines, bolding and font sizes.	Many of the distinguishin be set by the ExtraView ac much of the control becon responsibility of the admi ensure the meeting of the
(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.	The only area of ExtraView where end users may choose color settings is when preparing charts for viewing. A number of different color preconfigured palettes are available, from high-contrast color to monochrome.	End users may also define palettes for charts, and ma any colors that their comp and computer operating sy generate.
(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.	ExtraView does not utilize any flashing or blinking objects.	
(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	ExtraView offers highly customizable forms. Indeed this feature is at the core of ExtraView's functionality. Each form can be designed with a variable number of fields, of varying types, and this information is programmable by the ExtraView administrator. ExtraView offers a complete toolbox (the Design Center) with which to create the electronic forms, and it is the administrator's responsibility to ensure that compliance with this criteria is met. For example, every field has the capability of text being available to assistive technology, but it is the administrator's responsibility to compose relevant text for the field.	The text offered to assisti fully customizable by the administrator, and each m of any length up to 4,000

***Section 1194.22 Web-based Internet information and applications – Detail* VPAT™ Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) A text equivalent for every non-text element shall be provided (e.g., via "alt", "longdesc", or in element content).	Non-text elements are implemented in the form of bitmap images. All such images are complemented with a text equivalent which can be interpreted by assistive technology	It is possible for the Extra administrator to implemen elements. When they do th responsibility to provide a

(d) Documents shall be organized so they are readable without requiring an associated style sheet.	It is the responsibility of the ExtraView administrator to comply with this criteria when they configure an ExtraView installation. For example, it is possible to implement a field display type known as an *HTML Area* field. In this case, markup information within the field might be inserted by an end user that would not satisfy this criteria.	It is ExtraView Corporatic recommendation that adm not utilize the *HTML Area* type if compliance with S required. There are two ot types that may be used as
(e) Redundant text links shall be provided for each active region of a server-side image map.	Not applicable	
(f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Only end user charts which are generated with drilldown links utilize client-side image maps. In all cases the regions are defined within either a rectangular or pie-slice shape.	
(g) Row and column headers shall be identified for data tables.	These are implemented throughout the reporting function and all data tables that present information in the form of results to an end user have the appropriate column and/or row headers.	There are a number of gen tables that only use colum row headers are not applic context.
(h) Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.	Only reports known as Matrix Reports fall within this category, and there are two logical levels of row and column headers. Each of these is supported with markup that indicates to assistive devices what the underlying data means.	
(i) Frames shall be titled with text that facilitates frame identification and navigation	There are two possible frames used through ExtraView, that present information to the end user. In both cases, these are identified with titles	There is a third frame that some screens. This is hidd user and is only used to st data that is invisible to the Purposely, this frame is nc
(j) Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	
(k) A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.	Not applicable	
(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by Assistive Technology.	JavaScript is used within various pages to display user alerts. These alerts are text-based and are visible to assistive technology. Ajax techniques are frequently used to retrieve parts of screen forms from the server. When this occurs, the appropriate text information that is required by assistive technology is	

(n) When electronic forms are designed to be completed on-line, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.	ExtraView offers highly customizable forms. Indeed this feature is at the core of ExtraView's functionality. Each form can be designed with a variable number of fields, of varying types, and this information is programmable by the ExtraView administrator. ExtraView offers a complete toolbox (the Design Center) with which to create the electronic forms, and it is the administrator's responsibility to ensure that compliance with this criteria is met. For example, every field has the capability of text being available to assistive technology, but it is the administrator's responsibility to compose relevant text for the field.	The text offered to assistiv fully customizable by the administrator, and each m of any length up to 4,000
(o) A method shall be provided that permits users to skip repetitive navigation links.	Not applicable	

Section 1194.23 Telecommunications Products – Detail **VPAT™ Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a TTY functionality shall provide a standard non-acoustic connection point for TTYs. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.	Not applicable	
(b) Telecommunications products which include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.	Not applicable	
(c) Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYs.	Not applicable	
(d) Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.	Not applicable	
(e) Where provided, caller identification and similar telecommunications functions	Not applicable	

(g) If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
(h) Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Not applicable	
(i) Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.	Not applicable	
(j) Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies which use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.	Not applicable	
(k)(1) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be tactilely discernible without activating the controls or keys.	Not applicable	
(k)(2) Products which have mechanically operated controls or keys shall comply with the following: Controls and Keys shall be operable with one hand and shall not require tight grasping, pinching, twisting of the wrist. The force required to activate controls and keys shall be 5 lbs. (22.2N) maximum.	Not applicable	
(k)(3) Products which have mechanically operated controls or keys shall comply with the following: If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.	Not applicable	
(k)(4) Products which have mechanically operated controls or keys shall comply with the following: The status of all locking or toggle controls or keys shall be	Not applicable	

(a) All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals.	Not applicable	
(b) Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.	Not applicable	
(c) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.	Not applicable	
(d) All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.	Not applicable	
(e) Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.	Not applicable	

***Section 1194.25 Self-Contained, Closed Products – Detail* VPAT™ Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) Self contained products shall be usable by people with disabilities without requiring an end-user to attach Assistive Technology to the product. Personal headsets for private listening are not	Not applicable	

(d) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.	Not applicable	
(e) When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.	Not applicable	
(f) When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
(g) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Not applicable	
(h) When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.	Not applicable	
(i) Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.	Not applicable	
(j) (1) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48 inch length on products which are freestanding, non-portable, and intended to be used in one location and which have operable controls.	Not applicable	
(j)(2) Products which are freestanding, non-portable, and intended to be used in	Not applicable	

controls shall comply with the following: Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.		
(j)(4) Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following: Operable controls shall not be more than 24 inches behind the reference plane.	Not applicable	

Section 1194.26 Desktop and Portable Computers – Detail VPAT™ **Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) All mechanically operated controls and keys shall comply with §1194.23 (k) (1) through (4).	Not applicable	
(b) If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).	Not applicable	
(c) When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.	Not applicable	
(d) Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards	Not applicable	

Section 1194.31 Functional Performance Criteria – Detail VPAT™ **Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for Assistive Technology used by people who are blind or visually impaired shall be provided.	Assistive Technology supports this criteria.	Note that each user has the the text size of all informa to them when using Extra setting allows visually im better use ExtraView, with limitations that are often i using browser settings alo
(b) At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print	Both modes are provided within ExtraView.	

provided		
(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	Not applicable	
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	Not applicable	
(f) At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.	Not applicable	

Section 1194.41 Information, Documentation and Support – Detail **VPAT™ Voluntary Product Accessibility Template®**		
Criteria	**Supporting Features**	**Remarks and explanatio**
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge	Product support documentation is provided as standard and at no charge to all end users in an online format, accessed through a standard web browser, where Assistive Technology may be utilized. The documentation may also be dowloaded by any end user in the Adobe PDF format. Other formats may be obtained by copying the text of the product documentation into a word processor or text editor for reading or conversion into alternate formats.	
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	This VPAT is available online as part of the product documentation. In addition the product documentation refers to many parts of this VPAT to highlight specific criteria.	
(c) Support services for products shall accommodate the communication needs of end-users with disabilities.	Support services for the product are available in many forms, telephone, email, fax and writing are the common forms of accessing the support services.	

More information on how ExtraView meets the needs to comply with Section 508 can be seen here.