Vector

VECTOR ISSUE TRACKER

ADMINISTRATOR TRAINING MANUAL

Training Contents

Introduction to Vector Issue Tracker

Vector Issue Tracker is a flexible, Web-based system for centrally tracking and managing issues and calls. Vector Issue Tracker is a template of the Vector Issue Tracker Engine. Because it is Web-based, it enables users to access the issue database from any browser, anywhere, any time. It also minimizes deployment effort because there is nothing to install on the PCs it supports.

Vector Issue Tracker works like a Windows application rather than a set of static HTML pages that must be constantly updated and reloaded. This enables you to easily customize Issue Tracker to suit the way you want to work. When you run a query, view an issue, or submit a new issue, Vector Issue Tracker dynamically updates its interface. It uses pop-up dialogs for tasks like generating reports and attaching files to records.

Terminology

The following terms are used to refer to Vector Issue Tracker components:

Projects are databases or knowledge bases. All Projects share user accounts, user group privileges, and the administration utilities, but each Project has a separate database.

Web views are customized views of Project databases. Each Web view is designed to meet the needs of a class of users. For example, employees who do not belong to the support department only need to see the issues they submitted, not all the issues in the Project database or the notes added by the support staff. Conversely, support staff need access to all the issue information in the Project database.

Your notes:

The Components

Issue Tracker Server houses the shared databases that contain the issues and definitions (such as queries, reports and layouts) for a Vector Issue Tracker Project. It must be installed on a Web server (a PC running IIS - Internet Information Services)

Issue Tracker Web is a Web-based application through which users enter issues, query the database, and generate reports.

Issue Tracker Admin is a Microsoft Windows application for administering Vector Issue Tracker Projects. For example, you use Issue Tracker Admin to create Projects, customize the issue fields, and set up e-mail notifications. You can install Issue Tracker Admin on any PC running Microsoft Windows, including your Web server. Typically, you install Issue Tracker Admin on a single system from which you manage Vector Issue Tracker.

Web Admin is a Web-based administration tool. It allows remote users (with privilege) to administrate Vector Issue Tracker using a Web browser. Using Issue Tracker Web Admin you can add and edit users, define workflow rules, create new tabs, set up choice fields, and configure SLA and e-mail integration.

Web View Editor is a Microsoft Windows application that enables you to create **Web Views** for your Vector Issue Tracker Projects. Web Views are HTML/ASP pages that provide access to Vector Issue Tracker Projects through a Web browser.

Import Users Accounts is a Microsoft Windows application that allows you manage the integration of your Domain or Active Directory user accounts with Issue Tracker.

Your notes:

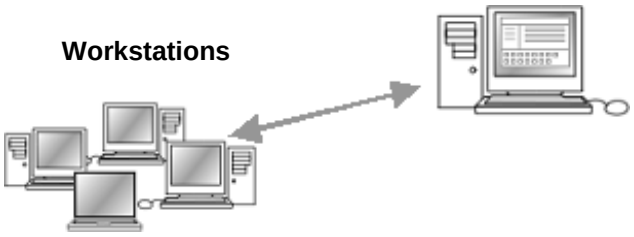
Issue Tracker Architecture

Vector Issue Tracker Architecture Diagram

As Vector Issue Tracker is a Web based product, the architecture is relatively simple. All of the components below should be located on one Server.

Single Tier Installations

Web Server +
Database Server
Mail Server



- HelpDesk Server
- HelpDesk Web Server
- HelpDesk Admin *(workstation or server)*
- HelpDesk Web View Editor
- SQL Database Server
- E-mail Integration

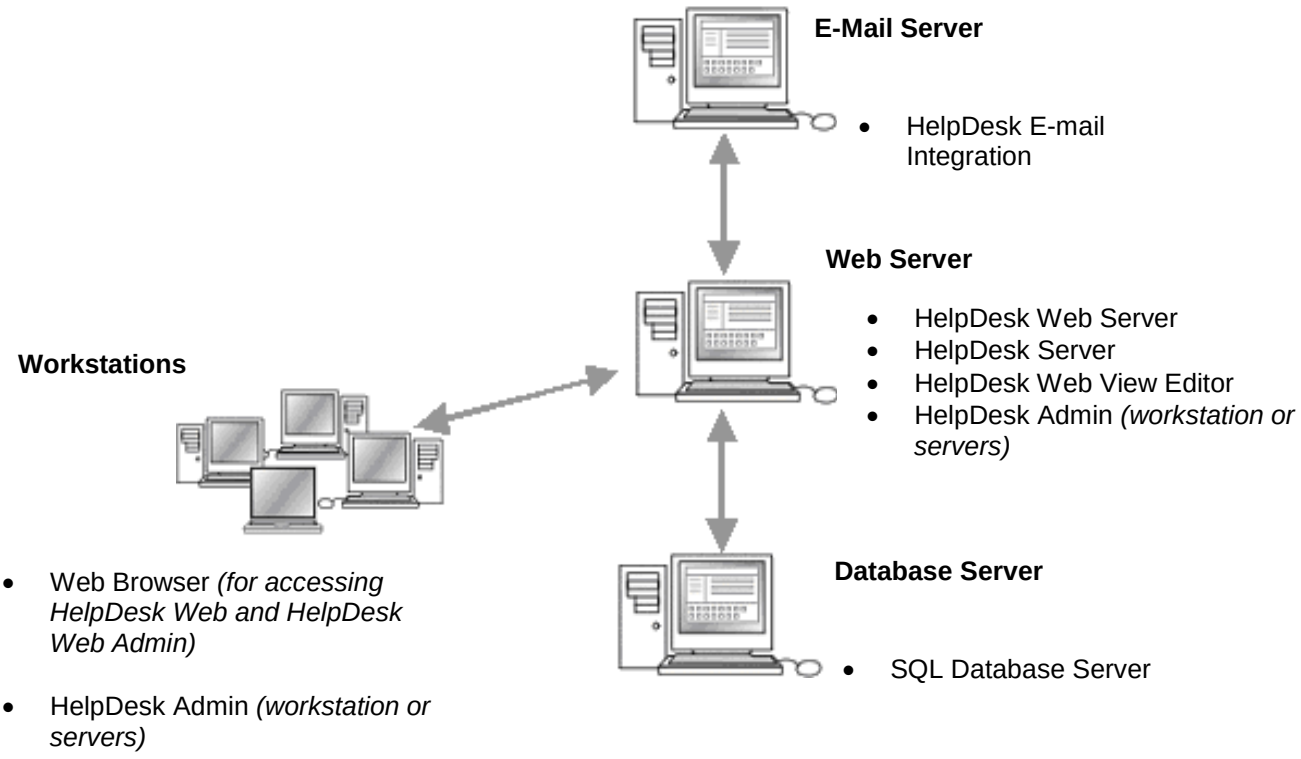
- Web Browser *(for accessing HelpDesk Web and HelpDesk Web Admin)*
- HelpDesk Admin *(workstation or server)*

Your notes:

Multi-Server Setup

Vector Issue Tracker architecture supports the following multi-server architecture.

To install this configuration several items need to be manually configured on each server.



Your notes:

Issue Tracker Architecture

Issue Tracker functions by using a combination of technologies, some of which are located in different places on the disk. This section will aim to shed some light on these different technologies, and their respective locations.

Services

Services are programs that run in the background; never visible to the user. Issue Tracker utilizes three different Windows services, and they all play a part in the overall operation of Issue Tracker:

1. Mq Issue Agent

This service handles all outgoing mail, and also manages the sending of e-mail notifications defined in Admin.

2. Mq Mail Integration Agent

This service is responsible for reading incoming e-mail from POP accounts, as well as executing actions specified in the rules. When it wants to send outgoing mail, it does so through Mq Issue Agent – it never sends e-mails itself.

3. Mq SLA Evaluator Agent

This service is responsible for evaluating issues, and monitoring their service agreement compliancy. It will handle the process of escalating issues, as well as any other actions that are SLA-related.

These services can be manually stopped and started from the Windows Services configuration screen, though this usually only necessary when the server is under maintenance.

Important Folders

Issue Tracker uses files that are placed in a few different locations:

1. C:\Program Files\Common Files\MetaQuest

This folder contains the majority of the DLLs required by Issue Tracker to function. The executables behind the services are also located in this folder.

2. C:\Program Files\Vector\IssueTrackerTools

This folder contains the Web View Editor, Issue Tracker Admin, Import Users tool, and other tools.

3. C:\Program Files\Vector\IssueTrackerServer

The main Issue Tracker folder – by default, it contains:

- Web views
- Attachments (Issue, E-mail, E-mail Template)
- Databases (Projects, Global)

Your notes:

This folder is particularly important, and so it will be covered further in the next section.

IssueTrackerServer Folder

To better understand how Issue Tracker structures the IssueTrackerServer folder, let's take a look at how a project and its web views are represented within it. Let's assume we have a project called "HelpDesk", and it has a view called "Employee". Let's also assume that the view has already been generated.

Project Databases

By default, the project databases will be created in the IssueTrackerServer root (C:\Program Files\Vector\IssueTrackerServer), with the following naming convention – where <project> is the name of the Vector Issue Tracker project:

- <project>01.dat

The DAT database file contains, generally, most of the data saved in Issue Tracker. For example, issues, attachment information, notifications, e-mails, pending outgoing e-mails, etc.

- <project>02.def

The DEF database contains most of the definitions. For example, it holds e-mail integration information, service level agreements, fields, sorts, queries, report information, etc.

- <project>03.usr

Used by Issue Tracker Admin.

- <project>.cen

In our example, this would result in:

- HelpDesk01.dat
- HelpDesk02.def
- HelpDesk03.usr
- HelpDesk.cen

Your notes:

If you are using SQL Server, the names and extensions of the files will be different. Also, the DAT and DEF databases may not be located on the same machine as the Issue Tracker installation – it all depends where the databases were relocated to during the SQL relocation. The SQL Server can also be a different machine from the Issue Tracker server, in which case the databases will be located on the SQL Server using the following naming convention:

- <project>01_Dat.mdf
- <project>01_Dat_log.LDF
- <project>02_Def.mdf
- <project>02_Def_log.LDF

In our example, these files would be:

- HelpDesk02_Def.mdf
- HelpDesk02_Def_log.LDF
- HelpDesk01_Dat.mdf
- HelpDesk01_Dat_log.LDF

Project Data Files

The project will also have its own folder in the IssueTrackerServer root:

C:\Program Files\Vector\IssueTrackerServer**HelpDesk**

The folder, by default, will contain all attachments for that project, which includes: issue attachments, e-mail attachments, and e-mail template attachments.

Your notes:

Project Web views

Web views are stored in another location:

C:\Program Files\Vector\IssueTrackerServer\CensusWeb\Views\CensusWebVD

Each Web view is represented by a folder in the CensusWebVD directory. In our example, our Web view is called “Employee”, and the project is called “HelpDesk”, so the following folder exists:

C:\Program Files\Vector\IssueTrackerServer\CensusWeb\Views\CensusWebVD**HelpDesk_Employee**

The folder contains all the files necessary to allow the web view to function. Whenever the view is regenerated, this is the folder that will be updated by the Web View Editor.

System Files

Beyond project-specific databases and files, the IssueTrackerServer folder also has a few **global databases**:

- Censusweb.mdb

This database contains the Web view definitions and settings.

- Users.mdb

This database contains Issue Tracker users, contacts, companies, and related security settings.

- Licenses.mdb

Holds license and system information.

In addition to the global databases, Issue Tracker has a few key system files:

- CenSession.xml

Contains the location of all the global databases, as well as which database engine is being used.

- CenInfoSession.xml
- Censys.mdw

This is a security database for users that are using Issue Tracker Authentication instead of Active Directory authentication.

Your notes:

CensusUser Account

Vector Issue Tracker needs a Windows domain account to use for:

- Anonymous access to the virtual directories on the Web server.
- Anonymous access is required to run any Web view or Issue Tracker Web Admin, which are all stored in virtual directories on the Web server.
- Access to Vector Issue Tracker databases in a distributed configuration, where the databases are not on the Web server.
- Access to attachments, which may be stored on a different computer than the Web server.
- Access to Vector Asset Management site databases

By default, Vector Issue Tracker uses the CensusUser account, which is created when you install Vector Issue Tracker. The default password for the CensusUser account is “nd5kvmWJ.nd5kv”.

The CensusUser account is a Windows domain account, and is created by the Issue Tracker setup.

Note: If you change the password for the CensusUser account, or delete the user account and use another one, you must update the virtual directories in the Internet Service Manager (Windows NT) or Internet Services Manager (Windows 2003, 2000, XP).

To change the Windows account used for anonymous access to a virtual directory:

1. Open the Web View editor. In the shortcut bar, click **URL**  .
2. Click **Change URL...** to open the Web View Wizard and then click **Next**.
3. Click **Advanced**, click **Update existing virtual directory**, and click **Next**.
4. Click **Next** until you get to the Virtual Directory Properties dialog.
5. Select the **Show Advanced Options** check box.
6. In the **User Name** box, enter the name of the user account.

   Click **Browse** to locate a domain user account.
7. In the **Password** box, type the user account password.
8. You can also use Issue Tracker Admin to change the Windows account.

To change the Windows account used by Vector Issue Tracker:

1. Open Issue Tracker Admin.

Your notes:

2 On the **Tools** menu, click **Windows Account**.

3 Enter the name and password of the domain user account you want to use.

This user account is used for anonymous access by all subsequent Web views you generate.

Note: When you change the user account used for anonymous access with the Web View Editor, all required permissions and rights are automatically set.

IIS (Internet Information Services)

Issue Tracker requires IIS, a Microsoft Web server, to function properly. The Issue Tracker setup will create numerous IIS virtual directories, and if you have IIS 6.0, application pools as well.

Virtual Directories

"A virtual directory is a friendly name, or alias, for a physical directory on your server hard drive."

- Microsoft IIS Help

To better understand what a virtual directory is, consider the URL http://servername/vit. In this example, "vit" is the virtual directory. It is mapped to a physical directory, located here: C:\Program Files\Vector\IssueTrackerServer\CensusWeb\Views\CensusWebVD.

Issue Tracker creates multiple virtual directories, each with a different purpose. Some virtual directories are only used for certain projects, and so whenever new projects are created, you might end up with more virtual directories in IIS.

Your notes:

Web View Virtual Directories

All Web View virtual directories have anonymous access enabled (using the CensusUser user account).

vit

- Main, entry point for the system.

vit00

- Used for load balancing.

vit01

- Used for load balancing.

vit02

- Used for load balancing.

Web Admin Virtual Directories

vitadmin

- Uses Integrated Windows authentication.

vitadmin00

- Anonymous access enabled with CensusUser user account.

Your notes:

Application Pools

Issue Tracker also assigns the virtual directories to specific Application Pools:

MqWAPAdmin

- vitadmin
- vitadmin00

MqWAPViews

- vit
- vit00
- vit01
- vit02

Both of these application pools are configured to run as the Network Service user.

Other IIS Features

SSL (Secure Socket Layer)

Issue Tracker supports SSL certificates, and is ready to use them at any time. The procedure for using an SSL certificate for a Issue Tracker Web view is essentially the same as the procedure for adding an SSL certificate to IIS. This is documented in the following article from Microsoft:

http://support.microsoft.com/kb/299875

If you already have the SSL certificate, you may only need to start from the section titled “Issue and download a certificate”.

Your notes:

IIS MIME Types

IIS only accepts requests for files with known extensions. If a user attempts to access a file whose extension is unknown to IIS, it may return a 404 error in the browser. This sometimes occurs when trying to view attachments in Issue Tracker. To prevent this, you must add the extension to the MIME Types list. To define a MIME type for a specific extension:

- Open Internet Information Services.
- In the console tree, right-click the virtual directory used for attachments (for example, census-BugTrk-Upload) and then click Properties.
- On the HTTP Headers tab, click MIME Types.
- Click New.
- In the Extension box, type a file name extension (for example, "ini").
- In the MIME Type box, type the MIME type of the file (for example, "text/ini").
- Apply your changes.

Note: You may need to restart the World Wide Web Publishing Service before the changes take effect.

Your notes:

Creating a Backup Plan

When to Back Up

Back up frequency depends mainly on the type of data. First of all we have to distinguish two different types of data:

- Issues and Contact data (records being tracked)
- System data (support information, schema, definitions)

Backing up Issues Data

This information is **dynamic**, since it changes every time an Issue Tracker user adds, updates, or deletes a record. You should tailor your backup strategy to the needs of your business. For example, if it is acceptable to lose data in the event of a disk failure, you may not need to perform frequent backups. What if your database must be available twenty-four hours a day, seven days a week? In this case, your database would have to be frequently backed up. The frequency of your backups and types of backups performed is determined in large part by the needs of your business.

Backing up System Data

System Data is the information normally hidden from the user that allows Issue Tracker to work. Examples are:

- List of Issue Tracker projects are available in a Issue Tracker Server
- Location of the databases used by a Issue Tracker project
- Fields used in a Issue Tracker project
- Fields available in each Web View

This information is usually changed through Issue Tracker Administrator Tools, like Issue Tracker Admin and the Web View Editor. This information is usually **static**, since once a Issue Tracker project is set up it rarely changes.

Power Customizations are usually static as well. That is, changes made to the Web files and scripts do not change often. These files are typically located under the CustomizedFiles folder (please refer to the documentation for more details about this).

Your notes:

How to Back Up Issue Tracker Databases (databases in SQL Server)

In Issue Tracker, Issues and System Data are in the SQL Server and some System data is in other type of files, like XML files. You can do a hot backup, which can be done while the system is being used, and a cold backup that requires all users to be logged off.

Live or hot backup using SQL Server tools

A live backup is done even if the files to be backed up are in use. This is ideal for 24 hour a day operations. In this scenario, the Issue Tracker Administrator has to use some database specific tools for backing up.

Back up SQL Server Databases:

In this scenario, Issues, Users/Contacts and System Data are in SQL Server databases. Use the SQL Server built-in back up utility. Select the Issue Tracker databases like

Project01_dat

Project02_def

Users_mdb

Licenses_mdb

CensusWeb_mdb, etc.

Please refer to Microsoft SQL Server's documentation for more information.

Cold backup not using SQL Server tools

A cold backup is the simplest backup. It involves copying the files to a tape or disk that is considered secure enough to be the backup media.

In this scenario, the Issue Tracker Administrator has to ensure the files and databases are **not being used** before the backup process starts because, as with any other application, files in use are not backed up.

SQL Server databases are not backed up as such, but as regular files, backing up the *.mdf and *.ldf files, which are the physical files of SQL Server databases.

In order to be able to copy these files, SQL Server must not be using the files. That is, either the SQL Server Service is stopped, or the database is temporarily detached from the SQL Server (while the backup is in done).

How to Back Up Issue Tracker Databases (databases not in SQL Server)

In Issue Tracker Standard, Issues Data and System Data are in Jet databases as well as other type of files.

Your notes:

Cold backup

A cold backup is the simplest backup. It basically consists of copying the files to a tape or disk that is considered secure enough to be the backup media.

In this scenario, the Issue Tracker Administrator has to ensure the files and databases are **not being used** before the backup process starts, because, as with any other application, files in use are not backed up.

Steps:

1. Ensure the files are not in use:
   - Unload the Issue Tracker Web virtual directories from the Internet Services Manager
     - or -
     If there are no other applications affected, stop the World Wide Web service from the Services Manager.
   - Stop the Issue Tracker services from the Services Manager.
   - Exit any running instances of Issue Tracker Admin or the Web View Editor.

TIP: you can log off users through the Logons Editor in Issue Tracker Admin.

2. Back up the Issue Tracker Server folder and all the files inside with the exception of the *AccessRT* folder, which contains the setup program for the Microsoft Access Runtime.

You can do this using any standard backup tool in the market, such as Backup Exec, Backup NOW!, or some Computer Associates tools.

Note: If you have any Issue Tracker Project in another folder outside the Issue Tracker folder, remember to back up those files as well.

Your notes:

Live or hot backup

A live backup is done even if the files to be backed up are **in use**.

In this scenario, the Issue Tracker Administrator has to use some third party tool, such as FMS Total Visual Agent, to back up Jet databases. This is ideal for 24 hour a day operations.

Steps:

1. Run the third party tool for backing up live Jet databases.
2. Backup the Issue Tracker Server folder and all the files inside with the exception of the *AccessRT* folder, which contains the setup program for the Microsoft Access Runtime.

Note: If you have any Issue Tracker projects in a folder outside the Issue Tracker Server folder, remember to back up those files as well.

How to Back Up a Complete Issue Tracker Server

In some cases, you may want to keep a complete copy of the Issue Tracker Server and not only the data (typically contained in SQL Server databases). This complete backup of the system could be used for cloning a server or for disaster recovery, which is particularly useful if a system has power customizations.

In order to do a complete backup of the system:

1. **Back up the SQL Server databases**

As described previously.

2. **Back up System Data not in SQL Server databases (regular files):**

You do not need to do this type of backup frequently as these files rarely change.

Ensure the files are not in use:

- Unload the Issue Tracker Web virtual directories from the Internet Services Manager
  - or -
  If there are no other applications affected, stop the World Wide Web service from the Services Manager.
- Stop the Issue Tracker services from the Services Manager.
- Close any running instances of Issue Tracker Admin and the Web View Editor.

TIP: you can log off users through the Logons Editor in Issue Tracker Admin.

Your notes:

3. **Backup the Issue Tracker Server folder and all the files inside with the exception of:**
   - the *AccessRT* folder, which contains the setup program for the Microsoft Access Runtime
   - *.mdf and *.ldf files, which are the physical files of SQL Server databases and should be backed up or synchronized as mentioned in the previous section

You can do this task by using any standard backup tool in the market, such as Backup Exec, Backup NOW!, or some Computer Associates tools.

Note: If you have any Issue Tracker projects in folders outside the Issue Tracker Server folder, remember to back up those files as well.

4. **Back up the MetaQuest Common Files:**

You do not need to do this type of backup frequently as these files rarely change.

Back up the complete folder:

<SystemDrive>:\Program Files\Common Files\MetaQuest

This folder contains dlls and binary files needed to run the Issue Tracker Server.

5. **Back up the Issue Tracker Tools:**

You do not need to do this type of backup frequently as these files rarely change.

Back up the complete IssueTrackerTools folder, which is located by default in:

<SystemDrive>:\Program Files\IssueTrackerTools

This folder contains customized files needed to run administrator tools and programs like the Issue Tracker Admin and the Web view Editor.

Your notes:

Creating Projects

A Project defines everything that you see in a view: the fields, queries, reports, sorts, and layouts.

We recommend that you don't edit the default Projects (such as HelpDesk) shipped with Vector Issue Tracker. Instead, create a new Project based on one of the default Projects, and use this new Project as your starting point.

How Many Projects Do You Need?

Each Vector Issue Tracker Project has its own issue database and definition database.

For example, if you want to record software, hardware, and support issues in separate databases, you can create three separate Projects. Separate Projects mean smaller databases and better performance. It also means you can customize fields, queries, sorts, layouts, and reports on a Project-by-Project basis. For example, you don't need a field to specify the issue type (software, hardware, or support), and you don't need separate queries for each issue type.

However, tracking issues in separate Projects has some disadvantages:

- You cannot generate reports across all Projects.
- You cannot create a single view that covers all Projects.
- If a help desk analyst works on all three types of issues, separate Projects may be inefficient and time-consuming.

Choosing a Base Project

A base Project serves as a starting point for a new Project. The new Project inherits the fields defined in the base Project, and can inherit the styles (queries, reports, sorts, layouts, and notifications) as well.

Vector Issue Tracker includes two pre-defined Projects you can use as the base Project. Before choosing a base Project, you should familiarize yourself with the fields in each Project, and understand what you can and cannot do when customizing fields.

HelpDesk: Designed for use by support departments and help desks, the HelpDesk Project allows you to record and track issues reported by employees. HelpDesk includes over 60 fields, along with a complete set of reports, queries, sorts, layouts, and notifications based on those fields.

Your notes:

Some default fields cannot be deleted, and these take up space in your database even if you don't use them. Before deleting a field, you must first remove it from any report, query, sort, layout, or notification. Deleting unused fields helps minimize the size of your database.

Timesheet: This project contains the elements required for recording and analyzing the time each employee has spent on the Projects in your Issue Tracker installation.

Exercise: Creating a Project

1. Start Issue Tracker Admin and log on as **admin** (password = **admin**).
2. In the **File** menu, select **New Project**.
3. In the **Project Name** field, type a name for the Project.
4. To choose a template for the new Project, click **HelpDesk** in the **Base Project** list.

A new Project always has the same fields as the base Project.

5. In the **Groups Allowed to Open Project** list, select **<All>** to allow all users to open the Project.

To log on to a view of a Project, users must belong to a group that is allowed to open the Project.

6. Click **Copy From the Base Project** to copy the styles (reports, queries, sorts, and layouts) and notifications from the base Project.
7. By default, a new Project does not include any issues in its database. To copy the sample issues from the base Project, select the **Copy issues and revision history from base project** check box.

*You can delete the issues later by choosing **Delete Issues** in the **Project** menu.*

Your notes:

Creating New Fields

Fields enable you to extend your Project database to hold information that is specific to your organization. Using the **Field Editor** in **Web Admin**, you can edit and add fields to your help desk Project. The general procedure for adding a new field is:

1. Create the new field:
   - **a** Specify the label (caption) for the field.
   - **b** Select a tab for the field.
   - **c** Choose the type of field:
     - Currency, Date, Time, Number, or Text
     - Memo (multi-line text field)
     - Multiple Choice or Single Choice list
     - Yes/No (check box)
   - **d** Specify the size of the field, whether it is required or enabled (disabled fields are read-only), and whether or not to keep a revision history for the field.
2. Update existing queries, sorts, layouts, and reports to include the new field, or define new queries, sorts, layouts, and reports for the new field.

For example, you may want to add the new field to the **Current Issues – Detailed** and **Notification – Detailed Record** reports. Vector Issue Tracker uses **Current Issues – Detailed** to format the output of the **Print** button in a view, and **Notification – Detailed Record** to format e-mail notifications.

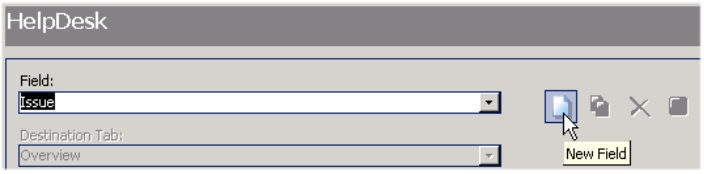
3. Use the **Web View Editor** to add the field to your views, and regenerate the views.
4. Test the new field by logging on to Vector Issue Tracker and opening a view that contains the field.

Your notes:

Exercise: Creating a New Field

This exercise guides you through the process of adding a new field to your Project. The field is a single-choice list that indicates whether the user reporting the problem has read an internal document that describes how to report problems to the IT Department.

1. Click the Windows **Start** button, and select **Programs**, **Vector**, **Issue Tracker**, **Issue Tracker Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Projects** list, select **HelpDesk**.
4. In the **Project** menu, select **Field Editor**.
5. Click **New Field** and type **hdmemorandum** as the name of the new field.



6. In the **Destination Tab** list, select **Overview** to display the new field on the **Overview** tab, which is the first tab to appear in a view.
7. In the **Field Caption** field, type **Read the Help request memorandum?**. This text appears beside the field in a view.
8. In the **Type** list of the **Data** area, click **Single Choice**.
9. Click the button beside the **Table Containing Choices** list. The Choice Editor is displayed.

The Choice Editor enables you to create and edit the database tables that store the choices for single and multi-choice lists. You can also edit the choice tables from Issue Tracker Web Admin.

10. Click **New Table** and type a name for the choice table.

Click **OK** to create the table.

Your notes:

11 In the **Field Value** column, type the possible choices for the list:

- Has read
- Has received, but not read
- Has not received
- Just joined company

After you type one choice, press the Tab key to move to the next row.

12 Click **Close** to save your changes.

13 In the **Table Containing Choices** list, select the table you created.

14 In the **Field Is** area, select the **Required** check box. This forces users to complete the field they can save an issue.

15 Click **Apply**. When Issue Tracker Admin warns you that it will log off users, click **OK**.

Your notes:

About Web Views

What is a Web View?

Web views are different views of a Vector Issue Tracker project. Each Web view of a project can display different issues and different fields.

You use the Web View Editor to create, edit, and generate Web views.

Types of Views

The Web View Editor can generate different types of view:

Normal Views allow users to submit and update issues.

Read-only Views allow users to review their existing issues, but not to edit them or submit new issues.

Submit-only Views allow users to submit issues from their Web browsers. Submit-only views can include all fields or just the fields needed to submit a new issue. For example, to submit a new issue, customers don't need to see the fields used by help desk staff.

Knowledgebase Views allow users to search all issues in a project database by keyword, by title or by identification number. They include simplified layouts, enhanced lookup facilities and special features that enable users to look for answers and articles that are already form part of a project database.

Self-Service Views are a type of Web view to be used by either internal or external Issue Tracker users to enter issues and be able to view (and possibly edit) the issues they have submitted. You can choose to allow them to edit certain fields in issues that they have submitted (for example, the Description field); or allow them to edit fields that were left empty when they submitted the issue; or simply view their submitted issues in a read-only format.

Your notes:

Creating Web Views

To create a new Web view, you must run the Web View Editor on the Web server. Web View Editors installed on other computers can only edit and regenerate existing Web views.

You can either create a new, blank Web view or you can copy an existing web view. Copying allows you to reuse all the settings in the existing Web view. For example, when you copy a Web view, all the field attribute settings are copied.

Exercise: Create a new Web view

1. Run the Web View Editor on the Web server

   To start the Web View Editor from Issue Tracker Admin:

   On the **Tools** menu, click **Web**, then click **Web View Editor**.

   The **Tools** > **Web** > **Web View Editor** command is also available when the Web View editor is installed on the same computer where you are running Issue Tracker Admin.

   To start the Web View Editor from the Start menu:

   Click **Start** > Programs > **Vector** > **Issue Tracker** > **Web View Editor**.
2. Log on as **admin** (password = **admin**).
3. Click **New View**  , type the name of the Web view, and click OK.
4. In the **Project Name** list, click a project.
5. In the **View Type** list, click the type of view you want to generate.
6. Set the **groups allowed to open** for the view.
7. Set the **Web view attributes**.
8. Export **fields** to the Web view.
9. Export **queries** to the Web view.
10. Click  to save your settings and generate the Web view.

    Notes

    - To log on to the Web view, click  .
    - Click  to save your settings without generating the Web view.

Groups Allowed to Open the View

The Web View Editor enables you to control access to the view. Users who do not belong to one of the groups allowed to open the view do not see it when they log on.

Your notes:

To select the groups that are allowed to access the view, click the  button to open the **View Permissions** dialog.

In the **Groups** box, click the groups you want to be able to access the Web view.

If you allow the **Users** group to open the Web view, then all users can open the Web view.

The **Groups** box lists the groups that are allowed to open the project (as specified in Issue Tracker Admin).

Your notes:

Web View Attributes

To set Web view attributes

1 In the shortcut bar, click **Web View**.

2 Click (beside **Attributes**) to open the Web View Attributes dialog:

- **Description**

This is the description of the Web view. It is displayed in the list of Web views that appears when a user logs on. The default description is the Project / View name. To include the project and view names in the description, use the macros **<ProjectName>** and **<ViewName>**.

If you change this attribute, you must regenerate the Web view.

- **Display All Read-Only Fields As Text**

Read-only fields can be displayed as text (select **Yes)** or as disabled controls (select **No**). In read-only and knowledge base Web views, all fields are read-only. In normal, self-service and submit-only Web views, read-only fields have been disabled through the Field editor.

If you change this attribute, you must regenerate the Web view.

- **Issues per Page**

This is the number of issues to show per page in the Summary List.

- **Timeout**

The number of minutes of inactivity before the browser session times out and the user is logged off.

- **Load Issues Not In Query**

If set to **Yes**, users can load any issue that they want by typing the issue number in the **Issue** box of the Web view. If set to **No**, users can load only the issues shown in the Summary List.

Your notes:

Adding Fields to Views

New fields are not automatically included in your views. To include a new field in a view, you must edit the view definition and regenerate the view with the **Web View Editor**.

Exercise: Adding a Field to a View

1. In the **Project / View** list, select web view you created in the previous exercise.
2. In the shortcut bar, click **Fields**.
3. If you do not see the **hdmemorandum** field in the **Available** box, click **Overview** in the **Tab** list.

Click the **hdmemorandum** field, then click to move the field to the **Export To View** list for the **Overview** tab.

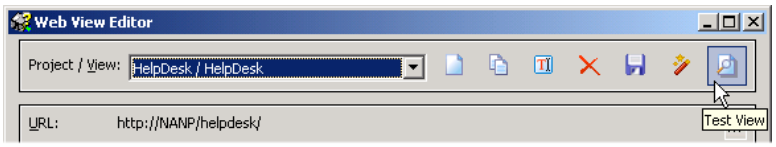
4. The list order determines the order in which the fields are displayed in the view. In the **Export to View** list, select the **hdmemorandum** field and use the button to move the field to the top of the list.
5. Click to generate the view (and save your changes).

It can take several minutes to generate a view.

6. If you want to log off all users, click **Yes**. This prevents users who are currently logged on from continuing to work with a version of the view that does not include the **hdmemorandum** field. A message is displayed to users who are logged on, and users who try to log on telling them that the administrator is shutting down the system.

If you want to allow users to remain logged on, click **No**. The field is displayed when users next log on.

7. When the view is generated, click **Test** to log on to the view and check your changes.



*You can also access the view using the **URL** displayed in the Web View Editor.*

8. Check the **hdmemorandum** choice list is displayed in the **Overview** tab. The **Dark Red** color of the label indicates that the field is required.

Your notes:

Web View Field Attributes

The fields on a Web view are arranged in a two-column layout inside an HTML table. The order of the fields is determined by the order in which they are listed in the Export to View list.

The appearance and layout of the fields can be customized through field attributes, which control options such as alignment, width, and height.

The following table lists the attributes:

Name	Description
Alignment	Aligns a field. Possible values are Left, Right, or Center.
Automatically Update List (Multi-Choice)	If Yes, the choice list is updated each time a user logs on to the Web view. If No, the choice list is updated only when the Web view is regenerated. To turn on the automatic update of choice lists, you must regenerate the view after you set this attribute to Yes.
Caption	Label text for a field.
Column Span	Set Column Span to 1 to have the field span one column of the page. Set Column Span to 2 to have the field span both columns of the page. To adjust the size of the field, set the CSS Class to either MemoFieldWidth (for text boxes and memo fields that are two columns wide) or SpanTwoWidthOne (for fields that are one column wide but are still alone on a line).
CSS Class	Name of a style in the Web view stylesheet (CensusMain.css).
Display Read-Only Field As Text	Default = use the value of the Display All Read-Only Fields As Text attribute Yes = if field is read-only, display it as text No = if field is read-only, display it as a disabled control
Editor	Choose the editor type for the memo field.
Height	Number of lines in a multi-line text box.
Html code after control	HTML inserted after the control in the generated HTML page.
Html code before control	HTML inserted before the control in the generated HTML page.
Link to user details	Select Yes to show the details of the selected user or contact when clicking on the value.
Number of Characters	Maximum number of characters per line in the text box.
Number of Visible Items	Number of items visible in the list box. Users can always see items that are outside the visible window by scrolling the list box.
Select from dialog	Select Yes to display the choices in a pop-up dialog, select No to use a drop-down list. When the choice list has too many items, it becomes difficult to select a value using a drop-down list and it can also slow performance. The pop-up dialog also allows searching and sorting the choices.

Your notes:

Name	Description
Show Selected Items In Text Box	Shows a comma-separated list of the selected items in a text box above the list. This helps users see what items are selected.
Show Selected Items In Tooltip	Shows a comma-separated list of the selected items in a tooltip. This helps users see what items are selected.
URL	Address of a resource on the Web or elsewhere on the Internet. Can be an absolute or relative address.
URL Button CSS	Base name for the CSS class of the button that connects to the URL. Type 'URLButton' or 'RemoteControl' to use the default CSS classes. The CSS class name is formed by adding 'State1' to the base name (for example, 'URLButtonState1').
Vertical Alignment	Sets the vertical positioning of a field. Possible values are Top, Middle, and Bottom.
Visible	If No, the field is hidden.
Width (Char)	Width of the field (in characters for text boxes, in pixels for list boxes).

Using Field Variables

Field variables allow you to insert the name, value, or id of a field into an attribute. The field variables are particularly useful with the **Html code after control** and **URL** attributes.

Variable	Inserts
%fieldvalue%	The current value of the field. For choice lists, %fieldvalue% is the ID of the choice.
%fieldname%	The name assigned to the input control (for example, cbo_18_cboPriority).
%fieldid%	The numeric ID of the field (this is the nID of the field in tblDtsFIelds).

Your notes:

Exercise: Hiding a Field

1. Log in to the Web View Editor
2. Choose a Web view
3. Select a field that is not required and set the **Visible** field attribute to No.
4. Generate the Web view
5. Log in to the Web view and ensure the field you hid is not visible.

Exercise: Changing the Caption of a Field

1. Log in to the Web View Editor
2. Choose a Web view
3. Select a field set the **Caption** field attribute to something different from the name of the field.
4. Generate the Web view
5. Log in to the Web view and ensure the field has the new caption.

Your notes:

Adding URL Buttons

URL buttons open a new browser window and load the document specified by the URL attribute. A URL button is associated with a field, and can use the field value as part of the URL.

For example, suppose you wanted to record the ID number of a Microsoft KB article that explains how to resolve a problem.

Exercise: Add a URL to a Field

1. Use the Field Editor to create a text field called **KB Article**.
2. Log in to the Web View Editor
3. Export the new field to a Web view.
4. Set the **URL** field attribute to: http://support.microsoft.com/default.aspx?scid=kb;en-us;%fieldvalue%

   Note: %fieldvalue% is a placeholder for the KB article ID number entered in the field.
5. Set the **URL Button CSS** attribute to: URLButton
6. Generate the view
7. Log in to the Web view
8. Save a value in the KB Article field.
9. Click on the button beside the field to ensure that the KB Article loads correctly.

The **URL Button CSS** attribute identifies the CSS classes used for the button. Vector Issue Tracker includes several different URL button classes you can use:

 URLButton

 MailToButton

 RemoteControl

Adding Timestamping

Your notes:

Changes to a memo field can be time-stamped. For example, you can time-stamp the changes, comments, notes, and follow-ups that are added to an issue description over time.

Timestamping requires two memo fields, one for input and one for storing the timestamped log. When an issue is saved, the Web view automatically copies the contents of the input field to the log field.

Exercise: Creating a Timestamp Field

1. Use the Field Editor to create a memo field for input of new data, and a field for displaying the timestamped log. For the input field, clear the **Show in Choice Lists** and **Maintain Revision History** check boxes.

2. Find the internal name of the timestamp log field. The internal name looks like *mem_FieldID_mem_FieldID_FieldName*.

   Open the project definitions database and look in the tblDtsFields table. The field name is composed from the values in the **nID** and **tBoundControlName** fields:

   mem_<nID>_<tBoundControlName>

   The **tBoundControlName** field includes a repeat of the *mem_<nID>* string. That is why the string appears twice in the name.

3. Export the two fields with the Web View Editor and set their **HTML code after control** attributes:

   - For the **input** field, enter this HTML code (as a single line of text):

```
<script type='text/javascript'>document.write(
parent.objCustomCode.getCodeAfterField( '%fieldname%',
'<timestamp-log-field-name>' ) ) </script>
```

   <timestamp-log-field-name> is the field name you found in the previous step. Note that the javascript is case sensitive.

   - For the timestamp **log** field, enter this HTML code (as a single line of text):

```
<script type='text/javascript'>document.write(
parent.objCustomCode.getCodeAfterField('%fieldname%','' )
)</script>
```

Your notes:

Remote Control Integration

To start a remote control session, all a help desk analyst has to do is type a computer name in a field and click the Remote Control button beside the field. The default HelpDesk Project includes a Computer Name field with a Remote Control button:

The Remote Control button connects to the specified computer and starts a PC-Duo ActiveX Remote Control session. The remote control session runs in a browser window, and does not require the PC-Duo Control to be installed on the local computer.

The requirements for remote control are:

- The view must be running in Internet Explorer, because the Remote Control button loads a page that contains an ActiveX control (ActiveX is supported only on Internet Explorer). The ActiveX control allows the help desk user to watch, share, or control the remote computer.
- PC-Duo Client must be installed on the remote computer, and the Client cannot use its license key serial number as a security key.

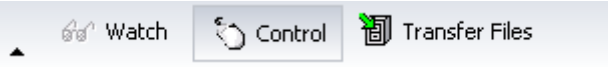
Your notes:

Remote Control Interface

The interface buttons cannot be interacted with while a connection is in progress, only when it is completed. Once it is available, it offers numerous ways to interact with the client (host) machine.

The interface is better explained when split into three different sections:

Controls



The first three buttons allow you to choose how to interact with the host desktop.

Watch mode

This mode allows you to view the host machine; however, your keyboard and mouse will not affect it.

Control mode

This mode allows you to interact with the desktop normally – mouse and keyboard are fully functional.

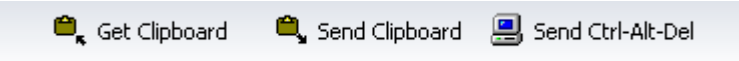
When you activate this mode, other users that are connected with Remote Control are forced into Watch mode. However, if someone is using the physical host machine, they can still control the mouse and keyboard whenever desired.

Transfer Files

Clicking this button will replace the viewer window with a “File Transfer” screen that allows you to move files to and from the host machine.

Your notes:

Actions



This section of the interface allows you to perform certain actions once connected to the host.

Get Clipboard

Remote Control will retrieve the clipboard on the host machine, and copy it to your machine.

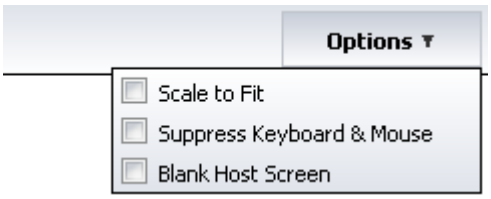
Send Clipboard

Remote Control will take your clipboard, and copy it to the host machine.

Send Ctrl-Alt-Del

This is the equivalent of pressing the “CTRL-ALT-DEL” key combination on the physical host machine.

Options



Scale to Fit

This option, if enabled, will scale the host screen so that it fits the current viewer window. If disabled, the host screen will be displayed in its regular proportions.

Suppress Keyboard & Mouse

This option prevents the host machine from being able to use the mouse and keyboard. This option only works if you are in “Control” mode. The host must also be configured to support this feature.

Blank Host Screen

The “Blank Host Screen” option allows you to prevent the host from seeing the desktop. While enabled, the host will just see a black screen. The host must be configured to support this feature.

Your notes:

Exercise: Adding a Remote Control Button to a Field

1. Log on to the Web View Editor.
2. In the shortcut bar, click the **Remote Control** button.
3. In the **Available Fields** list, expand the tab that contains the field.
4. If you do not see the field, select the **Show All** check box to show all available fields.
5. Select the **Can Connect** check box for the field.

This automatically sets the **URL** field attribute to

../../RC/rcviewer.asp?Client=%fieldvalue%

The first part of the URL (../../RC/rcviewer.asp) is the Remote Control URL, which points to this file:

IssueTrackerServer\CensusWeb\Views\CensusWebVD\RC\rcviewer.asp

The RCviewer.asp file is installed with PC-Duo Issue Tracker. You can customize this file to change the default remote control settings. For example, you can specify the security key used to access clients, and enable encryption or compression.

The second part of the URL is a query string that identifies the computer to control. When a user clicks the **Remote Control** button, %fieldvalue% is replaced with the current contents of the field.

6. Notice the **Gateway List** textbox. Here you can specify which PC-Duo Gateways to use whenever Remote Control tries to connect to a client. You can specify multiple gateways here, delimited by semi-colon: "GatewayA;GatewayC;GatewayB". The order is significant – the first Gateway that appears is the first gateway that will be consider. In this example, if Gateway A works immediately, then the other gateways aren't used. If Gateway A fails, then the system will automatically try with Gateway C, and so on. If all gateways fail, or no gateways are specified, Remote Control will try to connect using Peer-to-Peer mode.
7. Click to generate the view.
8. When the view is generated, click **Test** to log on to the view.
9. Create a new issue and try out the new **Remote Control** button.

Your notes:

Editing Choice Lists

Vector Issue Tracker administrators are often asked to update choice lists. For example, when you want to start tracking problems with a new software application, you need to add a new choice to the **Problem Area** list. This enables users to accurately categorize problems by the software or hardware that seems to be causing the problems.

Exercise: Exercise: Add Choices to a Choice List

This exercise demonstrates how to add a new application, called Auto-Draw, to the **Problem Area** list, so the help desk can handle any problems related to it.

1. Log on to Issue Tracker Web Admin as **admin** (password = **admin**).
2. Click the **Choices** tab. In the **Project** list, select **HelpDesk**.
3. In the **Choice List** list, select **Problem Area**. The Problem Area choices are displayed.
4. In the Choices section, click **Add choice**  .
5. In the **Add Choice** dialog, type **Apps – Auto-Draw**, and click **OK**.

The **Apps – Auto-Draw** choice is added to the list.

6. Click the Update Now button to add the value to all Web views that have this choice list without regenerating the Web view.
7. Log off Issue Tracker Web Admin.
8. Log on to the **HelpDesk / HelpDesk** view.
9. Create a **new issue** and select **Apps – Auto-Draw** as the problem area.

Your notes:

Global Choice Lists

Unlike Choice lists, which are only available within one Project, Global Choice Lists are shared by all Projects. After creating the Global Choice list, you can use the Field Editor in Issue Tracker Admin to associate the choice list with a field.

Exercise: Creating a Global Choice List

1. Open Vector Issue Tracker Web Admin from **Start, All Programs, Vector, Issue Tracker, Issue Tracker Web Admin.**
2. Select the **Choices** tab within Issue Tracker Web Admin.
3. In the **Project** list, click **Global Choice Lists**.
4. Click  to create a new choice list.

Use the  *button to copy an existing Choice list to a new list.*

5. When prompted, call your new choice list **tblPrinters** and name the caption as **Printers**.
6. In the Choices section, click **Add Choice**  .
7. In the **Add Choice** dialog, type **HP LaserJet 8000**, and click **OK**.

The **HP LaserJet 8000** choice is added to the list.

8. Repeat steps 5 and 6 to add more printers to the Choice list.

You have now created a Global Choice list called Printers. This list can be used in all Projects available to you in your Issue Tracker installation.

To add this Choice List to your views, create a new field for your Choice List. You must regenerate the Web view to display your Choice list.

Your notes:

Admin Options

To use Issue Tracker most effectively, you should configure the options. To do this, start Issue Tracker Admin and, in the **Tools** menu, select **Options**. The following table lists the options:

Name	Description
Monitor Interval	How often (in seconds) a Web view should check for system messages (such as shutdown and timeout messages). The default interval is 60 seconds. If the interval is too large, the administrator will have to wait a long time when logging off users.
Send immediate shutdown message	Send an immediate shutdown message to Web views when users are logged off (in addition to the standard message).
Enable backups	Back up files when the field definitions are changed.
SMTP server	Valid name or IP address of an SMTP server (if using SMTP as the mail system).
Always verify locked databases	When logging off users, always check if the users have a lock on a database.
SLA Rules Evaluation Interval	Evaluate Service Level Agreement rules at the specified interval (in minutes).
Mail Integration Check Email Interval	Check for new emails interval for Mail Integrations
Server Mail Sender	Name of sender for SMTP e-mail. Some SMTP mail servers require the sender name to be a valid e-mail address.
Server Mail Interval	Send e-mail notifications at the specified interval (in minutes).
Standard Report Engine	Specifies the default report engine used to display listing reports, format notifications, and print issues. To use Crystal Reports, you need a Report Creation API license on the Web server.
Custom Report Engine	Specifies the default report engine used to display custom reports. The HTML report engine displays custom reports as standard listing reports.
Server SMTP Port	The port for the SMTP server.
Maximum Notification Retries	The maximum number of retries for e-mail notifications. Once surpassed, the notification will be sent to the address specified in the Send Invalid Notifications To option.

Your notes:

Send Invalid Notifications To	If the Maximum Notification Retries is surpassed, the notification will be sent to this address. If there is no address specified, the notification service will continue trying to send to the original recipient.
Server SMTP User Name	The user name for logging into the SMTP server. Use this only if your SMTP server requires authentication.
Server SMTP Password	The password for logging into the SMTP server. Use this only if your SMTP server requires authentication.
Request Read Receipt	Request a read receipt when sending out e-mails from the web views.
Delete Attachments	Web view users can upload file attachments to the Web server. To delete uploaded file attachments when they are removed from issues, set Delete Attachments to Yes. We recommend that you leave Delete Attachments set to No.
Password Complexity Requirements	Specifies the requirements for passwords that are set for users. The default requirements for the "Allow complex passwords only" option are: exactly 8 characters long, with at least 1 lowercase letter, 1 uppercase letter and 1 number.
Password Expiration	How often (in days) the user's password should expire. Applies to Issue Tracker Authentication user accounts when logging into the Web views. New users will need to set their password the first time they log in. Enter 0 to disable this option.

Exercise: Setting Options

1. Check that the **Standard Report Engine** option is set to **HTML**.
2. Log in to a Web view and load a **Listing** report.
3. Notice how the report looks.
4. Log off from the Web view.
5. Change the **Standard Report Engine** to **Crystal Reports 9**.
6. Log in to a Web view and load a **Listing** report.
7. Notice how the report looks. What is different from before?

Your notes:

Building Queries

Vector Issue Tracker ships with over twenty predefined queries, such as **All Open Issues**, **My Open Issues**, and **My In Progress Issues**, which enable you to view and work with selected issues from a Project. However, you can also add your own queries to the list to create customized issue lists for your own specific uses. The following exercise guides you through creating a query that finds all printer-related issues.

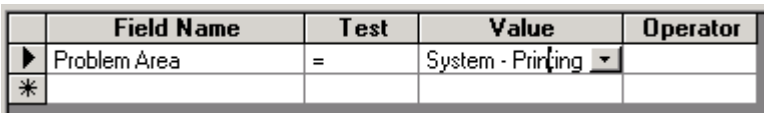
Exercise: Creating a Query

1. Start Issue Tracker Admin and log on as **admin** (password = **admin**).
2. In the **Project** list, select a Project. The new query is added to this Project.
3. In the **Project** menu, select **Query Editor**.
4. In the **Query Editor**, click the **New Query** button. Name the query **All Printer Related Issues** and click **OK**.
5. To create a query that finds all issues logged against the **System – Printing** area:

a. In the **Field Name** list, select **Problem Area**.

b. In the **Test** field, click **=.**

c. In the **Value** list, select **System – Printing**.



6. Click **Apply**, and then click **Close**.

Your notes:

Exercise: Exporting a Query

To make the new query available in your view, you must regenerate the view.

1. Start the **Web View Editor** and log on as **admin** (password = **admin**).
2. In the **Project / View** list, select **HelpDesk/HelpDesk**.
3. In the shortcut bar, click **Queries**.
4. In the **Available** list, click the **All Printer Related Issues** query. Click to move the query to the **Export To View** list.
5. Click to generate the view (and save your changes).
6. Click **No** to generate the view without logging off users.
7. When the view is generated, click **Test** to log on to the view and test your changes.
8. Click the **Query** button, and run **All Printer Related Issues** to list all printer-related issues in the Summary list.

Exercise: Creating a Query with multiple conditions

1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Projects** list, select **HelpDesk**.
4. Click **Project** > **Query Editor**.
5. Click the **New Query** button.
6. As a query name, enter *Issues for Employee Originating from Web or E-mail*.
7. Click **OK**.

Adding a query condition: Contact = *Employee* And

8. Click the **Field Name** cell in the first **Query** row, and select the value *Contact.*
9. In the **Test** cell, select =.
10. In the **Value** cell, select *Employee.*
11. In the **Operator** cell, select *And*.

Your notes:

Adding a query condition: Source = *Web* Or

12. Click the **Field Name** cell in the second **Query** row, and select the value *Source.*
13. In the **Test** cell, select =.
14. In the **Value** cell, select *Web.*
15. In the **Operator** cell, select *Or*.

Adding a query condition: Source = *E-mail*

16. Click the **Field Name** cell in the third **Query** row, and select the value *Source.*
17. In the **Test** cell, select =.
18. In the **Value** cell, select *E-mail.*
19. Select the row you created in steps 16-18 and click the **Add ()**  button.
20. Click **Apply**.
21. Click **Close**.

The query, at this point, should look like this:

	Field Name	Test	Value	Operator
	Contact	=	Employee	And
	Source	=	Web	Or
	Source	=	E-mail	

To test it, export the query using Web View Editor, and then execute it in the HelpDesk view. The issues returned should all have the Contact *Employee*, and a Source value of *Web*, or *E-mail*. Check a few issues to make sure this is the case.

Your notes:

Exercise: Creating a Query with multiple conditions and the use of macros.

1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Projects** list, select **HelpDesk**.
4. Click **Project** > **Query Editor**.
5. Click the **New Query**  button.
6. As a query name, enter *High Priority E-mail/Software Issues Closed Before Today*
7. Click **OK**.

Adding a query condition: Closed Date <> <*Today*> And

8. Click the **Field Name** cell in the first **Query** row, and select the value *Closed Date.*
9. In the **Test** cell, select <>, which means "not equal to".
10. In the **Value** cell, select <*Today*>. The <Today> macro will automatically be resolved to the current day, whenever you run the query.
11. In the **Operator** cell, select *And*.

Adding a query condition: State = *Closed* And

12. Click the **Field Name** cell in the second **Query** row, and select the value *State.*
13. In the **Test** cell, select =.
14. In the **Value** cell, select *Closed.*
15. In the **Operator** cell, select *And*.

Adding a query condition: Priority = *High* Or

16. Click the **Field Name** cell in the third **Query** row, and select the value *Priority.*
17. In the **Test** cell, select =.
18. In the **Value** cell, select *High.*

Adding a query condition: Priority = *Highest* And

Your notes:

19 Click the **Field Name** cell in the fourth **Query** row, and select the value *Priority.*

20 In the **Test** cell, select =.

21 In the **Value** cell, select *Highest.*

22 Select the row you created in steps 19-21 and click the **Add ()** button.

Adding a query condition: Service Type = *E-mail* Or

23 Click the **Field Name** cell in the fifth **Query** row, and select the value *Service Type.*

24 In the **Test** cell, select =.

25 In the **Value** cell, select *E-mail.*

Adding a query condition: Service Type = *Software*

26 Click the **Field Name** cell in the sixth **Query** row, and select the value *Service Type.*

27 In the **Test** cell, select =.

28 In the **Value** cell, select *Software.*

29 Select the row you created in steps 26-28 and click the **Add ()** button.

30 Click **Apply**.

31 Click **Close**.

The query, at this point, should look like this:

	Field Name	Test	Value	Operator
	Closed Date	<>	<Today>	And
	State	=	Closed	And
	Priority	=	High	Or
	Priority	=	Highest	And
	Service Type	=	E-mail	Or
	Service Type	=	Software	

To test it, export the query using Web View Editor, and then execute it in the HelpDesk view. Verify that the conditions added in the exercise are reflected in the results.

Your notes:

Defining Sorts

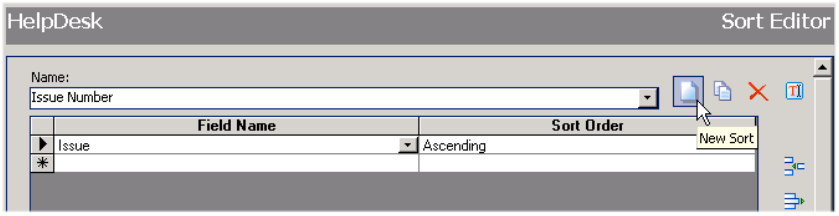
Sorts enable you to order the issues listed for a view. There are over 10 pre-defined sorts available to the Issue Tracker users. You can also add your own sorts using the following method.

Exercise: Creating a Sort

1. Start Issue Tracker Admin and log on as **admin** (password = **admin**).
2. In the **Project** list, select the Project to which you want to add the new sort.
3. In the **Project** menu, select **Sort Editor**.

*If the **Sort Editor** option is not displayed in the menu, click the button or double-click the menu to expand it.*

4. In the **Sort Editor**, click **New Sort**. Type **Department** as the name for the sort and click **OK**.



5. Add a row to the query:
   a. In the **Field Name** list, select **Department**.
   b. In the Sort Order list, select Alphabetic Descending.
6. Click **Apply**, then click **Close**.

The new sort is available in all views of the Project.

Your notes:

Defining Layouts

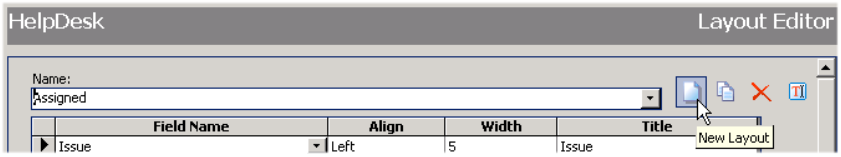
Layouts define which fields are displayed in the Summary list. You can add your own layouts to the list. The following exercise guides you through creating a new layout.

Exercise: Creating a New Layout

1. Start Issue Tracker Admin and log on as **admin** (password = **admin**).
2. In the **Project** list, select the Project to which you want to add the new layouts.
3. In the **Project** menu, select **Layout Editor**.

*If the **Layout Editor** option is not displayed in the menu, click the button or double-click the menu to expand it.*

4. In the **Layout Editor**, click **New Layout**. In the **Name** field, type **Contact**.



5. Define a layout of contact-related information. For example:

Field Name	Align	Width	Title
Issue	Left	10	
Contact	Left	30	Name
Contact Electronic Mail	Left	30	E-mail
Contact Telephone Number	Left	15	Phone #
Department	Left	15	

Use the **Title** field to change the text that appears in the column header. The default text is the field name, which, in many cases, is too long.

6. Click **Apply**, then click **Close**. Your new layout is available in all views of the Project.

Your notes:

Notifications

You can configure Vector Issue Tracker to automatically generate notification messages that inform users of changes to the Issue Tracker database. Notifications work by monitoring one or more fields in the database and then sending e-mail messages to the contact, the owner, the previous owner, or a specific user when a change occurs.

Notifications are sent using the native e-mail system. They can be used to keep users up-to-date with changes to issues avoiding the need to run queries, inspect issues, and review revision histories to find out about changes.

*Use notifications for changes to fields like **Owner**, **Progress**, and **Priority**. Defining too many notifications can overwhelm users with e-mail, and result in them missing important notifications*

Editing Notifications

Use the Notification Editor to define and edit the notifications for your system. With it, you can:

- Specify who you want to receive the notification. Select the names of one or more users from the **Send Notification to** list.
- Define when you want Vector Issue Tracker to send the notification. Click the button beside the **When** list to define a when condition, which is like a query that retrieves updated issues.
- Specify what you want to include in the notification message. The body of a notification message can include information from the **Issue Record** or the **Revision History**.
- Describe why the notification was sent. Enter a one-line description in the **Notification Description** field. You can include this description in the body of the e-mail message.

Exercise: Sending a notification when a new issue is submitted.

1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Projects** list, select **HelpDesk**.
4. Click **Project** > **Notification Editor**.
5. Click the **New Notification**  button.
6. As a notification name, enter *New Issue Submitted*.

Your notes:

7. Click OK.
8. Click the **Send Notification To** dropdown, select <*Owner*>.
9. Click the […] button next to the **When** field.
10. Click the **New When** button.
11. As the when name, write *Issue Submitted.*
12. Click OK.
13. Click the **Field Name** cell in the first **When Condition** row, and select the value *Revision Number.*
14. In the **Test** cell, select =.
15. In the **Value** cell, type *1.*
16. In the **Operator** cell, select *And*.
17. Click the **Field Name** cell in the second **When Condition** row, and select the value *Submitted Date.*
18. In the **Test** cell, select =.
19. In the **Value** cell, select <*Today*>.
20. Click **Apply**.
21. Click **OK**.
22. Click the **When** dropdown, and select the newly created *Issue Submitted* entry.
23. Set the **Include** field to include *Notification Description, Summary* and *Detailed*.
24. In the **Description** field, write *A new issue has been submitted.*
25. Click **Apply**.

Log in, and create a new issue in the Issue Tracker system, and make yourself the owner. An e-mail should be sent to the e-mail address associated with your user account shortly.

Exercise: Sending a notification when a non-owner updates the issue.

1. Open the **Notification Editor**
2. Click the **New Notification** button.
3. As a notification name, enter *Owner Issue Edited*.
4. Click OK.
5. Click the **Send Notification To** dropdown, select <*Owner*>.

Your notes:

6. Click the […] button next to the **When** field.
7. Click the **New When** button.
8. As the when name, write *Non-owner updated the issue.*
9. Click OK.
10. Click the **Field Name** cell in the first **When Condition** row, and select the value *Revision Number.*
11. In the **Test** cell, select >.
12. In the **Value** cell, type *1.*
13. In the **Operator** cell, select *And*.
14. Click the **Field Name** cell in the second **When Condition** row, and select the value *Owner*.
15. In the **Test** cell, select <>.
16. In the **Value** cell, select <*User*>.
17. Click **Apply**.
18. Click **OK**.
19. Click the **When** dropdown, and select the newly created *Non-owner updated the issue* entry.
20. Set the **Include** field to <*All*>.
21. In the **Description** field, write *Someone edited your issue – see the included revision history changes*.
22. Click **Apply**.

Log in, and create a new issue in the Issue Tracker system, and make yourself the owner. Log in with another user, and then modify your issue. An e-mail should be sent to the e-mail address associated with your user account shortly.

Exercise: Sending a notification when VIP issues are updated

For this exercise, we're going to be treating the users "Jean Manager" and "Jean Developer" as VIP users.

1. Open the Notification Editor.
2. Click the **New Notification** button.
3. As a notification name, enter *VIP Update Notification*.
4. Click OK.
5. Click the **Send Notification To** dropdown, select <*Owner*>.
6. Click the […] button next to the **When** field.

Your notes:

7. Click the **New When**  button.
8. As the when name, write *VIP user updated highest priority issue.*
9. Click OK.
10. Click the **Field Name** cell in the first **When Condition** row, and select the value *Revision Number.*
11. In the **Test** cell, select >.
12. In the **Value** cell, type *1.*
13. In the **Operator** cell, select *And*.
14. Click the **Field Name** cell in the second **When Condition** row, and select the value *Priority*.
15. In the **Test** cell, select =.
16. In the **Value** cell, select *Highest*.
17. In the **Operator** cell, select *And*.
18. Click the **Field Name** cell in the third **When Condition** row, and select the value *Submitter*.
19. In the **Test** cell, select =.
20. In the **Value** cell, select *Jean Manager*.
21. In the **Operator** cell, select *Or*.
22. Click the **Field Name** cell in the fourth **When Condition** row, and select the value *Submitter*.
23. In the **Test** cell, select =.
24. In the **Value** cell, select *Jean Developer*.
25. Select the row you created in steps 24-26 and click the **Add ()**  button.
26. Click **Apply**.
27. Click **OK**.
28. Click the **When** dropdown, and select the newly created *VIP user updated highest priority issue* entry.
29. Set the **Include** field is set to *<All>*.
30. In the **Description** field, write *A VIP issue has been updated!*
31. Click **Apply**.

Log in as “Jean Manager” or “Jean Developer” (no password), and create a new issue in the Issue Tracker system. Log in as “admin”, and modify this issue to have Priority of *Highest*, and change the Owner to *admin*. After saving the issue, further edits should trigger the notification.

Your notes:

Issue Tracker Users and Security

Issue Tracker Admin and Issue Tracker Web Admin contain several security features that control access to Issue Tracker and the information available to each type of user.

Users

All Issue Tracker users must have a user account, which consists of a user name and an optional password. User names and passwords can be unique to Issue Tracker, or you can use the accounts defined in your organization's Active Directory or Domain systems.

Groups

Groups control access to Issue Tracker features and information. By assigning users to groups, you can control:

- Access to features in the Admin utilities and in the views.
- Access to Projects.
- Workflow permissions.

Use Issue Tracker Admin to create groups, edit group privileges, and assign users to groups. Use the Web View Editor to control access to views.

Contacts

A contact is a person who reports an issue. A contact does not need to be a Vector Issue Tracker user. For example, a guest from another company may report an issue with a computer while working on-site. In this case, the guest is the contact, and the help desk analyst who enters the report into Issue Tracker is the submitter.

To create and manage a list of contacts, use Issue Tracker Web Admin, or the Issue Tracker User Import Manager to import your contacts from your Active Directory or Domain. Views can also include a **Contact** button that opens the Contacts Editor. Access to the Contacts Editor from a view is controlled by group permissions.

Your notes:

Creating and Updating User Accounts

The following exercise demonstrates how to create an account for a fictional user, Bob Sinclair.

Exercise: Adding new users

1 Click the Windows **Start** button, and select **Programs**, **Vector**, **Issue Tracker**, **Issue Tracker Web Admin**.

or

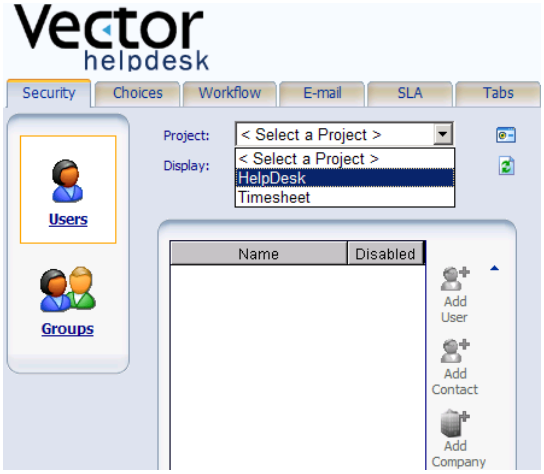
Open your browser. In the address field enter **http://*pcname*/vitadmin**.

Where *pcname* is the name of your PC.

2 Log on as **admin** (password = **admin**).

3 Select the **Security** tab.

4 In the **Project** choice list select **HelpDesk**.



5 In the **Display** choice list, select **All Users**.

All Users enables you to view all the users associated with the **HelpDesk** Project. Use the **Display** choices to view the contacts and users within the Project and to search for specific names.

6 Click the **Add User** button.

7 In the **Authenticate With** choice list, select **Issue Tracker Authentication** to check the user details against the Issue Tracker user database.

Your notes:

8 To add a new user, enter their details on the right of the browser window. This exercise demonstrates how to create an account for Bob Sinclair.

When creating a new user, Vector Issue Tracker allows Administrators to specify a logon name, password, user name, e-mail address and other contact details. The fields listed in bold red lettering are required and must be completed.

For this exercise, enter a **Logon Name** and **Password** of **BSinclair**, and complete the rest of the details.

9 Click **Apply** to create the new user.

User Category allows Administrators to specify which users are visible within a Project. This enables you to restrict the list of users that can be seen in each of your Projects while maintaining a single user database.

Exercise: Updating existing users

1 In the **Display** choice list, select **Names starting with...**

All Users enables you to view all the users associated with the **HelpDesk** Project. Use the **Display** choices to view the contacts and users within the Project and to search for specific names.

2 Type **Bob** in the text box and press Enter.

3 Select the user that you created from the filtered list

4 Click the **Edit** button.

5 Update Bob's information, changing his phone, address, etc.

6 Click **Apply** to update the user.

*Note: Use the **Edit Logon** button instead of the **Edit** button if you wish to change the Logon Name or Password of an existing Issue Tracker user.*

Your notes:

Changing User Permissions

When you create new users, they are automatically added to the **Users** group by default. This group has limited permissions and members of the group cannot perform administrative tasks. The following exercise shows you how to give administrative permissions to a user.

Exercise: Changing User Permissions

1. Click the Windows **Start** button, and select **Programs**, **Vector**, **Issue Tracker**, **Issue Tracker Web Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Project** list, select **HelpDesk**.
4. In the **Display** list, select **All Users**.
5. In the **User Name** list, select the user account you created in the previous exercise.

*To see the permissions granted to members of the **Users** group, click the **Groups** tab. In the **Group Name** list, select **Users**. To maintain security, almost all features are disabled for this group.*

6. To give administrative permissions to the new account.
   a. Click the **Groups**  button.
   b. In the **Select Groups** dialog, select **Admins**.
   c. Click **OK**.

The account now has administrative privileges.

7. To see the permissions granted to members of the **Admins** group, click the **Groups** icon. In the **Group Name** list, select **Admins**, then click the **Features** icon.

All features are enabled for members of the Admins group.

Your notes:

Advanced User Concepts

New User Default Values

To assist in the creation of new Issue Tracker user accounts and save time, administrators can specify default values for fields when a new account is created.

Exercise: Specifying Default User Values

1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Web Admin**.
2. Log on as **admin** (password = **admin**).
3. Select the HelpDesk Project from the **Project** list.
4. Select to display **All Users** from the display list.
5. In the **User Name** list, select the user account you created in the previous exercise.
6. Click the **Make Default** button.

Issue Tracker remembers the **eMail**, **Company Name, Telephone Number, Postal Address, Fax Number, Location, Department** and **User Category**.

*Every time you create a new user, all the above fields are populated with their default values. You can prevent Issue Tracker from remembering a field by clearing it before selecting the **Make Default** icon.*

7. Click the **Add User** icon. The fields are populated with the default values.

Your notes:

Work Teams

In larger organizations, several people may be assigned to each role within a help desk. For example, a business may have staff who are the first point of contact for customers, and specialist support teams that handle problems in specific areas. Work Teams enable you to group individuals by their specialisms and to assign issues to one of these groups without choosing a particular individual.

Issues can be assigned to a Work Team manually through the **Assigned Work Team** field in the **Overview** tab, or automatically by workflow or Service Level Agreements. Team members can then check for issues assigned to their Work Team using the **My Work Team's Issues** query and select an issue to work on by assigning a query to themselves.

Implementing Work Teams

Four Work Teams are defined for the HelpDesk Project by default. This exercise demonstrates how to change and add Work Teams for your own use.

1. In Issue Tracker Web Admin, click the **Choices** tab.
2. In the **Project** list, select **Global Choice Lists**.
3. In the **Choice List**, select **Work Team**. The Work Teams for your Issue Tracker installation are displayed in the **Choices** list.
4. Select **Team A** and click the **Update choice** button. In the Update Choice dialog, enter **First Line Support** and click **OK**. Enter the details of the second-level work teams using the same process. Change:

Team B to **Hardware Support**

Team C to **Software Support**

Team D to **Network Support**

5. Click the **Add Choice** button, enter **Database Support** in the **Choice** field and click **OK**.
6. Select the **Security** tab. Select **HelpDesk** in the **Project** list and select **All Users** in the **Display** list. The list of user names is displayed.
7. Select your entry in the user list, click the **Edit** button, and select **First Line Support** in the **Work Team** list. Click **Apply** to save your changes.
8. Add at least one user to each of the Work Teams.

Your notes:

Limiting Access to User Lists

In a multi-Project installation of Vector Issue Tracker, you can limit the list of users available in each Project. The visibility of users and contacts can be controlled through assigning them to a User Category. The User Categories can be edited through Issue Tracker Web Admin.

Exercise: Editing the List of User Categories

1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Web Admin**.
2. Click the **Choices** tab.
3. In the **Project** list, click **<Global Choice Lists>**.
4. In the **Choice List**, click **User Category**.
5. In the **Choices** section, create a new category called **Standard HelpDesk**.

To add a new User Category, click and then type the category name.

To rename a User Category, click the category and then click .

To delete a User Category, click the category and then click .

Exercise: Assigning Users and Contacts to Categories

1. In **Issue Tracker Web Admin**, click the **Security** tab.
2. In the **Project** list, select the **HelpDesk** Project.
3. In the **Display** list, select to display **All Users**.
4. Select the account you created in the previous exercise and then click **Edit** .
5. In the **User Category** list, select the **Standard HelpDesk** category we created in the previous exercise.

Your notes:

Exercise: Hiding Users in Projects

1. In **Issue Tracker Web Admin**, click the **Security** tab.
2. In the **Project** list, select the **HelpDesk** Project.
3. Click  .
4. In the **Advanced** dialog, select the **In this Project, only display users and contacts in the following categories** check box, and then select the **Standard HelpDesk** category.

*Only users in the **Standard HelpDesk** category are visible in the HelpDesk Project.*

Your notes:

Importing Accounts From Active Directory or Windows Domains

Issue Tracker user accounts can be synchronized with Active Directory or Windows Domain accounts. This enables users to log on to Issue Tracker using their standard Windows accounts, and means that Administrators only need to manage one user list.

To ensure that the users details within Issue Tracker are kept up-to-date, you can schedule synchronization using the **Import User Accounts** application, which is included as part of the Vector Issue Tracker installation.

Exercise: Importing User Accounts using the Import Manager

The Import User Accounts Manager allows you to specify criteria to control user imports. Vector Issue Tracker allows users to create multiple rules to allow you to import both Issue Tracker users and contacts from different user groups within your Windows environment. This exercise demonstrates how to configure Issue Tracker to regularly update your user lists.

1. Select **Start, All Programs, Vector, Issue Tracker, Import User Accounts** to open the Import User Accounts manager.
2. Logon using **admin** (Password = **admin**).
3. In the Welcome page, click **Next**.
4. Click **Add** to create a new rule. Call your rule **Admin Users**. Click **OK**.
5. Click **Next**.
6. Select an Active Directory Server or Domain from the list to specify where your users are held and click **Next** to continue.

If your Active Directory or Windows Domain is not listed, click the browse  button, and follow the appropriate instructions:

To add an Active Directory Server:

a. In the **Manage Active Directory Servers and Windows Domains** dialog, click **Add AD**.

b. Enter IP address of your Active Directory Server in the **Host** field.

c. Edit the **Port** details if this needs to be changed.

The default port is 389, LDAP over SSL uses port 626 by default.

Your notes:

d Enter the Base **DN**.

The Base DN is the top level of the LDAP directory tree. For example, if you company's name is "mycompany.local", the Base DN is "dc=mycompany,dc=local". If you don't know your Base DN, ask your tutor.

e Enter a Display Name for the Active Directory Server. Vector Issue Tracker uses this name to identify the server.

f Leave the **Anonymous Bind** check box selected.

If the Anonymous Bind check box is cleared, you must enter the information for authenticating a user when connected to the server.

User DN is the user to authenticate. For example:

"CN=Administrator,CN=Users,DC=mycompany,DC=local"

Password is the user's password.

g In the **Active Directory Logon Name** Field, enter the name of the Active Directory property that stores the user account name. Vector Issue Tracker uses this name to log on.

h Click **Test** to test the connection, then click **Next**.

To add a Windows Domain:

a In the **Manage Active Directory Servers and Windows Domains** dialog, click **Add Domain**.

b In the **Domain** list, select the Windows Domain you want to add.

c If the **Computer Name** field is blank, type the name of the server that is the primary domain controller. The name must be entered in UNC format, for example: *myserver*.

d Click **Test** to test the connection, then click **Next**.

7 In the **Import Users** dialog select the **Administrators** group.

By default, the User Account Import Manager imports all users within the Active Directory or Windows Domain you specified. ***Selected Users*** *enables you to choose which users are imported*.

8 The **Import Settings** dialog specifies the user import settings:

- **Import as Contacts** imports members of the specified user groups as contacts.
- **Import to Group** specifies the Issue Tracker user group you want the imported users to join. Select a group from the drop down list.
- **Get E-mail Addresses From** imports users' e-mail details from your organization's Exchange Server. To specify the Exchange Server, enter its name or IP Address.

Your notes:

- **Import any user account that does not already exist in Issue Tracker** imports any accounts in the specified Active Directory or Windows Domain if they don't already exist. Deselect this option to prevent the import manager from creating new accounts.
- **Synchronize any user account that already exists in Issue Tracker** synchronizes all Issue Tracker user accounts with the specified Active Directory or Windows Domain. Deselect this option to disable any synchronization; any name or e-mail address changes must then be performed manually.

9 To schedule the import and synchronization of user accounts, click the **Configure** button within the **Import Settings** dialog.

10 When prompted for a username and password, enter an Administrator account for your network, and click **OK**.

11 In the Scheduler, specify for the task to run Daily at 03:00 and click **OK**.

The Advanced Scheduler allows you to be more specific. For example, you can specify a time frame when the schedule is valid and configure it to repeat every 30 minutes between 9 a.m. and 5 p.m.

12 Click **Finish** to import your Admin users into the Issue Tracker Project.

Exercise: Importing Contacts using the Import Manager

Repeat the previous exercise, importing the user accounts as Issue Tracker contacts instead of Issue Tracker users.

Your notes:

Managing Logons

The Issue Tracker Admin utility includes a powerful real-time logon manager. As Vector Issue Tracker is Web-based, it is important that you can control who is logged on and also that you are able to log off users. The **Logons Editor** enables you to see which users are currently logged on and to log off all users.

Exercise: Using the Logons Editor

1. Log on to Vector Issue Tracker as **demo** and open the **HelpDesk / HelpDesk** view.
2. Start Issue Tracker Admin and log on as **admin** (password = **admin**).
3. In the **Tools** menu, select **Logons Editor**.

*The **Logons Editor** shows that **admin** is logged on to Admin (Issue Tracker Admin) and **demo** is logged on to a view of the HelpDesk Project.*

Your notes:

Creating Reports

The Report Editor in Issue Tracker Admin allows you to quickly build and view three types of reports:

- Listing
- Summary (cross-tab)
- Time (trend)

Only **Listing** reports are exported to views. However, using Crystal Reports you can customize a Listing report to include charts, graphics, calculations, running totals, and cross-tab tables. In a view, these customized Listing reports are available from the **Custom** tab of the Report Viewer.

Listing Reports

Listings extract and present subsets of the information entered in the issue records. Listing reports are the only type of report available in views. However, using Crystal Reports, you can customize a listing report so that it is a cross-tab (Summary) report.

Listing reports are listings of information entered in the issue records. Use listing reports to extract specific information from the issue records. For example, you can use them to print a summary of the resolution details for each resolved issue, or you print only the record number, owner, and a summary of each issue. With listing reports, you choose a set of fields from the issue record, and only those fields are included in the report.

Summary Reports

Summary reports are like spreadsheets. They give you a numerical break down of the state of your Project. For example, use summary reports to answer questions, such as: What is the distribution of open issues among help desk staff? How many of the open issues are showstoppers? Is there a relationship between functional area and issue severity?

Summary reports are available as text, bar graphs, and pie charts. They are *available in Issue Tracker Admin.*

Time (Trend) Reports

Time reports show trends over time. Use time reports to answer questions like: What's the issue arrival rate? What's the issue fix rate? How fast are severe issues being fixed?

Your notes:

Time reports are available as text, line graphs, bar graphs, and pie charts. A time report divides the reporting period into intervals of days, weeks, months, quarters, or years. The time report then sorts the issues into the time intervals, and counts the number of issues in each interval.

You can control which issues a report counts by choosing values that can be entered in an issue record field. The time report counts the number of issues with each value. For example, to see the number of Highest and High priority issues, you choose these **Priority** field values. The time report then counts the number of Highest and High priority issues in each interval.

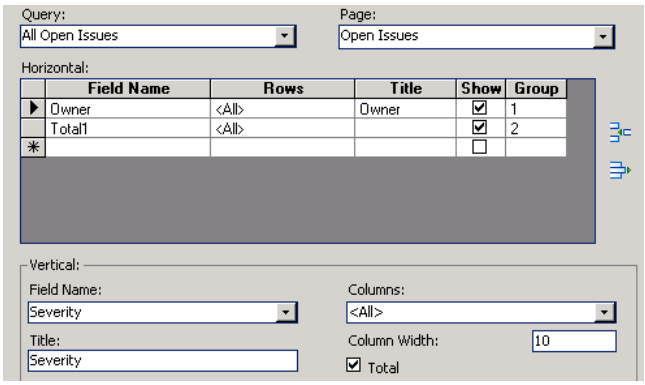
Time reports are available in Issue Tracker Admin.

Exercise: Create a Summary report

1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Projects** list, select **HelpDesk**.
4. Click **Project** > **Report** > **Editor**.
5. Click the **New Report**  button.
6. As a summary name, enter *Assigned Open Issues by Severity*.
7. Click **OK**.
8. In the **Query** dropdown, select *All Open Issues*.
9. In the **Page** dropdown, select *Open Issues.*
10. Click the **Field Name** cell in the first **Horizontal** row, and select the value *Owner.* The rest of the row will be automatically populated.
11. Click the **Field Name** cell in the first **Horizontal** row, and select the value *<Total>.* The rest of the row will be automatically populated.
12. In the **Vertical** section, click the **Field Name** dropdown, and select *Severity*.
13. Click the **Preview**  buttons to make sure the report produces the desired results.
14. Click **Apply**.
15. Click **Close**.

The report, at this point, should look like this:

Your notes:



Exercise: Create a Listing report

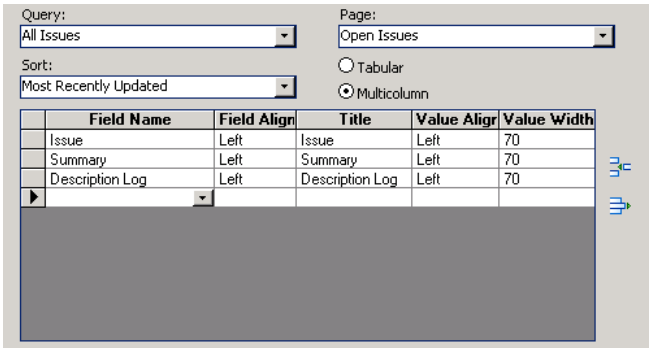
1. Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Admin**.
2. Log on as **admin** (password = **admin**).
3. In the **Projects** list, select **HelpDesk**.
4. Click **Project** > **Report** > **Editor**.
5. Click the **New Report** button.
6. As a summary name, enter *Quick View – Issue Description*.
7. Click **OK**.
8. In the **Query** dropdown, select *All Issues*.
9. In the **Sort** dropdown, select *Most Recently Updated*.
10. In the radio boxes below the **Page** field, select *Multicolumn*.
11. In the first row's **Field Name** column, select *Issue*. The rest of the cells are automatically populated.
12. Modify the **Value Width** column so it has a value of *70*.
13. In the second row's **Field Name** column, select *Summary*. The rest of the cells are automatically populated.
14. Modify the **Value Width** column so it has a value of *70*.
15. In the third row's **Field Name** column, select *Description Log*. The rest of the cells are automatically populated.
16. Modify the **Value Width** column so it has a value of *70*.

Your notes:

17 Click the **Preview** button to make sure the report produces the desired results.

18 Click **Apply**.

The report, at this point, should look like this:



Exercise: Create a Time report

1 Click the Windows **Start** button, and select **Programs, Vector, Issue Tracker, Issue Tracker Admin**.

2 Log on as **admin** (password = **admin**).

3 In the **Projects** list, select **HelpDesk**.

4 Click **Project** > **Report** > **Editor**.

5 Click the **New Report** button.

6 As a summary name, enter *Total Number of Issues by Service Type*.

7 In the **Query** dropdown, select *All Issues*.

8 In the **Page** dropdown, select *Total Number of Issues.*

In the Time Axis section:

9 In the **Granularity** dropdown, select *Month.*

10 In the **Master Date** dropdown, select *Submitted Date.*

11 Enable the **Cumulative** checkbox.

12 Enable the **Show dates with no value** checkbox.

In the Time Axis – Range section:

Your notes:

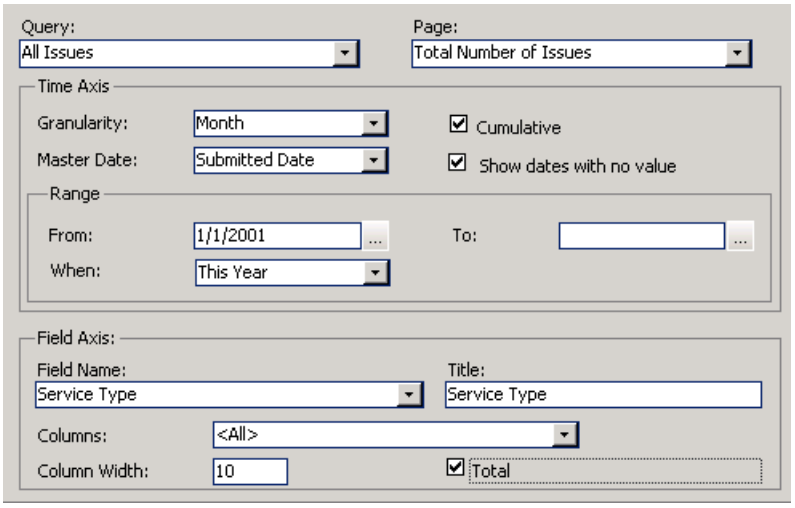
13. In the **From** dropdown, type a date that occurs before all issues in the system, for example: *1/1/2011* (works with the default HelpDesk issues)
14. In the **When** dropdown, select *This Year.*

In the Field Axis section:

15. In the **Field Name** dropdown, select *Service Type*. The rest of this section should be automatically populated.
16. Enable the **Total** checkbox.
17. Click the **Preview**  buttons to make sure the report produces the desired results.
18. Click **Apply**.
19. Click **Close**.

Your notes:

The report, at this point, should look like this:



Your notes:

Defining Report Pages

Report pages define formatting elements common to every page of a report, such as headers, footers, titles, and column layout. Report pages also define report titles. Pages can be shared by many reports, allowing you to define a standard look for all reports generated by Vector Issue Tracker.

Vector Issue Tracker comes with a set of predefined pages. You can adapt these templates to your specific requirements, or define entirely new pages.

To open the Page Editor:

On the **Tools** menu, click **Report**, then click **Page Editor**.

- Choose a page from the **Name** list. You can then edit, delete, or rename the page.
- To use one page as a starting point for a new page, choose a page from the **Name** list, click **Copy**, and give the new page a name.
- To create a page from scratch, click **New**.

You can use the Page editor to define headers, footers, and titles for your reports. In addition to typing and formatting plain text, you can insert placeholders for the current date, time, and page number. When you generate your report, these placeholders are replaced with values.

To do this	Click
Insert the current date	
Insert the current time	
Insert the current page number	
Left-align text	
Center text	
Right-align text	
Format text by changing fonts and point sizes, and applying bold, italic, or underline styles.	

Your notes:

Defining Workflow Rules

Workflow rules allow you to define and enforce an issue handling process. Together with e-mail notifications, workflow rules help you automate the tracking and management of issues.

What Can You Do with Workflow Rules?

When a user selects a choice from a choice list, you can:

- Select choices in other choice lists.
- Change the possible choices in other choice lists.

These are the basics of workflow rules. However, this explanation leaves out some important details:

- By default, rules are applied when a user creates, saves, or loads an issue. You can also force rules to be evaluated when a user selects a choice.
- Workflow rules can also be based on more complicated conditions. For example, a rule may require that certain choices are selected from a number of different choice lists, or that the user is a member of a specific group, or both.

What You Should Know about Workflow Rules

- **Rules work with single-choice list fields**

You cannot define rules that apply to any other type of field, including multiple-choice list fields.

- **Rules are defined per project**

All Web views of a project share the same workflow rules. You cannot disable the workflow rules for specific Web views. The rules are either enabled for all views or disabled for all views.

- **Rules can impact performance**

Defining a large number of rules may impact the performance of Web views.

Using workflow rules to set default values is a good choice if you have a small number of rules and are not limited by resources (server, network, end-user computers).

Your notes:

- **Rules are evaluated when issues are loaded and created**

By default, workflow rules are evaluated when an issue is loaded or created (note that when you save an issue it is immediately re-loaded, triggering the workflow rules). You can force rules to be evaluated when a user changes the value of one of the fields specified in the condition. Evaluating rules on field changes has a potentially higher performance cost. However, if you want to implement dependent fields, you should evaluate the workflow rule on field changes.

- **Changes to choice lists can break workflow rules**

If you remove choices from a choice list, or change the meaning of a choice, rules that use the choice list may stop working or result in unexpected behavior.

- **By default, rules apply to all users**

To build group-specific rules, use the macro <**User in Group**> in your conditions.

- **The order of rules is important**

Rules are evaluated in the order they are listed in the Workflow Editor. For example, in the default workflow, the rule **Admins**-<**Any**> is the first rule in the list. This ensures that any member of the **Admin** group can make any change to the Progress field.

If the **Admins**-<**Any**> rule is last, then an analyst who is also a member of **Admins** does not have full administrator permissions for changing the **Progress** field. The stricter rules are evaluated first, limiting the changes the analyst can make.

Your notes:

Creating Rule Templates

Before you can define any rules, you must create a template. Templates define the fields used in rules, and rules provide the values. For example, a template might look like this:

When:

<User in Group> = _ _ _ _ AND

Progress = _ _ _ _

The possible values are:

Progress = _ _ _ _

A template defines what the rules look like, while a rule fills in the _ _ _ _ parts with specific values.

To create a rule template:

1. Log on to Issue Tracker Web Admin. Click the Workflow tab. In the Project list, click a project.

Workflow rules based on this template apply to all Web views of this project.

2. Click Template and click Add.
3. In the Add New Template dialog:

- In the **Template Name** box, type a name for the template.
- In the **Template Description** box, type a short description of the template.
- Select the type of rules you want to define:

A **Dependent Values** rule makes the value of one field depend on the value of another field. For example, if How Found = Reported by Customer then Priority = Highest.

A **Possible Values** rule makes the possible values of one field depend on the value of another field. For example, if Type = Doc Defect then the possible values for Functional Area = Help, Readme, or Manual.

4. Click **OK**.
5. In the list of templates and rules, click the new template.

Your notes:

6 Under **Conditions**, click . Then click the **Field** box three times and click a field whose value you want to test. Repeat for each additional field you want to test.

Conditions determine when a rule is applied. If all the field tests evaluate to True, the rule is applied.

Note that the **Field** list contains single-choice fields only.

7 If you created a dependent-values template, click under **Dependent Values**, then click the **Field** box three times and click the field whose value you want to set. Repeat for each field whose value you want to set.

If you created a possible-values template, click under **Possible Values**, then click the **Field** box three times and click the field whose possible values you want to specify. Repeat for each field whose possible values you want to specify.

Note that the **Field** list contains single-choice fields only.

Defining Rules

Defining a rule involves filling in the template with specific values.

Note that while you edit rules, you can edit the values, but you cannot add or remove fields. To add or remove fields you must edit the rule template.

To define a rule:

1 Select a rule template in the **Workflow Editor**.

2 Click **Rule** and then click **Add**.

3 Under **Conditions**, specify the values to test. For each field, click the **Value** box three times and then click the field value you want to test for.

4 If you are defining a dependent values rule, then under **Dependent Values**, for each field, click the value you want to set. To use the value of another field, double-click the **<Value of Field???>** macro.

If you are defining a possible values rule, then under **Possible Values**, for each field, select the check boxes for each possible value.

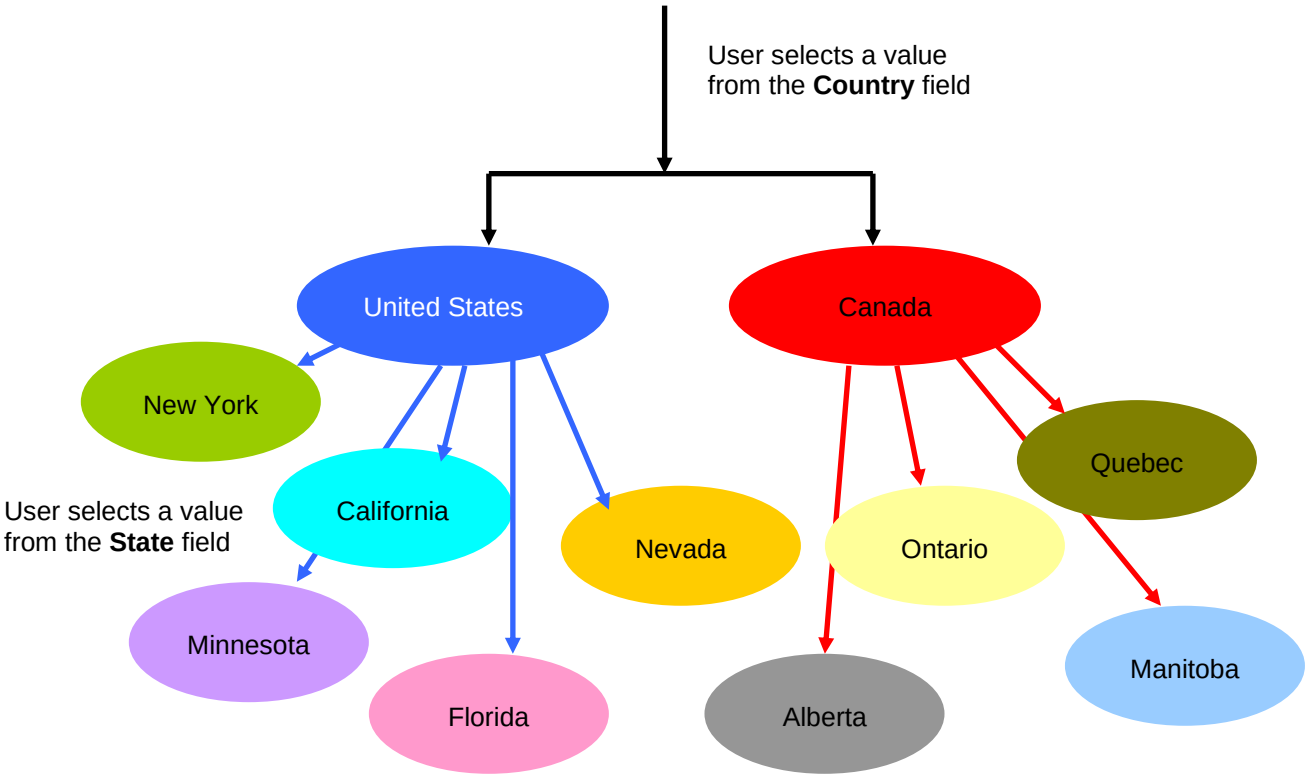
5 Click Apply to apply the rule to the Web views of the project.

Note: You can also copy a rule and edit it. To copy a rule, click the rule, then click Rule, click Copy, and type a name for the new rule.

Your notes:

Exercise: Create a Country / State Workflow

6 Create the fields, workflow template and rules required to create the workflow shown in the following diagram.



Your notes:

Managing Inventory Integration

During the installation procedure for Vector Issue Tracker, the connection to a Vector Inventory database was configured. There may be a time when you want to change the name of your Enterprise Site or the location of your database. These changes must be applied to Vector Issue Tracker to ensure the latest data can be displayed.

Exercise: Getting the Site Database Information

To integrate Vector Inventory with Vector Issue Tracker, you need to know the type (Access or SQL), name, and location of the Site database, and whether you need a user account and password to log on to the Site database.

To get the type, name, and location of the Site database:

1. In the Console tree, expand the Site, and then click **Site Management**.
2. In the Details pane, click **Database and Licensing**.

The **Database Location** box specifies the type, name, and location of the database. For example:

ACCESS MySiteDB \\server\share\MySiteDB.mdb

-or-

SQL SERVER MySite MySQLServer MySiteDB

To get the logon information for the Site database:

1. In the console tree, click **Enterprise Management**.
2. In the Details pane, click **Logon Information**.

Exercise: Changing your Site Database

You can connect different Projects to different Site databases, but each Project can be connected to only one database.

Pop-ups must be enabled on your browser for this exercise.

1. Log on to Issue Tracker Web Admin as **admin**.
2. Click the **Inventory** tab.
3. In the **Project** list, select the **HelpDesk** Project.
4. Remove the current database link by clicking the Remove button.
5. Click the **Link** button. A new explorer window opens.

Your notes:

6 The **Link Site Wizard** guides you through the process of adding a Site to the HelpDesk Project. Click **Next**.

*The **Link Site Wizard** lists any Sites it finds on the Issue Tracker machine.*

7 If your Site is listed in the **Detected Sites** list, select the radio button and click **Next**.

If your Site is not listed:

a Select **Other Sites** and click **Next**.

b Specify the **Site Name** by typing it in the box.

c Enter a description of your Site.

d Select the type of database used by your Enterprise Site.

e Enter the location of your Site database. The location must be entered as UNC path.

f Enter a username and password that has access to the database.

g Click **Next**.

8 Check the details on the **Confirm Site** page. Click **Finish** to complete the change.

Adding the Inventory Tab to a View

It may be necessary to add the **Inventory** tab to a new view. The following exercise demonstrates how to add the Inventory tab to a view using the Issue Tracker Web View Editor.

Exercise: Adding the Inventory Tab to a View

1 Log on to the Web View Editor.

2 In the **Project / View** list, select **HelpDesk / HelpDesk**.

3 In the shortcut bar, click **Fields**.

4 In the **Tab** list, select **Inventory**. Add all the Inventory fields to the **Export To View** list.

You have to export at least the **Client Name** field. Export all the Inventory fields to ensure the Inventory reports work.

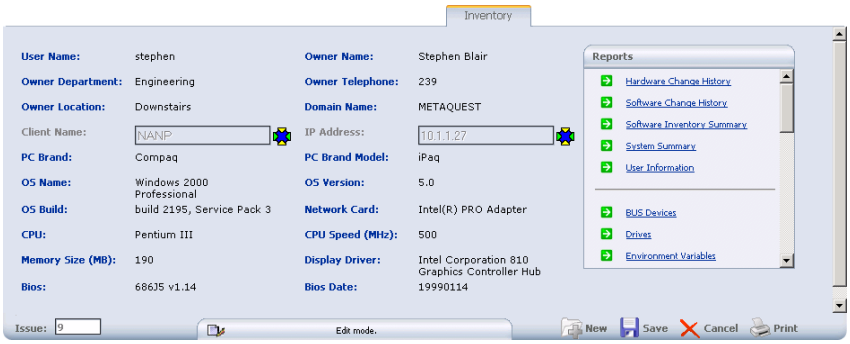
*If you don't export all the fields, the **System Summary** report will be incomplete or display the error message "The field name is not known".*

5 Click to generate the view.

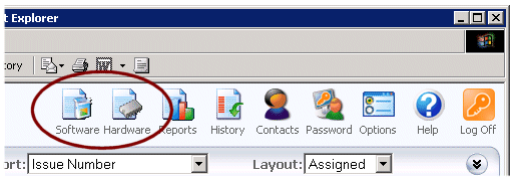
6 When the view is generated, click **Test** to log on to the view.

Your notes:

7 Create a new issue and type the name of a computer in the **Computer Name** field, then click the **Inventory** tab to display the inventory information for the specified computer.



Adding the **Inventory** tab also adds **Software** and **Hardware** buttons to the view. These buttons allow users to generate Inventory reports for the entire Site.

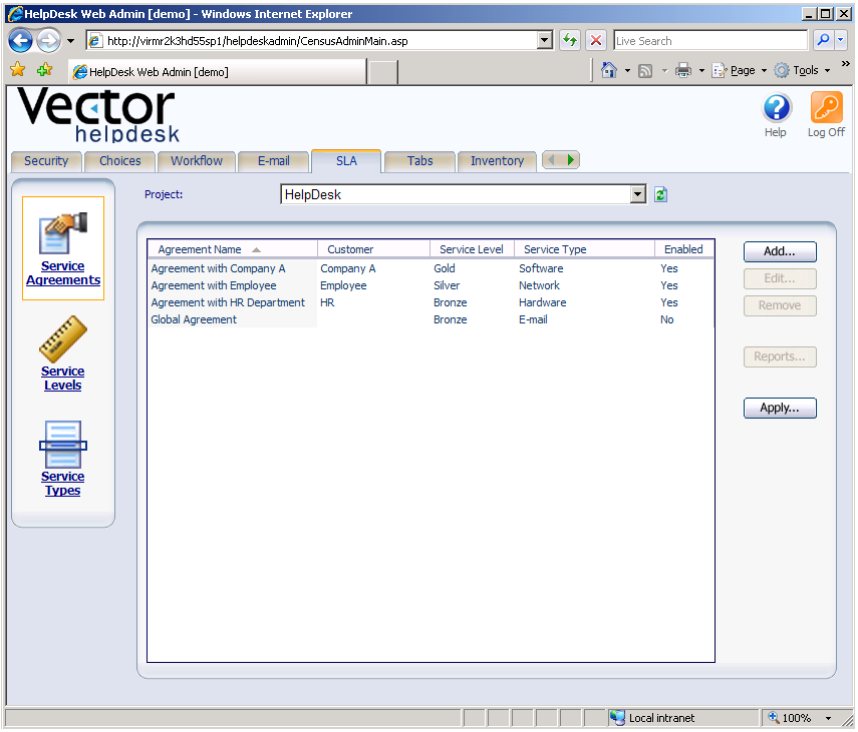


You can hide these buttons by disabling the corresponding features (in Issue Tracker Admin, click **Tools** > **Security**, click the **Group** tab, select a group, and disable the **Report Viewer – Hardware Inventory** and **Report Viewer – Software Inventory** features).

Your notes:

Service Level Agreements

Service Level Agreements (SLAs) are contracts between a service provider and the customers that document agreed service levels for a service. In Issue Tracker, they enable support staff to optimize their workloads by identifying when each issue should be fixed and by providing automatic warnings and escalations when a target deadline is reached. In addition, SLAs also allow organizations to track and manage quality targets by providing information on the overall performance of the help desk and how well service targets are being met.



Working with SLAs

When you add an issue to Issue Tracker, it automatically checks the details against the service agreements that have been specified for the project. If the **Contact** and **Service Type** values of the **Overview** tab match those of a current agreement, Issue Tracker displays a flag in the Summary list, indicating that the issue is subject to an agreement. Issue Tracker also calculates target response and completion times for the issue from the terms of the agreement and displays them in the **SLA** tab of the Console's Issue section. In addition, the color of the flag changes to indicate how close the

Your notes:

issue is to the specified completion targets. The target completion times and the escalation state depend on the terms of the governing agreement.

Exercise: Working with SLAs

This exercise demonstrates SLAs using a service agreement from the default HelpDesk project. It contains the following targets for dealing with issues:

Target Times

Priority	Initial Response Time	Closure Time
Highest	30 minute(s)	2 hour(s)
High	1 hour(s)	4 hour(s)
Medium	2 hour(s)	1 day(s)
Low	4 hour(s)	2 day(s)
Lowest	6 hour(s)	3 day(s)
<Default>	6 hour(s)	3 day(s)

1. In Issue Tracker, log on to HelpDesk / HelpDesk as admin (password = admin) and make sure that **Summary Layout** is selected for **All Issues**.

2. Enter a new issue with the following information:

Contact: **Employee**

Owner: **<None>**

Progress: **New**

Priority: **High**

Service Type: **Network**

Problem Area: **System – Network**

Summary: **The network is running really slowly.**

Description: **It is taking a long time to copy files to the server.**

Click **Save**.

After a few minutes, Issue Tracker evaluates the information and identifies the issue is subject to a service agreement.

3. Select the **SLA** tab. It lists the response and resolution targets for this issue and the name of the service agreement from which the target values are derived.

*If the **Service Type** and **Target Initial Response Time** are not displayed, click the **Update SLA** button to display the SLA information.*

4. Click the **Refresh Query** button in the Summary list. A green flag is displayed to the right of the issue to indicate it is

Your notes:

covered by a service agreement and it is currently at escalation level 1 (New Issue).

*You can display the service agreement details of issues in the Summary list by selecting **SLA** in the **Layout** field.*

5 Enter the current date and time in the **Actual Initial Response Date** and **Actual Initial Response Time** fields to record you are about to request more information on the problem and click **Save**.

*If the person is unavailable, or you are waiting for input from an outside source, you can select **Paused** in the **Escalation State** field to suspend the timer until you are able to continue.*

If you resolve the issue within the **Target Closure Time** displayed, the **Escalation Level** will remain at 1 to indicate that the issue is being handled within the specified targets.

If you do not enter an initial response time within the specified target and the **Escalation State** is not **Paused** or **Off**, the following events will occur:

- 10 minutes before the initial response is due, Issue Tracker sends an e-mail warning to the person specified as the current owner of the issue.
- 5 minutes after the initial response is due, Issue Tracker sends an e-mail warning to the issue owner and increases the **Escalation Level** to **2**. The flag color changes to blue.
- 30 minutes after the initial response is due, Issue Tracker sends an e-mail warning to the issue owner and increases the **Escalation Level** to **3**. The flag color changes to yellow.

If you do not resolve the issue within the specified target time and the **Escalation State** is not **Paused** or **Off**, the following events occur:

- 10 minutes before the resolution is due, Issue Tracker sends an e-mail warning to the issue owner.
- 5 minutes after the resolution is due, Issue Tracker sends an e-mail warning to the issue owner and increases the **Escalation Level** to **4**. The flag color changes to orange.
- 60 minutes after the resolution is due, Issue Tracker sends an e-mail warning to the issue owner and increases the **Escalation Level** to **5**. The flag color changes to red.

6 Complete the issue following the normal workflow.

Your notes:

Configuring SLAs

Before you can use Service Level Agreements to manage escalations and monitor performance, you must specify:

- The number and type of escalation warnings you want to use
- Which elements of your IT infrastructure you want to manage
- The levels of service available to customers
- The services that have been agreed between your help desk and its customers

The following sections describe these processes in detail.

Defining SLA Variables

In essence, Service Level Agreements provide a method for ensuring that issues raised with a help desk are resolved in a timely and efficient manner. In Issue Tracker, this is managed by defining a set of targets for the time taken to respond to customers that have raised issues, and by providing a system of automatic warnings and escalations of issues when the targets are not met.

Before you can create SLAs in a project, you must define the values for two fields that are used to control the progress of escalations through the system:

Escalation Levels provide a signal to support staff on where an issue is in relation to its assigned targets. Normally, when an issue is first entered into the system, it has an escalation level of 1. By default, this is indicated by a green flag in the Web view Summary list. Then, as the issue reaches trigger points defined in user-specified rules, its escalation level is automatically updated by the system and the flag changes color.

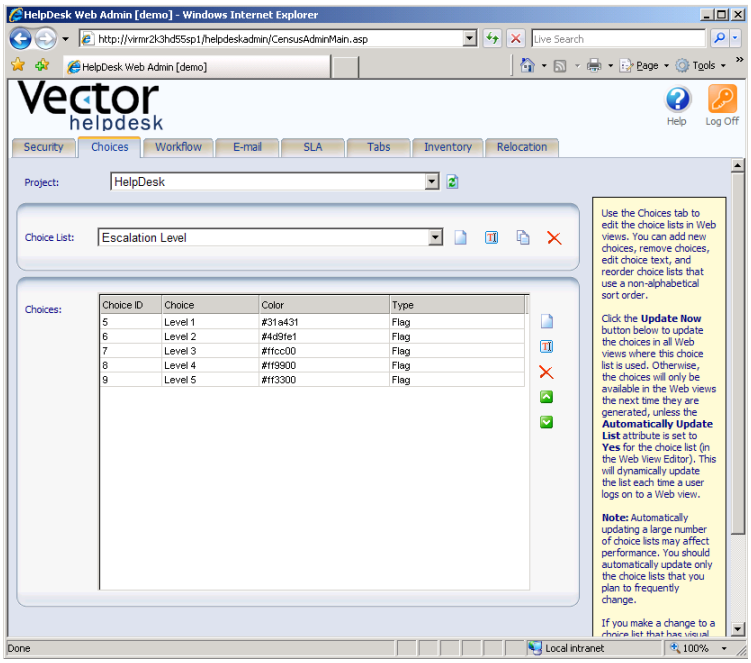
You can define as many escalation states as you want to use in your system. However, you must take care when deciding on how many you create, as these must be used by all SLAs in a project. For demonstration purposes, the HelpDesk project uses five.

Escalation States give support staff the ability to control the progress of escalation levels. For example, if a customer is unavailable when a help desk analyst calls to collect more information about an issue, the Paused escalation state in the HelpDesk project gives the analyst the ability to suspend escalation until the customer returns. Again, the Escalation States you define are used throughout a project, so you must give some thought to the requirements of all the Service Level Agreements you are likely to implement.

Your notes:

Exercise: Editing Escalation Levels

1. In Issue Tracker Web Admin, click the **Choices** tab.
2. In the **Project** list, select **HelpDesk**.
3. In the **Choice List**, select **Escalation Level**. The Escalation Levels for SLAs in this project are displayed in the **Choices** list.



4. Click the **Add Choice** button.
5. In the Add Choice dialog, enter **Level 6** in the **Choice** field, enter **Black** in the **Color** field and click **OK**.

Exercise: Creating Escalation State

1. In Issue Tracker Web Admin, click the **Choices** tab.
2. In the **Project** list, select **HelpDesk**.
3. In the **Choice List**, select **Escalation State**. The Escalation States for SLAs are displayed in the **Choices** list.
4. Click the **Add Choice** button.
5. In the Add Choice dialog, enter **See Parent** in the **Choice** field, and click **OK**.

Your notes:

Service Types

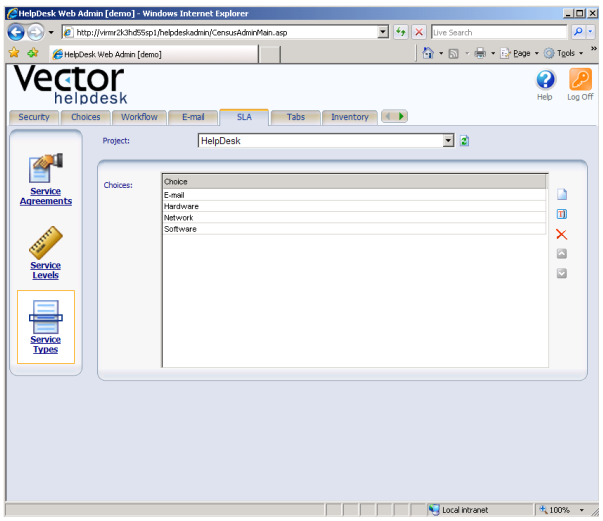
Service Types identify the different elements in your organization that you want to manage. For example, you can create service types based on your IT infrastructure, or you can create service types that cater for the particular needs of the different business units or functions within your organization.

When you have created the Service Types for your organization, you can then specify the level of service you want your support staff to provide and the target response and resolution times for each service type. This enables you to differentiate the priorities you apply to each type of issue and to specify the targets for the various levels of support your help desk provides.

Exercise: Creating Service Types

This exercise demonstrates how to create a service type in the default infrastructure-oriented project supplied with Issue Tracker.

1. In Issue Tracker Web Admin, click the **SLA** tab.
2. In the **Project** list, select **HelpDesk**.
3. Select **Service Types** . The **Choices** list displays the Service Types available to users of the **HelpDesk** project.

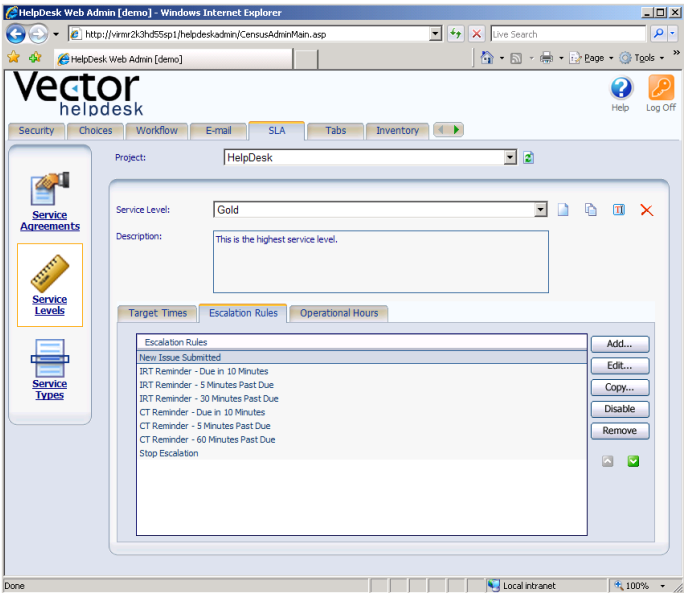


4. Click the **Add Choice** button.
5. In the Add Choice dialog, enter **Peripherals** in the **Choice** field, and click **OK**. The new Service Type is displayed in the **Choices** list.

Your notes:

Service Levels

One of the aims of a Service Level Agreement is to regularize the way in which each type of issue is handled. Issue Tracker does this using Service Levels. Each SLA must have a Service Level that defines a set of target times for responding to and resolving issues of different priorities. This not only provides users with a set of deadlines they can expect for the resolution of issues they raise, but also enables managers to check that their support targets are being met. In addition, Service Levels also give administrators the ability to automate the actions to be taken when a target is breached. These levels can range from sending warnings of imminent target failures, through increasing the priority or severity of an issue, to diverting issues to other support staff.



Exercise: Editing Service Levels

This exercise demonstrates how to use the default Service Levels provided as part of the HelpDesk project.

1. In the **SLA** tab of Web Admin, make sure **HelpDesk** is the selected **Project**.
2. Select **Service Levels** .
3. In the **Service Level** list, select **Gold**. The **Target Times** tab lists the priorities that can be assigned to issues in the HelpDesk project and the target response and closure times for each priority in the service level.

Your notes:

*By default, the HelpDesk project contains three service levels: Gold, Silver and Bronze. You can add your own service levels to the project, or edit the existing levels by clicking the buttons to the right of the **Service Level** list.*

4 Double-click the **Highest** entry in the **Priority** list.

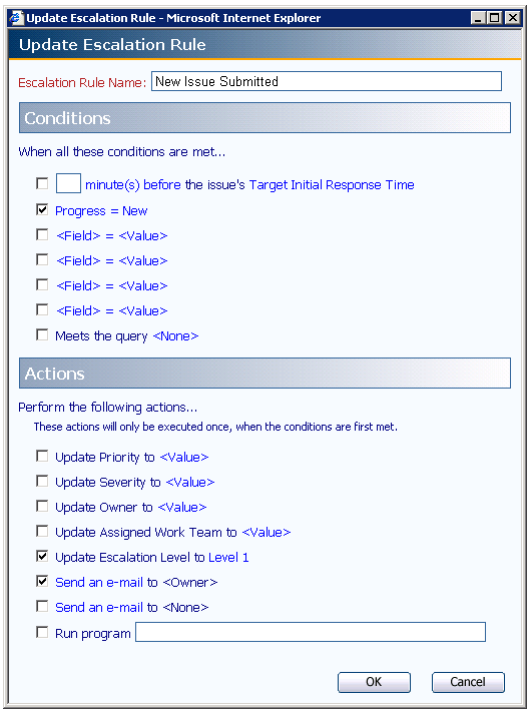
5 In the Edit Target Times window:

a Enter an **Initial Response Time** of **15** minutes. This will enable you to see a Service Level in action soon after an issue is raised.

b Leave the **Closure Time** unchanged and click **OK** to save your changes.

6 Select the **Escalation Rules** tab to list the automatic actions associated with this Service Level. Double-click the **New Issue Submitted** entry to view the details of the rule. The Update Escalation Rule window is displayed. The window is divided into two sections:

- **Conditions** specifies the circumstances that trigger the rule.
- **Actions** specifies the actions that Issue Tracker performs when the rule is triggered.



*In this example, the escalation rule specifies that when an issue is created (identified by a **Progress** value of **New**), a value of **Level 1** is assigned to the **Escalation Level** field (shown in the issue's **SLA** tab) and an e-mail is sent to the person listed as the **Owner** of the issue.*

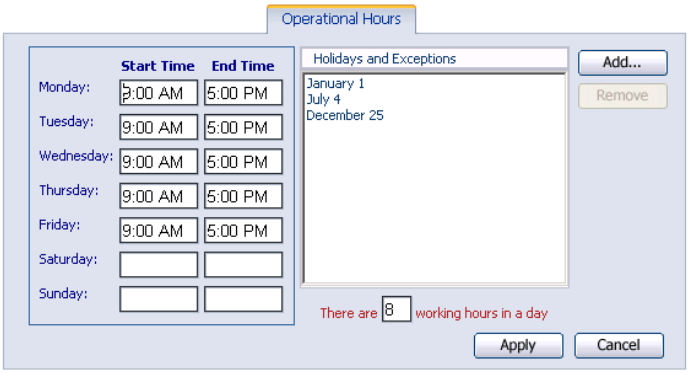
Your notes:

7 Close the Update Escalation Rule window. Open some of the other rules and try to find out how they work. For example, notice how the **Escalation Level** is changed by each of the CT Reminder rules. These changes determine the color of the warning flag shown against the issue in the Console's Summary list.

8 Create a rule that automatically assigns an issue to a second-level support team when it is 90 minutes overdue. To do this:

- **a** Click **Add** to create a new escalation rule.
- **b** In the **Escalation Rule Name** field, enter **Transfer to Software Support**.
- **c** Enter a condition of **90 minutes after the issue's Target Closure Time** and make sure it is enabled.
- **d** Select **Severity** and change the **Value** to **Highest**.
- **e** Select **Update Assigned Work Team** and change the **Value** to **Software Support**.
- **f** Select **Update Escalation Level** and change the **Value** to **Level 6**.
- **g** Select the first **Send an e-mail to** entry in the Actions list. In the E-mail Content Editor, enter your e-mail address in the **To** field, enter a warning message in the **Body** field, and click **OK**.
- **h** Click **OK** to create the new rule.

9 Select the **Operational Hours** tab. This lists the periods during which the SLA timings apply. If an issue is raised outside the specified times, the escalation timings of the service agreement do not begin until the **Start Time** of the next working day specified in the **Operational Hours** list. Leave this page unchanged.



Your notes:

Service Agreements

Service agreements record the details of the support that your help desk is contracted to supply to its customers. They specify what is to be supported (the Service Type), and the support targets (the Service Level) for each set of customers the help desk serves. In addition, they specify the duration of each contract, and, optionally, the customer and support staff responsible for contract management.

Service agreements also enable systematic quality management of your help desk services by automatically storing information on issues that have failed to meet the support targets, and compiling and supplying regular reports that can help you decide whether your help desk services satisfy the requirements of your organization and are performed cost-effectively and as planned.

Exercise: Creating Service Agreements

1. In the **SLA** tab of Web Admin, make sure **HelpDesk** is the selected **Project**.
2. Select **Service Agreements** . The Service Agreement list displays the service agreements that are defined for the HelpDesk project.
3. Click the **Add** button to create a new service agreement. The Add Service Agreement window is displayed.
4. In the **Agreement Name** field, type **Agreement with Marketing Department**.
5. In the **Agreement is with a** list, select **Department**.

*Service agreements can be with individual users, with a department or business unit, or with companies. The selection you make controls the contents of the **Agreement Customer** list.*

6. In the **Agreement Customer** list, select **Marketing**.
7. In the **Service Type** list, select **Software**.

If you created the Peripherals service type in the earlier exercise, it should be displayed in this list.

8. In the **Service Level** list, select **Gold** to specify the target times for responding to issues raised by users in Marketing.
9. Enter today's date in the **Agreement Start Date** field and enter the anniversary of today's date in the **Agreement End Date** field to create an agreement that lasts for one year. You can type the date in the format specified by your system locale, or click the appropriate **Calendar** button to select the date.

Your notes:

10 To configure Issue Tracker to send an automatic reminder that an agreement is due to expire:

   a In the **Point of Contact (Provider)** list, select **Jean Manager**.

   b Enter a **Review Date** that is one week before the **Agreement End Date** you specified.

   c Select the **Send the Point of Contact (Provider) a reminder** check box, and enter **28** in the **days before Review Date** field.

11 Issue Tracker automatically stores information on all issues covered by a service agreement and the number of missed targets. Select an entry in the **Reporting Period** list to specify the frequency with which you want Issue Tracker to compile reports for this agreement.

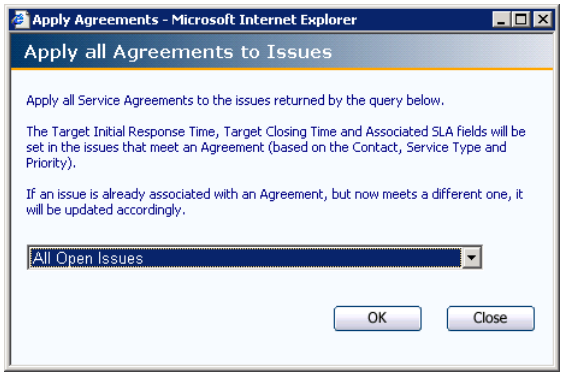
*You can view the reports for a service agreement by clicking the **Reports** button in Web Admin's **SLA** tab.*

12 Select the **Service Agreement is enabled** check box to enable the Service Agreement.

*You can suspend a service agreement at any time by selecting the agreement in the **SLA** tab, clicking **Edit**, then deselecting this option.*

13 Click **OK** to save your changes. The agreement is displayed in the Service Agreement list, and is automatically applied to all new **Software** issues raised by the Marketing department. To retrospectively apply the new service agreement to existing Marketing Software issues:

   a Select the new agreement in the Service Agreement list, and click **Apply**.



   b In the Apply all Agreements to Issues window, select **All Open Issues** and click **OK**.

14 When you have finished, close Web Admin.

Your notes:

Service Level Reporting

Vector Issue Tracker includes a set of service level reports to help you monitor and measure help desk performance against service level objectives,

Exercise: To view a service level report:

1. In Web Admin, click the SLA tab.
2. In the project list, click a project.
3. In the Service Agreements section, click Reports. (If the Reports button is disabled, click a service agreement.)
4. In the Service Agreement Reports dialog, click the report you want to view, and then click OK, or double-click the report.
5. In the toolbar of the Crystal Reports viewer, click to print the issue. Click to save the report as PDF, Word, or Excel.

Your notes:

Setting Up E-mail Integration

In addition to enabling users to submit issues through Web views, you can configure Issue Tracker to directly accept issues submitted by e-mail, as well as keep track of all e-mail conversations associated to the issue. This provides an easy-to-use interface with which most users are already familiar, and enables support staff to manage e-mail exchanges with users without having to spend time entering the details of conversations.

To configure your system to accept e-mail issues:

1. Open **Web Admin**
2. Log on as a user that belongs to the **Administrators** group.
3. In Web Admin, click the **E-mail** tab and click **Incoming Mail**.
4. Select the **Project** for which you want to enable e-mail integration.

The E-mail Integration Process

Configuring Issue Tracker to accept issues submitted by e-mail is a multi-stage process:

Click **Add a new Integration** to enter the details of an e-mail address you want to use to submit issues to the project and keep the e-mail exchanges. The **Add E-mail Integration Account** window is displayed.

For each e-mail address you want Issue Tracker to monitor, there are four main configuration steps that must be taken:

1. Specify the E-mail Integration Account details.

The information that will enable Issue Tracker to access the mailbox you wish to monitor for incoming mail.

2. Configure Mail Handling Rules.

These are the rules that govern how incoming e-mails are handled.

3. Map message fields to issue fields

Allows you to select the information you want to copy from e-mails to the associated issue.

4. Configure Default Values

This step is needed to provide values for the fields that cannot be populated from e-mail fields. Default values can be set globally, but they can also be overriden in each individual e-mail rule.

We will now look at these four steps in further detail.

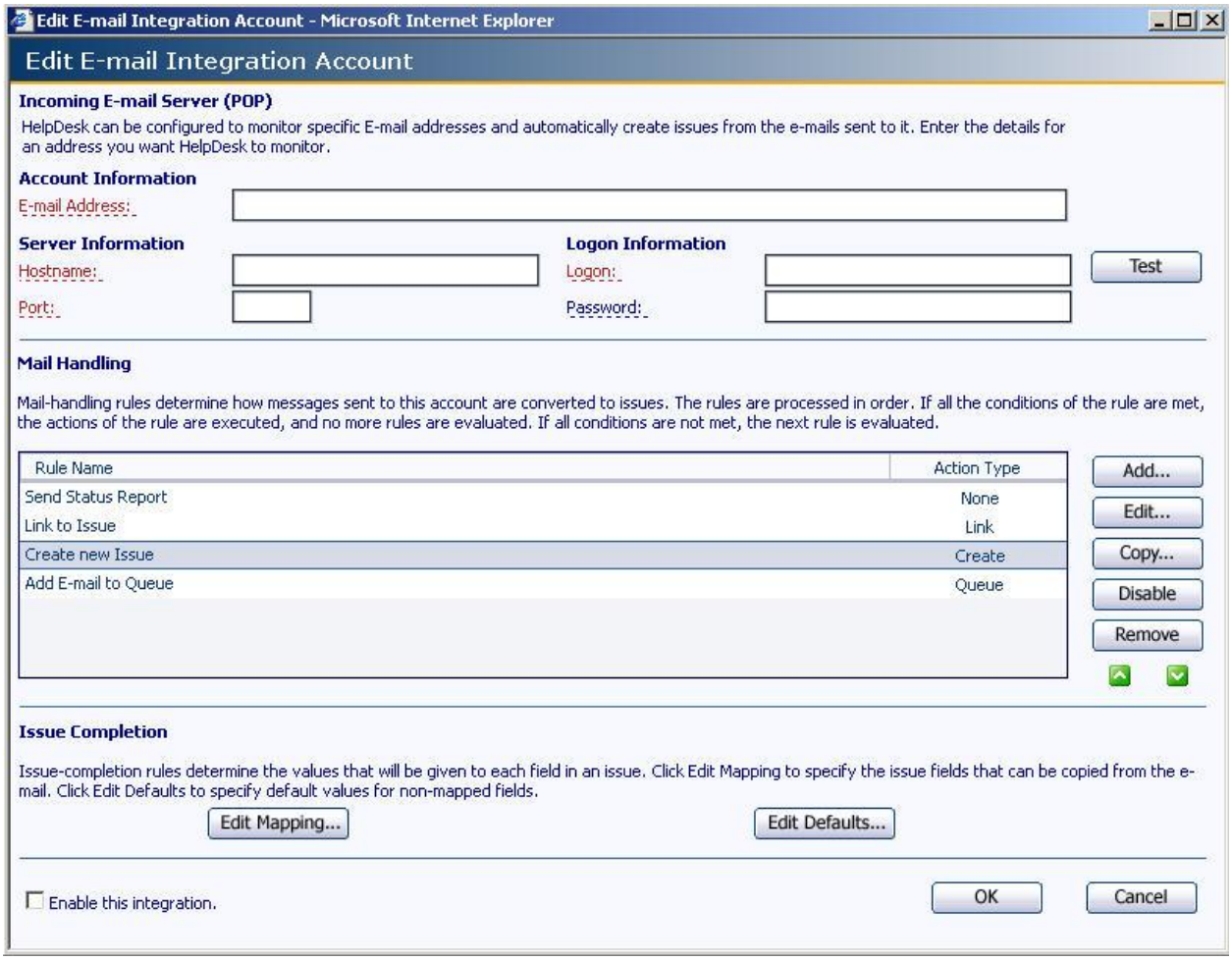
Your notes:

1. Specifying the E-mail Integration Account Details

Before Issue Tracker can convert e-mails to issues, you must specify the addresses that you want to use for submitting issues.

To specify the details of the e-mail account you want to integrate with Issue Tracker:

1. In the **Hostname** field, enter the name or IP address of the POP e-mail server that handles incoming e-mail.
2. In the **Port** field, enter the port through which the e-mail server communicates. By default, POP uses port 110.
3. Enter a **Logon** and a **Password** for the account that Issue Tracker will use to access the e-mail server.



Your notes:

2. Configure Mail Handling Rules

Mail handling rules determine how e-mails sent to the address specified in the **Incoming E-mail Server** section are processed.

When an e-mail is received, Issue Tracker compares the e-mail fields with the conditions specified in the first entry of the rules list. If the e-mail matches all conditions specified in the rule, Issue Tracker executes the specified actions, and then processes the next e-mail. If any of the conditions in the rule are not met, Issue Tracker tests the e-mail against the conditions specified in the next rule, until it reaches the end of the rule list.

There are three main types of Rule actions:

Create New Issue

When executed, this action will create a new issue in the Issue Tracker system. You have the opportunity to specify some rule-specific default values, which will allow you to override any global default values that have been specified. Default values will be covered in Step 4, *"Configure Default Values".*

Send to Queue

The Send to Queue action will simply send the e-mail that triggered it to the E-mail Queue.

It is recommended to place a rule that has an **Action Type** of **Queue** as the last rule in the list to cover the possibility that the e-mail does not meet the conditions of any rule in the list, in which case, the e-mail will be automatically added to the **E-mail Queue** for manual processing.

Link to Issue

Link to issue rules are used to link an e-mail to the **E-mail Conversation** of a particular issue.

When this action type is selected, it must be accompanied by the **E-mail contains number identifier of existing issue in field** condition.

Only one of the main actions can be chosen per rule. There are, however, a couple additional actions that can be executed in addition to the main actions:

Your notes:

Additional Actions

Send an e-mail

Allows you to pre-define an e-mail that should be sent when the rule is executed.

To send an automatic e-mail as an E-mail Integration Rule Action:

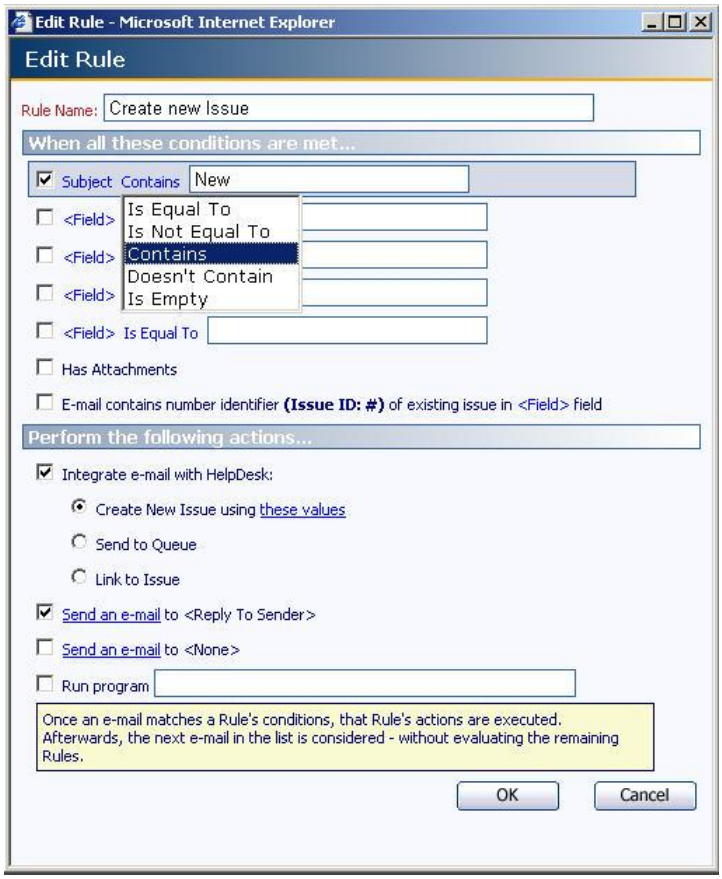
1. Log on to Web Admin.
2. Click the **E-mail** tab and the **Incoming Mail** section. Select a Project, and then load an E-mail Integration. Once in the Edit E-mail Integration screen, load a Mail Handling Rule, and select **Send an e-mail** as an Action.
3. Enter the e-mail information and click OK. This e-mail will be sent when the conditions of the Mail Handling Rule are met.

Tip: Automatic E-mail Integration Rule E-mail Actions are useful for providing information to the person who sent the e-mail. For example, e-mail actions can be configured to reply to the e-mail sender, potentially telling them the number of the issue their e-mail created. With that information, the sender can then follow up on the issue at a later time.

Run program

This action can be used to run a program when the rule is executed. You cannot run a program that requires user input.

Your notes:



Exercise: Create an e-mail rule

1. In the **Mail Handling** section, click the **Add** button. The **Add Rule** window is displayed.
2. Enter a **Rule Name**.

   Enter the conditions you want the rule to test for.

   For example, to test the *Body* of the e-mail for the word *problem*:
3. Enable the first empty condition by selecting its check box.
4. Click **<Field>** and select **Body**.
5. Click **Is Equal to** and select **Contains**.
6. Type *problem* in the entry field.
7. Next, enter the actions you want the system to perform when all the conditions are met.

Your notes:

For example, to configure the system to create an issue and send a reply to the person who sent the e-mail:

A. Select the **Integrate e-mail with Issue Tracker** check box.

B. Select the **Create New Issue using these values** radio button.

*By default, Issue Tracker completes the issue using the field mappings defined in the **Issue Completion** section of the **Edit E-mail Integration Account** window. To override these mappings for this rule only, click **these values**. For more information, see the next E-mail Integration configuration steps, "Map Message Fields to Issue Fields", and "Configure Default Values".*

C. Select the first **Send an e-mail to** checkbox.

D. Click on the **Send an e-mail** link.

E. When the e-mail editor appears, confirm that the fields are set as follows:

To: <Reply to Sender>

Cc: <Reply to CC>

From: <Integration E-mail>

F. Enter the following message in the body:

Thanks for contacting support.

Your e-mail has been assigned to issue <Issue Number>.

G. Click **OK** in the e-mail editor to save the **Send E-mail action.**

8 Click **OK** to save the rule. The rule is added to the bottom of the mail-handling list. Ensure the rule type is "Create".

9 Select the rule and click the **Up** and **Down** arrows to specify the processing order for the rule.

In most systems, the first rule checks whether an e-mail refers to an existing issue to avoid the possibility of creating duplicate issues. The easiest way to create this rule is to specify a condition that checks whether the e-mail contains a reference to an existing issue. If there is no match, only then should the system go on to check whether the e-mail contains details of a new issue.

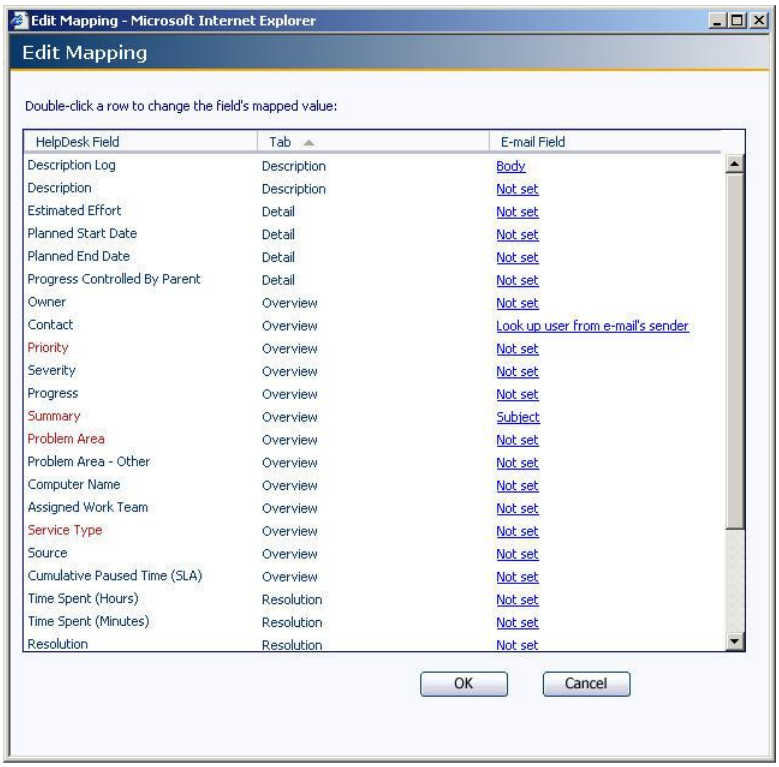
Your notes:

3. Map Message Fields to Issue Fields

When an e-mail is sent to a monitored address, Issue Tracker generates an issue and copies information from the e-mail to specified issue fields. Issue Tracker automatically creates a default mapping between the e-mail fields and specified issue fields when you integrate an account. For example, the *body* of the e-mail is copied to the issue's *Description* field. However, you can change the fields that the e-mail information is copied to using the **Edit Mapping** button.

To view the field mappings for the specified account:

- Click the **Edit Mapping** button. The **Edit Mapping** window lists the fields in your selected project, with mandatory fields shown in red.



To map an e-mail field to a project field:

- Double-click the row of the project field you wish to map. The **Edit Mapping Field** window is displayed.
- In the **Edit Mapping Field** window, select the E-mail Field you want to map to the selected project field, and click the OK button.

Your notes:

To undo a field mapping:

- In the **Edit Mapping** window, double-click the mapping you want to cancel.
- In the **Edit Mapping** Field window, deselect the **Assign value to this field** check box and click the OK button.

Click the **OK** button to save your changes, and close the **Edit Mapping** window.

In addition to the usual E-mail Fields, a special field called **Lookup user from e-mail's sender** is included. If a project field is mapped to this field, the system will use the incoming e-mail's **From** address in an attempt to find an existing Issue Tracker user or contact who matches the credentials. If a user is found, that user will be associated with the e-mail. Otherwise, a contact may be created automatically if the option **Create a contact based on the "from" address** in the Default Values is set.

For example, a typical mapping could be like this:

E-mail Field	Vector Issue Tracker Field
Subject	Summary
Body	Description Log
From	Instead of mapping From to a Vector Issue Tracker field, you can use the <Look up User from sender's e-mail> macro to fill in the field with Vector user ID.
To	Contact (this would allow you to search for issues submitted by e-mail)

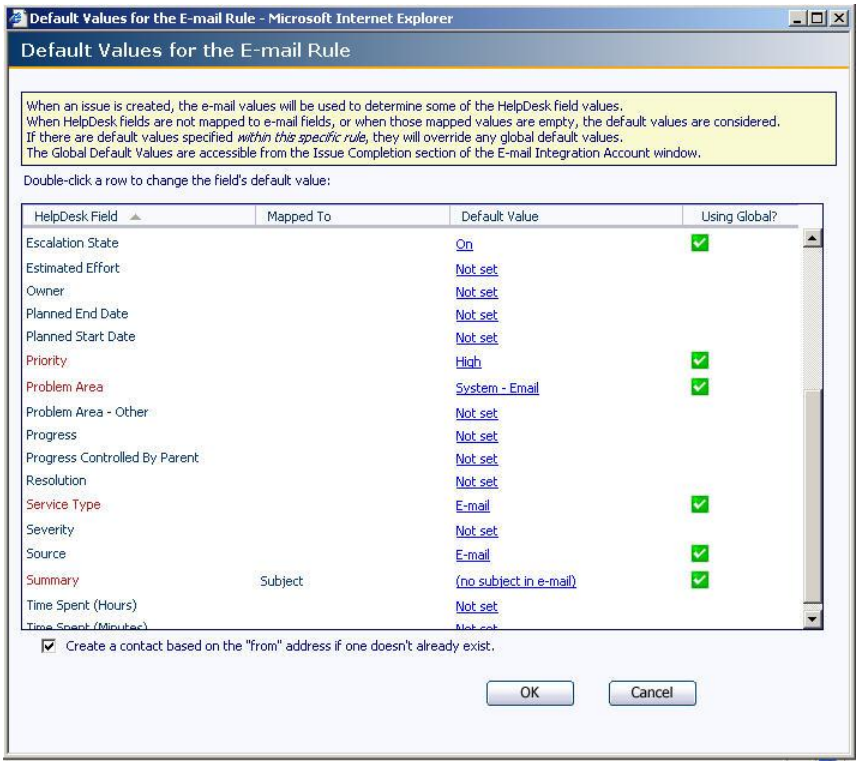
Your notes:

4. Configure Default Values

While the Edit Mapping window will allow associating e-mail fields to Issue Tracker project fields, it is possible to define a separate set of values that will be applied along with the imported e-mail fields. When Issue Tracker fields are not mapped to e-mail fields, or when those mapped values are empty, the default values are considered. There are two different types of Default Values:

- **Global Default Values** are set in the **Issue Completion** section of the **E-mail Integration Account** window.
- **Rule Default Values** can be set within any specific Rule that has **Create** as an **Action Type**, and if specified, they can override the **Global Default Values**.

For example, you could have a **Global Default Value** that sets the Issue Tracker field *Priority* to *Medium*. This may be acceptable in the majority of cases, but for the sake of this example, let's say a Rule is created to treat e-mails sent from the CEO to the Issue Tracker system. In this case, you may want the issue *Priority* to be set to *High*, instead of *Medium*, but still use all other existing **Global Default Values**. By using the **Rule Default Values**, special cases like the one just described are possible.



Your notes:

If you mapped **Lookup user from e-mail's sender** to any Issue Tracker field in the **Edit Mapping** window, selecting the **Create a contact based on the "from" address if one doesn't already exist** checkbox will enable the auto-creation of contacts when no match is found in the system. (See Step 3, "Map Message Fields to Issue Fields".**)**

Exercise: Editing the Global Default Values

1. Click the Windows **Start** button, and select **Programs**, **Vector**, **Issue Tracker**, **Issue Tracker Web Admin**.
2. Log on as **admin** (password = **admin**).
3. Click the **E-mail** tab.
4. In the **Projects** dropdown box, select **HelpDesk**.
5. Click **Add a new Integration**.
6. Fill in the required fields in the **Account Information** and **Server Information** sections. Afterwards, use the **Test** button to make sure everything works.
7. In the **Issue Completion** section, click **Edit Defaults**.
8. Locate the **Summary** field, and consult the following note:
   - Notice how the **Mapped to** column says *Subject*. What this means is that an e-mail field is mapped to this Issue Tracker field. In this case, the e-mail subject will be used to populate the **Summary** – should this e-mail be used to create an issue. In addition, when we look at the **Default Value** column, we see it is set to *(no subject in e-mail)*. This value will be used to populate the **Summary** field, if the cases where the e-mail subject is blank.
9. Locate the **Severity** field.
10. Click the **Not set** link that accompanies the **Severity** field. You can also just double-click the row.
11. Ensure the **Assign a value to this field** checkbox is selected.
12. In the **Default Value** dropdown, select: *Medium*
13. Click **OK**.
14. Click **OK** to save the Global Default Values**.**
15. Select the **Enable this integration** checkbox.
16. Click **OK** to save the E-mail Integration Account.

Now, to test what we've just changed, try sending an e-mail to the integration e-mail address. Leave the subject blank so we can test that default value mechanism while we're at it. We want the e-mail to end up in the e-mail queue. Once it arrives in the E-mail Queue, select the e-mail, and click Create Issue.

Your notes:

The resulting issue should have a summary that says *(no subject in e-mail)*, and the Severity field should say *Medium*.

Exercise: Setting Rule-specific Default Values

The **Global Default Values** exercise must be completed prior to this one.

1. Click the Windows **Start** button, and select **Programs**, **Vector**, **Issue Tracker**, **Issue Tracker Web Admin**.
2. Log on as **admin** (password = **admin**).
3. Click the **E-mail** tab.
4. In the **Projects** dropdown box, select **HelpDesk**.
5. Select the integration you created in the **Editing the Global Default Values** exercise**.**
6. Click the **Edit the selected Integration** button.
7. In the **Mail Handling** section, select the **Create new Issue** rule.
8. Click the **Edit...** button to edit the rule. You can also double-click the rule to edit it.
9. Notice how the rule is configured:
   - The **When all these conditions are met** section has one condition:
     - Subject contains *New*
   - The **Perform the following actions** section has two actions:
     - Integration e-mail with Issue Tracker – *Create New Issue using these rules*.
     - Send an e-mail to <*Reply to Sender*>

   To trigger this rule, the e-mail simply needs to have *New* in the subject. Once triggered, it will create an issue using the e-mail, and send a message to the sender.
10. Click on the **these values** link, which is found listed with the **Create new Issue using these values** action.
11. A window called Default Values for the E-mail Rule opens. At the top of this window is a note. Read it carefully:

    When an issue is created, the e-mail values will be used to determine some of the Issue Tracker field values. When Issue Tracker fields are not mapped to e-mail fields, or when those mapped values are empty, the default values are considered. If there are default values specified within this specific rule, they will override any global default values. The Global Default Values

Your notes:

are accessible from the Issue Completion section of the E-mail Integration Account window.

This window goes one step further than the global defaults window. Not only does it show you the mapping (via the **Mapped To** column), but it shows you both global and rule-specific defaults.

12 Locate the *Priority* field in this window.

You'll notice that it has a default value in the **Default Value** column, and this value is *High*. You'll also notice that the **Using Global?** field has a green checkmark for this row. This means the value *High* is actually a global default value, not a rule-specific default value.

13 Click the **High** link on the *Priority* row, or double-click the row.

14 In the **Default Value** dropdown, select *Medium*.

15 Click **OK**.

16 Notice how the row no longer has a green checkmark in the **Using Global?** column. This is because we just set a default value that is going to be used only for this rule.

To set it to use the global default value as before, simply repeat step 13, and uncheck the **Assign a value to this field to override the global default value** checkbox.

17 Click **OK** in the **Default values for the E-mail Rule** dialog.

18 Click **OK** in the **Edit Rule** dialog to save your changes.

We've finished configuring the *Create New Issue* rule. Next, we're going to create a new *Create New Issue VIP* rule, which will have an extra condition that checks for the presence of a VIP address in the e-mail From field. If the *Create New Issue VIP* rule is executed, we want to make sure the Priority is set to *Highest*, not *Medium*.

19 Select the **Create New Issue** rule you just saved.

20 Click **Copy**.

21 In the **Copy Rule** dialog, enter: *Create New Issue VIP*

22 Select the *Create New Issue VIP* rule.

23 Click **Edit**.

24 Click on the **<Field>** link right after the **Subject** link, and select *From*. In other words, use a condition row that is currently not being used.

25 In the textbox, write a valid e-mail that you can send e-mails from. Click on the checkbox to the left of the row to activate the condition.

Your notes:

26 Click on the **these values** link, which is found listed with the **Create new Issue using these values** action.

27 Click the **Medium** link on the *Priority* row, or double-click the row.

28 In the **Default Value** dropdown, select *Highest.*

29 Click **OK**.

30 Click **OK** in the **Default values for the E-mail Rule** dialog.

31 Click **OK** in the **Edit Rule** dialog to save your changes.

We've finished configuring the *Create New Issue VIP* rule; however, we still need to place it properly in the Mail Handling sequence.

32 In the **Mail Handling** rule list, use the arrow buttons   to make sure the *Create New Issue VIP* rule is right above the *Create New Issue* rule.

The *Create New Issue VIP* rule is placed above *the Create New Issue* rule because it has more conditions.

If the *Create New Issue* rule were to be placed above the *Create New Issue VIP* rule, the *Create New Issue VIP* rule would never be executed. This is because the original *Create New Issue* rule will execute when it sees *New* in the subject, and once it executes, no other rules are considered. To get around this, we can place the rule with the most conditions first, in this case, *Create New Issue VIP*.

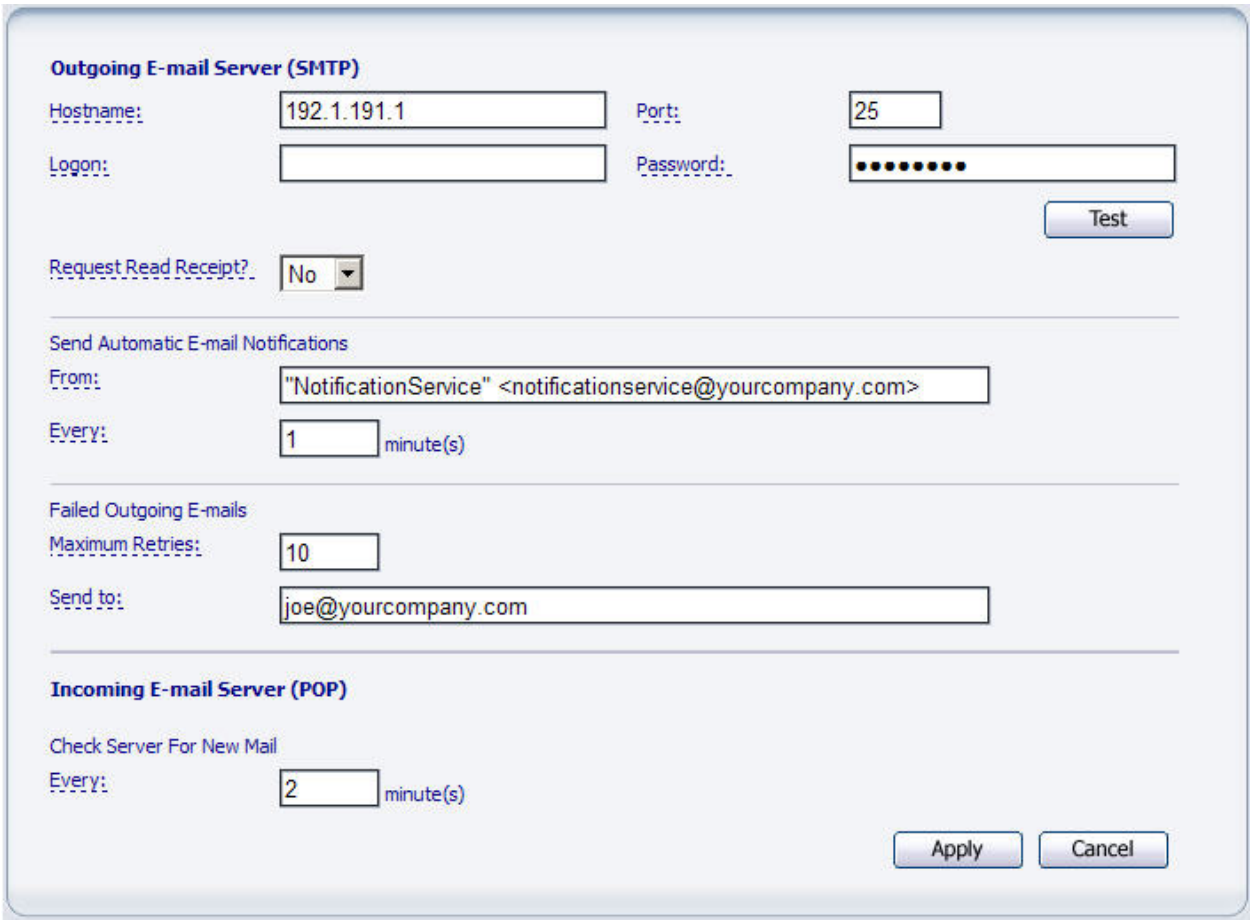
33 Click **OK** to save the changes to the e-mail integration account.

Now we test the changes. You'll notice that if you send the e-mail from the VIP address, the resulting issue will be created with a *Priority* of *Highest*, rather than *Medium*.

Your notes:

Mail Settings

In order for the E-mail Integration to process incoming and outgoing e-mails, several Mail Settings must be configured in Issue Tracker.



Your notes:

To configure the Mail Settings:

1. Log on to Web Admin. Click the **E-mail** tab and the **Mail Settings** section.
2. Fill in the Outgoing E-mail Settings. These settings are used when sending e-mails.
3. Click **Test** to ensure Issue Tracker is able to connect to the SMTP server using the settings you provided.

Option	Description
Hostname	The hostname or IP address of the SMTP server. For example: smtp.mycompany.com
Port	The port through which the SMTP server communicates. The default SMTP server port is 25.
Logon	The logon account used to gain access to the SMTP server. Use this only if your SMTP server requires authentication.
Password	The password for logging into the SMTP server. Use this only if your SMTP server requires authentication.
Request Read Receipt	Read receipts will appear in the conversation, confirming that the recipient has read the message. Note, however, that some recipients may choose to never send read receipts.
Send Automatic E-mail Notifications From	Name of the sender for SMTP e-mail. Some SMTP mail servers require the sender to be a valid e-mail address. Supported Formats: "Notification Service" <notificationservice@yourcompany.com> , notificationservice@yourcompany.com
Send Automatic E-mail Notifications Every	Send e-mail notifications at the specified interval (in minutes).
Maximum Retries	The maximum number of retries for e-mail notifications. Once surpassed, the e-mail will be sent to the address specified in the Send Failed Outgoing E-mails To.
Send Failed Outgoing E-mails To	If the Maximum Retries is surpassed, the e-mail will be sent to this address. If there is no address specified, the e-mail service will continue trying to send to the original recipient.

Fill in the **Incoming E-mail Settings**. These settings are used when receiving e-mails, together with the **Account**, **Server** and **Logon Information** specified in the defined Mail Integrations.

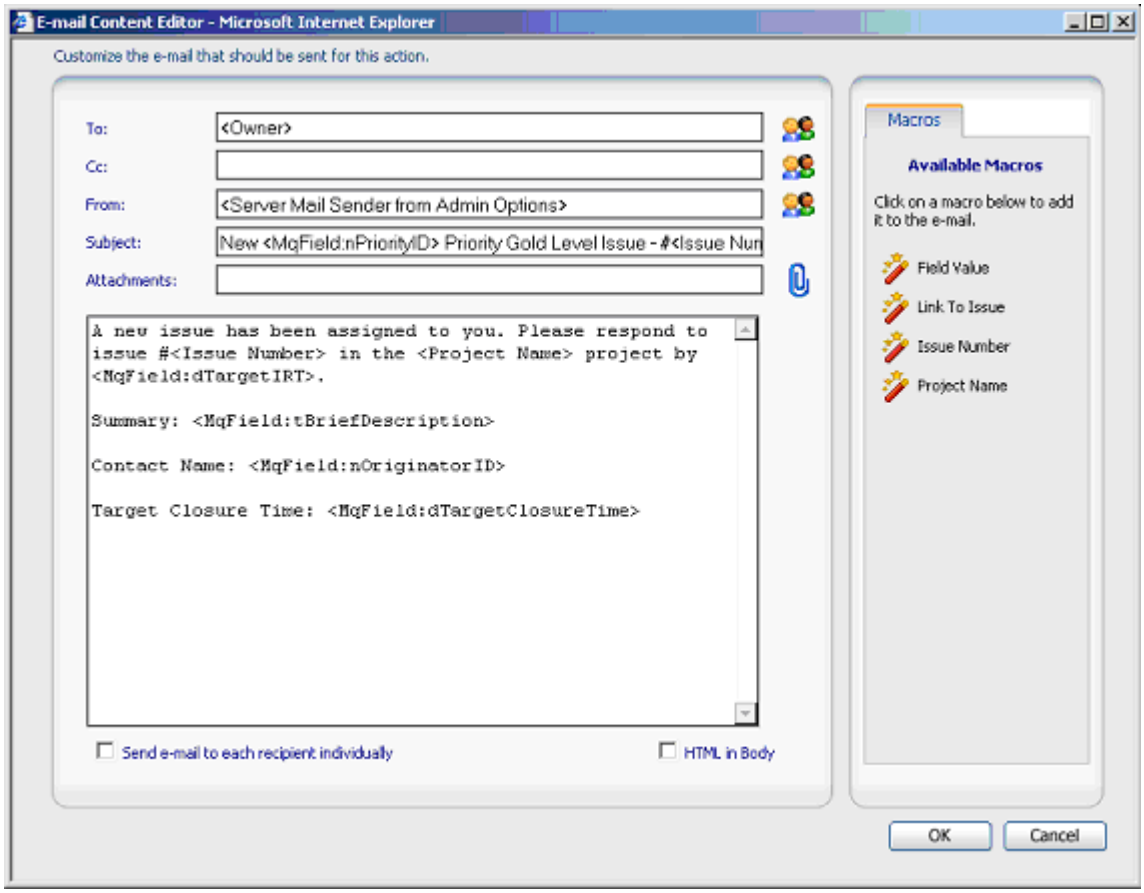
Option	Description
Check Server For New Mail Every	Check for new incoming e-mails at the specified interval (in minutes).

Your notes:

Working with E-mail Integration

Using the E-mail Editor

The E-mail Editor allows you and your users to create and send e-mail messages from the Web view. You can also configure e-mail to be sent automatically from SLA or E-mail Integration (for example, when Issue Tracker creates a new issue from an incoming e-mail, or when an SLA rule changes the Owner of an issue).



Your notes:

Sending E-mails

Editing the To, CC, and From Fields

You can specify users by either looking up users and contacts in Issue Tracker, using **macros** or typing in the e-mail address directly.

To lookup users and contacts in Issue Tracker, beside the To, CC, or From box, click 

In the Select Users and Contacts dialog box, double-click the users and contacts you want to add.

The list of selected users and contacts is displayed under **Selected Users and Contacts**. You can edit this string of text, for example, to remove a user, or to add the e-mail address of a person who is not a user or contact.

Notes

The text box beside the Find button allows you to display all users and contacts whose names start with the same letters. In the text box, type the first few letters of the name and then click Find.

To display the complete list of users and contacts again, delete all text from the box and then click Find.

Click Advanced to search for all users and contacts whose names contain the same string, or to search based on e-mail addresses.

If you would like to send separate e-mails to several recipients, select the Send e-mail to each recipient individually checkbox. If you have recipients entered in the CC field, you will not be able to send individual e-mails.

Editing E-mail Content

You can type in any text you want, and you can use **macros** to insert the issue number, the name of the project, and the values of different fields (such as the Summary and Description Log). These macros are covered in the next section, “E-mail Macros”.

If you prefer your e-mail body to be in HTML format, click the **HTML in Body** checkbox.

Attaching Files

Beside the Attachments box, click  .

In the E-mail Content Attachments dialog, click Browse and locate the file you want to attach. Click Upload or Link.

This adds the file to the list of files attached to this e-mail message. Every time the e-mail message is sent, the files are attached to the message.

Your notes:

E-mail Macros

Macros are available when you use the E-mail Editor in the Web views and Web Admin.

Macros resolve values for information related to the issue so you don't have to look it up manually.

Macro	Available In Fields	Description
<Contact>	To, CC, From	The person who is entered in the Contact field in the issue. This is usually the person who reported the issue.
<Owner>	To, CC, From	The person who is entered in the Owner field in the issue.
<Previous Owner>	To, CC, From	The person who was entered in the Owner field in the issue before it was reassigned to a new Issue Tracker user.
<Submitter>	To, CC, From	The person who is entered in the Submitter field in the issue. This is the person who entered the issue in Issue Tracker.
<Work Team Members>	To, CC	The people who belong to the work group that is entered in the Assigned Work Team field in the issue.
<Reply To Sender>	To	The person who sent the e-mail. This only applies when replying to an e-mail through the Conversation or Queue or from the E-mail Integration Actions.
<Reply To CC>	CC	The people who were CCed on the e-mail that was sent. This only applies when replying to an e-mail through the Conversation or Queue or from the E-mail Integration Actions.
<Integration E-mail>	From	The e-mail address specified for the E-mail Integration Account.
<Server Mail Sender From Admin Options>	From	The e-mail address specified in the Mail Settings for who to Send Automatic E-mails Notifications From.
Field Value	Subject, Body	The value of a field in the issue.
Issue Number	Subject, Body	The number of the issue.
Project Name	Subject, Body	The name of the project the issue is in.

Your notes:

Link To Issue	Body	Generates a URL that you can include in the e-mail to allow people who have access to the Web views to log in to a specific view and automatically load the issue you specified.

To use a macro:

Position your cursor in the e-mail where you would like the resolved macro to be inserted.

Click on the **Macros** tab.

Click on the macro you would like to insert. In the Web views, the macro will be resolved to the current value. In templates and in Web Admin, the macro will remain unresolved so that it can be resolved when the automatic e-mail is sent or when the template is applied to an e-mail.

Exercise: Using the "Link to Issue" Macro.

1. Click the Windows **Start** button, and select **Programs**, **Vector**, **Issue Tracker**, **Issue Tracker Web**.
2. Log on as **admin** (password = **admin**).
3. Load the *HelpDesk* view.
4. Load any issue.
5. Click the **E-mail Conversation** button.
6. Click on the **New Mail** button.
7. In the E-mail Editor, click the **Macros** tab on the right.
8. Click in the Body field so that you see the mouse cursor.
9. Click the **Link to Issue** macro from the **Available Macros** menu.
10. In the **Web View** dropdown, select *HelpDesk/HelpDesk*.
11. In the **Query** dropdown, select *All Issues*.
12. Click **OK** to close the window.

The "Link to Issue" link appears in the e-mail body. You can now send the e-mail, and when the recipient gets that link, they can use it to load the HelpDesk view, and it will automatically load the issue you selected in **Step 4**, with the query you specified. You can try it now by copying this link, and pasting it in a new browser window.

Your notes:

E-mail Templates

Templates are available when you use the E-mail Editor in the Web views.

Use templates to store reusable e-mail content so that your users can quickly create e-mails when standard responses are required. A template can contain Subject, Body and Attachment information.

To create a template:

All users who have access to the Web View – Manage E-mail Templates can create and edit templates.

To create a template, open the E-mail Editor to create a new e-mail. Click the **Templates** tab and click **Add a new template**.

By default, the new template is filled in with any subject, attachment and body text that was entered in the e-mail you added the template from.

Enter a **Name** for the template, as well as any subject, attachment or body text that you want in the template.

Click OK, and your new template will be available in the Templates list for all users who have the feature Web View – Manage E-mail Templates.

To use a template:

All users who have access to the Web View – Manage E-mail Templates can use templates.

To use a template, open the E-mail Editor to create a new e-mail. Click the **Templates** tab and select the template you want to use. Click **Apply** the selected template.

Exercise: Creating a Template

1. Log into an e-mail integration enabled Web view:

   The user you are logging in with will need to have access to the "Manage E-mail Templates" feature.
2. Open the **E-mail Conversation** of an issue of your choice.
3. Click **New e-mail**.
4. In the **Templates** tab on the right, click **Add a new template.**
5. Enter the following values:

   Template Name: *Issue Info*

Your notes:

Subject: *Your Issue Information*

6 Select the **HTML in Body** checkbox.

7 Using the macros tab on the right, author the e-mail template body so that it will produce output similar to this example:

Your issue, with the number is 32, has the priority Medium, and it is entered in the project HelpDesk.

8 Click **OK** to save the template.

9 Back in the E-mail Editor, double-click template you just created.

The template should be automatically applied to the body, with all macros correctly resolved to the current issue's values.

Tip: If the e-mail body is plain text, the template will be inserted as plain text, even though it was authored in HTML mode. The opposite also works.

Your notes:

E-mail Conversation and Queue

E-mail integration brings the ability to view support-related and other e-mails directly from the Web views. The E-mail **Conversation** and **Queue** are where you can **view and manipulate** these integrated e-mails.

The E-mail Conversation

The E-mail Conversation is where you can access all the e-mails related to a specific issue.

To access an issue's E-mail Conversation:

1. Log on to the Web view where the issue can be found.
2. Find the issue using the **search** feature.
3. Select the issue from the summary list.
4. Click 

in the toolbar.

The E-mail Queue

The E-mail Queue is where you can access and process all the e-mails pending assessment from a help desk analyst. These e-mails have not been associated to any existing issue.

To access the E-mail Queue:

1. Log on to a Web view of the desired Project. (Each Project has its own E-mail Queue.)
2. Click 

in the toolbar.

Processing E-mails in the Web View

The E-mail Conversation and Queue are where integrated e-mails can be processed, in the Web view. There, you can:

- Send a new e-mail.
- Reply to an e-mail.
- Forward an e-mail.
- Link an e-mail to an existing issue.
- Create a new issue from an e-mail.

Your notes:

Sending New E-mails

E-mails are created and sent using the **e-mail editor**.

You might be interested, for example, in sending an e-mail and keep a copy in an issue's E-mail Conversation and **Activity Log**.

New e-mails' fields will be completely blank with the exception of the From address which is determined by your **E-mail Options**, and the Subject which, for the Conversation only, is pre-filled with the respective issue number.

To send a new e-mail from an E-mail Conversation or the E-mail Queue, click New Mail....

Exercise: Send an e-mail containing information about the current issue

3 Log on to a Web view.

4 Load an issue and click on the  button.

The E-mail Editor will open, with the default "Current Issue" **Template** applied. You can add the value of additional fields using the Field Value **Macro**.

5 Click the Send button.

This e-mail will be added to the issue's Conversation if the **Save to Conversation** checkbox is selected.

Replying to E-mails

E-mail replies are created and sent using the **e-mail editor.**

You might be interested, for example, in requesting more information from a customer after receiving a support e-mail.

E-mail replies are pre-filled with the original e-mail's content, and the From address is determined either by the original e-mail's **Integration Account's** (see Setting up E-mail Integration) e-mail address, or by your **E-mail Options** if the original e-mail didn't come from E-mail Integration.

To reply to an e-mail from an E-mail Conversation or the E-mail Queue, click Reply... or Reply All..., depending whether you want to reply only to the sender or to all the original recipients as well.

Note: see Sending E-mails From Web views to see how an E-mail Conversation reply can automatically update the respective issue's Actual Initial Response Date and Time.

Your notes:

Forwarding E-mails

Forwarded e-mails are created and sent using the **e-mail editor.**

You might be interested, for example, in sending a copy of a customer e-mail to a colleague for second-line support.

Forwarded e-mails are pre-filled with the original e-mail's content with the exception of the To recipient which is left blank. The From address is determined by your E-mail Options.

To forward an e-mail from an E-mail Conversation or the E-mail Queue, click 

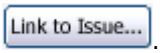
.

Service Level Agreements (SLA) and E-mails:

If the issue has an SLA agreement associated with it, the first time you send an e-mail from Issue Tracker to the **Contact** of the issue, the **Actual Initial Response Date** and **Actual Initial Response Time** fields in the issue will automatically be set to the date and time when the e-mail is sent (if they aren't set already).

Linking an E-mail to an Existing Issue

Whether an e-mail is already in an issue's E-mail Conversation or still in the E-mail Queue, you might find out it is related to some (other) existing issue.

To link an e-mail to an issue, from an E-mail Conversation or the E-mail Queue, click 

.

After the e-mail is linked to this new issue, it can be found in the issue's E-mail Conversation. The e-mail itself is actually moved to the new issue's Conversation, not copied. The old issue will still have an Activity Log entry for the e-mail, even though it is no longer associated.

Creating a New Issue From an E-mail

Whether an e-mail is already in an issue's E-mail Conversation or still in the E-mail Queue, you might decide a new issue needs to be created with regards to the information found in it.

To create a new issue from an e-mail in an E-mail Conversation or the E-mail Queue, click 

.

After the issue is created, you will receive a message stating the new issue's number, and the e-mail will now be in this issue's E-mail Conversation. The e-mail used to create the issue is actually moved to the new issue's Conversation, not copied. The Activity Log will also have an entry for this e-mail.

Your notes:

Web View E-mail Options

The Web view E-mail Options affect all e-mails created from the Web views, be it from the E-mail toolbar button, an issue's **E-mail Conversation or the E-mail Queue**.

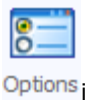
Two options are available to Web view users regarding e-mails:

- The **From address** to be used when composing e-mails.
- The requesting of **read receipts**.

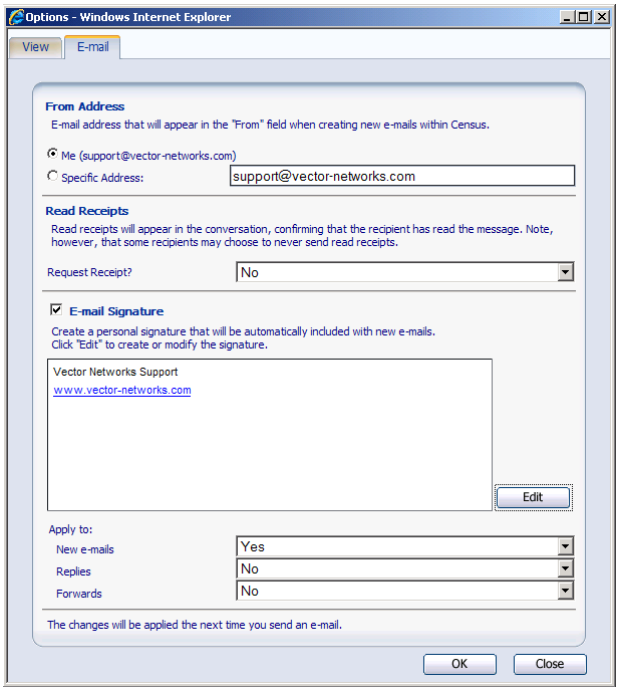
By default, every user's E-mail Options are:

- From Address: their own e-mail address.
- Read Receipts: requested.

To change your E-mail Options:

1. Log on to a Web view.
2. Click 

in the toolbar.
3. Click the E-mail tab to open it.
4. Perform the desired changes and click OK.



Your notes:

The “From Address” E-mail Option

You have the option to use the e-mail address of your Issue Tracker user account or any other e-mail address, when sending e-mails from Web views.

No matter what this option is set to, replies to e-mails coming from an **E-mail Integration Account** will always have the respective account’s e-mail address as their From address.

The “Read Receipts” E-mail Option

You have the option to request a read receipt for all the e-mails you send from any Web view.

Depending on the From address of your e-mails and the **E-mail Integration** configuration, these read receipts can be processed automatically by the E-mail Integration feature.

Note that read receipts can be recognized by their subjects starting with “Read:”.

The “E-mail Signature” E-mail Option

Issue Tracker allows each user to define an e-mail signature which can be automatically applied whenever the e-mail editor is used. It is also possible to control when you want to have the signature automatically applied… specifically, you can enable or disable the signature when:

- Composing a new –email
- Replying to an e-mail
- Forwarding an e-mail

You can also decide whether you want an HTML signature, or a plain text signature. If you’re replying to a plain text e-mail, and your signature was created in HTML mode, Issue Tracker will automatically convert your signature to plain text before it adds it to the e-mail editor. The opposite is also true.

Your notes:

Exercise: Create an e-mail signature

1. Select the **E-mail Signature** checkbox.
2. Click the **Edit** button.
3. In the Edit Signature dialog, enter the following:

   Jean Manager

   HelpDesk Analyst
4. Press **OK** to save the signature.
5. In the **Apply to New E-mails** field, select *Yes*.
6. In the **Apply to Replies** field, select *Yes*.
7. In the **Apply to Forwards** field, select *No*.
8. Click **OK** to save the options.

Finally, test the signature. Trying composing new e-mails, replying, and forwarding existing e-mails. The signature should be applied when you author new e-mails, or when you reply – not when you forward.

Your notes:

The CustomizedFiles Folder

Customizing Web View Files

To customize specific Web views without editing the generated files, you put your customized files in a special **CustomizedFiles** folder. Each time you generate the view, the Web View Editor copies your customized files from the **CustomizedFiles** folder into the view.

The basic steps to customizing Web view files are:

1. In the "<IssueTrackerServer>\CensusWeb**"** folder, create a *CustomizedFiles* folder.

   <IssueTrackerServer> represents the folder where your Issue Tracker Server is installed. Usually, this is C:\Program Files\Vector\IssueTrackerServer.

2. In the *CustomizedFiles* folder, create a folder structure to hold the customized files.

3. Copy the files you want to customize from the view into the *CustomizedFiles* folder, respecting the folder structure of the folders that are being customized.

4. Customize the files and generate the view.

To better understand these steps, we must first understand the architecture of the *CustomizedFiles* folder.

Customized Files Folder Architecture

Directly below the *CustomizedFiles* folder, folders can be created that:

- represent a project, or all projects.

  Example: "MyProject"

- represent a virtual directory

  Example: `http://server/vit` (In this case, "vit" is the virtual directory)

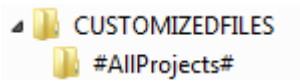
Your notes:

Customizing Projects

You have two options when adding folders to customize a project. You can either apply a customization to a specific project, or to all projects.

Customizing All Projects

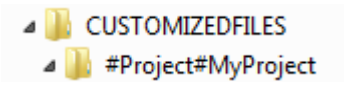
To add customized files that will be used in all projects, create a folder called "#AllProjects#" in the *CustomizedFiles* folder.



Anything you place in that folder will affect all projects, across all virtual directories. For example, you could place a customized "logon.asp" in that folder, and when the views are regenerated, it will overwrite the non-customized version in "C:\Program Files\Vector\IssueTrackerServer\CensusWeb\Views\CensusWebVD".

Customizing a Specific Project

To add customized files that will be used in a specific project only, create a folder using this format: #Project#<project>, where <project> is replaced by the name of the project you wish to customize:



This, by itself, isn't very useful – but it allows much flexibility when we start thinking about customizing the Web views within that project.

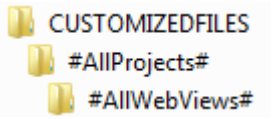
Customizing Web Views

Once we have a project folder in *CustomizedFiles*, we have the option of adding a Web view folder – this is where the true power lies.

The folder naming is similar to the projects folders: #AllWebViews# targets all web views, and #WebView#<project>_<webview> targets a specific web view.

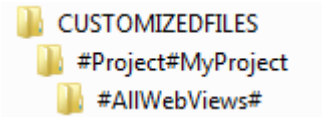
Here are some examples that illustrate how to combine both the "Project" and "Web view" folders to customize Issue Tracker:

- *To customize files for all Web views of all projects*, create this folder structure:

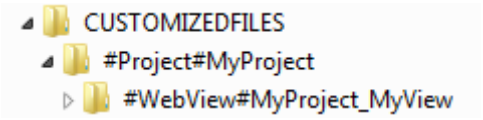


Your notes:

- *To customize files for all Web views of a specific project*, create a folder structure like this:



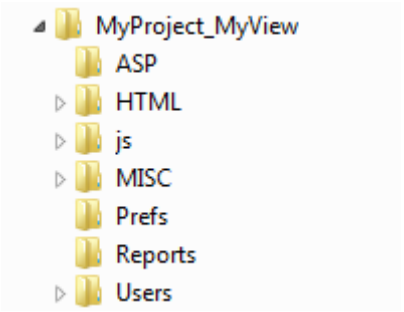
- *To customize files for a specific Web view of a specific project*, create a folder structure like this:



Structuring the Contents

Once you have the folder structure set up, it is time to place the files that you wish to customize. The contents of the *CustomizedFiles* folders must respect the structure of the folders they are customizing.

For example, if you want to customize all web views which belong to the project “MyProject”, you’d first have to determine which files you want to customize, and where they are placed. Here’s a typical Web view’s folder structure:



Now, suppose we wanted to customize two files:

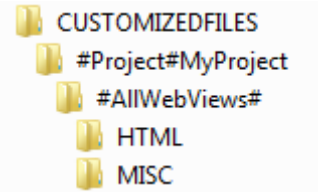
TmplTopToolbar.html (from the HTML folder)

Start.rec (from the MISC folder)

Also, suppose we wanted to do this for all web views in the “MyProject” project.

To achieve this, all we have to do is follow the same folder structure as the Web view folder, and reflect it in the *CustomizedFiles* folder:

Your notes:



We only need to create the folders that will contain customized files. Once the folders are there, the files must also be placed in their proper locations. From looking at the actual Web view folder earlier, we know that "TmplTopToolbar.htm" goes in the HTML folder, and "Start.rec" goes in the MISC folder.

The same approach works with the Project and Virtual Directory folders – except in those cases, you must respect the folder structure of the CensusWebVD directory (By default: C:\Program Files\Vector\ IssueTrackerServer\CensusWeb\Views\CensusWebVD).

Customizing Virtual Directories

You can also customize the files that are shared by Web views accessed through the same URL. These are the files found in the "CensusWebVD" folder, such as "logon. asp".

- **To customize the files in "CensusWebVD" for all Web views:**

  Put the files in the folder

  CustomizedFiles\#AllProjects#

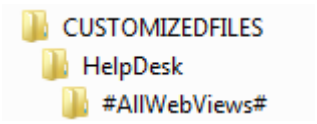
  -or-

  CustomizedFiles\<virtual directory>

  …where <virtual directory> is the name of the virtual directory.

- **To customize files for all Web views accessed through a given URL**:

  Create a folder structure like this:



  In this example, "Vit" is the last part of the URL used to connect to Issue Tracker. By default, this URL is in the form `http://server/vit`, where "server" is the name of the server where Issue Tracker is installed. The "vit" part of that URL is known as a Virtual Directory.

Your notes:

Use this approach if you generate Web views outside the IssueTrackerServer folder.

NOTE: Customizations placed in the virtual directory folder will override any other project customizations that are within the same virtual directory. Even project-specific folders like #Project#HelpDesk are overriden when the virtual directory folder is used.

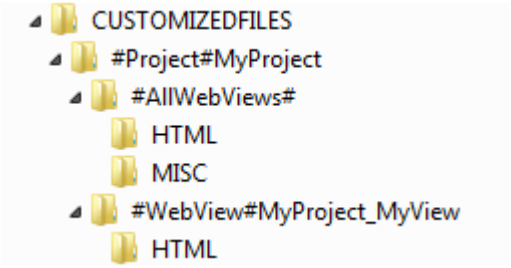
Overriding Customizations

It is also possible to apply customized files to all web views, and still override these files in specific web views. To do this, a folder must be created with a special format:

#WebView#<project>_<view>

Where <project> is the project name and <view> is the view name.

Consider the following example:



If any files found within "#WebView#MyProject_MyView" are also within the "#AllWebViews#" folder, the files within the "#WebView#MyProject_MyView" folder will be used. Essentially, the files within "#WebView#MyProject_MyView" will override all "#AllWebViews#" files; however, this is only true for the specified view – in this case, "MyView".

NOTE: You can use this **#WebView#<project>_<view>** format in any of the three top-level customization folders (#AllProjects#, #Project#<Project>, and Virtual Directory)

Your notes:

Custom Reporting – Crystal Reports with Issue Tracker

Building Custom Reports

Using Crystal Reports, you can add features such as charts, formulas, field highlighting, and running totals to a listing report. You can also import graphics (such as company logos) and completely reformat a listing report. To build custom reports, you need a version of Crystal Reports that is version 8.5 or beyond.

Customized listing reports appear on the **Custom** tab of the Issue Tracker Web Report Viewer. After you customize a listing report, you cannot edit it in the Report Editor. You must use Crystal Reports.

While Issue Tracker comes with numerous custom reports out of the box, it may be desirable to create additional custom reports. The process of creating such a report is as follows:

1. Open the **Report Editor** for the desired project.
2. Select the **Listing** tab.
3. Locate a report that has the **Custom Report** checkbox checked. If checked, this indicates that the report will appear in the **Custom** tab of **Reports** section of the Web views.
4. Click the **Copy Report** button. Choose a name for the new report, type it in, and press **OK**.
5. Press **Apply** to save your changes.

Note: After doing this, Issue Tracker will have already saved two .rpt files in the **CustomizedFiles** folder allocated to this project. In order to view the reports in the Web views, they must be moved to the Web view folder. This can be achieved by regenerating the Web views that are related to the project.

Example:

CUSTOMIZEDFILES\#Project#HelpDesk\#AllWebViews#\

6. Regenerate the Web views that are related to the project.
7. Navigate to the Web view's **Reports** folder, and locate the two .rpt files. From here you can use Crystal Reports to edit the .rpt files. If you wish to add, change, or remove fields, create cross tabs, or add new charts, you will need advanced knowledge of Crystal Reports. Please contact support for more information.

Your notes:

If the report name is "Open Issues - Age by Priority" then the filenames will be:

rptListingGOpen$Issue$-$Age$by$Prioritylandscape.rpt

rptListingGOpen$Issue$-$Age$by$Priorityportrait.rpt

Once the modifications have been made to both files, they must now be copied to the **CustomizedFiles** folder to ensure they will be included the next time the Web views are generated.

Your notes:

Adding Fields to Custom Reports

1. In Issue Tracker Admin, select a project and open the Report Editor. On the Listing tab, add one or more fields to a custom report. You can insert the new fields anywhere (for example, in between two existing report fields).

2. Log on to a Web view of the project and view the custom report.

   Issue Tracker dynamically adds the field when you view the report BUT Issue Tracker does not save the changed report. You have to do that yourself (see step 3).

3. From the report viewer, save the report in the Reports folder. Do this for both the Portrait and Landscape versions of the custom report.

   The Reports folder is located in the IssueTrackerServer folder. For example:

   C:\Program Files\Vector \IssueTrackerServer\CensusWeb\Views\CensusWebVD\HelpDesk_HelpDesk\Reports

4. In Crystal Reports, open one of the .rpt file you just saved. The report includes the new field (to check: in the Field Explorer, expand Database Fields and then expand ado).

   Note that if you insert the new field into the report and then try to preview the report, Crystal Reports will display an OLE DB Provider dialog box and prompt you to select a data source.

   When this happens, just click Cancel. Issue Tracker sets the data source at runtime.

   If you want to be able to preview changes in Crystal Reports:

   - Save the report. If you get a "Unable to Save Data With Report" message box, click No.
   - In the Web view, view the report and save it again (this time the saved report will include the data required by Crystal Reports for previewing).
   - Open the report in Crystal Reports: now you can preview the report without being prompted for a data source.

5. Copy the modified .rpt files to the CUSTOMIZEDFILES folder. If you don't, your modified custom reports will be overwritten the next time you generate the Web view.

Note: In general, any time Crystal Reports asks you to either used saved data or refresh data, use the saved data. Refreshing the data requires that you select a data source, and the data source should be set only by Issue Tracker at run time (when a user views the reports).

Your notes:

Removing Fields from Custom Reports

1. In Issue Tracker Admin, select a project and open the Report Editor. On the Listing tab, remove a field from a custom report.

2. Log on to a Web view of the project and view the custom report.

   When you view the report, Issue Tracker dynamically updates the list of fields included in the report BUT Issue Tracker does not save the changed report. You have to do that yourself (see step 3).

   If you get a "This field name is not known" message, then the field is used in a formula somewhere in the report. If this happens, you must open the .rpt file in Crystal Reports, find the formulas that use the field, and remove all references to the field.

   If the field was displayed in the report, or used to define a chart, you'll see a blank space in the report where the field or chart were supposed to be.

3. From the report viewer, save the report in the Reports folder. Do this for both the Portrait and Landscape versions of the custom report.

   The Reports folder is located in the IssueTrackerServer folder. For example:

   C:\Program Files\Vector \IssueTrackerServer\CensusWeb\Views\CensusWebVD\HelpDesk_HelpDesk\Reports

4. In Crystal Reports, open one of the .rpt file you just saved. The report no longer includes the field you removed (to check: in the Field Explorer, expand Database Fields and then expand ado).

5. Update the custom report as required. For example, if the removed field was used to define a chart, you'll have to create a new chart.

6. Copy the modified .rpt files to the CUSTOMIZEDFILES folder. If you don't, your modified custom reports will be overwritten the next time you generate the Web view.

Note: In general, any time Crystal Reports asks you to either used saved data or refresh data, use the saved data. Refreshing the data requires that you select a data source, and the data source should be set only by Issue Tracker at run time (when a user views the reports).

Your notes:

Customizing the Issue Tracker User Interface

It is possible to replace the logos used by Issue Tracker in a multiple areas:

- Web views
- Web Admin
- HTML Reports

Issue Tracker has two different logo files:

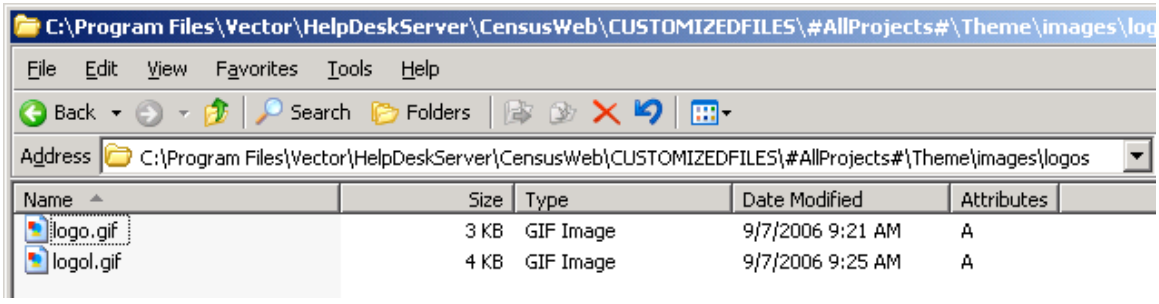
Filename	Dimensions	RGB Matte	Description
logol.gif	200x60	#F7F9FF	Used with dark backgrounds. For example, the Web views.
logo.gif	166x45	#003366	Used with dark backgrounds. For example, the logon page.

You will need to create replacements for these files, while respect the dimensions. This will ensure the best integration with Issue Tracker.

When ready to place the new logos, keep in mind that there are multiple copies of Issue Tracker logos throughout the product – the ones that will need to be replaced depends on what you want to achieve.

How to Change the Logos Used in the Web Views

1 Copy the new logos to "C:\Program Files\Vector\IssueTrackerServer\CensusWeb\CUSTOMIZEDFILES\#AllProjects#\Theme\images\logos", as shown in the image below:



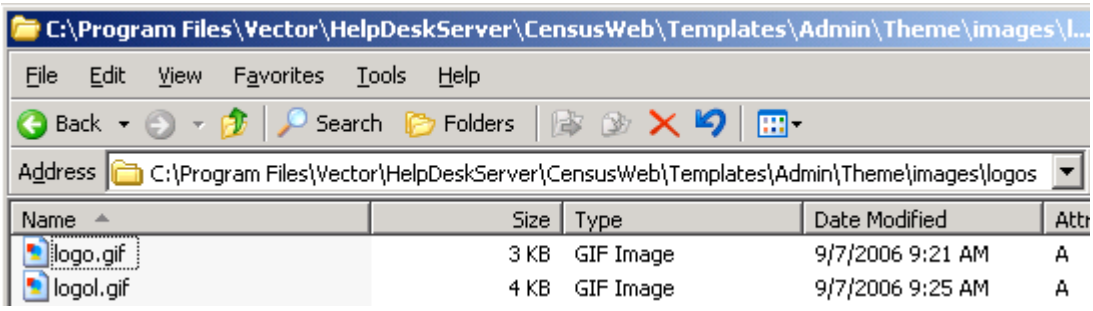
If some of those folders are missing (CUSTOMIZEDFILES and beyond), create them.

2 Regenerate the web views.

Your notes:

How to Change the Logos Used in Web Admin

1 Copy the new logos to "C:\Program Files\Vector\IssueTrackerServer\CensusWeb\Templates\Admin\Theme\images\logos", as shown in the image below:



2 Regenerate Web Admin.

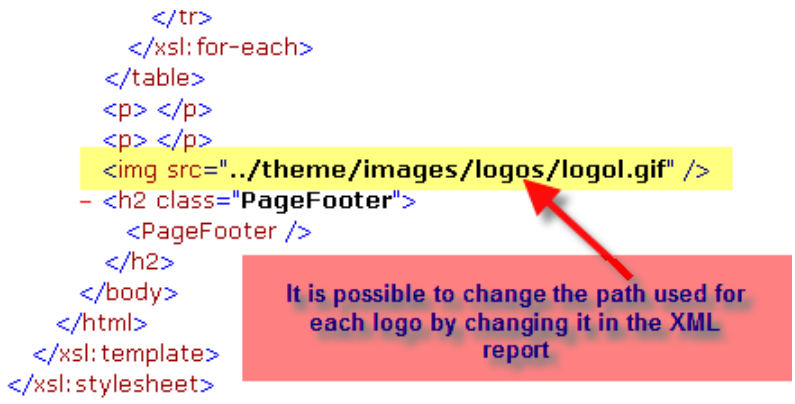
How to Change the Logos Used in the HTML Reports

HTML Reports use a path defined within an XML file when displaying logos. Changing this path would therefore change the logo displayed. The XML file in question could have one of two different names:

- tmplrpt_listing_multicolumn.xml
- tmplrpt_listing_tabular.xml

1 Locate and modify the report XML file.

You can find them at the path: "C:\Program Files\Vector\IssueTrackerServer\CensusWeb\Views\CensusWebVD\<project>_<view>\Reports", where <project> is a project name, and <view> is the name of the view you want to customize.



Your notes:

2. Copy the modified file to the *CustomizedFiles* folder. This will ensure that the changes are preserved even after the web views are generated.

For example, the resulting location in *CustomizedFiles* could be: "C:\Program Files\Vector\IssueTrackerServer\CensusWeb\CustomizedFiles\#Project#Help Desk\#WebView#Employee\Reports", if you wanted to have the change appear only for the Employee view of the HelpDesk project.

3. Regenerate the web views.

Exercise: Using a Custom Logo in the Web Views

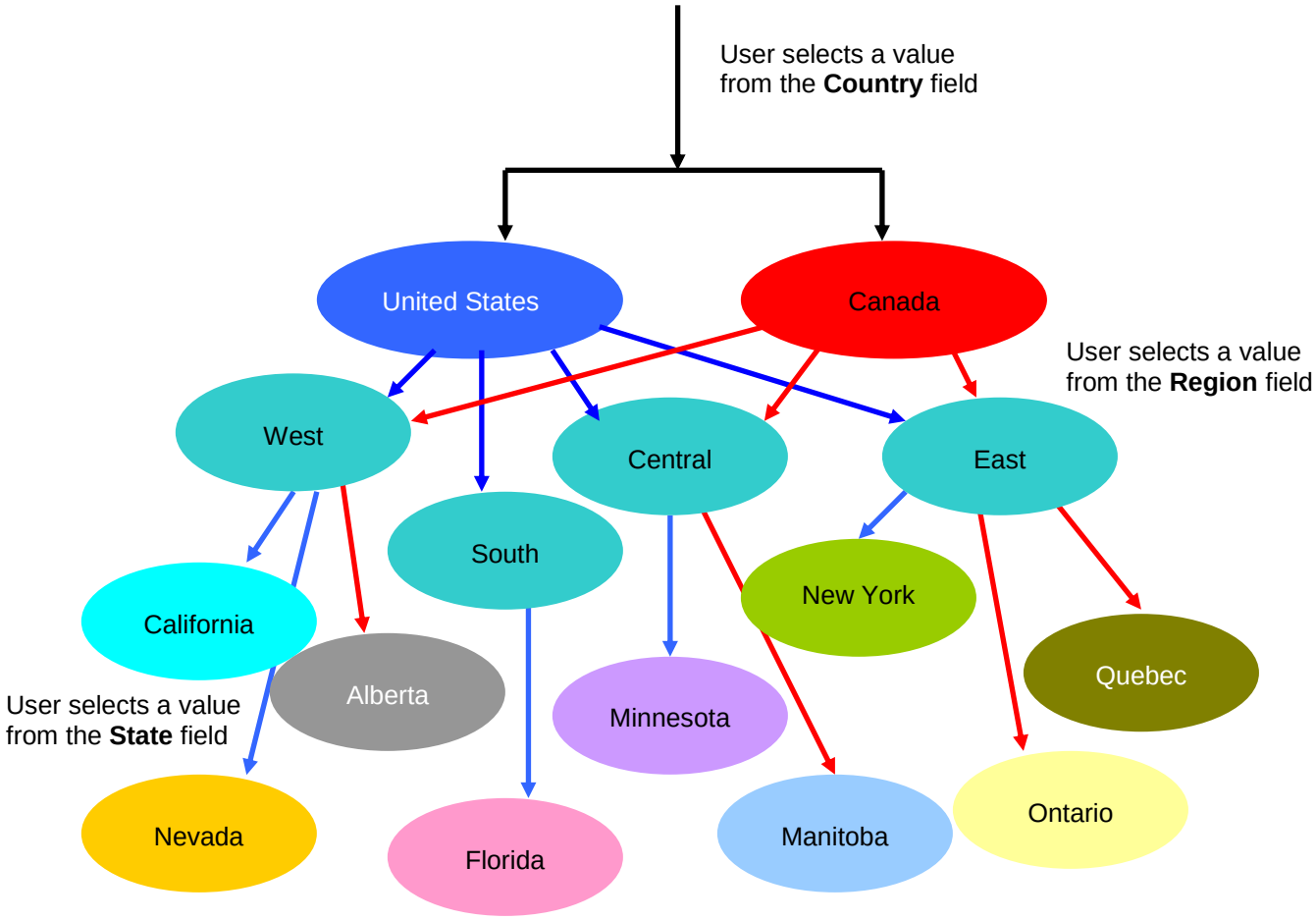
1. Open the "Training" folder on your desktop.
2. Open the "Customizing Issue Tracker" folder.
3. Copy "logol.gif" and "logo.gif".
4. Create the appropriate *CustomizedFiles* folder structure that will allow you include customized files to be used in all projects within the Issue Tracker virtual directory.
5. Create the necessary folders to hold the "logol.gif" and "logo.gif" images.
6. Copy the "logol.gif" and "logo.gif" images to the folder to the correct folder, as created in Step 5.
7. Click *Start* > *All Programs* > *Vector* > *Issue Tracker Tools* > *Generate Web Views* to regenerate the Web views. When asked which views to regenerate, select them all.
8. Log into one of the web views, and confirm that the change is working. In some cases, you may need to clear the browser cache to see the change.

Your notes:

Advanced Workflow Techniques

Exercise: Create a Country / Region / State Workflow

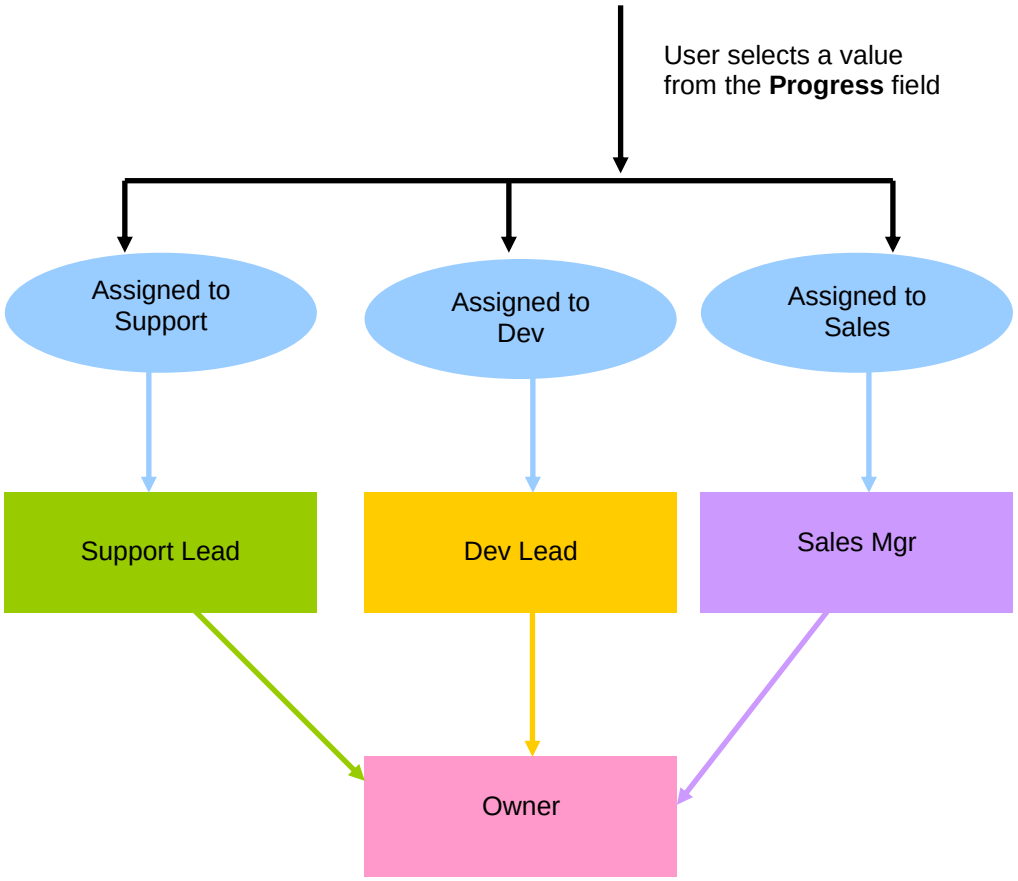
1 Create the fields, workflow template and rules required to update the workflow you created earlier to reflect the following diagram.



Your notes:

Exercise:

1 Create the fields, choice values, workflow template and rules required to create the workflow shown in the following diagram.



The **Progress** field value, once chosen, will automatically set the **Owner** field. The value used to populate the **Owner** field will depend on the **Progress** value chosen (Assigned to Support, Assigned to Dev, or Assigned to Sales), as well as the value in the associated field (Support Lead, Dev Lead, or Sales Mgr).

For example: Selecting *Assigned to Dev* as the **Progress** value will automatically result in the value from the **Dev Lead** field being used to set the **Owner** field.

Your notes:

Creating Custom Macros for Queries

Issue Tracker comes bundled with a few macros that can be used when defining queries:

- <Today>
- <First Day of Month>
- <First Day of Quarter>
- <First Day of Year>
- <31 Days Ago>
- <First Day of Week>

Macros are useful for including dynamic values in your queries, like dates. For example, the value of the <Today> macro will be different depending on the day you use it, meaning the query results will differ accordingly.

Macros are written in the VBScript programming language, and they are defined here:

C:\Program Files\Vector\IssueTrackerServer\<Project>\Macro72.bas

Custom macros should be defined in a different file:

C:\Program Files\Vector\IssueTrackerServer\<Project>\CustomMacro.bas

In both of the paths above, <Project> is the name of the project where you wish to add macros.

Exercise: Add a date macro

For this exercise, we're going to create a macro that gives us the date 14 days ago.

1. Navigate to the IssueTrackerServer folder. This is usually located at *C:\Program Files\Vector\IssueTrackerServer*.
2. Open the folder of the project you wish to add a macro.
3. Within the project folder, you will find a file called *Macro72.bas*. Open this file with Notepad.The full path to this file, if you want to add the macro to the HelpDesk project, is: *C:\Program Files\Vector\IssueTrackerServer\HelpDesk\Macro72.bas*.
4. Look through *Macro72.bas* and copy a function that is similar to the type of macro you wish to create. In our case, the macro *GetMacro31DaysAgo* is very similar to what we want.
5. Copy the macro code from Step 4, and paste it into the *CustomMacro.bas* file, which is located in the same directory.

Your notes:

6 Edit the *GetMacro31DaysAgo* macro you placed in *CustomMacro.bas* so that all it works with 14 days ago rather than 31 days ago. Once you're done, it should look like this:

```
'-------------------------------------------------------------
'NAME:          GetMacro14DaysAgo
'DESCRIPTION:   Get the date 14 days ago
'-------------------------------------------------------------
Public Function GetMacro14DaysAgo(oCensusApplication,
lngDtsRecordID, oExpression, recRevisionHistory)

        Dim varDate

        varDate = DateAdd("d", -14, Date)
        GetMacro14DaysAgo = Year(varDate) & "/" &
Month(varDate) & "/" & Day(varDate)

End Function
```

7 Open the project's DEF database. In this case, we're working with the HelpDesk project, so we need to open *HelpDesk02.def*.

8 Locate and open *tblMacros* in the DEF database.

9 Add a new row in *tblMacros*, containing the following values:

ID	tName	tFunctionName	nType	nUsageType
31	<14 Days Ago>	GetMacro14DaysAgo	1	12

The **nID** field is a unique identifier, so it must contain the next available ID. For example, if the highest ID is 30, the new row must have an ID of *31*.

The **tName** field holds the macro itself – this is what you will see in the Query Editor, *<14 Days Ago>*.

The **tFunctionName** field should hold the exact name of the function you added to CustomMacro.bas, in our case, *GetMacro14DaysAgo*.

The **nType** field specifies what arguments the function takes:

1 = No Arguments
2 = Issue Record
3 = Revision History
4 = Expression
In our case, we want to use *1.*

The **nUsageType** field must be set to *12*, which makes the macro available in the Query Editor.

The new macro should now be available whenever you add a Date field to a query:

Your notes:

Advanced Notifications

Changing the Format of Attachments

The **Detailed** choice in the **Include** list of the Notification Editor attaches a report to the notification message. This report includes most fields for an issue.

If you do not use Crystal Reports, attachments can be HTML files or text files. If you do use Crystal Reports, attachments are RTF files by default. You can change this to be PDF, text, or a number of other formats.

To change the format of a notification attachment:

1. Open the project definitions database.
2. In **tblMailContents**, change the **nFormatType** for the attachments. (Attachments have **nType** = 3 in **tblMailContents**).

Posible nFormatType constants:

NoFormat	0	Lotus123WK1	12	Excel70	27
CrystalReport	1	Lotus123WK3	13	Excel70Tabular	28
DataInterchange	2	WordForWindows	14	Excel80	29
RecordStyle	3	Excel21	18	Excel80Tabular	30
RichText	4	Excel30	18	PortableDocFormat	31
Comma Separated Values	5	Excel40	20	HTML40	32
TabSeparatedValues	6	Excel50	21	CrystalReport70	33
CharSeparated Values	7	Excel50Tabular	22	ReportDefinition	34
Text	8	ODBC	23	ExactRichText	35
TabSeparatedText	9	HTML32Standard	24	XML	36
PaginatedText	10	Explorer32Extend	25		
Lotus123WKS	11	NetScape20	26		

Your notes:

Attaching Information

By default, the **Revision Record** and **Summary** are included in the body of the e-mail notification message. You can include this information as separate attachments.

To do this, open the project definitions database and in **tblMailContents** change the **nType** to 3. **nType** determines where the content is put in the e-mail message.

nType	Description
1	Subject
2	Body of e-mail message
3	Attachment

Adding Notification Reports

Vector Issue Tracker can use reports to format information included in e-mail notifications. For example, the Detailed and Summary items are formatted by reports. You can define new reports and add them to the list of items that can be included in an e-mail notification message.

Exercise: Add a New Report for Notifications

1. In Issue Tracker Admin, use the Report Editor to define a new listing report.
2. Save and preview the report.
3. Exit Issue Tracker Admin.
4. Open the project definitions database.
5. Open the **tblSystemCustomReports** table, find the record for the report you just created, and get the **nID** value.
6. Open the **tblMailContents** table and create a new record.

Field	Description
nID	Next available ID number for a record in the **tblMailContents** table.
tName	Name displayed in the Include list of the Notification Editor.
nType	2 = include in message body 3 = attachment

Your notes:

tFunction	The GenerateReport function takes care of generating the report for the notification message.
tArguments	<nID>.10, where <nID> is the ID of the report in **tblSystemCustomReports**.
nFormatType	4 = rtf 8 = text 14 = word 31 = pdf 32 = html40 When **nType** = 2, **nFormatType** must be 8 (text).

The report is now available in the **Include** list of the Notifications Editor.

7. Create a notification using this include source.
8. Test to ensure that the notification that you receive includes your new report.

Note: If you're using Crystal Reports for your listing reports, you'll have to create a Crystal Report report file (.rpt) for the new notification report:

- View the report in a Web view.

  This creates an .rpt file in the CensusWebVD\<project>_<view>\Reports folder. For example:

  \Program Files\Vector\IssueTrackerServer\CensusWeb\Views\CensusWebVD\helpdesk_helpdesk\Reports
- Copy the .rpt file to the IssueTrackerServer\<project>\Reports folder. For example:

  \Program Files\Vector\IssueTrackerServer\helpdesk\Reports
- Rename the file by removing **portrait** (or **landscape**) from the .rpt file name.

Your notes:

Adding Custom Mail Contents

In the Notification Editor, the **Include** list specifies what to include in an e-mail notification message. You can add items to this list. The items can be used as the message subject, inserted in the message body, or included as attachments to the message.

To add an item to the Include list of the Notification Editor:

1. Define a function in the CustomMacro.bas file.

   This function should return the content you want to include in the e-mail message.

   CustomMacro.bas is located in the project sub-folder of the IssueTrackerServer folder (for example:

   `IssueTrackerServer\helpdesk\CustomMacro.bas`)

2. Open the project definitions database, and in the tblMacros table, add a row for the new function.

   tName is the name of the macro.

   tFunctionName is the name of a function defined in macroXX.bas.

   nType specifies what arguments the function takes:

   1 = No Arguments

   2 = Issue Record

   3 = Revision history

   4 = Expression

3. In the **tblMailContents** table, add a row for the macro, using the same **tName** as in **tblMacros**.

   nType specifies where to include the contents:

   1 = subject
   2 = body
   3 = attachment

   nFormatType specifies the format:

   4 = rtf
   8 = text
   14 = word
   31 = pdf
   32 = html40

   When **nType** = 2, **nFormatType** must be 8 (text), otherwise the contents appears as a plain text e-mail message that contains RTF or PDF, which is never sent. This will hold up all your notifications.

Your notes:

Exercise: Create a Notification With Custom Mail Content

1. Open the IssueTrackerServer\HelpDesk\CustomMacro.bas file with notepad.
2. Enter the following functions:

```
'Return a simple subject line
Public Function _
GetCustomSubject(oCensusApplication, _
lngDtsRecordID, oExpression, recRevisionHistory)
 GetCustomSubject = "Your subject goes here."
End Function

'Return the contents of a text file
Public Function GetCustomMsgBody( _
oCensusApplication, lngDtsRecordID, oExpression, _
recRevisionHistory )
 Dim fsObj
 Dim txtStreamObj
 Dim emailbody
 Dim strFileName
 strFileName = "C:\Messages\msg.txt"
 Set fsObj = CreateObject( _
        "Scripting.FileSystemObject")
 Set txtStreamObj = fsObj.OpenTextFile( _
        strFileName, 1, False, False)
 emailbody = txtStreamObj.ReadAll
 txtStreamObj.Close
 GetCustomMsgBody = emailbody
End Function
```

Your notes:

```
'Return a subject line that includes the value of a
'field
Public Function GetSubject(oCensusApplication, _
lngDtsRecordID, oExpression, recRevisionHistory)
 Dim lngLastRevisionNumber
 Dim rstValue
 Dim variablename
 If oCensusApplication Is Nothing Then
  Exit Function
 End If
 If recRevisionHistory Is Nothing Then
  Exit Function
 End If
 'get the last revision number
 GetRevisionNumberRange recRevisionHistory, 0, _
               lngLastRevisionNumber
 ' Get the value for the field from the table
 ' of the last revision in the given set.
 Set rstValue = oCensusApplication.CurrentProject._
 DataStores.Item(32). _
 GetConnection(1).Execute( _
  "SELECT tBriefDescription FROM tblDts_History_
  WHERE nID=" & lngDtsRecordID _
  & " AND nRevisionNumber=" _
  & lngLastRevisionNumber, , 1)
 ' Build subject line that looks like:
 'HELPDESK [Ticket 37] - Cannot print PDF file
 If Not rstValue.EOF Then
  If Not IsNull(rstValue.Fields(0).Value) Then
   GetSubject = "HELPDESK [Ticket " &_
      lngDtsRecordID & "] - " &_
      rstValue.Fields(0).Value
  End If
 End If
End Function
```

Your notes:

3. Create a text file in C:\Messsages\ called msg.txt. Add a custom body content to this file. The second function above will read this file and use it in the notification.

4. Open the project definitions database, and in the **tblMacros** table, add a row for each of the new functions:

ID	tName	tFunctionName	nType
31	<Simple Subject>	GetCustomSubject	3
32	<Body From File>	GetCustomMsgBody	3
33	<Subject With Val>	GetSubject	3

5. In the **tblMailContents** table, add a row for each of the macros:

nID	tName	nType	nFormatType
5	<Simple Subject>	1	8
6	<Body From File>	2	8
7	<Subject With Val>	1	8

6. Create notifications using these include sources.

7. Test to ensure that the notifications that you receive include the custom mail content.

Your notes:

CustomCode.bas – DIY Power Customizations

Issue Tracker allows you to customize the process of creating and saving issues via a file called **CustomCode.bas**. Each web view has such a file within its folder structure – here is an example path: <IssueTrackerServer>\CensusWeb\Views\CensusWebVD\HelpDesk_Employee\HTML (Where <IssueTrackerServer> is the path of the IssueTrackerServer directory – typically: C:\Program Files\Vector\IssueTrackerServer). You can also place this file in the appropriate *CustomizedFiles* folder(s) to ensure the web view regeneration process preserves it.

You have the option of adding your own customized code to the following events:

- OnAddNewRecord
- OnCopyRecord
- OnValidate
- OnBeforeSave
- OnFieldSave
- OnAfterSave

The programming language used in CustomCode.bas is VBScript. These events, written as VBScript functions, allow you to place your own code in different contexts – for example, “OnAfterSave” allows you to customize what happens after the issue is saved. Within the CustomCode.bas file, you will notice calls to internal functions, prefixed with “Mq_”. These functions are stored in MqCustomCode.bas, which is an internal file that should not be edited. Custom code should only be added to the CustomCode.bas file.

Below are a few examples of the customizations you can make to the way Issue Tracker works.

Exercise: Apply the custom functions

1. Open the CustomCode.bas file from your Web view with Notepad.
2. Locate each section, and add the custom code examples from below.
3. Test the changes within the Web view
4. When they work as expected, copy the CustomCode.bas file to the appropriate CustomizedFiles folder.

Your notes:

Example 1 – OnCopyRecord

Custom code that automatically adds the text “Copied Issue:” to the beginning of the Brief Description field upon copying an issue.

```
Public Function OnCopyRecord(objApp, rs, lngRecordID, lngUserID)
' DESCRIPTION:
'   This function will set the default values for fields in a
'   copied record

' RETURN VALUE:
'   Info: not used
Const FLD_BRIEF_DESCRIPTION = "tBriefDescription"
Const LBL_COPIED_PREFIX = "Copied Issue: "
Dim strBriefDescription

' Retrieve the current brief description text
strBriefDescription = objApp.GetFieldValue(rs, _
                                    FLD_BRIEF_DESCRIPTION)

' Check to see if the Copied Prefix "Copied Issue: " is present.
If InStr(strBriefDescription, LBL_COPIED_PREFIX) = 0 Then

       ' The prefix is missing. Add it:
       strBriefDescription = LBL_COPIED_PREFIX & _
                                    strBriefDescription

       ' … and then save the updated value.
       Call objApp.SetFieldValue(rs, FLD_BRIEF_DESCRIPTION, _
                                    strBriefDescription)
End If

' Proceed with the copy operation.
Call Mq_OnCopyRecord(objApp, rs, lngRecordID, lngUserID)
End Function
```

Your notes:

Example 2 – OnAddNewRecord

This example illustrates how the AddNewRecord function can be used to set some default values.

```
Public Function OnAddNewRecord(objApp, rs, lngRecordID, lngUserID)

' DESCRIPTION:
'   This function will set the default values for fields in a new
'   record.
' RETURN VALUE:
'   Info: not used

Const FLD_SOURCE = "nSource"
Const VALUE_SOURCE_WEB = 1

' Update the nSource field to have a value of 1, which is “Web”.
' If the user has a default value configured for the nSource field,
' the default value will be applied – our change here will not be
' seen.
' This is an interesting way to enforce a default for all users
' that currently don’t have any defined.
Call objApp.SetFieldValue(rs, FLD_SOURCE, VALUE_SOURCE_WEB)

' Proceed with the regular add new operation.
Call Mq_OnAddNewRecord(objApp, rs, lngRecordID, lngUserID)
End Function
```

Your notes:

Example 3 - OnFieldSave

This example illustrates how you would modify a field value as it is being saved.

```
Public Function OnFieldSave(objApp, cfield, varCurrentValue, _
                                    ByRef strChangedFields)
  ' DESCRIPTION:
  '   This function will allow user to add custom code to further
  ' modify the record based on another field value. For example, in
  ' the Mq_OnFieldSave function, if we determine that the record was
  ' closed, we set the fields close date and close time.
  ' RETURN VALUE:
  '   Type: boolean
  '   Info: return true if you changed the strChangedFields list
  ' Argument strChangedFields: a comma seperated list of changed
  ' fields. Add the related fields that you've changed.

 Const FLD_BRIEF_DESCRIPTION = "tBriefDescription"
 Const LBL_UPDATED = "Updated: "

 'If the field is the brief description field...
 If cfield.FieldName = FLD_BRIEF_DESCRIPTION Then

  'Check to see if the "Updated: " string is already there.
  If InStr(varCurrentValue, LBL_UPDATED) = 0 Then

   'The string is missing, add it.
   varCurrentValue = LBL_UPDATED & varCurrentValue

  End If
 End If

 OnFieldSave = Mq_OnFieldSave(objApp, cfield, varCurrentValue, _
                                    strChangedFields)
End Function
```

Your notes:

Example 4 – OnValidate

This example is a little more advanced – it illustrates how you would go about enforcing custom validation rules, in addition to the standard Issue Tracker rules.

```
Public Function OnValidate(objApp, lngRecord, dctFldVals)
' DESCRIPTION:
'   This function will allow user to add custom validation before
saving the record.
'   Here you can do validation specific to your needs.
' RETURN VALUE:
'   Type: string
'   Info: If the returned string is not empty, the save action is
canceled and
'      the string is displayed to the user.

Const FLD_SEVERITY_ID = "19"
Const FLD_BRIEF_DESCRIPTION_ID = "30"
Const MIN_LEN_BRIEF_DESCRIPTION = 3
Const MSG_SEVERITY_NOT_SET = "The Severity field must be set. Enter
a value and try again."
Const MSG_BRIEF_DESCRIPTION_TOO_SHORT = "The Brief Description
field must be at least 3 characters long. Enter a new value and try
again."

Dim strSeverityID
Dim strMessage
Dim blnValidationFailed

'Start off thinking the validation is going to be successful.
'If any of the steps fail, they will change this boolean to true.
       blnValidationFailed = False

       'Validate Brief Description field...
       If dctFldVals.Exists(FLD_BRIEF_DESCRIPTION_ID) Then

              strBriefDescription = dctFldVals.Item( _
                                          FLD_BRIEF_DESCRIPTION_ID)

              'Does the Brief Description field meet the 3
              'character minimum length?
              If Len(strBriefDescription) <
                                   MIN_LEN_BRIEF_DESCRIPTION Then

                     'No, it does not meet the minimum length
                     'requirement.
                     'Show the user a message.
                     strMessage = MSG_BRIEF_DESCRIPTION_TOO_SHORT

                     'Mark the validation step as failed.
                     blnValidationFailed = True

              Else
                     'Description field validated fine.
```

Your notes:

```
                        'Validate Severity field...
                        If dctFldVals.Exists(FLD_SEVERITY_ID) Then
                               strSeverityID = dctFldVals.Item( _
                                                     FLD_SEVERITY_ID)

                               'Check to see if the Severity value is
                               'blank.
                               If strSeverityID = "" Then

                                  'The field is blank.
                                  'Tell the user.
                                  strMessage = MSG_SEVERITY_NOT_SET

                                  'Mark the validation step as failed.
                                  blnValidationFailed = True

                               End If
                        End If
                 End If
          End If


          'Did the validation fail?
          If blnValidationFailed Then

                 'Yes it did...
                 'show the user the validation failure message.
                 OnValidate = strMessage
          Else
                 'No... validation finished successfully.
                 'No problems found. Proceed as usual:
                 OnValidate = Mq_OnValidate(objApp, lngRecord, _
                                            dctFldVals)
          End If

End Function
```

Your notes: