

# **PC-Duo Enterprise HelpDesk Administrator's Guide**

Configuring and Maintaining PC-Duo Enterprise HelpDesk version 5.0

Copyright © Vector Networks Limited, MetaQuest Software Inc. and NetSupport Limited. All rights reserved.

The information in this document is subject to change without notice and should not be construed as a commitment by Vector Networks Limited, Vector Networks Inc., MetaQuest Software Inc. or NetSupport Limited.

Vector Networks Limited, Vector Networks Inc. MetaQuest Software Inc. and NetSupport Limited assume no responsibility for errors in this document.

The software described in this document is supplied under a license and may be used or copied only in accordance with the terms of such license.

PC-Duo, and its logos, are trademarks of Vector Networks Limited. MetaQuest is a trademark of MetaQuest Software Inc. All other trademarks are the property of their respective owners.

PART NUMBER: DH500/00

<b>Chapter 1</b>	
<b>Administering Enterprise HelpDesk</b> .....	1
Creating Projects and Generating Web Views .....	1
Managing Users, Contacts, and Groups .....	1
Tools for Enterprise HelpDesk Administrators .....	2
Troubleshooting HelpDesk Web Admin .....	3
<b>Chapter 2</b>	
<b>Planning and Deploying a Help Desk System</b> .....	5
Planning .....	5
Implementation Roadmap .....	6
Creating a New Project .....	7
Customizing Fields .....	8
Creating Groups and Granting Permissions .....	10
Creating User Accounts .....	11
Generating Web Views .....	12
Setting Up Notifications .....	14
<b>Chapter 3</b>	
<b>Projects</b> .....	17
What is a Project? .....	17
Creating New Projects .....	17
Copying and Sharing Definitions .....	18
Building a Project Template .....	19
Deleting Projects .....	19
Editing Project Properties .....	19
<b>Chapter 4</b>	
<b>Editing Fields</b> .....	21
About the Field Editor .....	21
Adding Fields .....	22
Removing Fields .....	24
Working with Choice Lists .....	25
Working with Tabs .....	27

<b>Chapter 5</b>	
<b>Finding and Listing Issues</b> .....	29
Building Queries .....	29
Defining Sorts .....	31
Defining Layouts .....	32
<b>Chapter 6</b>	
<b>Reporting</b> .....	35
About Reports .....	35
Viewing Reports .....	35
Changing Report Viewers .....	35
Selecting Which Issues to Include in a Report .....	35
Defining Summary Reports .....	36
Defining Listing Reports .....	38
Defining Time Reports .....	39
Defining Report Pages .....	41
<b>Chapter 7</b>	
<b>Managing Contacts, Users, and Groups</b> .....	43
About Users and Contacts .....	43
About Security .....	43
About Groups .....	43
Importing User Accounts from Windows .....	44
Creating User Accounts .....	47
Setting Default Values for New Users .....	47
Managing Work Teams .....	48
Organizing Users by Projects .....	49
Disabling User Accounts .....	50
Editing User Information .....	50
Changing Passwords .....	51
Changing the Authentication Method .....	51
Defining User Groups .....	51
Groups: Adding and Removing Users .....	52
Users: Changing Group Membership .....	52

Companies .....	52
Departments .....	53
Enabling and Disabling Features .....	53
Enabling and Disabling Projects .....	56

## Chapter 8

<b>Defining Workflow Rules</b> .....	57
About Workflow Rules .....	57
What Can You Do with Workflow Rules? .....	57
What You Should Know about Workflow Rules .....	59
What is a Workflow Rule? .....	59
Creating Rule Templates .....	60
Defining Conditions .....	63
Defining Rules .....	63
Deleting Rules .....	63
Renaming Rules .....	64
Using Macros in Rules .....	64
Setting Possible Values .....	64
Changing When Rules Are Evaluated .....	65
Changing the Order of Evaluation .....	65
Applying Workflow Rules .....	65
Disabling Workflow Rules .....	65

## Chapter 9

<b>Defining Service Level Agreements</b> .....	67
About Service Level Agreements .....	67
Setting Up Service Agreements .....	67
Target Times .....	67
Escalation Levels .....	68
Defining Escalation Rules .....	69
Specifying Operational Hours .....	71
Defining Service Levels .....	72
Service Agreements .....	72
Service Level Reporting .....	73
Service Types .....	73

<b>Chapter 10</b>	
<b>E-mail Notifications</b> .....	75
About Notifications .....	75
What Can You Do With Notifications? .....	75
Editing Notifications .....	76
Specifying Notification Recipients .....	77
Defining When Conditions .....	77
Specifying Notification Contents .....	78
Managing Workflow with Notifications .....	78
Setting Up Notifications .....	79
Handling Notification Failures .....	81
<b>Chapter 11</b>	
<b>Generating Web Views</b> .....	83
What is a Web View? .....	83
Editing Web Views .....	83
Configuring Web Views .....	86
Exporting Fields and Queries .....	87
Adding the Child Issues Tab .....	88
Working with Fields .....	89
Web View URLs .....	93
Customizing Web Views .....	95
Changing the Date and Time Formats for Web Views .....	98
Administering Enterprise HelpDesk on the Web .....	99
<b>Chapter 12</b>	
<b>Setting Up E-mail Submission</b> .....	101
About Submitting Issues by E-mail .....	101
Defining Integration Rules .....	101
Configuring the Servers .....	102
Mapping Fields .....	102
Assigning Default Values .....	103

<b>Chapter 13</b>	
<b>Maintaining Your Help Desk System</b>	105
Relocating Databases	105
Relocating Attachments	106
Deleting Issues	107
Managing Logon Sessions	107
Setting the Monitor Interval	108
Repairing and Compacting	108
Running Security Repair	109
Checking Integrity	110
Enabling Auto Repair	111
Entering License Keys	111
Releasing Databases	112
Backing Up	112
Troubleshooting Problems with Attachment Fields	117
<b>Chapter 14</b>	
<b>Importing Issues</b>	119
About Importing Issues	119
What Can You Import?	119
How New Records are Created	120
Before You Import	121
Importing Issues into a Source Table	122
Combining Multiple Source Tables	122
Importing Issues from Enterprise HelpDesk Projects	123
Creating Queries to Merge Source Tables	123
Mapping Fields	124
<b>Chapter 15</b>	
<b>Integrating Inventory</b>	125
About Inventory	125
How to Integrate Inventory	126
Linking Projects and Site Databases	126
Editing Links	127
Removing Links	127
Defining the Query	127
Adding the Inventory Tab to Web Views	128

Hiding the Software and Hardware Report Buttons . . . . .	128
Manually Linking to Other Sites . . . . .	129
Gathering Information about the Site Database . . . . .	129

## Chapter 16

<b>Integrating Remote Control</b> . . . . .	131
About Remote Control in Enterprise HelpDesk . . . . .	131
Setting Up Remote Control . . . . .	131
Adding Remote Control Buttons . . . . .	131
Configuring PC-Duo ActiveX Remote Control . . . . .	132
Checking Client Security Key Settings . . . . .	133
Removing Remote Control Buttons . . . . .	133

## Chapter 17

<b>Customizing Enterprise HelpDesk</b> . . . . .	135
Power Customizations . . . . .	135
About the Databases . . . . .	135
Editing Databases . . . . .	135
Creating an Attachments Field . . . . .	136
Customizing URL Buttons . . . . .	136
Customizing the Inventory Tab . . . . .	137
Customizing Reports with Crystal Reports . . . . .	138
Customizing HTML Reports . . . . .	140
Customizing the Report Used to Print Issues . . . . .	141
Deleting Users . . . . .	142
Removing Disabled Users from Choice Lists . . . . .	143
Adding a Choice List of Users or Contacts . . . . .	143
Timestamping . . . . .	143
Customizing Notifications . . . . .	147
Submit-only Views Without Persistent Cookies . . . . .	150
Branding the Web View . . . . .	151
Branding the Dialogs . . . . .	154
Branding the Logon Pages . . . . .	155
Customizing the Timesheet . . . . .	156



<b>Appendix A</b>	
<b>Installing Enterprise HelpDesk</b> .....	161
Supported Configuration .....	161
Installing Enterprise HelpDesk .....	161
Selecting Components .....	162
User Account for Notifications .....	163
Entering Your License Information .....	163
<b>Appendix B</b>	
<b>Databases</b> .....	165
Overview .....	165
Issue Database .....	165
Project Definitions Database .....	166
Users Database .....	167
Other Project Files .....	167
Other Databases .....	167
<b>Appendix C</b>	
<b>Relocating Enterprise HelpDesk Installations</b> .....	169
About the Relocation Wizard .....	169
Before You Relocate .....	169
How to Relocate Enterprise HelpDesk .....	170
Relocating Enterprise HelpDesk .....	170
If Something Goes Wrong .....	171
Updating Client Programs .....	171
Enabling Enterprise HelpDesk after Relocation .....	171
<b>Index</b> .....	173



# Chapter 1: Administering Enterprise HelpDesk

## Creating Projects and Generating Web Views

An Enterprise HelpDesk project includes:

- A database of issues (and their revision histories).
- A database of definitions, which includes the queries, sorts, layouts, reports, notifications, fields, and tabs available in the project.

Each project can have multiple Web-based views.

Each Web view is customized to meet the specific needs of a class of users. For example, employees don't need to see all the issues in the project database, just the issues they submitted. And they don't need to see notes and comments entered by help desk staff. The help desk staff, on the other hand, needs access to all the issue information in the project database.

With Enterprise HelpDesk, you can provide separate views for employees and for help desk staff. Each view is accessed through the same Web-based interface.

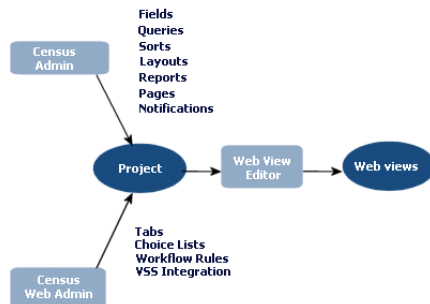
Views are easy to define using the Web view Editor. Just choose the queries and fields that you want to expose in the view.

- Queries determine which issues users can retrieve from the project database.
- Fields determine what information users can view and modify for each issue.

To create projects and edit definitions (of fields, queries, reports, sorts, layouts, and notifications), you use HelpDesk Admin, a Windows program.

HelpDesk Web Admin is a Web-based tool that allows you to remotely edit some of the project definitions (such as tabs and choice lists).

### Administering Projects and Web Views



## Managing Users, Contacts, and Groups

**Users** All Enterprise HelpDesk users must have an Enterprise HelpDesk user account, which consists of a user name and an optional password. You use HelpDesk Web Admin to create and manage Enterprise HelpDesk user accounts.

**Groups** By assigning users to groups, you can control:

- Access to features in HelpDesk Admin, HelpDesk Web Admin, and Web views.
- Access to projects.
- Access to Web views.
- Workflow permissions.

You use HelpDesk Web Admin to create groups, edit group privileges, and assign users to groups.

**Contacts** A contact is a person who is not an Enterprise HelpDesk user, but who reports an issue. For example, a guest from another company may report an issue with a computer while they are working on-site. In this case, the guest is the contact, and the help desk analyst who actually enters the report is the submitter.

To create and manage a list of contacts, you use HelpDesk Web Admin. Web views can also include a Contact button that opens the Users and Contacts dialog box. Access to this dialog box from a Web view is controlled by group permissions, which are defined in HelpDesk Web Admin.

## Tools for Enterprise HelpDesk Administrators

Enterprise HelpDesk provides a set of tools for administering projects and Web views:

- HelpDesk Admin for administering projects.
- Web View Editor for defining and generating Web views for projects.
- HelpDesk Web Admin for administering projects and users through the Web.

### HelpDesk Admin

HelpDesk Admin is a Microsoft Windows application for administering Enterprise HelpDesk projects. For example, you use HelpDesk Admin to:

- Create projects.
- Customize fields.

- Define queries, sorts, and layouts.
- Define reports.
- Define and set up e-mail notifications.

#### To start HelpDesk Admin:

- On the Start menu, point to Programs and then click PC-Duo Enterprise. Point to HelpDesk and then click HelpDesk Admin.

### Web View Editor

Web View Editor is a Microsoft Windows application that you use to create Web views for your Enterprise HelpDesk projects. Web views are Web-based applications that provide access to Enterprise HelpDesk projects through a Web browser.

---

*HelpDesk Admin and Web View Editor are installed on the Web server. For convenience, you can install additional copies of these tools on other computers. For example, you can install copies of HelpDesk Admin and the Web View Editor on your own workstation, so you can perform many administration tasks from your desk.*

*Note, however, that you cannot create new Web views from your desk; to create new Web views, you have to use the Web View Editor on the Web server.*

---

#### To start the Web View Editor from HelpDesk Admin:

- On the Tools menu, click Web and then click Web View Editor.

The Tools > Web > Web View Editor command is available only if Web View Editor is installed on the same computer where you are running HelpDesk Admin.

**To start the Web View Editor from the Start menu:**

- On the Start menu, point to Programs and then click PC-Duo Enterprise. Point to HelpDesk and then click Web View Editor.

## HelpDesk Web Admin

HelpDesk Web Admin is a Web-based administration tool. It allows you to perform additional administrative tasks over the Web:

- Manager users and user groups, and define group privileges (access to features and projects).
- Add and edit contacts.
- Define workflow rules.
- Create new tabs.
- Set up choice fields.
- Enable e-mail notifications.
- Migrate projects to SQL Server and move projects to different SQL Server computers.
- Move attachments to a different computer.

### To log on to HelpDesk Web Admin

Do one of the following:

- In your Web browser, go to `//server/helpdeskadmin`, where server is the name of your Web server.
- In HelpDesk Admin, click Tools > Web > Web Admin.
- If you are sitting at the Web server, click Start > Programs > PC-Duo Enterprise > HelpDesk > HelpDesk Web Admin.

## Troubleshooting HelpDesk Web Admin

If users cannot successfully relocate databases or perform other tasks with HelpDesk Web Admin, check if there is a global group named `YOURDOMAIN\CensusAdminsGroup`, and that the user (especially if the user is a domain user, not a domain administrator) is a member of this group.

When you log on to HelpDesk Web Admin, HelpDesk Web Admin uses your Windows credentials to run tasks if you are a member of the `CensusAdminsGroup` group or the local `Administrators` group on the HelpDesk Server computer. Otherwise, HelpDesk Web Admin runs tasks as `CensusUser`.

Members of the `CensusAdminsGroup` group (or of the local `Administrators` group on the HelpDesk Server computer) have the required permissions to perform any task with HelpDesk Web Admin. The `CensusUser` account, on the other hand, cannot perform IIS-related tasks such as unloading virtual directories (when logging off users), and may not be able to relocate databases to other computers.

During installation, the Setup program creates the `CensusAdminsGroup` group and adds all members of the domain `Administrators` group to the `CensusAdminsGroup` group. Setup also adds the `CensusAdminsGroup` to the local `Administrators` group on the HelpDesk Server computer. The purpose of the `CensusAdminsGroup` is to control access to Web Admin.

If Setup was unable to create the `CensusAdminsGroup`, you can create it manually.

For example, if you want to allow a domain user that is not a domain administrator (because domain administrators already belong to the local Admins group by default) to use the Relocation tab, you can create the CensusAdminsGroup and add the domain user to the group. This will allow the domain user to perform tasks that are typically only available to local admins:

- Managing SQL Server databases and physical files.
- Logging off Enterprise HelpDesk users (which requires permissions to control IIS).

**To manually create the CensusAdminsGroup after Enterprise HelpDesk 5.0 is installed:**

- 1 Create a global group named in "CensusAdminsGroup" the domain.
- 2 Add CensusAdminsGroup as a member of the local Administrators group of the Web server.
- 3 On the Start menu, click All Programs > PC-Duo Enterprise > HelpDesk > HelpDesk Tools > Set Up Global Group.

# Chapter 2: Planning and Deploying a Help Desk System

## Planning

To set up a help desk system that reflects your help desk structure and process, you need a good understanding of that structure and process.

### Information Recording and Tracking

- What information do you want to record and track for each issue?
- How do you categorize issues?
- Do you want to provide different views of the issue data?

For example, do you want a summary view optimized for logging issues and categorizing problems, and a detailed view for recording things such as how the issue was resolved, and how long it took?

- Do you want to be able to link issues? Enterprise HelpDesk supports parent-child relationships between issues.

### Workflow

- What is your help desk process?  
Can you represent the path of an issue through the process as a sequence of steps, or decisions, such as New, Assigned, Verified, Resolved?
- Do you want to enforce this “workflow” process?

- Who should have permission to make each decision? Who will be responsible for carrying out each step in the process?
- Do you need e-mail notifications to enforce ownership and accountability? When issues are submitted or resolved, who needs to be alerted?

### Roles and Responsibilities

- What are the different roles and responsibilities of your help desk staff? Can you divide users into groups (such as help desk analysts and group leaders)?
- Do different groups have different requirements of the issue tracking system? Do you need to restrict access to the system based on group membership?

For example, you probably want to give employees only limited access to the system so they can submit new issues and track the status of submitted issues. Help desk staff, on the other hand, will require greater access to the system.

- Do need to manage and coordinate work teams? Enterprise HelpDesk allows you to define work teams and the assign issues based on work teams.

## Implementation Roadmap

This roadmap outlines the major steps in implementing an issue tracking system. Performing the steps in the sequence recommended here will save you time and simplify the process.

### Step 1. Create a project

A project defines the fields, queries, sorts, layouts, and reports that you see in a Web view.

- 1 Create a new project.
- 2 Customize the fields in the project.
- 3 Edit and define the queries, reports, sorts, and layouts to match the set of fields defined in the project.

### Step 2. Define user groups and create user accounts

- 1 Define user groups and set group permissions to control access to data and administrative features.
- 2 Create user accounts so people can log on. You can either import user accounts from Active Directory (or from a Windows domain), or create user accounts in Enterprise HelpDesk.
- 3 Assign users to groups.
- 4 Define work teams and assign users to work teams.

### Step 3. Define and generate Web views

After you generate and test your Web views, you can perform more advanced customizations, such as defining workflow and notifications.

### Step 4. Define field dependencies (optional)

Use the workflow editor in HelpDesk Web Admin to make the possible values in one choice list depend on the choice selected from another list.

You can apply changes made in the workflow editor without regenerating the Web view.

### Step 5. Define a workflow (optional)

Use the workflow editor in HelpDesk Web Admin to define workflow rules to emulate your process. For example, you can enforce a sequence of steps by controlling the possible values of the Progress field.

You can also define rules that set the value of a field when another field changes. For example, you can define rules that assign an owner based on the problem area:

When (Problem Area = Outlook), then set this value: (Owner = Resident Outlook Wiz).

### Step 6. Define Service Level Agreements

A service agreement is an agreement between the help desk and users. The service agreement defines a required level of service for the users.

A service agreements can be with individual users (contacts), with all users in a department, or all users in a company.

A service level is a guarantee of a certain level of service. For example, a basic service level may provide 9-to-5 service during the regular working week, while a more comprehensive service level might provide 24 hour service, 7 days a week.

Each service level has its own hours of service, target response and closure times for issues, and escalation rules.



### Step 7. Import existing data (optional)

After you finalize the set of fields in a project, you can import trouble tickets and call data from existing databases.

### Step 8. Define and set up notifications

You can define and set up notifications after you generate your Web views, but you should do this before people start using the Web views to submit issues.

### Step 9. Go live

Make your Web views available to help desk staff and employees.

### Step 10. System maintenance (ongoing)

You should regularly backup your projects, databases, Web views, and other system files.

You should also run the Repair and Compact utility (Tools menu, HelpDesk Admin) on a regular basis. Compacting Microsoft Access databases and files often is the best preventive maintenance.

## Creating a New Project

### About Projects

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

---

*Do not edit the default HelpDesk project shipped with Enterprise HelpDesk. Instead, create a new project based on HelpDesk, and use this new project as your starting point.*

*Only members of the Admins group should be allowed to open projects in HelpDesk Admin.*

---

### How Many Projects Do You Need?

Each Enterprise HelpDesk project has its own issue database. Projects can share the definitions of things like reports and queries, but the issues recorded in each project database are completely separate.

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 optionally inherit the styles (queries, reports, sorts, layouts, and notifications) and Web views as well.

Enterprise HelpDesk includes a default HelpDesk project you can use as the base project. Before you create a new project based on HelpDesk, you should familiarize yourself with the fields included in HelpDesk, and understand what you can and cannot do when customizing fields.

Designed for use in development projects, HelpDesk allows you to record and track project-related tasks, feature and enhancement requests, user suggestions, and change notices.

HelpDesk includes over 60 fields, along with a complete set of reports, queries, sorts, layouts, and notifications based on those fields. A number of the default fields cannot be deleted. So even if you don't use these fields, they will take up extra space in your database.

When you do delete a field, you must first remove it from any report, query, sort, layout, or notification that references the field. Deleting unused fields helps minimize the size of your database.

## Customizing Fields

### About Customizing Fields

In general, if an existing field does not meet your requirements, you can either delete it or edit it.

For example, if a field is the right data type and size, but has the wrong caption, you can change the caption. In the case of choice lists, you can replace the table of choices completely.

Before you start customizing the fields, you should familiarize yourself with the fields in the base project, and determine:

- Which of the existing fields can you reuse as is? Or reuse by changing the label, choice table, or tab?
- What new fields do you need to add?
- Which of the existing fields do you want to delete?

You should also familiarize yourself with what you can and cannot do when editing fields.

### What You Can Do

#### You can:

- Add new fields.
- Change field labels.
- Change the list of choices for a choice list.

However, you must update the queries that test the choice values.

If you change the Progress choice list, you should either disable or update the default workflow rules. The default workflow is based on the Progress choice list.

- Delete most fields.

To delete a field, you must first remove it from any queries, sorts, layouts, reports, and notification that use the field.

Before you try to delete a field, go through the different queries, sorts, layouts, reports, and notification conditions and either remove the field or delete the style.

- Create choice lists where the contents of one list depends on the choice selected from the other list.

For example, Problem Type could be one of Software, Hardware, and System. Problem Area could then be a type-specific list that displays either a list of software applications, hardware components, or system components.

- Move fields between tabs.
- Change tab names, and reorder the tabs.
- Disable fields (make read-only) either for all users or for specific user groups.
- Hide fields. Note that when you hide a field, it is hidden in all Web views.

## What You Cannot Do

You cannot:

- Change field types.

For example, you cannot change a single choice field into a multi-choice field, or a Number field into a Text field.

- Change the field size.

For example, you cannot change the size of a text box from 20 to 30.

- Delete certain fields. Some fields, such as Owner, State, and Progress, cannot be deleted.

When you generate a Web view, you can choose not to include specific fields. So even if you cannot delete them, you can remove them from all views. Of course, the fields will still take up space in your database.

- Use multi-choice lists in workflow rules.
- Use multi-choice lists in formulas, charts, or cross-tabs when building custom reports with Crystal Reports.

---

*If you need to change the type or the size of a field, the best thing to do is to copy the field and delete the original. When you copy a field, you can edit its type and size. Note that copying a field does not copy the stored data, and deleting a field destroys any stored data.*

---

## What Happens to Styles

Styles such as queries and reports are based on fields. For the most part, HelpDesk Admin automatically updates styles when you customize the fields, but there are some exceptions.

**When you add a new field** You need to add the new field to the following reports:

- Current Issue - Detailed  
Used to print the current issue in a Web view.
- Notification - Detailed Record,  
Notification - Summary  
Used to format the contents or attachments to e-mail notification messages.

---

*In a Web view, these reports show only the fields exported to the view.*

---

**When you rename a field** When you change the label appearing on choice lists, HelpDesk Admin automatically updates any reports and layouts that use the field name as a title.

If you change just the Field Caption label, HelpDesk Admin does not update any reports and layouts that use the field name as a title.

If you rename a field such as the Progress field, you may want to rename any sorts, queries, and layouts whose names are based on the name of the field.

**When you edit a choice list** If you delete a choice from a choice table (for example, Assigned from tblSubstate, the Progress choice table), then you have to update any queries that test the choice value. The same is true if you change the choice text (for example, from “Assigned” to “Started”).

You may also have to update custom reports that use the choice list. For example, when you change the choice text, custom reports that use a specified sort order will lump the new choice into the Others category.

You should also check the workflow rules if you edit the Progress choice list.

**When you delete a field** Custom reports that use the deleted field will not display properly. For example, if a custom report uses the field for calculations, or as a chart axis, then deleting the field invalidates the report. In many cases the report will still work, but the data it displays won't make sense.

## Creating Groups and Granting Permissions

### Overview

If you want to restrict access to Web views or to administrative features, you use groups. Typically, you create groups that match the different roles in your help desk process. For example, if you have separate groups for employees and for help desk staff, you can prevent employees from opening the same Web views used by the help desk staff.

Enterprise HelpDesk includes several built-in groups that cannot be deleted: Users, Admins, and Guests. It also includes several sample groups that reflect basic help desk roles: Employees, HelpDesk-Analysts, and HelpDesk-GroupLeads.

If a help desk analyst is responsible for administering the Enterprise HelpDesk system, you can make the analyst a member of both HelpDesk-Analysts and Admins. As a member of Admins, the analyst has full access to all administrative features.

You could have several different admin-type groups, with each group providing a different level of access to administrative capabilities. For example, you might want a basic-level admin group that allows members to create new user accounts and update contact information. Other admin groups could provide the ability to:

- Create fields, edit choice lists, rename tabs, change workflow.
- Create reports, queries, sorts, and layouts, define notifications.
- Create projects, delete records, perform database maintenance, set up notifications.

### About the Built-in Groups

**Users** By default, all users are members of the Users group. You cannot remove users from the Users group, or delete the Users group.

You use the Users group to set permissions that you want to apply to all users.

Permissions granted to the Users group are inherited by all users, and cannot be overridden. For example, if a feature is enabled for the Users group and disabled for Employees group, then members of the Employees group can still use the feature.

The reverse is not true, however. If a feature (or project or view) is disabled for the Users group, members of other groups can still access the feature (or project or view)—if you enable the feature (or project or view) for the other groups.

**Admins** Members of the Admin group have complete access to all projects and administrative features. You cannot disable features or projects for the Admins group.

**Guests** Intended for users who are not full-time employees, such as customers or visitors from other companies.

## Features

Features allow you to control:

- Who can use the Ad-hoc Query Editor, generate reports, update contact information, view revision histories, or change their password in a Web view.
- Who can log on to HelpDesk Admin, HelpDesk Web Admin, and the Web View Editor.
- Who can use certain tools in HelpDesk Admin and HelpDesk Web Admin. For example, who can edit workflow rules in HelpDesk Web Admin, and who can create reports or edit fields in HelpDesk Admin.

## Projects

When you create a project, you specify which groups can open the project. Groups allowed to open a project can:

- Log on to Web views of the project (if they also have permission to open the view).
- Edit the project in HelpDesk Admin.

- Edit views of that project in Web View Editor, or generate new views of that project.

Admins can always open a project. Instead of allowing Users to open a project, you should allow specific groups. That way you can grant access permissions to views on a group-by-group basis in the Web View Editor.

## Views

Groups allowed to open a view can log on to the view. A group must be allowed to open the project before it can be allowed to open a view.

Remember that if members of the Users group are allowed to open the view, then any user can open the view.

# Creating User Accounts

## About User Accounts

User accounts provide basic logon security. Users can log on to Enterprise HelpDesk with the following logon accounts:

- Enterprise HelpDesk user accounts, which exist only in Enterprise HelpDesk.
- Active Directory user accounts.
- Windows user accounts (for Windows NT users, such as in Windows NT 4.0 and Windows 2000 without Active Directory).

The authentication method used by Enterprise HelpDesk for each user is specified in HelpDesk Web Admin.

You need to create a user account for each person who needs to log on to a Web view or to one of the administrative tools: HelpDesk Admin, HelpDesk Web Admin, and the Web View Editor.

You don't necessarily have to create user accounts for every employee in your company. If you provide a submit-only Web view for employees to use when submitting issues, employees don't need their own user account.

## Importing User Accounts from Windows

You can import user accounts from an Active Directory domain or from a Windows NT domain. Enterprise HelpDesk includes a User Account Manager wizard to help you import user accounts.

You can also schedule imports to keep Enterprise HelpDesk synchronized with Active Directory (or Windows domains).

## Submit-only Views

A submit-only view allows an unlimited number of users to submit issues. All you need is a single user account. All users will automatically log on to the view with this account (in fact, the users never see the logon window, they go straight to the view).

This user account must belong to a group that has permission to open the Web view, and to add and update contacts. The account will be used to set the Submitter field.

The user submitting the issue is considered the contact, and must enter their contact information (name, e-mail, and so on) the first time they submit an issue.

## Predefined User Accounts

Enterprise HelpDesk includes several built-in users: demo, guest, and admin. It also includes several sample users that reflect basic help desk roles: employee, analyst, and group leader.

You can disable most of these accounts in HelpDesk Web Admin. The admin account cannot be disabled, so you should change the admin password.

Disabled user accounts are still listed in the Contact, Owner, and Submitter lists. Deleting the users from the database (or removing them from the choice lists) requires editing the project database files.

## Generating Web Views

### Parent-child relationships between issues?

You can add a Child Issues tab to a Web view to allow users to link one or more child issues to a parent issue. For example:

- If you have several bugs that are all symptoms of the same problem, you can make those bugs the children of the main, parent bug for the problem.
- If a task consists of a number of sub-tasks, the sub-task issues can be children of the main task.

- If a bug is present in multiple branches of your code, then you could create a child issue for each code branch,

By default, the parent issue controls the substate of the child issues. For example, when a user changes the substate of the parent to Fixed, all the children are also marked Fixed. If you want the substate of a child issue to be independent from the substate of the parent issue, you need to export the Substate controlled by parent field.

## Customized files from the base project?

New projects automatically inherit the customized Web view files of the base project. For example, all projects based on the HelpDesk project inherit the HelpDesk custom reports.

When you create a new project, Enterprise HelpDesk copies everything in:

```
CUSTOMIZEDFILES\#Project#<base-project>\
to
```

```
CUSTOMIZEDFILES\#Project#<your-project>\
```

## What if you don't export a field?

**Queries** If you don't export a field, then don't export queries that reference the field. The query won't work.

For example, suppose you don't export the Owner field, but you do export a query like My Open Issues, which tests the value of the Owner field. When a user tries to run the query, the user gets a message saying that the query could not be completed and the view is rolling back to the previous query.

If the query is the default query for the view, users will get a more informative message when they log on.

**Layouts** Layouts do not include fields that are not exported.

**Sorts** Sorts default to sorting by issue number if a field is missing.

**Listing Reports** Listing reports (such as the Current Issue - Detailed report, which is used by the Print button) include only the fields exported to the view.

**Custom Reports** Like listing reports, custom reports include only the fields exported to the view. However, unlike listing reports, custom reports cannot always handle missing fields properly.

For example, if the Owner field is not exported, then instead of showing owner names along one axis of a chart, the report may show the summary descriptions or the priority values. What the report shows depends on the order of the fields in the report definition (if a field is missing, the next one in the definition is used).

## Should you automatically update choice lists?

If you expect to frequently update a choice list, you may want to set the Automatically Update List attribute to Yes.

This means you won't have to regenerate the Web view every time you update the list. The view will check for updates each time a user logs on.

By default, only the Contact, Owner, and Submitter choice lists are automatically updated.

Automatically updating a large number of choice lists may affect performance. You should automatically update only the choice lists that you plan to frequently change.

## Do you want to change a field caption?

You can change field labels by setting the Caption attribute in the Web View Editor. This allows you to override the label specified in the project. For example, if the original labels assumed the users were help desk staff, you may want to change the labels in a view intended for employees.

The Caption attribute changes only the label displayed beside the field in the HTML form. Everywhere else in the Web view (such as in reports and the Ad-hoc Query Editor), the label defined in the project is used.

## When do you have to regenerate?

When you:

- Add a new field or query to a project. Remember to move the new field or query to the Export to View list before you generate.
- Change a choice list (for example, add a new choice, or change the text of a choice), unless Automatically Update List is set to Yes.
- When you change any of the attributes for a field (such as when you set Automatically Update List to Yes).

You don't have to regenerate when you:

- Change the definition of a query, sort, or layout.
- Define new sorts and layouts. All sorts and layouts are automatically exported to views of the project.
- Create or edit reports.
- Add a group to, or remove from, the list of groups allowed to open the view. You just have to save the view.
- Enable or disable features.

---

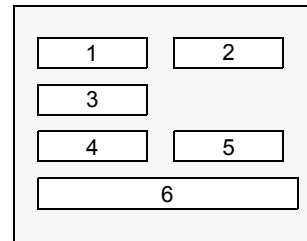
*Web view users must exit and log back on to see the changes.*

---

## How to control the layout of fields?

The order of the fields in the Export to View list determines the order in which they are laid out in the two columns of the HTML form. For example, here's how the first six fields in the Export to View list would be arranged, if:

- None of the first five fields are Memo fields.
- Field 3 has Column Span = 2.
- Field 6 is a Memo field and has Column Span = 2 and CSS Class = MemoFieldWidth. (Memo fields automatically have Column Span set to 2 and CSS Class = MemoFieldWidth.)



## Setting Up Notifications

Notifications allow you to alert help desk staff and employees when issues are updated. For example, you can:

- Notify analysts when issues are assigned to them.
- Notify analysts when employees update an issue.
- Notify employees when issues are resolved.



You should try to keep the number of notifications to a minimum. Defining too many notifications for field updates can overwhelm users with e-mail, resulting in users missing important notifications. Use notifications for changes to critical fields like Owner, Progress, and Priority.



# Chapter 3: Projects

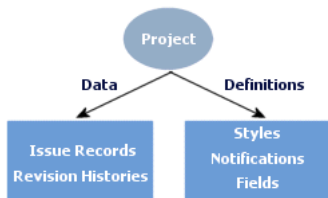
## What is a Project?

In Enterprise HelpDesk, projects are used to keep issues in separate databases. How you organize your projects is up to you. You can have one project for tracking all issues, or you can have several projects. To create and manage projects, use HelpDesk Admin.

A project includes:

- A database of issues and their revision histories.
- A set of project-specific definitions, which include styles (queries, sorts, layouts, reports, and report pages), the fields, and notification definitions. These definitions are shared by all users of a project.

### Project Structure



## Creating New Projects

Typically, you start a new project because you want to start tracking issues in a new database. However, there are other reasons for creating a new project. For example, you may want to:

- Share the definitions of styles, notifications, and fields with another project.

- Stop sharing definitions so you can add project-specific changes. For example, you may need to change the fields for one project but not for the others.
- Build a template project and use it as a base for all other projects.
- Break a large project into several smaller projects.

New projects are always based on an existing project. When you create a new project, you can copy the issues, styles, notifications, and the fields from the base project. You can also share the styles, notifications, and fields between projects.

### To create a new project:

- 1 Start HelpDesk Admin
- 2 On the File menu, click New Project.
- 3 In the Project Name box, type the name of the new project.
- 4 In the Base Project list, click the project you want to use as a template for the new project.
- 5 In the Groups Allowed to Open Project, click the user groups that will be allowed to access the project, either through HelpDesk Admin, HelpDesk Web Admin, the Web View Editor, or Web views.

Note that access to individual Enterprise HelpDesk components can be selectively disabled. For example, a group can have access to Web views of a project, but be denied access to HelpDesk Admin, HelpDesk Web Admin, and the Web View Editor.

- 6 Under Global Styles and Notifications:

- Click None to create a project with no queries, sorts, layouts, reports, or notifications. Only the fields will be copied from the base project.
  - Click Copy from the Base Project to copy the definitions of fields, queries, sorts, layouts, reports, and notifications to the new project.
  - Click Share with Base Project to share a single set of fields, queries, sorts, layouts, reports, and notifications.
- 7 If you want to copy the issues from the base project, click the Copy issues and revision history from base project check box.
  - 8 If you don't want to copy the Web views from the base project, clear the Copy Web views from the base project check box.

Copying Web views from the base project can save you time. For example, copying the Web views from HelpDesk means you don't have to manually set up timestamping in a new Web view.

**Creating your first project?** Use one of the sample projects that come with Enterprise HelpDesk as the base project. Copy the styles and notifications, but do not copy the issues and revision history. Also, you should read "Building a Project Template" on page 19 before you start tracking issues.

## Copying and Sharing Definitions

A new project is always based on an existing project. The new project can either share or take a copy of the styles, notifications, and fields in the

base project. In the New Project dialog box, select the option that corresponds to what you want to do with the new project:

**None** Clear the styles and notifications so you can build your own. Copy the fields from the base project and use it as a starting point.

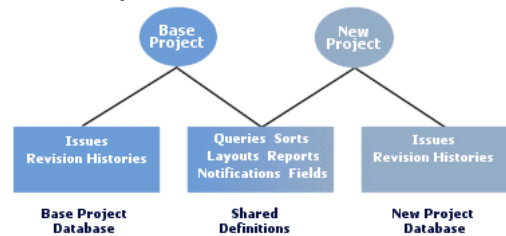
**Copy from the Base Project** Copy the styles, notifications, and fields from the base project and use them as a starting point, or template, for the new project.

**Share with Base Project** Share styles, notifications, and fields with the base project.

**Why copy styles and notifications?** Copying styles and notifications allows you to make changes on a project-by-project basis. For example, you may need to add project-specific fields. In turn, the new fields may require changes to the styles (for example, you may need to include new fields in queries and reports).

**Why share styles and notifications?** Sharing styles and notifications provides consistency across projects and simplifies the distribution of new styles and notifications. For example, when you define a new report, it is immediately available in all projects that share the same styles.

### Shared Project Definitions



Sharing styles and notifications sometimes requires that you create extra styles. For example, suppose you want to print the product name in

report titles. To do this, you need a copy of your standard report page for each product. Then for each report that uses that report page, you need to provide a product-specific report definition.

## Building a Project Template

Before you start using Enterprise HelpDesk to track issues, you should build a project template. A project template is a project that you use as the base for all new projects. The project template contains styles and definitions common to all projects.

For example, a project template can define a standard set of queries, reports, and notifications. In addition, a project template can include a set of fields customized to match your company's process and terminology.

Using a project template allows you to reuse custom styles, notifications, and fields. Each new project can copy (or share) the styles and definitions from the project template.

Before you build a project template, you must first evaluate your issue tracking and reporting requirements. For example, you should decide:

- What custom fields and choice lists are required.
- What standard queries and reports you want in each project.
- What notifications are needed to the workflow in your process.

To build the actual project template, create a new project based on the HelpDesk project, then customize the issue fields and define the custom styles and notifications you need.

## Deleting Projects

### To delete a project:

- 1 In HelpDesk Admin, click a project in the Project list.
- 2 On the File menu, click Delete Project.

## Editing Project Properties

The project properties are displayed when you click a project in the Project list.

### Project Location

Location of the project files, which includes the definitions database.

### Definitions Database

The name of the project definitions database. The definitions database contains the definitions of the fields, queries, sorts, layouts, reports, and notifications for the project.

If a project shares the definitions of another project, the two projects have the same definitions database.

### Database Engine

Specifies whether the project uses Microsoft Access or SQL Server for the issue database.

### Groups Allowed to Open Project

List of user groups that are allowed to open the project. Groups allowed to open a project can:

- Log on to Web views of the project (if they also have permission to open the views).
- Edit the project in HelpDesk Admin (depending on what features are enabled for the group).
- Edit views of that project in Web View Editor, or generate new views of that project.

If the Users group is allowed to open the project, then all groups can open the project. The Admins group is always allowed to open projects.

## Current Users

Displays the users currently logged on to Web views of the project.

**Name** Logon name of the user.

**Date/Time** Date and time that the user logged on.

**Workstation** The user's IP address or computer name.

**Project** The user is logged on to a Web view of this project.

**Virtual Directory** The virtual directory is the final part of the URL used to access the Web view. For example, if the virtual directory is named "helpdesk", then the URL is http://server/helpdesk.

Virtual directories such as helpdesk00, helpdesk01, and helpdesk02 are all accessed through the //server/helpdesk URL.

**Application** This is always "Web View". The Logons Editor also lists the Web View Editor and Web Admin.

# Chapter 4: Editing Fields

## About the Field Editor

Before you start recording and tracking issues, you probably need to customize some of the fields used to collect information. For example, the Problem Area and Priority fields should list choices that correspond to your terminology and environment.

You may want to delete unused fields, add new fields to track additional information, or add new tabs. For example, you may want to add a tab for hardware configuration details.

HelpDesk Admin provides a simple Field Editor for editing fields. To open this editor, click Field Editor on the Project menu. The Field Editor allows you to edit field definitions, but to export fields to Web views you use the Web View Editor.


**Editing Fields** Click a field in the Field list to edit, copy, rename, or delete the field. The Field list contains all the fields defined in the project.

The buttons beside the Field list allow you to create new fields or copy, delete, or edit the selected field.

**Destination Tab** Tabs allow you to group sets of related fields.

**Labels** A field has two labels. One label is the field name, which appears in choice lists such as the Field list in any of the HelpDesk Admin editors. The other label is the caption that appears beside the field in a Web view.

**Data** Under Data, you specify what type of input the field accepts: text, dates, times, numbers, yes/no values, or choices from a list.

The choices displayed in a choice list field are defined in a choice table. To edit and create choice tables, click  beside the Table Containing Choices list to open the Choice Editor.

**Field Is** The Field Is check boxes give you control over how the field behaves in a Web view. Required fields cannot be left blank. Visible fields appear in a Web view, instead of being hidden. Enabled fields accept user input, while disabled fields are read-only (they display data but do not accept user input). Enabled choice list fields can also be used in workflow rules.

The Read-Only For list specifies which user groups cannot edit the field.

**Show in Choice Lists** This check box controls whether you can use the field to build queries, reports, and other styles.

**Maintain Revision History** This check box controls whether Enterprise HelpDesk tracks revisions to the field, and whether you can use the field for update notifications (update notifications are generated when the value of a field changes).

**Applying Changes** To apply changes to fields, HelpDesk Admin must log off the users who are logged on to Web views of the project.


## Adding Fields

### About Adding Fields

You can add new fields to any of the tabs. New fields are automatically available in all Enterprise HelpDesk editors, such as the Query Editor and Report Editor.

New fields are not automatically exported to Web views. You must use the Web View Editor to export the fields and regenerate the Web views.

---

*You can use an existing field as a starting point for a new field. In the Field list, click a field and then click .*

---

### Adding New Fields to Reports

When you add new fields, you should update the reports that Enterprise HelpDesk uses to print issues and to format notifications.

- Current Issue - Detailed is used to print the current issue in a Web view.

- Notification - Detailed Record and Notification - Summary are used to format the contents or attachments to e-mail notification messages.

### Making Fields Required

By default, fields are optional, which means users can leave the fields blank when they submit an issue. To make a field required, click the Required check box. Users cannot save an issue without filling in a required field. Required fields have a highlighted label in a Web view.

### Making Fields Read-Only

**To make a field read-only for all users** Clear the Enabled check box.

**To make a field read-only for a specific user group** Click the Enabled check box, and then click the group in the Read-Only For list.

### Using Fields to Define Styles

If you don't need to use a field to build queries, sorts, layouts, reports, or notifications, clear the Show in Choice Lists check box. This removes the field from the Field lists of editors such as the Query Editor. It also removes the field from the Fields list in the Ad-hoc Query Editor of a Web view.

For example, the Attachments field is a field that you don't need for queries, sorts, layouts, reports, or notifications. How often would you expect users to search for or sort issues based on what files are attached?



## Tracking Changes

If you don't need to track changes to a field, clear the Maintain Revision History check box.

Enterprise HelpDesk won't update the revision history when a user changes the field.

For a memo field, Enterprise HelpDesk doesn't track the actual changes to the field value. Instead, Enterprise HelpDesk marks the field as "modified".

---

*If you want to send notifications when a field is updated, you must select the Maintain Revision History check box for that field.*

---

## Choosing a Destination Tab

The Destination Tab specifies the tab to which the new field is added.

Fields added to the Contact tab are read-only (visible but not enabled). These fields are also added to the Users and Contact page in HelpDesk Web Admin, which is where you enter data into the fields.

To create new tabs, use HelpDesk Web Admin. See "Working with Tabs" on page 27.

## Setting Field Labels

Field Caption is the label that appears beside the field in a Web view. You can override this label in the Web View Editor by setting the Caption attribute.

Choice Lists is the label that appears in any choice list that allows a user to choose a field (for example, in the Field list of the Ad-hoc Query Editor of a Web view). To change this label, click

 to rename the field.

## Choosing a Field Type

**Currency, Date, Number, Text, and Time** These are all input fields where a user can enter text. Enterprise HelpDesk automatically validates the text entered in these field types, and displays a warning if a user enters any invalid characters or uses the wrong format.

For example, Number fields accept only numeric values, and Currency, Date, and Time fields require the input values to follow the Windows Regional Settings.

**Memo** A Memo field is a text field that allows a large amount of characters to be input.

**Single Choice and Multi Choice** These fields are drop-down lists of choices. Choice lists present fixed lists of choices to the user. Multi Choice fields allow a user to select one or more choices.

**Yes/No** This is a check box.

## Setting the Field Size

For Text fields, the field size is the maximum number of characters that a user can type in the field. For Number fields, however, the size is the data size (Byte, Integer, Long Integer, Double, or Single).

Size	Description
Byte	Stores numbers from 0 to 255 (no fractions).  Decimal precision: None  Storage size: 1 bytes

Size	Description
Integer	Stores numbers from –32,768 to 32,767 (no fractions).  Decimal precision: None  Storage size: 2 bytes
Long Integer	Stores numbers from -2,147,483,648 to 2,147,483,647 (no fractions).  Decimal precision: None  Storage size: 4 bytes
Single	Stores numbers from –3.402823E38 to –1.401298E–45 for negative values and from 1.401298E–45 to 3.402823E38 for positive values.  Decimal precision: 7  Storage size: 4bytes
Double	Stores numbers from –1.79769313486231E308 to –4.94065645841247E–324 for negative values and from 1.79769313486231E308 to 4.94065645841247E–324 for positive values.  Decimal precision: 15  Storage size: 8 bytes

## Removing Fields

### About Removing Fields

To remove a field, you can either delete it or hide it. Or you can simply not export the field when you generate your Web views.

You can also disable fields, making them read-only (see “Making Fields Read-Only” on page 22).

### Deleting Fields

Deleting a field removes it and all stored data from the issue database. If you don't want to lose the data, you can disable the field, hide it, or remove it from the Web views.

You can delete a field only if it is not used in any query, sort, layout, report, or notification.

### Hiding Fields

Because you can simply remove a field from a Web view (by not exporting the field), hiding fields is not something you will do often. However, you may want to hide a field if some of the queries you export use the field, but you don't want users to see the field.

To hide a field in all Web views of a project, clear the Visible check box in the Field Editor. To hide a field in specific Web views, use the Visible attribute of the field in the Web View Editor.

Note that if you hide a field, it is still available in editors such as the query, sort, layout, and report editors, unless you clear the Show in Choice Lists check box.

---

*Queries do not work if the fields used in the query definition are not in the Web view.*

---

## Removing Fields from Web Views

Using the Web View Editor, you can remove fields from some Web views and leave the fields in other views.

## Working with Choice Lists

### About Choice Lists

A choice list is a list of choices displayed in a selection list on an HTML form. The list of choices is defined in a *choice table*.

### Editing Choice Tables

You can edit the choices in the list from either:

- HelpDesk Admin
- HelpDesk Web Admin

Both allow you to add new choices, delete choices, change choice text, and reorder choices.

**Using HelpDesk Admin** Use HelpDesk Admin when you want to create new choice tables. Using the Field Editor, you can both create the choice table and associate it with a field.

Also, use HelpDesk Admin when you want to edit the Progress choice table. Progress choices must be mapped to State choices (see “Editing the Progress and State Lists” on page 26), and you can do this only with the Field Editor.

**When to use HelpDesk Web Admin** Use HelpDesk Web Admin to edit existing choice tables (for example, when you want to edit choice text or add new choices). While you can create new choice tables in HelpDesk Web Admin, you cannot associate the new choice table with a field—for that you need to use the Field Editor in HelpDesk Admin.

Also, don’t use HelpDesk Web Admin to edit the Progress choice list. Use HelpDesk Admin instead. All Progress choices must be mapped to a State choice, and you cannot edit (or even view) that mapping in HelpDesk Web Admin.

Any new choices you do add to Progress will not be mapped to a State choice. And if you do edit the text of a Progress choice, remember that if the new text changes the sense of the choice, the State field will be set incorrectly. For example, if you change “Resolved” to “Reopened”, then Reopened will still be mapped to the Closed state.

HelpDesk Web Admin can also delete choice lists, but only if they are not referenced by a field.

**Advantages of HelpDesk Web Admin** The advantage of HelpDesk Web Admin is that you can edit choice lists across the Web. You don’t have to be sitting at a machine where HelpDesk Admin is installed. Also, you must use HelpDesk Web Admin to define global choice lists.

### Editing Choice Text

When you change the text of a choice, you must update any queries that test the choice value. For example, consider this query:

```
Progress = Assigned
```

If you change the choice text from "Assigned" to "InProgress" in the choice table, then the query will not find any issues. Issues store the index of the choice, but queries store the actual text.

## Renaming Choice List Tables

HelpDesk Web Admin (in the Choice List list on the Choices tab) displays a name associated with the choice table, not the name of the choice list field.

A choice table actually has two names: the name of the choice table (for example, "tblState") and a friendly name (for example, "State"). HelpDesk Web Admin displays the friendly name. You can change the friendly name by renaming the choice table in HelpDesk Web Admin.

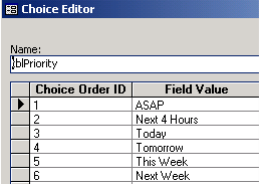
## Sorting Choice Lists

Choices can be listed in alphabetical order, or in any order that you want. For example, a non-alphabetic choice order such as Highest, High, Medium, Low, Lowest is more appropriate for a list of relative values than the alphabetic order.

When you create a new choice list, you choose how you want to order the list. The Allow Choice Order Sort check box controls whether a choice list supports non-alphabetic choice orders and sorts.

By default, Enterprise HelpDesk automatically lists choices in alphabetic order. But when you allow choice order sorts, you can specify a non-alphabetic choice order, and you can define sorts that sort issues by choice order as well as by alphabetic order.

To specify a non-alphabetic choice order, you assign a numeric ID to each choice. This ID represents the position of the choice in the list (1st, 2nd, and so on).



Choice Order ID	Field Value
1	ASAP
2	Next 4 Hours
3	Today
4	Tomorrow
5	This Week
6	Next Week

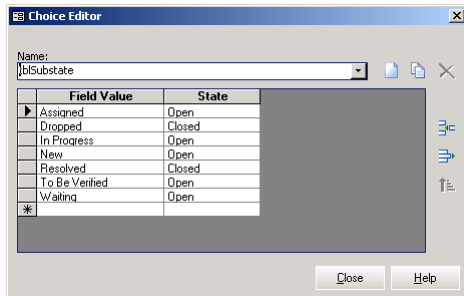
If you do not specify the choice order, Enterprise HelpDesk automatically sorts the list into alphabetic order.

## Editing the Progress and State Lists

The Progress choice list is a special type of choice list. When a user selects a choice from the Progress list, the State field is automatically set to either Open or Closed.

If you want to change the mapping of Progress values to State values, you must use HelpDesk Admin.

In HelpDesk Admin, the choice table for the Progress list contains an extra column that maps Progress choices to State choices. You must fill in this column when you add or edit the choices in the Progress list.



When you edit the State choice table, remember that the Closed choice is the choice that sets the Closed Date and Time fields. So, for example, changing the choice text from "Closed" to something else may confuse users.

---

*If you edit the Progress choice list, you should check that workflow rules based on the Progress field still work.*


---


## Global Choice Lists

Global choice lists are choice lists that are shared by all projects. After you create a global choice list, you use the Field Editor in HelpDesk Admin to associate the choice list with a field. You will also have to regenerate the Web views that will use the field.

### To define a global choice list


- 1 In HelpDesk Web Admin, click the Choices tab.
- 2 In the Project list, click Global Choice Lists.

- 3 Click  to create a new choice list.

To create a new choice by copying an existing list: in the Choice List list, click a list and then click .

- 4 In the Add Choice List dialog box:

- In the Choice List Name box, type a name for the database table that will store the choices in the choice list.
- In Choice List Caption, type a display name for the choice list (this is the name displayed in in HelpDesk Web Admin).
- Select the Non-Alphabetical Choice Order check box if you want to define a non-alphabetical order for the choices in the list (for example, "Applications", "System", "Hardware").

- 5 In the Choices section, click  to add a new choice to the list.

## Working with Tabs

HelpDesk Web Admin allows you to add new tabs to a project. After you add a new tab, you use the Field Editor to add new fields to the tab.

You can also reorder the tabs, change the tab names, and delete tabs. To delete tabs you must either delete all the fields on the tab or move the fields to another tab.



# Chapter 5: Finding and Listing Issues

## Building Queries

### About Queries

To build queries in HelpDesk Admin, click Query Editor on the Project menu. In the Query Editor, you use And and Or operators to combine multiple search conditions. To control the order in which search conditions are evaluated, you insert sets of parentheses.

---

*To use one query as a starting point for a new query, choose a query from the Query Name list, click Copy, and give the new query a name.*

*To test a query, click Preview.*

---

### Searching by Dates

You can use the value <Today> to match the current date. For example, you can search for all issues submitted or updated today.

To search against specific dates, double-click the Value box and then double-click a date in the calendar.

### Searching for Unassigned Issues

By default, the Owner field is set to <None>. You can use the value <None> in queries to find unassigned issues.

### Finding Issues for the Current User

You can use the value <User> to match the current user. With <User>, you can build generic queries that work for any user. For example, the My Assigned Issues query finds all issues assigned to the current user.

### Finding New Issues

To find all issues that have not been updated since they were first submitted, search against the revision number: Revision Number = 1.

### Finding Parent Issues

You can find the parent issues of a child issue by searching against the Child Issues field. For example, to find the parent issues of the issue 22, use the Advanced query editor to search for Child Issues = 22.

To find all parent issues, use the Advanced query editor to search for Child Issues <> 0.

### Searching Choices Lists with Relational Operators

The relational operators are <, <=, >=, and >. When you search choice lists with a relational operator, the search is based on the order of the choices in the list.

For example, the order of choices in the Problem Area list is:

- Apps - Goldmine
- Apps - MS Excel
- Apps - MS Outlook
- Apps - MS Word
- Apps - Other
- HW - Disk
- ...

So the query Problem Area < HW - Disk returns all the application-related issues.

If a choice list uses a non-alphabetical sort order, the sense of the relational operators is reversed. For example, the Priority list has this choice-order sort:

- ASAP
- Next 4 Hours
- Today
- Tomorrow
- This Week
- Next Week
- This Month
- Whenever

The query Priority > Today returns issues marked ASAP or Next 4 Hours. The query Priority < Today returns issues marked Tomorrow, This Week, Next Week, This Month, or Whenever.

## Previewing Queries

To check the results of a query without closing the Query Editor, click the Preview button. This runs the query and displays the results in a preview window.

## Saving Queries

**To save changes and continue editing:**

- Click Apply to apply your changes without closing the Query Editor.

**To save changes and exit the Query Editor:**

- Click Close to apply your changes and close the Query Editor.

## Inserting Parentheses Around Search Conditions

When you combine search conditions with the And and Or operators, you may not always get the results you expect. For example, suppose you want to find all new issues with priorities ASAP or Today.


```
Progress = New And  
Priority = ASAP Or  
Priority = Today
```

And has a higher precedence than Or, so this query finds all new issues with priority ASAP, plus all issues (not just the new ones) with priority Today:

```
( Progress = New And Priority = ASAP ) Or  
Priority = Today
```

To find just the new issues with priorities ASAP and Today, you need to put parentheses around the conditions joined by Or, so that the query looks like this in the Code View:

```
Progress = New And  
(Priority = ASAP Or  
Priority = Today)
```

To insert the parentheses, click the Priority = Today search condition and then click .

## Searching for Strings

The Contains operator performs a case-insensitive search for a string of text anywhere in a field. You can use Contains to search for keywords in the



Summary or Description fields. This allows you to package common keyword searches such as predefined queries. For example:

Summary Contains printer

You can also use Contains to find all choices in a list that contain the same string of characters. For example, the choices in the default Problem Area list start with either "HW - ", "Apps - ", or "System - ". So Contains "HW -" finds all hardware problems.

## Searching for Wildcards

The Like and Not Like operators support wildcard characters, which gives you considerable flexibility in the specification of search patterns. Using wildcards, you can search for inexact patterns of text in any field.

Wildcard	Matches
_	Any single character. For example:  "run_time" matches "run time" or "run-time"
%	Zero or more characters. For example:  Contains run%time matches any string that contains "runtime", "run time", or "run-time".  Like Install% matches any string that starts with "Install".  Like %run%time% matches the same strings as Contains run%time.

Wildcard	Matches
[charlist]	Any single character in charlist. Can include spaces, but not the right bracket (]) character. For example:  "SP[56]" matches "SP5" or "SP6"  Use a hyphen to specify a range of characters. For example:  "[1-36-9]" matches the digits 1, 2, 3, 6, 7, 8, or 9  To match the hyphen character, the hyphen must be either the first or last character in charlist. For example:  "[-0-9]" or "[0-9-]" match any digit or a minus sign
[!charlist]	Any single character not in charlist. For example:  "[!tb]rash" matches "crash" but not "trash" or "brash"

To search for the wildcard characters \_ and %, you must enclose them in brackets. For example, to search for a percent sign, use the pattern [%].

## Defining Sorts

### About Sorts

You can sort the Summary List by issue number, priority, state, progress, owner, or any other field or combination of fields. Enterprise HelpDesk allows you to define sorts, which are named sets of sort criteria. Sorts appear in the Sort list on the Summary toolbar.

To define a sort in HelpDesk Admin, click Sort Editor on the Project menu to open the Sort Editor.

In the Sort Editor, choose the fields you want to use as sort keys. The first field is the primary sort key, the second field is the secondary key, and so on.

For example, if you sort by Owner and Priority, then issues are sorted alphabetically by owner, so that all issues belonging to the same person are grouped together. Then the issues for each owner are sorted by Priority.

---

*To use one sort as a starting point for a new sort, choose a sort from the Name list, click Copy, and give the new sort a name.*

---

## Sort Orders

Choice Order Ascending and Choice Order Descending sort the issues based on the order of the choices in the choice list, not on alphabetical order. For some choice lists, this is not the same order.

For example, a choice list may contain the values "High, Medium, Low" in that order. An alphabetical order for the sort list would "High, Low, Medium" or "Medium, Low, High", which doesn't make as much sense.

## Previewing Sorts

To check the results of a sort without closing the Sort Editor, click the Preview button. This runs the sort and displays the results in a preview window.

## Saving Sorts

**To save changes and continue editing:**

- Click Apply to apply your changes without closing the Sort Editor.

**To save changes and exit the Sort Editor:**

- Click Close to apply your changes and close the Sort Editor.

## Defining Layouts

### About Layouts

When you use different queries, you probably want to list different information in the Summary List. For example, when you list all issues assigned to you, you might replace the Owner column with some other column. But when you list all issues assigned to a group, you probably want to see who owns each issue.

Enterprise HelpDesk allows you to define layout styles that specify the column layout and contents of the Summary List. Layout styles appear in the Layout list on the Summary Toolbar.

To define a layout in HelpDesk Admin, click Layout Editor on the Project menu to open the Layout Editor.

Each column in the Summary List corresponds to a field. Choose the fields you want to list, and set the column widths and alignments. By default, field names are used as column headings, but you can change this by entering a new heading in the Title cell.

---

*To use one layout as a starting point for a new layout, choose a layout from the Name list, click Copy, and give the new layout a name.*

---

## Previewing Layouts

To check a layout definition without closing the Layout Editor, click the Preview button.

## Saving Layouts

### **To save changes and continue editing:**

- Click Apply to apply your changes without closing the Layout Editor.

### **To save changes and exit the Layout Editor:**

- Click Close to apply your changes and close the Layout Editor.



# Chapter 6: Reporting

## About Reports

Reports help you understand and assess the state of your project. An issue tracking system like Enterprise HelpDesk contains a lot of valuable information about a project. Reports allow you to access this information, break it down, analyze it, and present it.

Enterprise HelpDesk provides three types of reports: Summary (cross-tab), Listing, and Time (trend).

In addition to defining standard Listing reports in HelpDesk Admin, you can also use Crystal Reports (must be purchased separately) to customize Listing reports by adding features such as charts, formulas, field highlighting, and running totals

To design reports in HelpDesk Admin, click Reports on the Project menu, and then click Report Editor.

## Viewing Reports

Depending on the report format and definition, you can view reports as text or as line, bar, or pie charts. Charts can be in either 2D or 3D.

You can view Summary, Time, and Listing reports in HelpDesk Admin. You can also view Listing reports in Web views. By default, Web views use HTML to format and display Listing reports, and Crystal Reports 9.0 for custom reports (Enterprise HelpDesk includes the Crystal Reports 9.0 Runtime Software).

## Changing Report Viewers

Options control which report viewers are used by the Web views:

- Standard Report Engine specifies the report viewer used for Listing reports.
- Custom Report Engine specifies the report viewer used for Custom reports.

To set these options, log on to HelpDesk Admin, and on the Tools menu, click Options.

To build custom reports, you need to change Standard Report Engine from HTML to Crystal Reports 9 or Crystal Reports 8.5. You also need to license the Report Creation API, because Enterprise HelpDesk has to create the initial .rpt file when you first view a Listing report. This initial .rpt file is the file that start with when you build a custom report.

## Selecting Which Issues to Include in a Report

In the Query list, choose a query to extract issues from the issue database and include them in the report. For example, if you want a report that breaks down the open issue count, then use the Open Issues query.

In Web views, users can use a combination of predefined and ad-hoc queries to specify what issues to include in a report. The Web-based report viewer allows users to generate reports using the current contents of the Summary List, or using the current issue.

## Defining Summary Reports

### About Summary Reports

Summary reports are like spreadsheets. They give you a numerical break down of the state of your project. Use Summary reports to answer questions like: What's the distribution of open issues among help desk analysts? How many of the open issues are urgent? Is there a relationship between department and issue priority?

You can view Summary reports in HelpDesk Admin.

### Adding Rows

Each row corresponds to a possible value of a choice-list field (single or multi). For example, you can add rows for all users in the Owner list, or just for the help desk analysts in the list.

A "row" is something different in each type of report.

**Text (cross-tab) reports** Each row is a row in the cross-tab table.

**Bar charts** A bar chart shows bars for each row. That is, the "rows" define the horizontal axis, while the "column" defines what the bars represent.

If you don't include a "column", then there is one bar for each row. This bar represents the total number of issues for the row. If you include a "column", then you get side-by-side bars for each row.

**Pie charts** Each row is a slice of the pie. To ensure that the slices add up to 100%, select <All> in the Rows column.

### Adding Columns

Each column corresponds to a possible value of a choice-list field (single or multi). For example, you can add columns for all possible priority values, or just for the highest priorities (ASAP, Next 4 Hours, Today).

Like rows, columns mean different things in the different report formats.

**Text (cross-tab) reports** Each column is a column in the cross-tab table.

**Bar charts** The column specifies what bars to display for each row.

**Pie charts** Columns are not used in pie charts.

### Calculating Totals

You can insert rows to calculate the totals of columns of numbers. Choose <Total> from the Field Name list. Then choose the groups for which you want a total.

A *group* is the set of rows for a given field. The Group column displays the group ID. When you add a total row, you use these IDs to specify which groups of rows you want to add up.

A Total row sums only the numbers in the selected groups. So each group of rows can have its own subtotal. To add a grand total, choose <ALL>.

To add a column that calculates the totals of rows of numbers, select the Total check box.

## Using Totals and the Show Setting

Suppose you want to break down the open issue count, not by individual owner, but by groups of owners. For example, you might want to see the distribution of open issues between analysts and group leaders.

For both groups (Help Desk Analyst and Help Desk Group Leader), add a group of rows and a total row. The group of rows (for example, row 1 below) contains a row for each help desk analyst. The total row for analysts (row 2) totals up the individual numbers to give a group total.

### Showing Totals for Groups

Horizontal:					
	Field Name	Rows	Title	Show	Group
	Owner	Help Desk Analyst	Analysts	<input type="checkbox"/>	1
	Total1	Group1: Owner	Analysts	<input checked="" type="checkbox"/>	2
	Owner	Help Desk Group Leader	Group Leaders	<input type="checkbox"/>	3
	Total2	Group3: Owner	Group Leaders	<input checked="" type="checkbox"/>	4

To hide the rows for the individual owners in a group, clear the Show check box.

## Customizing Row and Column Headings

Use the Title fields to enter the heading text for rows and columns.

## Controlling Column Width in Text Reports

Use the Column Width box to set a maximum width for all columns in a report, including the column headings.

## Examples

**Text (cross-tab) report** A Summary report can break down the open issue count by owner and by priority.

Query: All Open Issues Page: Assigned By Priority

Horizontal:

	Field Name	Rows	Title	Show	Group
	Owner	Help Desk Analyst	Owner	<input checked="" type="checkbox"/>	1
	Total1	<All>		<input checked="" type="checkbox"/>	2

Vertical:

Field Name: Priority Columns: ASAP;Next 4 Hours;Today;Tomorrow

Title: Priority Column Width: 10

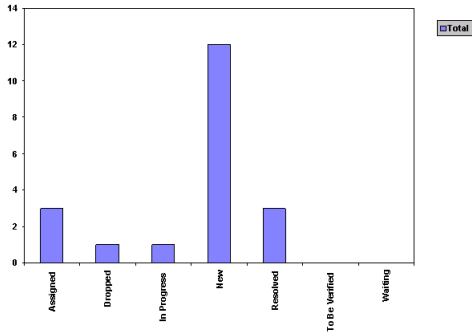
Total

This example includes a row for each help desk analyst, and columns for the priorities ASAP, Next 4 Hours, Today, and Tomorrow. The report also includes totals.

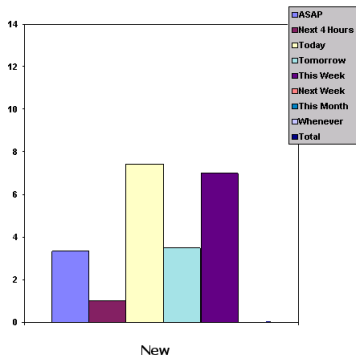
### Assigned By Priority

	Total	Priority			
		ASAP	Next 4 Hours	Today	Tomorrow
<b>Owner</b>					
Help Desk Analyst	2	2	0	0	0
Total	2	2	0	0	0

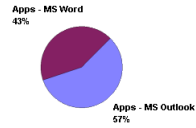
**Bar chart** Bar charts show data as vertical bars. If you have no columns (in the Columns list, click <None>), then the bar chart shows a total for each row.



If you add columns, then the bar chart shows a series of side-by-side bars for each value of the horizontal field. For example, you could show a breakdown by priority of the issues with Progress = New.



**Pie charts** A pie charts shows a percentage breakdown of the issues. Each slice of the pie corresponds to a row. Since a whole pie represents 100%, you should select <All> in the Rows list.



Having more than one group of rows or a Total row won't make sense in a pie chart (generally, you'll be counting each issue twice if you have two groups of rows). If the report defines more than one group of rows or a Total row, clear the Show check box before you view the pie chart.

Columns are ignored in a pie chart.

## Defining Listing Reports

### About Listing Reports

*Listings* extract and present subsets of the information entered in issues. Listings are available only as text.

You can view Listing reports in HelpDesk Admin and in Web views. You can use Crystal Reports to customize the version of the listing report that is displayed in Web views.

### Defining Listing Reports

Listing reports are listings of information entered in issues. Use Listing reports to extract specific information from issues.



For example, you might want to print out a summary of the resolution details for each resolved issue. Or you might want only the issue number, owner, and a summary of each issue. With Listing reports, you choose a set of issue fields, and only those fields are included in the report.

**Query** Retrieves the issues included in the report

**Sort** Sorts the issues.

**Page** Header, footer, and title to apply to the report.

**Tabular** Tabular listings list issues in the columns of a table. A tabular report is like the Summary List, except that you can use a report template to add things like a report title or page numbering.

#### Tabular Listing

Issue Number	Priority	Submitted Date	Submitted Time	Progress
1	ASAP	12/11/2001	12:46:43 PM	Resolved
2	This Week	12/11/2001	12:48:00 PM	In Progress
3	This Week	12/11/2001	1:05:45 PM	Assigned
4	ASAP	12/11/2001	4:36:33 PM	Assigned
5	Today	12/11/2001	4:38:20 PM	New
6	Today	12/11/2001	4:59:59 PM	New

**Multicolumn** Multicolumn listings arrange issue information into blocks, which are repeated down the page for each issue.

#### Multicolumn Listing

Issue Number	1
Priority	ASAP
Submitted Date	12/11/2001
Submitted Time	12:46:43 PM
Progress	Resolved
Assigned Date	12/11/2001
Assigned Time	4:15:17 PM
Problem Area	System - Printing
Owner	Help Desk Analyst
Summary	Cannot print from my office PC.

**Custom Report** Marks the report as a custom report. In a Web view, custom reports are listed on the Custom tab of the View Reports dialog box. Custom reports are typically Listing reports customized with Crystal Reports.

## Defining Time Reports

### About Time Reports

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

### Defining Time Reports

Time reports show the relationship between the number of issues and time. For example, a Time report can show you the number of issues opened each week during the last month.

### Defining the Time Axis

The time axis divides the reporting period into intervals of days, weeks, months, quarters, or years (this is the *granularity* of the report). The Time report then sorts the issues into the time intervals, and counts the number of issues in each interval.

To sort issues into time intervals, a Time report uses a master date. The master date is a date entered in an issue field such as Submitted Date, Closed Date, Assigned Date, or Update Date.

Master Date	Description
Assigned Date	Date an issue was assigned.  For a report that shows the number of open issues per analyst, you might use the Assigned Date instead of the Submitted Date.

Master Date	Description
Closed Date	Date an issue was closed. This happens when Progress is set to a value that maps to the Closed state.  Use this date for reports that show the number of issues fixed over time (fix rate reports).
Submitted Date	Date an issue was originally submitted.  Use this date for Time reports that show the number of submitted, open, or closed issues over time.
Update Date	Date an issue was last modified.

**Including All Dates** Select the Show dates with no values check box to show days, weeks, months, quarters, and years when there were no issues. For example, in a report that shows the daily arrival rate of new issues during the last week, you probably want to see a value for each day in the week, even if that value is 0.

**Showing Interval Totals** When the Cumulative check box is selected, a Time report accumulates the number of issues from one interval to the next. For example, suppose you have a Time report that shows the number of submitted issues per week. To see how the total number of submitted issues grows week by week, select the Cumulative check box. To see the number of issues submitted each week, clear the Cumulative check box.

**Defining Reporting Periods** Enter specific From and To dates, or simply choose one of the When conditions: This Month, This Quarter, or This Year. You can also combine From or To with When. For

example, if the year was 2004 and you set From to "3/3/04" and When to This Year, your reporting period would be 3/3/04 to 12/31/04.

**Including Totals** Select the Total check box. For each time interval, the Time report will show the total number of issues included in the report.

**Controlling Column Width in Tabular Time Reports** Use the Column Width box to set a maximum width for all columns in a report, including the column headings.

## Defining the Field Axis

The field axis determines which issues a report counts. For example, to see the number of ASAP and Today priority issues, you choose these Priority field values as the columns. The Time report then counts the number of ASAP and Today priority issues in each interval.

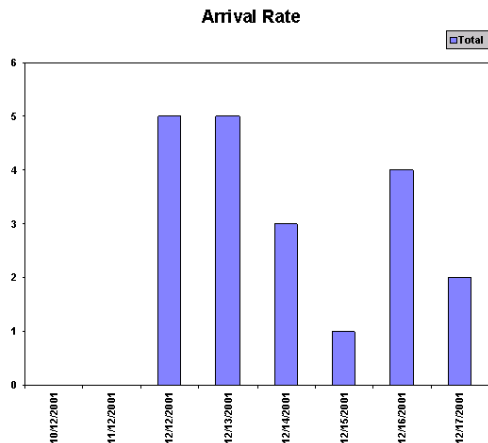
Each "column" corresponds to a possible value of a choice-list field (single or multi). For example, you can add columns for all possible priority values, or just for the highest priorities (ASAP, Next 4 Hours, Today).

**Text (cross-tab) reports** Each column is a column in the cross-tab table.

**Line charts** Each column is a line in the line chart.

**Bar charts** The column specifies what bars to display for each row.

If you set Field Name to <None>, then the Time report provides a total of all issues for each interval.



## 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 Enterprise HelpDesk.

Enterprise HelpDesk 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 and 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 the actual 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.	



# Chapter 7: Managing Contacts, Users, and Groups

## About Users and Contacts

In Enterprise HelpDesk, you work with two types of users:

- Users, who have logon names and passwords and can log on to Web views, HelpDesk Web Admin, HelpDesk Admin, or the Web View Editor.
- Contacts, who cannot log on. Contacts are people who report issues, either by phone, e-mail, fax, or through submit-only views.

Users are not specific to projects. For example, a user can use the same logon name and password to log on to any Web view of any project. However, each project can store different information for users. When you add a field to the Contact tab of a project, that field is a project-specific user information field. That is why you have to choose a project before you can create or edit users in HelpDesk Web Admin.

### Importing Users and Contacts from Windows

You can import user accounts from Active Directory (or from a Windows NT domain), so users can log on to Enterprise HelpDesk with their Windows user names and passwords. You use the User Account Import Manager to import user accounts and keep Enterprise HelpDesk synchronized with Active Directory/Windows.

**Administering Users and Contacts** To create and manage users and contacts in Enterprise HelpDesk you use HelpDesk Web Admin. For example, you can use Web Admin to disable users, create contacts, and to create user accounts.

Users with the required permissions can also create contacts in Web views.

## About Security

Enterprise HelpDesk provides security features that allow you to manage user access to issue data and Enterprise HelpDesk features. In Enterprise HelpDesk, security is based on the concepts of users and groups.

When you install Enterprise HelpDesk, the Setup program automatically creates Admin, demo, and guest users, along with a number of sample, role-based user accounts.

To secure your projects, you must either import or create user accounts for other users. You then assign users to groups and use group privileges to control access to Enterprise HelpDesk tools such as HelpDesk Admin and HelpDesk Web Admin and for individual features such as the Report Editor.

## About Groups

Every user is a member of one or more groups. Access to Enterprise HelpDesk features and projects is based on group membership. You can enable and disable features and projects on a group-by-group basis. A user can only access a feature or project if the user is a member of a group where the feature or project is enabled.

Enterprise HelpDesk has several default groups.

- The Admins group has all features enabled. Other groups enable only some features.
- The Users group enables features that you want to make available to all users. All users are members of the Users group.
- The Help Desk Analysts and Help Desk Group Leaders groups have access to all Web view features controlled by security permissions.
- The Employees group cannot access any of the Web view features controlled by security permissions.

To control access to Enterprise HelpDesk features, you assign users to the groups based on their roles and responsibilities in the issue tracking process. For example, a help desk group leader or analyst who is also responsible for administering Enterprise HelpDesk must be a member of the Admins group.

---

*Use the Web View Editor to control who can log on to a given Web view of a project. The Web View Editor allows you to set group access permissions for Web views. See “Setting Group Access Permissions” on page 87.*

*Use HelpDesk Admin to control access to projects. See “Enabling and Disabling Projects” on page 56.*

---

## Importing User Accounts from Windows

### Importing User Accounts

You can import user accounts from an Active Directory domain or from a Windows NT domain.

For Active Directory domains, Enterprise HelpDesk imports the user names and e-mail addresses.

#### To import user accounts:

- 1 Log on to the HelpDesk User Account Import Manager.
- 2 In the Welcome dialog box, click Next.
- 3 In the Import Rules dialog box, click an import rule. Import rules determine which users are imported.
- 4 In the Active Directory Servers and Windows Domains dialog box, select an Active Directory LDAP server or a Windows NT domain.

If you need to add an Active Directory server, click Add LDAP. Click Add Domain to add a Windows NT domain.

- 5 In the Active Directory Servers and Windows Domains dialog box, click the Active Directory server or Windows domain from which you want to import users.
- 6 In the Import Users dialog box, do one of the following:
  - If you want all the users listed in the dialog box, click Next.
  - For Active Directory: If you want to filter the list based on groups, click Add Filter and select the groups to filter. Then click Append to add the group filter to the current search filter, or click Replace to replace the current filter with the group filter.

Finally, click Refresh to apply the search filter.

You can also type additional LDAP search filter conditions directly in the Filter box. For example, "(cn=e\*)" selects all users with user names starting with "e", and

"(&!cn=IUSR\*) (!cn=CensusUser))" filters out all IUSR\_<computername> accounts and the CensusUser account.

- For Windows Domains: If you want to filter the list of users, select the groups you want to import from the list.
  - If you want to import only some of the users, click Selected Users and then click the users you want to import.
- 7 In the Import Settings dialog box,
- If you want to import contacts instead of users, select the Import as Contacts check box.
  - Imported users are always added to the Users group. If you want to add the imported users to another user group such as Employees, then in the Import to Group list, click the group to which you want to add the new users.
  - If you want to schedule imports, select the When Scheduled check box and then click Configure.

## Defining Import Rules

An import rule “remembers” the settings you used the last time you used the rule.

### To define an import rule:

- 1 In the Import Rules dialog box, click Add and then type a name for the import rule.
  - 2 Click Next and continue through the remaining steps of the User Account Import Manager.
- All your subsequent choices and settings will be saved in the import rule. For example, suppose you select an Active Directory server, specify an LDAP search filter, and change the default

import settings. The next time you run the User Account Import Manager, you can select the import rule to use the same choices and settings.

## Adding Active Directory Servers and Windows Domains

Before you can import user accounts, you need to add a connections to an Active Directory server or Windows NT domain.

### To add an Active Directory server:

- 1 In the Active Directory Servers and Windows Domains dialog box, click Manage.
- 2 In the Manage Active Directory Servers and Windows Domains dialog box, click Add LDAP.
- 3 In the Display Name box, type a name for the LDAP server. Enterprise HelpDesk uses this name to identify the server.
- 4 In the Host, Port, and Base DN boxes, type the connection information for the LDAP server.
  - Host is the IP address of the LDAP server.
  - Port is the port the LDAP server is running on. By default, LDAP servers run on port 389. LDAP over SSL uses port 636 by default.
  - Base DN is the top level of the LDAP directory tree. For example, if your company’s DNS domain name is "mycompany.local", the Base DN is "dc=mycompany,dc=local".
- 5 If you want to use anonymous authentication for the connection, select the Anonymous Bind check box.
- 6 If the Anonymous Bind check box is cleared, 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
- 7 In the LDAP Logon Name Field box, type the name of the LDAP property that stores the user account name. Enterprise HelpDesk will use this name to log on.
  - 8 Click Test to test the connection.

## Adding a Windows NT Domain

### To add a Windows NT domain:

- 1 In the Active Directory Servers and Windows Domains dialog box, click Manage.
- 2 In the Active Directory Servers and Windows Domains dialog box, click Add Domain.
- 3 In the Domain list, click the Windows NT domain you want to add.
- 4 If the Computer Name box is not automatically filled in, type the name of the server that is the primary domain controller, in the format "\\server".
- 5 Click Test to test the connection.

## Filtering Users

You can use LDAP search filters to filter the list of users imported from Active Directory.

If you want to filter users based on Active Directory groups, click Add Filter and select the groups you want to filter. Then click Append to append the group filter to whatever search filter is already in the Filter box, or click Replace to replace any existing search filter.

If you want to filter on other conditions, you can also write your own LDAP search filters, and combine them with the group filters created with Add Filter. For example, you could type in filters such as:

- (sn=Mark)  
selects users with a surname of "Mark".
- (!cn=IUSR\_\*)  
filters out all user names that start with "IUSR\_\*".
- (&!cn=IUSR\_\*) (!cn=IWAM\_\*)  
filters out all IUSR\_<computername> and IWAM\_<computername> users.

For more information on the LDAP search filter syntax, see [http://msdn.microsoft.com/library/default.asp?url=/library/en-us/adsisearch\\_filter\\_syntax.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/adsisearch_filter_syntax.asp).

## Import Settings

**Import as Contacts.** If you want to import the users as contacts, select the Import as Contacts check box.

**Import to Groups.** By default, imported users are added to the Users group in Enterprise HelpDesk. If you want to add the imported users to a different group (for example, Admins), click the group in the Import to Groups list.

**Get E-mail Addresses From.** Specifies where to get the e-mail addresses of imported users.

**Scheduling Imports.** Specifies when to import users. Select the When Scheduled check box and then click Configure if you want to use Windows Scheduled Tasks to schedule regular imports. Scheduling imports will keep Enterprise HelpDesk synchronized with Active Directory and Windows domains.



Select the Now check box if you want to import users as soon as you finish with the User Account Import Manager.

**Import Settings.** These two check boxes control whether the Enterprise HelpDesk User Account Manager:

- Adds new user accounts for any new users found in the Active Directory or Windows domain.
- Updates existing user accounts with any changes (for example, to the user name or e-mail address) found the Active Directory or Windows domain.

## Creating User Accounts

You create Enterprise HelpDesk user accounts with HelpDesk Web Admin. New users are members of the Users group. To add a new user to other groups, you use HelpDesk Web Admin.

### To create a user account:

- 1 In HelpDesk Web Admin, click the Security tab.

If you are in HelpDesk Admin, click Tools > Security > Users.


- 2 In the Project list, click a project.

Users are not specific to a project, but each project can have its own user information fields. For example, one project may have a Department field while other projects do not.

- 3 In the Display list, click Users.

- To display all users, click All Users.
- To display all contacts, click All Contacts.

- To display all users and contacts whose names start with the same letters, click Names starting with and then type the first few letters of the name.
- To display all users and contacts whose names contain the same string, click Names containing and then type the string.

- 4 Click Add User 

- 5 In the Authenticate With list, click HelpDesk to authenticate against the Enterprise HelpDesk user database.

- 6 In the Logon Name box, type the name the user will use to log on to Enterprise HelpDesk.

- 7 In the Password and Confirm Password boxes, type the user's password.

- 8 Enter the rest of the user information and then click Apply.


- 9 If you want to control the projects in which the user is visible, use the Category list to assign the user to a category (for example, Internal Development or External Development).


Different projects can be configured to display different categories of users (and contacts).

## Setting Default Values for New Users

To save time when creating user accounts, you can use an existing user account as a template for new accounts. All the user information entered in the existing account (except for the password, user name, and logon name) will be used as the default values for new accounts.

### To set the default values for new user accounts:

- 1 In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Users.
- 2 In the Project list, click a project.
- 3 In the Display list, click Users.
- 4 Click a user and then click Make Default .

Tip You can do the same thing for contacts. Just click a contact in the list and then click .

## Managing Work Teams

### About Work Teams

You can use Enterprise HelpDesk to help manage and coordinate work teams. Setting up work team support involves the following tasks:




- Building a list of work teams. Enterprise HelpDesk includes a global choice list named Work Team.
- Assigning users to work teams.
- Adding the Assigned Work Team field to Web views. This field is used to assign issues to specific work teams, either manually by users or automatically by workflow rules.
- Define queries for finding work team issues. Enterprise HelpDesk includes a My Work Team's Issues query that gets all the issues assigned to a user's work team, but you may want to define additional queries for work teams (for example, a query that finds all open issues assigned to the user's work team).

### Defining Work Teams

The list of available work teams is stored in a global choice list named Work Team. The BugTrk, XSupport, and XSupportBugTrk projects all have an Assigned Work Team field that use this global choice list.

You use HelpDesk Web Admin to edit the list of work teams.

#### To edit the list of work teams:


- 1 In HelpDesk Web Admin, click the Choices tab.
- 2 In the Project list, click < Global Choice Lists >.
- 3 In the Choice List list, click Work Team.
- 4 In the Choices section:
  - To rename a work team, click the work team and then click .
  - To add a new work team, click  and then type the name of the work team.
  - To delete a work team, click the work team and then click .

### Assigning Users to Work Teams

You can assign both users and contacts to work teams. No user or contact can belong to more than one work team.

#### To assign a user or contact to a work team:

- 1 In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Users.
- 2 In the Project list, click a project.
- 3 In the Display list:
  - To display all users, click All Users.
  - To display all contacts, click All Contacts.

- To display all users and contacts whose names start with the same letters, click Names starting with and then type the first few letters of the name.
  - To display all users and contacts whose names contain the same string, click Names containing and then type the string.
- 4 In the list of users, click a user (or contact) and then click Edit .
  - 5 In the Work Team list, click the work team to which the user belongs.

## Adding Work Team Support to Web Views

To allow users (and workflow rules) to assign issues to work teams, export the Assigned Work Team field (Overview tab) to the Web views.

## Building Work Team Queries

You can query for issues assigned to a specific work team, for example, all issues assigned to the QA Team:

Assigned Work Team = QA Team

You can also use the <My Work Team> macro to query for issues assigned to the work team of the current user. For example, this query finds all open issues assigned to the user's work team:

Assigned Work Team = <My Work Team> AND State = Open




# Organizing Users by Projects

## Defining User Categories

You can control which users and contacts are visible in a project. Each user (and each contact) can be assigned to a user category. For example, some users can be assigned to the Internal Development category, and others to the External Development category.

The list of available user categories is a global choice list, so you can use HelpDesk Web Admin to build the list of user categories you want to use.

### To edit the list of user categories:

- 1 In HelpDesk Web Admin, click the Choices tab.
- 2 In the Project list, click < Global Choice Lists >.
- 3 In the Choice List list, click User Category.
- 4 In the Choices section:
  - 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 .


## Assigning Users to Categories

Assigning users and contacts to categories allows you to control which users and contacts are visible in a project.

### To assign users and contacts to categories:


- 1 In HelpDesk Web Admin, click the Security tab.

If you are in HelpDesk Admin, click Tools > Security > Users.

- 2 In the Project list, click a project.
- 3 In the Display list:
  - To display all users, click All Users.
  - To display all contacts, click All Contacts.
  - To display all users and contacts whose names start with the same letters, click Names starting with and then type the first few letters of the name.
  - To display all users and contacts whose names contain the same string, click Names containing and then type the string.
- 4 In the list of users, click a user or contact and then click Edit .
- 5 In the User Category list, click the category to which the user belongs.

## Hiding Users in Projects

**To control which users and contacts are visible in a project:**

- 1 In HelpDesk Web Admin, click the Security tab.
- 2 In the Project list, click a project.
- 3 Click .
- 4 In the Advanced dialog box, select the In this project, ... check box, and then select the categories of users and contacts you want to be visible in the project.

## Disabling User Accounts

Users are not deleted, only disabled.

Disabled user accounts cannot log on, however the user names still appear in the Owner and Contact lists. That's because existing issues may still refer to the users.

Disabling a contact has no effect.

**To disable a user account:**

- 1 In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Users.
- 2 In the Project list, click a project.
- 3 In the Display list, click Users.
- 4 Select the Disabled check box beside the name of the user you want to disable.

## Editing User Information


You can edit user information (for both users and contacts) with HelpDesk Web Admin.

**To edit user information:**

- 1 In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Users.
- 2 In the Project list, click a project.  
Users are not specific to a project, but each project can have its own user information fields. For example, one project may have a Department field while other projects do not.
- 3 In the Display list, click Users (or Contacts).

To quickly find a user: in the Display list, click Names starting with and then type the first few letters of the user's name. Or click Names containing and then type a few letters from anywhere in the user's name.


To display all users, click All Users.

- In the list of users, click the user and then click Edit .

## Changing Passwords

You can change passwords, but only for Enterprise HelpDesk user accounts, not for user accounts imported from Active Directory or Windows.

### To change a user's password:

- In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Users.
- In the list of users, click the user and then click Edit Logon .  
To quickly find a user: in the Display list, click Users starting with and then type the first few letters of the user's name.
- In the Change Logon Information dialog box, type a new password.

## Changing the Authentication Method

- In the Authenticate With list:
  - Click HelpDesk to authenticate against the Enterprise HelpDesk user database.
  - Click an Active Directory server to authenticate against Active Directory.
  - Click a Windows server to authenticate against a Windows domain.
- If you authenticate with HelpDesk, you may need to enter the logon name and password.

## Defining User Groups


Groups allow you to assign privileges to users. By enabling and disabling features for a group, you control the features (privileges) available to the members of that group.

Group membership determines which Enterprise HelpDesk features are available to a user. Each group enables and disables different features. Users that belong to more than one group have access to any feature enabled in at least one of the groups.

Group membership also controls access to projects and Web views. You use HelpDesk Admin to assign users to groups.

In the Users view of the Security tab, you can select a user and then edit the list of groups to which the user belongs. In the Groups view, you can select a group and edit the list of users that belong to the group.

### To add a group:

- In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Groups.
- On the Security tab, click the large Groups button on the left side of the tab.
- Click Add  and type a new for the group.

### To delete a group:

- In HelpDesk Web Admin, click the Security tab.  
If you are in HelpDesk Admin, click Tools > Security > Groups.
- On the Security tab, click the large Groups button on the left side of the tab.

- 3 In the Groups list, click the group you want to delete.

- 4 Click Delete .

## Groups: Adding and Removing Users

On the Security tab, the Groups view allows you to add or remove multiple users at the same time.

### To add users to a group:

- 1 In HelpDesk Web Admin, click the Security tab.

If you are in HelpDesk Admin, click Tools > Security > Groups.

- 2 On the Security tab, click the large Groups button on the left side of the tab.
- 3 In the Groups list, click a group.

- 4 Click Users .

- 5 If you want to add users:

- a. In the Non-Members list, click the users you want to add to the group. Use the Shift and Ctrl keys to select more than one user.

- b. Click .

- 6 If you want to remove users:

- a. In the Members list, click the users you want to remove from the group. Use the Shift and Ctrl keys to select more than one user.

- b. Click .


## Users: Changing Group Membership


### To add a user to a group (in the Users view):

- 1 In HelpDesk Web Admin, click the Security tab. By default, the Security tab shows the Users view.
- 2 In the Project list, click a project.
- 3 In the Display list, click All Users.

To quickly find a user: in the Display list, click Names starting with and then type the first few letters of the user's name. Or click Names containing and then type a few letters from anywhere in the user's name.

To display all users, click All Users.

- 4 In the list of users, click the user and then click Groups .
- 5 In the Select Groups dialog box, select the check boxes for the groups to which you want to add the user.

To filter the list of groups, click Advanced  and type part of a group name (for example, "Census"). Then click Filter to list only the groups that contain the text you typed.

To find all groups with names that start with a certain string of characters, click Options and in the Search Type list, click Starting With.

## Companies

Enterprise HelpDesk maintains a list of companies. By assigning users to companies, you can create a service level agreement that applies to all users at a specific company.

**To create a company:**

- 1 In HelpDesk Web Admin, click the Security tab. By default, the Security tab shows the Users view.
- 2 In the Project list, click a project.
- 3 In the Display list, click All Companies.
- 4 Click Add Company  .
- 5 Fill in the company information and click Apply.






## Departments

By assigning users to departments, you can create a service level agreement that applies to all users in a specific department.

**To edit the list of departments:**

- 1 In HelpDesk Web Admin, click the Choices tab.
- 2 In the Project list, click a project.

Each project has its own list of departments.




- 3 In the Choice List list, click Department.
- 4 Edit the departments:
  - Click  to create a new department.
  - To delete a department, click the service type and then click .
  - To rename a department, click the service type and then click .
  - To reorder the list, click a department and then use  and  to move it.

## Enabling and Disabling Features

### About Features

Enterprise HelpDesk provides the following set of features that can be enabled and disabled. Most features correspond directly to menu commands, such as Security or Report Editor. When a user does not have permission to use a feature, the feature is hidden in the Enterprise HelpDesk user interface.

**To enable or disable a feature for a group:**

- 1 In HelpDesk Web Admin, click the Security tab.
  - If you are in HelpDesk Admin, click Tools > Security > Groups.
- 2 On the Security tab, click the large Groups button on the left side of the tab.
- 3 In the Groups list, click a group.
- 4 Click Features .
- 5 If you want to enable a feature:
  - a. In the Disabled list, click the feature you want to disable. Use the Shift and Ctrl keys to select more than one feature.
  - b. Click .
- 6 If you want to disable a feature:
  - a. In the Enabled list, click the features you want to disable. Use the Shift and Ctrl keys to select more than one feature.
  - b. Click .

## Web View Features

Feature	Permits the user to
Ad hoc Queries	Access the Ad-hoc Query Editor.
Contacts	Open the Users and Contacts dialog box in a Web view by clicking the Contacts button.
Contacts - Add	Create contacts.
Contacts - Disable	Disable contacts.
Contacts - Update	Edit contacts.
Default Value Editor	Set default values for new issues
Password Editor	Change password.
Report Viewer	View Enterprise HelpDesk reports.
Report Viewer - Hardware Inventory	View Hardware Inventory reports.
Report Viewer - Software Inventory	View Software Inventory reports.
Revision History	View the change history for an issue.
My Queries	Access the My Queries tab in the Queries dialog box.
Queries - View Source	View the definition of a query.
Save & Remove User Queries	Save queries, and remove queries from the My Queries list.

**Example** The staff responsible for logging issues received from customers need to be able to add new contacts (each customer is a contact). To allow users to add new contacts in Web views, enable these features:

- Contacts

- Contacts - Add

## HelpDesk Web Admin Features

The following features enable and disable the different tabs in HelpDesk Web Admin.

Feature	Permits the user to
Web Admin - Choices	Create and edit choices lists.
Web Admin - Integration Editor	Connect projects to PC-Duo Enterprise site databases.
Web Admin - Notifications	Set the user account used for notifications.
Web Admin - Relocation	Relocate databases and attachments.
Web Admin - Tabs	Create new tabs.
Web Admin - Security	Edit users, contacts, and groups. Add, edit, and delete groups. Enable and disable features for groups.
Web Admin - Workflow	Edit workflow rules.

When Web Admin - Security is enabled, you can selectively enable features for editing user accounts.

Feature	Permits the user to
Users - View	View user information (such as the logon name, full name, and password) in the Users and Contacts window.
Users - Add	Add new users.
Users - Disable	Disable users.
Users - Update	Edit user information.



When Web Admin - Security is enabled, you can selectively enable features for editing contact information.

Feature	Permits the user to
Add Contact Editor	View contact information (such as the full name and e-mail address) in the Users and Contacts window.
Add Contact	Create contacts.
Delete Contact	Disable contacts.
Update Contact	Edit contact information.

## HelpDesk Admin Features

To enable HelpDesk Admin features, you must enable Admin Utility. Otherwise, users cannot even log on.

Feature	Permits the user to
Admin Utility	Log on to HelpDesk Admin.
Delete Project	Delete a project.
Delete Issues	Delete issues from a project.
Import Issues	Import issues into a project.
Integrity Editor	Open the Integrity Editor.
Layout Editor	Open the Layout Editor and define custom layout styles for the Summary List.
Licenses	Open the Licenses dialog box.
Logons Editor	Log off users.
New Project	Create a new project.
Notification Editor	Set up automatic e-mail notifications.
Password Editor	Change password, in Web views and in HelpDesk Admin.

Feature	Permits the user to
Page Editor	Create and edit report pages.
Project Properties	Edit project properties, such as which groups are allowed to open a project.
Query Editor	Open the Query Editor and define custom queries.
Repair and Compact	Repair and compact a project database.
Report Editor	Define new reports, and edit existing reports.
Sort Editor	Open the Sort Editor and define custom sorts.
Field Editor	Add new fields. Change labels. Modify the values that appear in choice lists.
Upgrade Editor	Upgrade Enterprise HelpDesk server files.
Web Tools Menu	Start the Web View Editor and HelpDesk Web Admin from the Tools > Web menu.
When Editor	Edit the when conditions for notifications.
Windows Account Editor	Edit the Windows user account used for anonymous access to virtual directories and for running the notification service.

**Example** If you want to allow users to create new reports, you need to enable, at a minimum, the Admin Utility and Report Editor features. This will allow users to log on to HelpDesk Admin and create new reports using existing queries, sorts, and report pages. The new reports will be automatically made available in existing Web views.

Enabling the Query Editor, Sort Editor, and Page Editor features will allow users to create new queries, sorts, and report pages and use them in report definitions. New queries won't be available in Web views unless you export the queries and regenerate the views. All new sorts, however, will automatically be made available in Web views.

## Web View Editor Features

You can prevent users from logging on to the Web View Editor by disabling the Web View Editor feature.

## Enabling and Disabling Projects

When you disable a project for a group, members of that group cannot:


- Log on to Web views of the project.
- Edit the project in HelpDesk Admin.
- Edit views of that project in Web View Editor, or generate new views of that project.

---

*You can disable specific Web views for members of a group. See "Setting Group Access Permissions" on page 87.*

---

### To enable or disable a project for a group:

- 1 In HelpDesk Web Admin, click the Security tab. Then click the large Groups button on the left side of the tab.
- 2 In the Groups list, click a group.
- 3 Click Projects 
- 4 If you want to enable a project:

- a. In the Disabled list, click the projects you want to disable. Use the Shift and Ctrl keys to select more than one project.

- b. Click .

#### 5 If you want to disable a project:

- a. In the Enabled list, click the projects you want to disable. Use the Shift and Ctrl keys to select more than one project.

- b. Click .

---

*You can also enable or disable projects from the Groups Allowed to Open list in the Project Properties dialog box.*

---

# Chapter 8: Defining Workflow Rules

## About 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?

### Overview

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. If necessary, you can force rules to be evaluated when a user selects a choice.

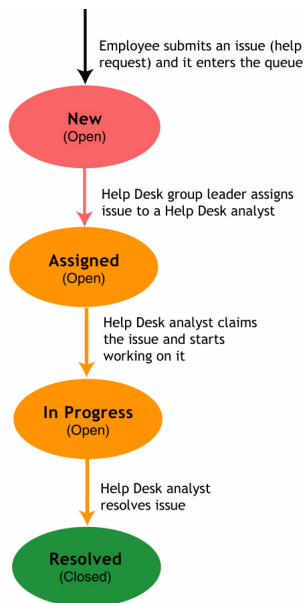
Workflow rules can also be based on more complicated conditions. For example, a rule may require that certain choices are selected from a number of different choice lists, or that the user is a member of a specific group, or both.

A few examples will help you understand what you can do with workflow rules.

## Automate Workflow

By controlling the possible values of the Progress field, you can define and enforce a process.

### Simple workflow controlled by Progress values



### Example 1:

After an analyst starts work on an issue and marks it In Progress, you can enforce a process where only the analyst can mark the issue as Dropped, Resolved, or To be Verified.

When:

<User in Group> = Help Desk Analyst AND  
Progress = In Progress

The possible values are:

- Progress = Dropped
- Progress = Resolved
- Progress = To be Verified

Note that Progress = In Progress is an implied possible value. A choice list can always be set back to its current value. For example, if a user is not a help desk analyst and an issue is marked In Progress, the Progress list contains only one choice: In Progress.

This rule is an example of a *possible values* rule.

### Example 2:

You can prevent anyone except a group leader from assigning new issues.

When:

- <User in Group> = Help Desk Group Leader AND Progress = New

The possible values are:

- Progress = Assigned

This prevents new issues from being resolved or dropped without first being assigned to an analyst by the group leader. If a user is not a group leader, the only possible choice will be New.

## Create Related Choice Lists

You can define rules to create a relationship between two choice lists.

### Example:

Suppose that Problem Type can be either Hardware, Software, or System. Problem Area can then be a type-specific list that displays either a list of hardware components, software applications, or system components.

When:

- Problem Type = Hardware

The possible values are:

- Problem Area = Disk
- Problem Area = Monitor
- Problem Area = Keyboard
- Problem Area = Memory

You need similar rules for software and system problems.

By default, workflow rules are evaluated when an issue is saved. For related choice lists like the ones in this example, you probably want to evaluate the rule whenever the Problem Type changes. Otherwise, users would have to select a Problem Type, save the issue, and then select the Problem Area.

## Set Field Values

Instead of setting the possible values of a choice list, you can define rules that select choices from other lists. These type of rules are called a *dependent values* rules, because they make the value of one field depend on the value of another field.

### Example:

This rule that assigns a default owner based on the Problem Area.

When:

- Owner = <None> AND Problem Area = SW - Outlook

The values to set are:

- Owner = Erick Yanez

This rule assigns a default owner for new issues, but allows the issue to be reassigned later. Without the <New Issue> = yes part, you could never change the owner of the issue.

## 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).

**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 was last, then a help desk analyst who is also a member of Admins does not have full administrator permissions for changing the Progress field. The stricter HelpDesk Analyst rules would be evaluated first, limiting the changes the analyst can make.

## What is a Workflow Rule?

A workflow rule has this simple format:

if ( condition ) then  
    action

The condition can test:

- If a user belongs to a specific group
- If a specific choice was selected from a choice list.

Multiple conditions can be joined with a logical AND. The only test operator available is the equal to operator (=).

If the rule is a possible values rule, the action can specify the possible values for one or more choice lists. If the rule is a dependent values rule, the action can select choices from one or more choice lists.

## 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 HelpDesk Web Admin. Click the Workflow tab. In the Project list, click a project.  
Workflow rules based on this template will apply to all Web views of this project.
- 2 Click Template and click Add.
- 3 In the Add New Template dialog box:
  - 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.
- 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, then the rule will be applied.

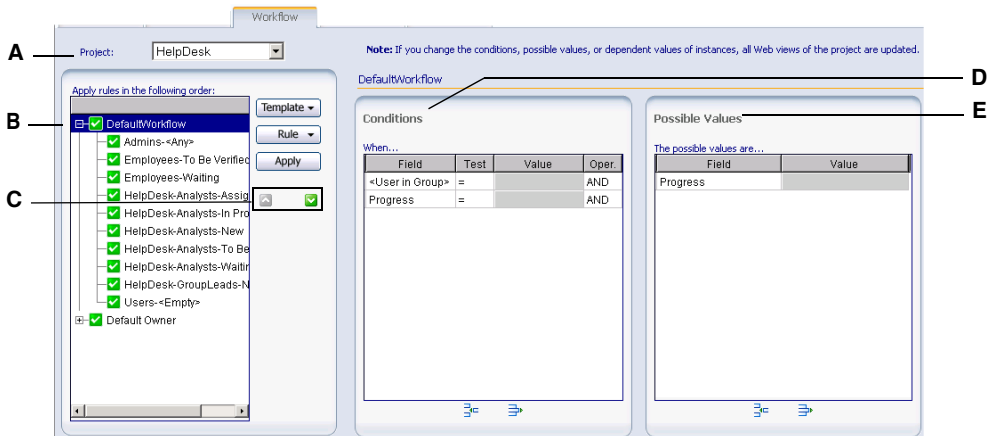
Note that the Field list contains single-choice fields only.

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


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

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



## Editing Rule Templates



**A** Workflow rules are defined on a project-by-project basis. All Web views of a project share the same workflow rules.

**B** A rule template specifies the fields used in each instance of the rule. Click a rule template to see and edit the list of fields that can be used in the rule instances.  means that the rule template is incomplete (for example, no fields listed on the Conditions tab).

Note that while you edit a rule template, you cannot edit the values. You can only add and remove fields.


**C** You can use  and  to change the order of the templates. The rules in the first (top) template are evaluated first, the rules in the second template are evaluated next, and so on.


Within a template, the rules are evaluated in the order listed (from top to bottom). The order of the rules is fixed, and corresponds to the order in which they are created.

**D** Conditions specifies the fields that are tested to determine if an rule is applied. The <User in Group> condition allows you to define different rules for different groups of users.

**E** Possible Values specifies which fields can be modified by the rules. In this example, the DefaultWorkflow rules can change the list of possible choices in the Progress list.


---

 adds a field

 removes a field

---

## Editing Rules

**A** Click a rule instance to see and edit the values.  means that the values are filled in for the rule.

Note that while you edit rules, you cannot add or remove fields. You can edit only the values.

**B** After you edit a rule, add a new rule, or remove a rule, you must apply your changes. Otherwise your changes are saved, but not applied to the Web views of the project.

**C** Conditions specifies the conditions that are evaluated. In this example, the rule applies only if the current user is a member of the Employees group and the Progress is To be Verified.

**D** The Possible Values list specifies the possible choices for the fields. A Dependent Values list looks much the same, but you can select only one value.



## Defining Conditions

### Defining Conditions based on User Groups

By default, a rule applies to all users. To build group-specific rules, use the macro <User in Group> in your conditions.

If a user belongs to a group for which there is no rule, then for possible values, the fields displays all possible values.

---

*Rules that apply to the Users group apply to all users, because all users are members of the Users group. Rules for specific groups can override the base rule defined for the Users group.*

---

### Defining Conditions for New Issues

To define rules that apply only to new issues, use the macro <New Issue> in the condition. <New Issue> is equal to Yes only for issues that have never been saved.

## 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 Log on to HelpDesk Web Admin. Click the Workflow tab.

- 2 In the Project list, click a project. Then click a rule template.
- 3 Click Rule and then click Add.
- 4 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.
- 5 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 <Values 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.
- 6 Click Apply to apply the rule to the Web views of the project.

---

*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.*

---

## Deleting Rules

#### To delete a rule:

- 1 In the list, click a rule.
- 2 Click Rule and then click Remove.
- 3 Click Apply to apply the changes to the Web views of the project.

## Renaming Rules

### To rename a rule:

- 1 In the list, click a rule.
- 2 Click Rule and then click Rename.
- 3 Type the new name for the rule.

### To change the default names for new rules:

- 1 In the list, click a rule template. Click Template and then click Properties.
- 2 In the Name rules according to box, type the new default name for rules.

By default, rule names are based on the condition values (the values entered in the Value column). The string %Value0% represents the value in the first row of the condition, %Value1% represents the value in the second row, and so on.

If you use a text string (such as "WorkflowRule") as the default rule name, rule names are formed by appending a number to the string.

## Using Macros in Rules

**<Any>** Use the <Any> macro in conditions to define a rule that applies to any value of a field, including <Empty>. For example, in the default workflow, the Admins-<Any> rule allows members of the Admins group to set any value in the Progress field.

**<Empty>** Use the <Empty> macro in conditions to define a rule that applies when a field is empty.

**<User>** <User> represents the current user (the user currently logged on to the Web view). You can use <User> in conditions, as a possible value, and as a dependent value.

<New Issue> is Yes for issues that

**<Value of Field???)>** This macro allows you to define a Dependent Values rule that assigns the value of a field to another field. For example, when an issue is fixed, a workflow rule could set the value of the Fixed By field to <Value of Owner>.

When you add a dependent values rule, you'll see the <Value of Field???)> macro in the Values column of the Dependent Values table. Double-click <Value of Field???)> and then select the field whose value you want to use.

If you want to use the Submitter field in the <Value of Field ???)> macro, you'll have to enable the Submitter field. By default, the Submitter field is not enabled (to enable the field, use the Field Editor in HelpDesk Admin).

## Setting Possible Values

When you set the possible values of a field, you don't have to include the current value of the field in the list of possible values. For example, given this rule:

When:

<User in Group> = Employees AND  
Progress = Waiting

The possible values are:

Progress = Dropped  
Progress = In Progress  
Progress = Resolved

then when Progress is set to Waiting, the Progress list will contain Dropped, In Progress, Resolved, and Waiting.

## Changing When Rules Are Evaluated

By default, workflow rules are evaluated when an issue is loaded and when issues are created.

However, you can force rules to be evaluated when a user changes the value of one of the fields specified in the condition. Keep in mind that evaluating rules on field changes can have a potentially higher performance cost.



### To evaluate rules on field changes:

- 1 In the list, click a template.
- 2 Click Template and then click Properties.
- 3 Select the Evaluate rules when users change field values check box.
- 4 In the Template Properties dialog box, click OK.
- 5 Click Apply to apply the change to the Web views of the project.

## Changing the Order of Evaluation

Rules are evaluated in the order they are listed in the Workflow Editor. You cannot change the order of rules in a template (except by creating them in the desired order), but you can change the order of the rule templates.

### To change the order of evaluation of rule templates:

- 1 In the Templates list, click a template.
- 2 Click  or  to move the template up or down in the list.

- 3 Click Apply to apply the change to the Web views of the project.

## Applying Workflow Rules

When you edit a rule, define a new rule, define a new group of rules, or change the group options, you must apply these changes.

### To apply workflow rules:

- 1 In the list, click a template.
- 2 Click Apply.

Apply automatically enables the group of rules. If you just enable the rules, but don't apply them, nothing happens.

---

*Web view users must log out and then log back on before the changes take effect.*

---

## Disabling Workflow Rules

You can disable all the rules based on a given template.

### To disable workflow rules:

- 1 In the list, click a template.
- 2 Click Template and then click Properties.
- 3 Clear the Enable in all Web views of the project check box, and click OK in the message box that appears.
- 4 In the Template Properties dialog box, click OK.
- 5 Click Apply to apply the change to the Web views of the project.



# Chapter 9: Defining Service Level Agreements

## About Service Level Agreements

A service agreement is an agreement between the help desk and users. The service agreement defines a required level of service for the users.

A service agreements can be with individual users (contacts), with all users in a department, or all users in a company.

A service level is a guarantee of a certain level of service. For example, a basic service level may provide 9-to-5 service during the regular working week, while a more comprehensive service level might provide 24 hour service, 7 days a week.

Each service level has its own hours of service, target response and closure times for issues, and escalation rules.

A Web view used by help desk analysts has an SLA tab. This tab contains information about the service level agreement that applies to the issue.

For example, when employee submits new issue, the Escalation State is automatically set to On, and the Problem Area is set based on the Service Type selected by the employee. Based on the service type, priority, and the employee's contact information (name, department, and company), Enterprise HelpDesk sets the Target Initial Response Time, Target Closing Time and Associated SLA fields.

## Setting Up Service Agreements

- 1 Define companies and departments, so you can quickly create service level agreements with groups of users. When you create an agreement, it can be either with a specific user or with all users in a department or in a company.
- 2 Define the escalation levels.
- 3 Define the service types.
- 4 Define service levels. Each service level is defined by the following:
  - Target times
  - Escalation Rules
  - Operational Hours
- 5 Define service agreements.
- 6 [Optional] Define workflow rules. Enterprise HelpDesk includes default workflow rules for the Service Type and Escalation State fields in Web views.

## Target Times

A service level defines target response and closure (resolution) times for each possible priority value.

**Target Initial Response Time** The time it takes to initially respond to a new issue. When a help desk analyst responds to an issue, the analyst has to enter the response date and time on the SLA tab of the Web view.

**Target Closure Time** The time it takes to resolve the issue, either by fixing the problem or providing an acceptable workaround. When an issue is resolved, Enterprise HelpDesk automatically enters the date and time into the issue.

When you create a service level, the level gets the default target times.

#### To edit the target times:

- 1 In the Service Level list, click a service level.
- 2 On the Target Times tab, click a row (for example, to edit the target times for the Highest priority, click that row).
- 3 Click Edit.
- 4 In the Edit Target Times dialog box, type the target times in the Initial Response Time and Closure Time boxes.

The target times must be integer values such as 2, 7, or 10. You cannot type values like 2.5.

You can change the time units between minutes, hours, and days. For example, to change from hours to minutes, click hour(s) and then click minute(s) in the pop-up list.

## Escalation Levels

By default, each Service Level has five escalation levels. Typically, time-based escalation rules are used to define a sequence of escalation levels.

For example, when a new issue is first submitted to the help desk, the issue is at the “Level 1” escalation level. If the help desk does not respond to the issue within the target initial response time, then the issue is escalated to “Level 2”. As more time goes by without either a response or a resolution, the escalation level of the issue will be raised, until it reaches the highest escalation level, “Level 5”.

Escalation levels allow the help desk to better identify, query, report, and monitor priorities and urgent issues.

Note Escalation rules and SLA are enforced only for issues where the Escalation State is set to On. Escalation State is a field on the SLA tab of a Web view. By default, escalation is on, but help desk analysts can pause or disable escalation.

## Defining Escalation Levels






By default, Enterprise HelpDesk defines five escalation levels, with “Level 1” being the lowest-priority level, and “Level 5” being the highest priority.

You can edit the escalation levels for a project on the Choices tab of HelpDesk Web Admin. For example, you can:

- Change the names of the escalation levels.
- Change the colors of the escalation levels (in Web views, the Summary List displays different colors for different escalation levels).

#### To edit the escalation levels:

- 1 In HelpDesk Web Admin, click the Choices tab.
- 2 In the Project list, click a project.
- 3 In the Choice List list, click Escalation Level.
- 4 Edit the escalation levels:

- To edit an escalation level, click the escalation level and then click .
- Click  to create a new escalation level.
- To delete an escalation level, click the escalation level and then click .
- To reorder the list, click an escalation level and then use  and  to move it.

## Defining Escalation Rules

### About Escalation Rules

Escalation rules are responsible for changing the escalation level of an issue. Each service level has its own escalation rules.

An escalation rule consists of conditions and actions. If all the conditions are true, then all the actions are executed.

#### To define an escalation rule:

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 In the Project list, click a project.
- 3 Click Service Levels.
- 4 Click the Escalation Rules tab.
- 5 Click Add, or click an existing rule and then click Copy.
- 6 In the Escalation Rule Name box, type a name for the rule.
- 7 Define the condition that triggers the rule.
- 8 Define an action that changes the escalation level when the condition is met.
- 9 Click the check box to enable the condition.

### Order of Evaluation

Escalation rules are evaluated in the order they are listed on the Evaluation Rules tab. The first (top) rule is evaluated first, then the next rule below it, and so on.

You can change the order of evaluation by using the Up and Down buttons.

### Conditions

You can define multiple conditions. When you have multiple conditions, then all conditions must be satisfied before the corresponding actions are executed. Conditions are evaluated as if there was a logical AND between each condition.

Note that you must select the check box beside a condition; otherwise the condition is disabled.

**Target Time conditions** You can define conditions based on the target response and closure times. For example, an escalation rule can escalate an issue if the issue has not been assigned to a help desk analyst within the guaranteed response time for that service level.

Or an escalation rule can send an e-mail reminder when an issue has not been resolved within the guaranteed response time.

**<Field> = <Value>** For convenience, the Add Escalation Rule editor allows you to easily add conditions that test the values of up to five choice list fields.

**Meets the query <Value>** For more complex conditions, you can use queries built with the Query Editor in HelpDesk Admin. Queries can use any number and type of field to determine whether to escalate an issue.

## Actions

Escalation rules can perform the following actions:

- Change the issue priority, owner, assigned work team, or escalation level.
- Send an e-mail message.
- Run a program.

## Sending E-mail Messages

### To send an e-mail message

- 1 Under Actions, click Send an e-mail.
- 2 In the E-mail Content Editor, fill in the To, Subject, and Body of the message. You can also attach files.

## Editing the To, CC, and From Fields

You can either use the macros or you can specify users.


### To insert a macro:

- 1 Click in the To, CC, or From box.
- 2 Under Available Macros, click the macro you want to insert.

The Contact is the person who reported the issue, while Submitter is the person who actually entered the issue into Enterprise HelpDesk. For example, if a help desk analyst takes a support call, the contact is the person who called, and the analyst is the submitter.

Previous Owner is useful when you send an e-mail message because an issue is reassigned.

### To add users to the To, CC, and From lists:

- 1 Beside the To, CC, or From box, click .

- 2 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.

### Tips

- 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 if you want to search for all users and contacts whose names contain the same string, or if you want to search based on e-mail addresses (for example, all contacts with example.com e-mail addresses).

## Editing E-mail Content

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).

### To insert the value of a field:

- 1 In either the Subject box or the Body box, click where you want to insert the field value.
- 2 Under Available Macros, click Field Value.
- 3 In the Field Value dialog box, click the field whose value you want to insert.




If you want to insert the issue description, insert the Description Log field, not the Description field.

**To switch to HTML format:**

- Select the HTML in Body check box.

## Attaching Files

**To attach files to an e-mail message:**

- 1 Beside the Attachments box, click .
- 2 In the E-mail Content Attachments dialog box, click Browse and locate the file you want to attach. Then click Link.

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

## Running Programs

To run a program, type the location and name of the program in the Run Program box. You can include command-line arguments for the program.

The default working directory for programs is the Windows system folder (for example, C:\Windows\system32).

Note Programs must not have a user interface or require any user input. The programs are run silently by the Mq.Evaluator service. By default, the programs are run under the credentials of the same user who runs the Mq.Evaluator service (CensusUser by default). You can check this in the Services dialog (click Administrative Tools > Services, open the Properties for the service, and then go to the Log On tab).

## Specifying Operational Hours

The operational hours define when the service level agreement is in effect. The service level clock stops running outside of those hours.

For example, if the hours of operation are from 9 to 5, Monday to Friday, then a new issue submitted at 4:59pm on Friday is not going to trigger any escalation rules during the weekend. If the service level specifies an initial response time of 30 minutes, then the help desk has until about 9:29am on Monday before any escalation rules are triggered.


Note also that help desk analysts can stop the clock for specific issues (by setting the Escalation State to Paused). For example, the analyst may “hit pause” while waiting for more information from the end user.

**To set the operational hours**

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 In the Project list, click a project.
- 3 Click Service Levels.
- 4 Click the Operational Hours tab.
- 5 In the Start Time and End Time boxes, enter the working hours during which the service level is in effect. Type the times in the format “9:00 AM” or “5pm”.
- 6 Enter the number of working hours in a day.
- 7 Add holidays and other exceptions to the standard working hours.
  - a. Click Add.
  - b. Click the day you want to add.
  - c. Click OK.

## Defining Service Levels

### To define a service level:

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 Click Service Levels.
- 3 In the Project list, click a project.
- 4 Beside the Service Level box, click .
- 5 In the Add Service Level dialog box, type a name and a description for the service level.

## Service Agreements

### Creating Service Agreements

A service agreement is an agreement between the help desk and users. The service agreement defines a required level of service for the users.

A service agreements can be with individual users (contacts), with all users in a department, or all users in a company.

### To create a service agreement:

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 In the project list, click a project.  
Each project has its own service agreements.
- 3 Define a service type.  
Each agreement is for a specific type of service (for example, Network, Software, or Hardware service).
- 4 In the Service Agreements section, click Add.
- 5 In the Add Service Agreement dialog box, fill in the **required** information.

- Agreement Name  
The name used to identify the agreement.
- Agreement Description  
Allows you add some notes or comments related to the agreement. Note that you can also attach documents to an agreement.
- Agreement is with a  
A service agreements can be with individual users (contacts), with all users in a department, or all users in a company.
- Agreement Customer  
Depending on whether the agreement is with a contact, a department, or a company, this list includes all the possible users, departments, or companies.
- Reporting Period  
Choose whether reports for this agreement are weekly, monthly, quarterly, semi-annual, or annual. The reports are available from the Service Agreements section of the SLA tab (click the Reports button).

### Applying Service Agreements to Issues

You can apply a service agreement to the issues that are already in the project database. To do this, you use a query to specify the issues to which the service agreement is applied.

### To apply a service agreement:

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 In the project list, click a project.
- 3 In the Service Agreements section, click a service agreement.
- 4 Click Apply.

- 5 In the Apply Service Agreement dialog box, click a query. The agreement will be applied to the issues returned by that query.

## Disabling Service Agreements

### To disable a service agreement:

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 In the project list, click a project.
- 3 In the Service Agreements section, click a service agreement.
- 4 Click Edit.
- 5 In the Update Service Agreement dialog box, clear the Service Agreement is enabled check box and then click OK.



## Service Level Reporting

Enterprise HelpDesk includes a set of service level reports to help you monitor and measure help desk performance against service level objectives,

### To view a service level report:

- 1 In HelpDesk 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 box, click the report you want to view, and then click OK.

You can also double-click a report to open it.






- 5 In the toolbar of the Crystal Reports viewer, click  to print the issue. Click  to save the report as PDF, Word, or Excel.

## Service Types

A service type identifies a type of service delivered by the help desk to help desk customers. The Service Type (for example, software or hardware) is set when an issue is submitted.

Note Enterprise HelpDesk includes default workflow rules that set the Problem Area based on the Service Type.

### To edit the list of service types:

- 1 In HelpDesk Web Admin, click the SLA tab.
- 2 In the Project list, click a project.  
  
Each project has its own list of service types.
- 3 In the Choice List list, click SLA Service Types.
- 4 Edit the service types:
  - Click  to create a new service type.
  - To delete a service type, click the service type and then click .
  - To rename a service type, click the service type and then click .
  - To reorder the list, click a service type and then use  and  to move the service type.



# Chapter 10: E-mail Notifications

## About Notifications

Enterprise HelpDesk can generate notifications (e-mail messages) to inform team members of changes to the project database. Notification messages are sent via the native e-mail system.

Notifications keep team members up to date with changes to reported issues. They don't have to run queries, inspect issues, and review revision histories to find out about changes. Instead, they get e-mail messages whenever new issues are assigned to them, or whenever someone edits a issue already assigned to them.

You should try to keep the number of notifications to a minimum. Defining too many notifications for field updates can overwhelm users with e-mail, resulting in users missing important notifications. Use notifications for changes to fields like Owner, Progress, and Priority.

## What Can You Do With Notifications?

You can send notifications to specific users or contacts, or to the current owner, the previous owner, or the contact (the person who reported the issue).

To trigger notifications, you use simple *when conditions* that test for changes to an issue.

**Send a notification when an issue is reassigned** When an issue is reassigned, you can use the <Owner> and <Previous Owner> to send notifications to both the new and the previous owner.

```
Send Notification To:
  <Owner>;<Previous Owner>
When:
  Owner Update
```

The when condition in this example tests for updates to the Owner field.

### Send a notification when a field is updated

You can use the Update test to send a notification when a field is updated.

```
When:
  Priority Update AND
  Revision Number > 1
```

In this when condition, the Update test checks for changes to the Priority field.

Testing the Revision Number allows you to distinguish between new issues and existing issues that have had their priority changed. Without the Revision Number > 1 test, a "Priority Updated" notification would be generated every time someone set the Priority when they submitted a new issue.

**Send a notification when a field is set to a certain value** You can send a notification when the priority of an issue is changed to "ASAP". To do this, you use a when condition that looks like this:

```
When:
  Priority Update AND
  Priority = ASAP
```

This when condition sends a notification when Priority is changed to ASAP. Without the Update test, it would send a notification every time an issue with Priority = ASAP is saved.

**Send a notification when a new issue is submitted** Each issue has a revision number that increases by one each time the issue is saved. When an issue is first submitted, this revision number is set to “1”, so you can test the revision number to find new issues.

When:  
Revision Number = 1 AND  
Submitted Date = <Today> AND  
Priority = ASAP OR  
Priority = Today

This when condition looks for new issues submitted today with priority of ASAP or Today.

**Send a notification when certain users update an issue** In the default workflow, employees can mark the issues they reported as Dropped or Resolved. When this happens, you can notify the owner of the issue.

Send Notification To:  
<Owner>

When:  
<User in Group> = Employees AND  
Progress Update

The <User in Group> macro allows you to test for user group membership.

### Send a notification when an issue is resolved

You can use the <Contact> macro to notify employees when the issues they submitted are resolved, dropped, or need to be verified by the employee. The contact for an issue is always the employee who reported the issue.

Send Notification To:  
<Contact>

When:  
Progress Update AND  
( Progress = Resolved OR  
Progress = Dropped OR  
Progress = To be Verified )

However, if you want to send an e-mail with a different subject for each possible case (for example, “Issue resolved”, “Issue dropped”, and “Issue to verify”), you need to define three notifications, one for each Progress value.

## Editing Notifications

HelpDesk Admin provides a Notification Editor for editing notifications. To open the editor, click Notification Editor on the Project menu. With the Notification Editor, you can:

- Specify who will receive the notification. Select the names of one or more Enterprise HelpDesk users from the Send Notification to list.
- Define when you want Enterprise HelpDesk to send the notification. Click  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 or the revision history.

- Describe why the notification was sent. Type a one-line description in the Notification Description box. You can include this description in the body of the e-mail message.

## Specifying Notification Recipients

While you can send notifications to specific Enterprise HelpDesk users and contacts, it's typically more useful to send notifications to the users listed in the Owner and Contact fields of an issue. To do this, you use macros. For example, to send a notification to the owner of an issue, you click the <Owner> macro in the Send Notification To list.

**<Owner>** The user whose name is currently entered in the Owner field.

**<Previous Owner>** The user who owned the issue before it was reassigned.

**<Contact>** The person whose name is currently entered in the Contact field.

## Defining When Conditions


### About When Conditions

When conditions determine when Enterprise HelpDesk sends notifications. A when condition is a test. If an issue satisfies the test, Enterprise HelpDesk sends a notification for that issue. You typically use when conditions to:

- Test for updates of a given field. For example, a when condition can generate a notification when issues are reassigned (by testing if the Owner field has been updated).
- Test for updates by a specific user or by users in a specific group. For example, a when condition can generate a notification when anybody except a manager updates the Priority.

To edit the when conditions for a notification, you use the When Editor. Like the Query Editor, the When Editor allows you to combine multiple conditions with parentheses and the And and Or operators.

### To open the When Editor:

Click  beside the When field in the Notification Editor.

## Sending Notifications of Field Updates

To send a notification when someone edits a field, use the Update test.

---

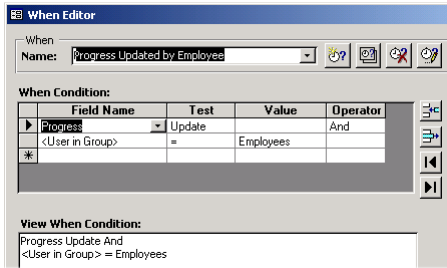
*To send Update notifications for a field, select the Maintain Revision History check box for that field (in the Field Editor).*

---

## Basing Notifications on Users

The Field Name list includes the macros <User> and <User in Group>. Use these macros together with = and <> to test who updated an issue. For example, the following condition sends a notification when any employee updates the Progress of an issue (in the default workflow, employees can mark issues as Resolved or Dropped).

### Notification Based on User Groups



## Specifying Notification Contents

A notification message can include information about the event and issues that generated the notification. For example, if Enterprise HelpDesk generates a notification because a new high priority issue was submitted, the message can include a brief description such as "New high priority issue".

Notifications generated because of changes to a field can include entries from the Revision History that show the changes. The notifications can also include either a summary or a complete copy of the issue.

To specify the contents, you select one or more of the following from the Include list:

- Notification Description is the text entered in the Notification Description box of the Notification Editor.
- Detailed is a copy of the issue.
- Revision Record is the entry from the Revision History for the change that generated the notification.

- Summary is a brief summary of the issue.

The Notification Description, Revision Record, and Summary are included as text in the message body. Detailed is included as a separate attachment.

To change the information included in the Summary section, edit the Notification - Summary report. For the Detailed attachment, edit the Notification - Detailed Record report.

By default, the Detailed attachment is an HTML file. If you use Crystal Reports for listing reports, the Detailed attachment is an RTF file. See "Viewing Reports" on page 35 for more information on using Crystal Reports for listing reports.

The subject of an e-mail notification message is automatically generated, and has this format:

Notification [<project>]: Record <issue number>  
<notification name>

For example:

Notification [HelpDesk]: Record 11 Progress Updated

## Managing Workflow with Notifications

The Progress (status) of an issue indicates where the issue is in your issue tracking system. As the status of an issue changes from New to Assigned to In Progress to To Be Verified to Resolved, different team members become responsible for the issue.

For example, when the issue is assigned to a help desk analyst, you can use update notifications to help manage your help desk workflow. To do this, define a notification that is sent to <Owner> when the issue is assigned and the Progress field set to Assigned.



When the help desk analyst marks the issue as In Progress, you can send a notification to the employee who submitted the issue. Similarly, when an employee updates an issue (for example, by adding more details to the description), you can have Enterprise HelpDesk notify the help desk analyst of the change.

## Setting Up Notifications

To set up notifications for HelpDesk Web, you use both:

- HelpDesk Web Admin, a web-based administration utility.
- HelpDesk Admin, a Microsoft Windows-based administration tool.

### To set up notifications:

- 1 Set up the notification service.
- 2 In HelpDesk Web Admin, specify the Enterprise HelpDesk user account used to send notifications.
- 3 In HelpDesk Admin, set the Mail Server options. These options configure the mail server used to send notifications, and specify how often the notification services checks for new notifications to send.
- 4 Define the notifications you want to send.

## Setting Up the Notification Service

Enterprise HelpDesk installs a Microsoft Windows service named Mq Issue Agent. This service runs on the server where you installed HelpDesk Web, and takes care of generating and sending e-mail notifications.

During installation, you can specify whether you want the service to start automatically whenever the server boots or you want to start the service manually.

### To set up the notification service on Windows XP:

- 1 Click Start, point to Settings, and then click Control Panel. Double-click Administrative Tools, and then double-click Services to open Services.
- 2 In the right pane, right-click the Mq Issue Agent service, and then click Properties.
- 3 On the Log On tab, select This account to choose a user account. Type the password for the account in Password, and then type it again in Confirm password.

The user account must be a valid domain user account and have permissions through the network.

- 4 Click Apply.
- 5 On the General tab, stop and start the service.

### To set up the notification service on Windows 2000:

- 1 Click Start, click Control Panel, click Performance and Maintenance, and then click Administrative Tools to open Services.
- 2 In the right pane, right-click the Mq Issue Agent service, and then click Properties.
- 3 On the Log On tab, select This account to choose a user account. Type the password for the account in Password, and then type it again in Confirm password.

The user account must be a valid domain user account and have permissions through the network.

- 4 Click Apply.
- 5 On the General tab, stop and start the service.

**To set up the notification service on Windows NT:**

- 1 Click Start, point to Settings, and then click Services to open Services.
- 2 Stop the Mq Issue Agent service.
- 3 Click Startup.
- 4 In the Service dialog box, select Startup Automatic if you want to start the service automatically every time the computer is restarted.
- 5 Select This Account and enter a valid domain user account and password that has permissions through the network.
- 6 Click OK.
- 7 Click Start to start the service.

## Setting the Mail Server Options

**To set the mail server options:**

- 1 In HelpDesk Admin, click Options on the Tools menu.
- 2 Set the server mail options. These options are used when sending notifications.
- 3 If you use an SMTP mail system, test your settings by clicking Test.

Option	Description
Server Mail System	1 = MAPI
	2 = SMTP
	4 = Lotus Notes

Option	Description
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. Note that this name does not appear in the From field.
Server MAPI Profile	Name of the MAPI Profile. If you have one profile only, you can leave this field blank.
SMTP Server	Name or IP address of your SMTP mail server.  You can test your settings by clicking Test.
Server Mail Interval	Specifies how often (in minutes) Enterprise HelpDesk generates notifications.

## Specifying the User Account Used to Send Notifications

By default, HelpDesk Web uses the issueagent user account (password = issuesvc) to log on to Enterprise HelpDesk and send notifications.

**To set the user account:**

- 1 In HelpDesk Web Admin, click the Notifications tab.
- 2 Type the user name and password, and click Apply.

After you change the user account, you must stop and restart the Mq Issue Agent service.

## Handling Notification Failures

If Enterprise HelpDesk is unable to send a notification, it will continue to retry to send the notification. The maximum number of times will Enterprise HelpDesk retry controlled by the **Maximum Notification Retries** option, which by default is 100.

When the maximum number of retries is reached, the notification is sent to the e-mail address specified by the **Send Invalid Notifications To** option.

To set these options, click Tools > Options in HelpDesk Admin.



# Chapter 11: Generating Web Views

## What is a Web View?

Web views are different views of an Enterprise HelpDesk project. Each Web view of a project can display different issues and different fields.

For example, employees don't need to see all the issues in the database, just the ones they reported. Also, they don't need to see internal notes and other information entered by the help desk staff. Help desk staff, on the other hand, need access to all the information in the issue database.

## Editing Web Views

### About the Web View Editor

You use the Web View Editor to create, edit, and generate Web views. To create Web views, you must run the Web View Editor on the Web server.

#### **To start the Web View Editor from HelpDesk Admin:**

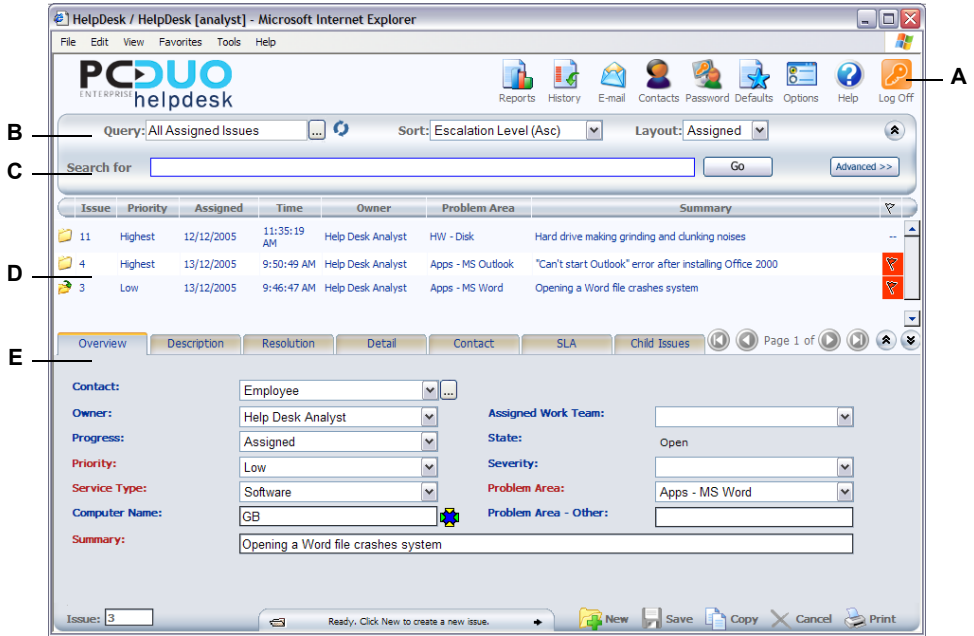
- On the Tools menu, click Web, then click Web View Editor.

The Tools > Web > Web View Editor command is available only if Web View Editor is installed on the same computer where you are running HelpDesk Admin.

#### **To start the Web View Editor from the Start menu:**

Click Start, point to Programs, point to PC-Duo Enterprise, point to HelpDesk, and then click Web View Editor.

**WEB VIEWS** Web views are different views of a project. Each Web view of a project can include a different set of queries and show a different set of fields.



**A** View toolbar. Allows users to generate reports, review the revision history of an issue, send e-mails, add contacts, change passwords, set defaults, set options, get help, and exit. Most of the buttons can be disabled by setting group permissions.

**B** Summary List toolbar. Allows users to select predefined queries, sorts, and layouts. Each Web view can export a different set of queries.

**C** Simple search form. The Advanced button displays the ad-hoc Query Editor, which allows users to build and save ad-hoc queries. Can be hidden by setting group permissions.

**D** Summary List. Displays all the issues that match the current query.



**E** Issue details. Each Web view can export a different set of fields.

## 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.

### To create a new, blank Web view:

- 1 Run the Web View Editor on the Web server.
- 2 Click New View , type the name of the Web view, and click OK.
- 3 In the Project Name list, click a project.
- 4 In the View Type list, click the type of view you want to generate.
- 5 Set the group access permissions for the view. See “Setting Group Access Permissions” on page 87.
- 6 Set the Web view attributes. See “Setting Web View Attributes” on page 87.
- 7 Export fields to the Web view. See “Exporting Fields” on page 87.
- 8 Export queries to the Web view. See “Exporting Queries” on page 88.
- 9 Click  to save your settings and generate the Web view.

---



To log on to the Web view, click .

Click  to save your settings without generating the Web view.

---

## Generating Web Views

### To generate a Web view:

- 1 In the Project / View list, click a Web view.
- 2 Click  to generate the Web view.
- 3 If you want to log off all users before generating the Web view, click Yes. If you click No, users logged on to the Web view will not see any changes until they exit and log on again.
- 4 Click Yes to overwrite the existing files.
- 5 After the Web view is generated, you can click  to log on to the Web view and test it.


### Notes

- You can generate Web views without using the Web View Editor. On the Web server computer, click Start > All Programs > PC-Duo Enterprise > HelpDesk > HelpDesk Tools > Generate Web Views.

## Copying Web Views

You can create a Web view based on an existing Web view. Note that if you copy a view and then change the project, all view settings are cleared.


### To copy a Web view:

- 1 In the Project / View list, click a Web view.
- 2 Click Copy .
- 3 Type a name for the new Web view.

The Web View Editor creates a new Web view that is an exact copy of the selected Web view.

## Deleting Web Views


### To delete a Web view:

- 1 In the Project / View list, click a Web view.
- 2 Click Delete .

Deleting a view deletes all the generated files and folders (used by that Web view) on your server.

## Renaming Web Views

### To rename a Web view:

- 1 In the Project / View list, click a Web view.
- 2 Click Rename .
- 3 Type a new name for the Web view.

## Configuring Web Views

### Types of Web Views

Normal views allow users to submit and update issues.

Read-only views allow users to review existing issues, but not to edit them. All fields are read-only, and users cannot create or submit new issues.

Knowledge Base views provide a simple search front-end to an Enterprise HelpDesk project. Users can either search the KB by keyword or type in a KB article number.

A Knowledge Base view allows an unlimited number of users to search the KB database. All you need is a single Enterprise HelpDesk user account. All users automatically log on to the view with this account (in fact, users never see the logon window, they go straight to the view).

This user account must belong to a group that has permission to open the Web view, and to add and update contacts.

Submit-only views are used to submit new issues. A submit-only view is basically just a form and a Submit button. Users cannot run queries or edit (or even view) existing issues.

A submit-only view allows an unlimited number of users (such as customers or employees) to submit issues. All you need is a single Enterprise HelpDesk user account. All users automatically log on to the view with this account (in fact, users never see the logon window, they go straight to the view).

This user account must belong to a group that has permission to open the Web view, and to add and update contacts. The account is used to set the Submitter field.



If you have more than one submit-only view for the same project, you may want to create separate accounts for each view. This will allow you to distinguish between issues submitted from different views.

The user submitting the issue is considered the contact. Users must enter their contact information (name, e-mail, and so on) the first time they submit an issue.



## Setting 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 box.

**Description** Description of the Web view. Displayed in the list of Web views that appears when a user logs on. The default description is the Project / View name (for example, “BugTrk / BugTrk” for the BugTrk view of the BugTrk project). 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 (Yes) or as disabled controls (No). In a read-only Web view, all fields are read-only. In normal and submit-only Web views, read-only fields are fields that have been disabled through the Field Editor.

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

**Issues per Page** 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 Yes, users can load any issue by typing the issue number in the Issue box of a Web view. If No, users can load only the issues shown in the Summary List.

## Setting Group Access Permissions

You can control access to Web views on a group-by-group basis. When users try to log on, they see only the Web views that they have permission to access.

**To set group access permissions:**

- 1 In the shortcut bar, click  Web View.
- 2 Click  (beside Groups Allowed to Open) to open the View Permissions dialog.
- 3 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 HelpDesk Admin).

## Exporting Fields and Queries


### Exporting Fields

**To export fields:**

- 1 In the shortcut bar, click  Fields.
- 2 In the Tab list, click a tab (a tab is a group of related fields).
- 3 In the Available list, click a field and then click . This moves the field to the Export To View list, which lists the fields included in the Web view when it is generated.

- 4 Use  and  to change the order of the fields in the Export to View list. The order of the fields in the list determines the layout of the fields in the Web view.

---

Click  to move all fields in the Available list to the Export To View list.

Required fields are exported by default. You can remove the fields—just ignore the warning.

The Field list in Ad-hoc Query Editor lists exported fields only, plus the Issue field

Layouts show only exported fields.

---



## Exporting Queries

Queries control which issues a user can see in a Web view. For example, if "My Submitted Issues" is the only query available in a Web view, then users can see only the issues they submitted.


To ensure that users cannot access any issues other than the ones found by the exported queries, you should hide the ad hoc query editor. The Ad-hoc Query Editor allows users to see any issue (for example, by running a query like Issue Number > 0, which returns all issues).

In the Queries section, the Available box lists all the queries that you can export to the Web view. The Export to View box lists all the queries that will be exported to the Web view.

### To export queries:

- 1 In the shortcut bar, click  Queries.
- 2 In the Available list, click a query.
- 3 Click  to move the query from the Available box to Export To View.

---



To move all queries from Available to Export To View, click .

---

## Adding the Child Issues Tab

Web views can have a Child Issues tab that allows users to link one or more child issues to a parent issue.

### To add the Child Issues tab:

- 1 In the shortcut bar, click  Fields.
- 2 In the Tab list, click Child Issues.
- 3 In the Available list, click the Child Issues field and then click .

The Child Issues field is a special grid control that allows users to build a list of child issues.

- 4 If you want to allow users to control whether child issues can have a different Progress value than their parent, export the Progress controlled by parent field (Details tab).

By default, child issues have the same substate as their parent. Users can set Progress controlled by parent to No to override this default behavior.

- 5 Regenerate the Web view.


## Working with Fields

### Editing 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.

#### To edit field attributes:

- 1 In the shortcut bar, click  Fields.
- 2 In the Tab list, click a tab. Then in the Export to View list, click a field.
- 3 Click Attributes to open the Attribute Editor.  
The Attribute Editor displays the attributes for the selected field.
- 4 After you open the Attribute Editor, you can edit the attributes for another field by clicking the field in the Field Name list.

### 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.

Variable	Inserts
%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).

### Adding Pop-up Editors

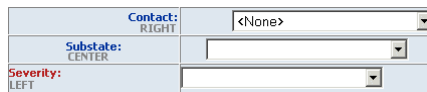
A Memo field such as the (Detailed Description field) has an Editor attribute that controls how the content of the field is edited.

Value	Description
<None>	The Memo field is an editable text area in the Web view.
HTML	The contents of the Memo field are edited in a pop-up HTML editor.
Text	The contents of the Memo field are edited in a pop-up Text editor.

### Aligning Fields

**Alignment.** Aligns a field (both the caption and the input control). Possible values are Left, Right, or Center. By default, all fields are left-aligned.

#### Aligning Fields



**Vertical Alignment** Sets the vertical positioning of a field (both the caption and the input control). Possible values are: Top, Middle, and Bottom. The default is Top.

### Vertical Alignment of Fields

Contact: TOP	<None>
Substate: MIDDLE	
Priority: BOTTOM	

## Automatically Updating Choice Lists

**Automatically Update List** If Yes, the choice list is updated each time a user logs on to the Web view. To turn on the automatic update of choice lists, you must regenerate the view.

If No, the choice list is updated only when the Web view is regenerated.

---

*Automatically updating a large number of choice lists may affect performance. You should automatically update only the choice lists that change frequently.*

---

## Changing Field Captions

The Caption attribute specifies a text label for a field. Note that reports and the Field list in the Ad-hoc Query Editor still use the original field name, not the value of the Caption attribute.

## Spanning Columns

Set Column Span to 1 to have the field span a single column, or 2 to have the field span the entire width of the page.

To make a field span 2 columns, you must also set the CSS Class to MemoFieldWidth. Use the SpanTwoWidthOne class if you want a field to span two columns but still be one column wide (that is, be alone on a line).

For example, in the default HelpDesk Web view, the Priority field uses the SpanTwoWidthOne class.

Priority:	Today	Problem Area - Other:	
Problem Area:	Apps - MS Outlook		
Summary:	Calendar items and tasks disappeared in Outlook Today		

## Applying CSS Styles

**CSS Class** Name of a style class defined in the cascading style sheet (CensusMain.css) used by the Web view. This class is applied to the controls (for example, the <input> form element for a text box). By default, fields use the classes ComboBoxWidth, MemoFieldWidth, and TextFieldWidth. These classes set the width and border of the control. ComboBoxWidth, and TextFieldWidth set the width to one column, and MemoFieldWidth sets the width to two columns.

The CSS Class attribute does not apply to read-only/disabled fields. These fields use the readOnlyStyle class.

## Displaying Read-Only Fields

You can display read-only fields as either text or as disabled controls.

### Read-only field displayed as text



Contact:	demo
----------	------

### Read-only field displayed as a disabled control

Contact:	demo
----------	------


In a read-only Web view, all fields are read-only. In normal and submit-only Web views, read-only fields are fields that have been disabled through the Field Editor.

### To set the default for all read-only fields in the Web view:

- 1 In the shortcut bar, click  Web View.
- 2 Click  (opposite Attributes) to open the Web View Attributes dialog box.
- 3 Set Display All Read-Only Fields As Text to either Yes or No.

By default, this setting applies to all read-only fields in the Web view.

### To override the default for a specific read-only field:

- 1 In the shortcut bar, click  Fields.
- 2 In the Tab list, click the tab that contains the field.
- 3 In the Export to View list, click the field and then click Attributes.
- 4 Change Display Read-Only Field As Text to either No or Yes.

When Display Read-Only Field As Text is set to Default, the field uses the value of the Web view attribute Display All Read-Only Fields As Text.

### Notes

- If you display a read-only memo field as a disabled control, the scroll bar is disabled, so the user may not be able to see everything in the field.
- You must regenerate the Web view after you change either the Web view attribute or the field attribute.

## Width and Height

**Width** Width in characters of a single-line text box, or width in pixels of a list box.

The CSS classes assigned to text boxes and list boxes override the Width attribute. These CSS classes (TextBoxWidth and ComboBoxWidth) specify the widths of the input controls.

## Inserting Custom HTML Code

**Html code before/after control** HTML inserted before and after the control in the generated HTML page. Must be a single line of text.

For example, suppose you want to add a help icon that displays a tooltip.



A simple way to implement field-level tooltips is to put this HTML in the Html code after control attribute:

```

```

This inserts a help icon that displays a tooltip when a user points to the icon.

A more generic approach would be to write a javascript function in CustomCode.js that returns a string of HTML.

```
function getHelpIcon ( tooltip ) {
var str;
str = '';
return str;
}
```

The Html code after control would then call this function to get the HTML:

```
<script type="text/javascript" language="javascript">  
document.write(  
    parent.objCustomCode.getHelpIcon( 'Tooltip text')  
);  
</script>
```

Important You must declare your function in CustomCode.js. Look for the public declarations at the bottom of the file, and add this line:

```
this.getHelpIcon = getHelpIcon;
```

---

*In the Html code before/after control attributes, you can use the string %fieldname% to refer to the name of the control. (The name of a control is the value of the name attribute on the form element.) For example, you could pass %fieldname% into the getHelpIcon() function, which would then return the help for that field.*

---

## Adding URL Buttons

A URL button opens a new browser window and loads 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.






To add a URL button that opens the specified KB article in a browser window, set the URL and URL Button CSS attributes as follows:

```
URL = http://support.microsoft.com  
/default.aspx?scid=kb;en-us;%fieldvalue%  
URL Button CSS = URLButton
```

In the URL attribute, %fieldvalue% is a placeholder for the KB article ID number entered in the field.

If you omit the “http://” prefix from the URL, Enterprise HelpDesk automatically adds it when you generate the Web view.

The URL Button CSS attribute identifies the CSS classes used for the button. Enterprise HelpDesk includes several different URL button classes you can use:

- URLButton 
- MailToButton 
- RemoteControl 

A URL button always opens a new browser window, even if you specify a URL like “mailto:xsupport@vector-networks.com”.

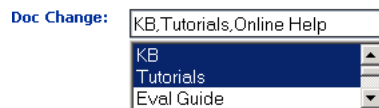
## Text Boxes

**Number of Characters** Maximum number of characters per line in the text box.

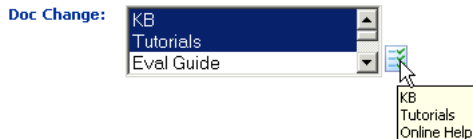
## Multi-Choice Lists

**Number of Visible Items** Number of items visible in a multi-choice list. Users can always see items that are outside the visible window by scrolling the list box.

**Show Selected Items In Text** Shows a comma-separated list of the selected items in a text box above the multi-choice 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 in a multi-choice list.



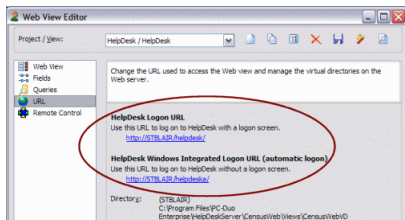
## Hiding Fields

Setting the Visible to No hides the field in the Web view. The field is still included in reports and listed in the Field list of the Ad-hoc Query Editor.

## Web View URLs

### Pointing Users to Web Views

The URLs for a normal or read-only Web view are displayed in the Web View Editor. The Enterprise HelpDesk Logon URL is for users with Enterprise HelpDesk users accounts. The Windows Integrated Logon URL is for users whose Windows user accounts have been imported into Enterprise HelpDesk.



The default page at the URL is logon.asp.

For Submit-only and Knowledge Base views, you have to add the logon.asp file name and a query string to the URL displayed in the Web View Editor. For example:

```
http://server/helpdesk/logon.asp?View=HelpDesk%2FReport%20Issue
```

```
http://server/helpdesk/logon.asp?View=HelpDesk%2FKB
```

The query string (the part after the question mark) specifies the project and view:

```
View=<project>%2F<view>
```

%2F is the escape sequence for a forward slash (/). Spaces in the view name are replaced with the escape sequence %20.

## Changing URLs and Directories

A Web view is accessed through a URL like //server/HelpDesk, where server is the name of the Web server computer, and HelpDesk is the name of a virtual directory.


On a Web site hosted by Microsoft Internet Information Services (IIS), a virtual directory is an alias (a short, descriptive name) that is mapped to a directory on the Web server.

The Web View Editor includes a Web View wizard to help you:



- Change the URL (for example, change //nan/HelpDesk to //nan/CallTracking) by changing the virtual directory.
- Change the directory where the Web view is published.

There are two ways to change the URL. You can create a new virtual directory, or you can use an existing virtual directory.

**To change the URL by creating a new virtual directory:**

- 1 In the shortcut bar, click  URL.
- 2 Click  to open the Web View Wizard and then click Next.
- 3 Click Advanced, click Create a new URL and a new Directory, and then click Next.
- 4 Type the name of your Web server and click Next.
- 5 In the Web Site list, click the Web site where you want to create the virtual directory.
- 6 In the Virtual Directory box, type the name of the new virtual directory.
- 7 In the Path box, select the directory where you want to put the generated Web view files.
- 8 If you need to change the user account used for anonymous access to the virtual directory, select the Show advanced options check box.
- 9 Click Next and then click Finish.



**To change the URL by using a different virtual directory:**

- 1 In the shortcut bar, click  URL.
- 2 Click  to open the Web View Wizard and then click Next.
- 3 Click Use existing URL and click Next.
- 4 In the Web Site list, click the Web site that contains the virtual directory you want to use.
- 5 In the Virtual Directory list, click the virtual directory you want to use.

By default, the Virtual Directory list contains only the virtual directories used by Enterprise HelpDesk Web views. To show all the available virtual directories, select the Show all virtual directories from IIS check box.

- 6 Click Next and then click Finish.

**To change the directory:**

- 1 In the shortcut bar, click  URL.
- 2 Click  to open the Web View Wizard and then click Next.
- 3 Click Advanced, click Update existing virtual directory, and then click Next.
- 4 Click Next and then click Next again.

This assumes you want to change just the directory, not the Web server, Web site, or virtual directory.

- 5 In the Path box, select the new directory where you want to put the generated Web view files.
- 6 If you need to change the user account used for anonymous access to the virtual directory, select the Show advanced options check box.
- 7 Click Next and then click Finish.

## Changing the Windows Account

Enterprise HelpDesk 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 HelpDesk Web Admin, which are all stored in virtual directories on the Web server.



- Access Enterprise HelpDesk 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 PC-Duo Enterprise site databases.

By default, Enterprise HelpDesk uses the CensusUser account, which is created when you install Enterprise HelpDesk. The default password for the CensusUser account is "nd5kvmWJ".



The CensusUser account is a Windows domain account.

---

*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 Start the Web View Editor. In the shortcut bar, click  URL.
- 2 Click  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.

You can also use HelpDesk Admin to change the Windows account.

#### **To change the Windows account used by Enterprise HelpDesk:**

- 1 Start HelpDesk Admin.
- 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 will be used for anonymous access by all subsequent Web views you generate.

---


*When you change the user account used for anonymous access with the Web View Editor or HelpDesk Web Admin (Notifications tab), all required permissions and rights are automatically set.*

---

## **Customizing Web Views**

### **Setting Default Values**

#### **To set default values for a Web view:**

- 1 Log on to the Web view.
- 2 In the Web view toolbar, click Defaults .
- 3 In the Default Values dialog box, set the field values you want to use as defaults for new issues.
- 4 Click Apply.

This creates a file named MqDefaultValues.js in the folder

**CensusWebVD\<project>\_<view>\Users\<logon-name>**

where <logon-name> is the name you used to log on to the Web view.

- 5 Copy the file  
`\CensusWebVD\<project>_<view>\Users\<logon-name>\MqDefaultValues.js`  
 to  
`\CensusWebVD\<project>_<view>\Users\Users\MqDefaultValues.js`

The folder Users\Users applies to all users that log on to the Web view.

- 6 Copy Users\Users\MqDefaultValues.js to the CustomizedFiles folder.

For example, if you want the default values to apply to all Web views of the BugTrk project, copy MqDefaultValues.js to:

**CUSTOMIZEDFILES\#Project#BugTrk\#AllWebViews#\Users\Users**

If you want the default values to apply only to the BugTrk\_BugTrk view, copy MqDefaultValues.js to:

**CUSTOMIZEDFILES\#Project#BugTrk\#WebView#BugTrk\_BugTrk\Users\Users**

*Notes*

- Users can override these default values by setting their own defaults.
- You can remove the Defaults button from Web views by disabling the Default Value Editor feature.

## Templates and the CustomizedFiles Folder

The files that make up a Web view (such as .JS, .CSS, .HTML, and .ASP files) are generated from templates. If you edit the original templates, your

customizations will apply to all Web views. And if you edit the generated files for a given Web view, you'll have to reapply your changes every time you generate the view.

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.

## Customizing Web View Files

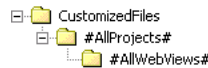
### To customize Web view files:

- 1 In the <HelpDeskServer>\CensusWeb folder, create a CustomizedFiles folder.

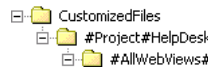
<HelpDeskServer> represents the folder where your HelpDesk Server is installed (for example, "C:\Program Files\PC-Duo Enterprise\HelpDeskServer").

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

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

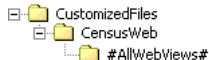


To customize files for all Web views of a specific project, create a folder structure like this:



and replace "HelpDesk" with the name of the project.

To customize files for all Web views accessed through a given URL, create a folder structure like this:

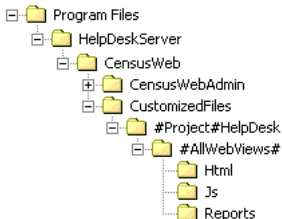


and replace "CensusWeb" with the last part of the URL. For example, if the actual URL is `http://SERVER/HelpDesk`, replace "CensusWeb" with "HelpDesk").

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

- 3 Copy the files you want to customize from the view into the CustomizedFiles folder.

You must recreate the same folder structure. For example, if you want to customize files in the HTML, JS, and Reports folders of Web views of the HelpDesk project, you must create this folder structure:



- 4 Customize the files and generate the view.

## Customizing Shared Web View Files

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>`

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

Put the files in the folder  
`CustomizedFiles\<virtual directory>`

For example, if the URL is `//server/HelpDesk`, then put the customized files in a folder named `CustomizedFiles\HelpDesk`.

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

## Overriding Customizations

To override the customizations in `#AllWebViews#` for a given Web view, you can create a `#WebView#<project>_<view>` folder. For example:



The files in `#WebView#HelpDesk_HelpDesk` override all `#AllWebViews#` customizations.

You can create a `#WebView#<project>_<view>` folder in any of the three customization folders (`#AllProjects#`, `#Project#<project>`, and `CensusWeb`).

## Customizing the Web View Interface

You can customize most of the HTML and ASP pages that make up a Web view. If you edit the templates, make sure to backup the original files before you begin your customization.

**CensusMain.css** Style sheet for a Web view. The `normalfield`, `requiredfield`, and `disabledfield` classes define the appearance of the fields.

**TmplCensusMain.htm** Defines the frame structure for the frames that make up the Web view page. You can change the size and position of each frame, add and remove scrollbars, and set the frame border size.

**TmplToolbar.htm** Defines the Web view toolbar.

**TmplSummaryList.htm** Defines the Summary List. You cannot customize this page.

**TmplISQE.htm** Defines the Ad-hoc Query Editor.

**Tabs.asp** Defines the layout of the tab navigation buttons.

**TmplCmdBar.htm** Contains the navigation controls.

When editing these files, do not change references to file names, the `<WC@ ... >` tags, or any of the Javascript code.

## Changing the Date and Time Formats for Web Views

### About the Date/Time Formats

The format of the dates and times entered and displayed in a Web view are controlled by the Regional Settings of the Web server, not the Regional Settings of the local computer.

---

*Web views use the short date format.*

---

### Microsoft Windows NT 4.0

When no one is physically logged on to the Web server, the Date/Time formats (and other Regional Settings) come from the system default settings (found in the `Locale.nls` file for the default locale). You can change the system default settings by clicking Set Default in the Regional Settings section of Control Panel.

After you change the default locale, you should restart the computer. Note that changing the default locale changes all regional settings, not just the date and time formats. There is no way to modify a specific setting within the locale.

When someone is logged on to the computer, the Date/Time formats come from the logged-on user's Regional Settings. These settings are read from the user profile settings in the `HKEY_CURRENT_USER/Control Panel/International` registry key. You can change this setting in the Regional Settings section of Control Panel, after which you must restart the computer.

## Microsoft Windows 2000 and XP

The Date/Time formats come from system default settings in the HKEY\_USERS/.Default/Control Panel/International registry key. This key contains the Regional Settings options specified during the operating system installation.

To change these default system settings, you must edit the registry. You may need to restart your Web server for the changes to take effect.

## Administering Enterprise HelpDesk on the Web

### About HelpDesk Web Admin

HelpDesk Web Admin is a Web-based administration tool that allows you to:

- Add and edit users and contacts.
- Define workflow rules.
- Create new tabs.
- Set up choice fields.
- Enable e-mail notifications.
- Migrate projects to SQL Server and move projects to different SQL Server computers.
- Move attachments to a different computer.
- Integrate PC-Duo Enterprise Inventory.

### Logging On

You can log on to HelpDesk Web Admin directly from the Web View Editor, using the same logon account you used to log on to the Web View Editor.

### To log on to HelpDesk Web Admin

Do one of the following:

- In your Web browser, go to `//server/helpdeskadmin`, where server is the name of your Web server.
- In HelpDesk Admin, click Tools > Web > Web Admin.
- If you are sitting at the Web server, click Start > Programs > PC-Duo Enterprise > Enterprise HelpDesk > HelpDesk Web Admin.
- In the Web View Editor, click Admin and then click Log On.

### Generating HelpDesk Web Admin

When you install the HelpDesk Web Server, the setup program generates a copy of HelpDesk Web Admin. If necessary, you can generate another copy of HelpDesk Web Admin. For example, you may want to change the URL used to access HelpDesk Web Admin.

#### To generate HelpDesk Web Admin:

- 1 In the Web View Editor, click Admin.
- 2 If required, change the URL and directory for HelpDesk Web Admin. See “Changing URLs and Directories” on page 93 for more information.
- 3 Click OK.

### Windows Permissions

When you log on to HelpDesk Web Admin, HelpDesk Web Admin uses your Windows credentials to run tasks if you are a member of the CensusAdminsGroup group or the local

Administrators group on the HelpDeskServer computer. Otherwise, HelpDesk Web Admin runs tasks as CensusUser.

Members of the CensusAdminsGroup group (or of the local Administrators group on the HelpDeskServer computer) have the required permissions to perform any task with HelpDesk Web Admin. The CensusUser account, on the other hand, cannot perform IIS-related tasks such as unloading virtual directories (when logging off users), and may not be able to relocate databases to other computers.

During installation, the Setup program creates the CensusAdminsGroup group and adds all members of the domain Administrators group to the CensusAdminsGroup group. Setup also adds the CensusAdminsGroup to the local Administrators group on the HelpDeskServer computer. The purpose of the CensusAdminsGroup is to control access to Web Admin.

# Chapter 12: Setting Up E-mail Submission

## About Submitting Issues by E-mail

You can set up Enterprise HelpDesk to automatically convert e-mail messages to issue records. The e-mail messages must be located in an Exchange mailbox or an Exchange Public folder. Every new e-mail message sent to the mailbox or Public folder is converted to an issue.

The conversion of an e-mail message is configurable, but typically goes something like this:

- The e-mail subject is a one-line summary of the issue
- The e-mail body is the issue description
- The e-mail sender is the issue submitter.
- E-mail attachments become attachments to the issue.

To set up and configure e-mail submission of issues, you use the Exchange Server Integration wizard. By default, this wizard is installed on the HelpDesk Server computer. If the Exchange server is on a different computer, you must install the wizard on the Exchange server by running the stand-alone setup program (hdexchsetup.exe)."

### To start the Exchange Server Integration wizard:

On the Exchange server, click Start > All Programs > PC-Duo Enterprise > HelpDesk > Exchange Server Integration.

## Defining Integration Rules

An integration rule specifies how an e-mail message is converted to a Enterprise HelpDesk issue. You define a rule by choosing the Exchange mailbox or Public folder that contains the e-mail messages to be converted, mapping e-mail fields to HelpDesk fields, and assigning default values to HelpDesk fields.

**Choosing a mailbox or Public folder** All new messages sent to a specified mailbox or Public folder will be converted to HelpDesk issues. You can have different mailboxes/Public folders for each of your Enterprise HelpDesk projects.

**Mapping Fields** You map the e-mail fields (such as From, Subject, and Body) to Enterprise HelpDesk fields. For example, a common mapping is the E-mail Subject to the Summary field, and the E-mail Body to the Description Log field.

For fields like Submitter and Contact, you should use the <Look up User from sender's e-mail> macro to fill in the field with Enterprise HelpDesk user ID.

**Copying Attachments** When an e-mail message is converted to an issue, you can copy attachments to an issue field (such as the Attachments field). The field will store links to the attachments, which are actually copied to the Web server.

**Assigning Default Values** You can assign default values to Enterprise HelpDesk fields. If an Exchange field is mapped to an Enterprise HelpDesk field, the default value is used only if the Exchange field is empty.

Important Fields that are required in Enterprise HelpDesk (for example, Summary and Priority) must be either mapped or assigned a default value. For this reason, you may want to add an “Unknown” or “Unspecified” value to a choice list field and use it as the default value in issues submitted by e-mail.

## Configuring the Servers

Each integration rule can be associated with a different mailbox or Public folder on the Exchange server. If you have multiple Exchange servers or HelpDesk Servers, you can even define different rules for different servers.

### Exchange Server Name

The computer name of the Exchange server.

### Inbox/Folder Name

A mailbox or Public folder on the Exchange server. The integration rule will be applied to all new e-mail messages in the specified mailbox or Public folder.

### Server Path

The location of the HelpDesk Server

### Logon Name

A user name that can be used to log on to Enterprise HelpDesk. The user must have access permissions for the project where the new issues will be created.

### Password

The user’s password.

## Mapping Fields

The mapping of Exchange fields to Enterprise HelpDesk fields controls how information is copied from an e-mail message to an issue.

For example, you could map fields like this:

Exchange Field	Enterprise HelpDesk Field
Subject	Summary
Body	Description Log
Priority	Priority (if you can rely on the submitters to set the e-mail priority)
From	Instead of mapping From to a Enterprise HelpDesk field, you can use the <Look up User from sender’s e-mail> macro to fill in the field with Enterprise HelpDesk user ID.
To	Contact (this would allow you to search for issues submitted by e-mail)

### To map an Exchange field to a Enterprise HelpDesk field:

- 1 Click the Enterprise HelpDesk field.
- 2 In the Exchange Field column, click <click here to map field> to open the Map Field dialog box.
- 3 In the Exchange Field list, click the e-mail field that you want to map to the Enterprise HelpDesk field.

When the e-mail message is converted to an issue, the contents of the Exchange field are copied to the specified Enterprise HelpDesk field.



**To remove the mapping between an Exchange field and a Enterprise HelpDesk field:**

- 1 In the Exchange Field column, click the field that is mapped to the **Enterprise HelpDesk** field.
- 2 In the Map Field dialog box, clear the Map this field check box.

**To copy attachments:**

- 1 Select the Copy e-mail attachments check box.
- 2 In the list HelpDesk fields, click a field. The list displays only the fields that support attachments.

## Assigning Default Values

You can assign default values to Enterprise HelpDesk fields that are not mapped. For example, you can set the Progress field to New.

Required Enterprise HelpDesk fields that are not mapped must be assigned a default value.

Another way to assign default values would be to associate different default values (such as Priority) with different mailboxes.

**To assign values to an Enterprise HelpDesk field:**

- 1 Click the Enterprise HelpDesk field.
- 2 In the Value column, click <click here to assign value> to open the Assign Value dialog box.
- 3 Select or type the value you want to assign.

**To remove an assigned value:**

- 1 In the Value column, click the value assigned to an Enterprise HelpDesk field.

- 2 In the Map Field dialog box, clear the Assign value to this field check box.



# Chapter 13: Maintaining Your Help Desk System

## Relocating Databases

### Relocating Databases to SQL Server

You can relocate (migrate) databases from Jet/MSAccess to SQL Server, or from one SQL Server to another. To relocate databases to SQL Server, you must have a license for PC-Duo Enterprise HelpDesk SQL Enabled.

There are two types of databases you can relocate:

- Global databases are the databases shared by all projects: the users database (users.mdb), the Web views database (censusweb.mdb), and the licenses databases (licenses.mdb).
- Project databases contain issues and project definitions (such as the definitions of fields, queries, and reports).

#### To relocate databases to SQL Server:

- 1 Log on to HelpDesk Web Admin.
  - In HelpDesk Admin, click Tools > Relocate > Databases. This logs you on to HelpDesk Web Admin, where you can use the Relocation tab to relocate databases to SQL Server.
  - In your Web browser, go to //server/helpdeskadmin, where server is the name of your Web server.
- 2 On the Relocation tab, under Databases to relocate, select the databases you want to relocate.
- 3 In the Relocate databases to this SQL Server list, click the SQL Server computer where you want to relocate the databases.
 

To relocate to a SQL Server instance, click Add a SQL Server to this list and then type the instance name using the syntax <computer name>\<instance name>.
- 4 In the New location for database files box, type or paste the name of an existing folder on the SQL Server computer.
 

This folder is where the database files (\*.mdf, \*.ldf) will be stored.

The new location must be the path as seen from the Web server. If the SQL Server is in a different computer, enter a UNC. Otherwise, enter a local path.
- 5 Click Apply to relocate the databases.
- 6 During the relocation, you may be prompted for the password for the sa SQL Server login account. Enterprise HelpDesk needs the password so it can initialize the SQL Server.
- 7 After the databases are relocated, regenerate your Web views.
 

If you relocated the global databases, regenerate all Web views. If you relocated project databases, regenerate the Web views of the relocated projects.

#### Notes

- We recommend that all databases be stored on the same SQL Server computer. This improves performance by reducing the amount of data sent over the network.

- When relocating databases from one SQL Server to another, the locations of the physical data files (.mdf,.ldf) on both the source and target computers must be accessible from the Web server. Also, the user running HelpDesk Web Admin must have full permission on the locations in order to move and create files.
- Relocating databases will log off users and prevent users from logging on, so choose a time when there is little or no activity on Enterprise HelpDesk.
- When you relocate a database to SQL Server, Enterprise HelpDesk creates a SQL Server database with one data file and one log file. After the database is created and is accessible in SQL Server, database administrators can add more files or configure the database as required.
- Enterprise HelpDesk creates a SQL Server login account named “censusapplication”, which is used to connect to the SQL Server.
- Verify that the HelpDesk Web server computer and the SQL Server computer can communicate through the network (for example, use Ping to test connectivity).
- Try using the IP address instead of the computer name to identify the SQL Server computer.
- To relocate to a SQL Server instance, click Add a SQL Server to this list and then type the instance name using the syntax <computer name>\<instance name>.
- Verify that both the SQL Server and the Web server are using the same protocol (by default, TCP/IP). To do this, use the SQL Server Server Network Utility on the SQL Server computer, and the SQL Server Client Network Utility on the Web server.

## Troubleshooting Relocation

If HelpDesk Web Admin cannot contact or initialize the SQL Server during relocation:

- Check that the SQL Server is running.
- Check that the SQL Server is configured to use SQL Server and Windows authentication (Mixed Mode authentication).
- Verify that the SQL Server login account sa exists, is not disabled, and has permissions to log into the master database in the SQL Server. sa must be system administrator in SQL Server.
- Stop any antivirus software that is running on the SQL Server computer or the Web server computer.

## Relocating Attachments

When users upload attachments, the attachments are stored on the Web server. For example, the files attached to issue #3 in the HelpDesk project are stored in the folder

HelpDeskServer\HelpDesk\Data\Attachments

For security purposes, you may want to move the attachments to a separate file server.

### To relocate attachments:

- 1 In HelpDesk Admin, click Tools > Relocate > Attachments.

This logs you on to HelpDesk Web Admin, where you can use the Relocation tab to move (relocate) attachments.

- 2 In HelpDesk Web Admin, click the Relocation tab and then click Relocate Attachments.

- 3 Under Relocate the attachments for these projects, select the projects whose attachments you want to move.
- 4 In the New location for attachments box, type or paste the name of an existing folder on another computer.

- The Windows account (by default, CensusUser) must have (full) permissions on the new location.
- The new location must be a UNC path (for example, \\sharename\Attachments) that the Web server can access.
- The new location is the root folder where Enterprise HelpDesk creates folders to store the attachments. For example, if the new location is

```
//fileserver/HelpDeskWeb
```

then attachments to the HelpDesk project are stored in

```
//fileserver/HelpDeskWeb
/HelpDesk/Data/Attachments
```

If you created your own attachment field, then attachments are stored in

```
//fileserver/HelpDeskWeb
/HelpDesk/Data/<fieldname>
```

- 5 Click Apply to relocate the attachments.
- 6 After the attachments are relocated, regenerate the Web views of the projects whose attachments were relocated.

## Notes

- Relocating attachments will log off users and prevent users from logging on, so choose a time when there is little or no activity on Enterprise HelpDesk.

## Deleting Issues

Using HelpDesk Admin, you can delete specific issues (for example, “1” or “3, 6, 9”) or a range of issues (for example, “1-100”) from a project.

### To delete issues:

- 1 In HelpDesk Admin, click Delete Issues on the Project menu.
- 2 In the Issues to delete box, type the issue numbers you want to delete.  
  
You can type a specific issue number, a comma-separated list of issue numbers (“1, 5, 7”), or a range (“1-25”).
- 3 If you want to reuse the issue numbers of deleted issues, select the Recycle Issue Numbers check box.

Recycled issue numbers are assigned to new issues.

## Managing Logon Sessions

### About the Logons Editor

HelpDesk Admin includes a Logons Editor (Tools menu) that lists all users logged on to Web views, HelpDesk Admin, HelpDesk Web Admin, or the Web View Editor.

The Logons Editor displays the following information for each logon session.

**Name** Logon name of the user.

**Date/Time** Date and time that the user logged on.

**Workstation** The user’s IP address or computer name.

**Project** If the user is logged on to a Web view, the name of the project is displayed.

**Virtual Directory** If the user is logged on to a Web view, the virtual directory is displayed. The virtual directory is the final part of the URL used to access the Web view. For example, if the virtual directory is named “helpdesk”, then the URL is `http://server/helpdesk`. You can use the Web View Editor to determine which views are at the specified URL.

Virtual directories such as `helpdesk00`, `helpdesk01`, and `helpdesk02` are all accessed through the `//server/helpdesk` URL.

**Application** This is either “Web View”, “Web View Editor”, “Admin”, or “Web Admin”.

## Logging Off Users

**To log off a specific user:**

- 1 On the Tools menu, click Logons Editor.
- 2 In the list of users, click a user.
- 3 Click Log Off.

**To log off all users:**

- 1 On the Tools menu, click Logons Editor.
- 2 Click Log Off All.

Before logging off a user, a Web view displays a message telling the user that Enterprise HelpDesk is shutting down. You can give users a bit more time by sending an immediate message. To do this, set the Send immediate shutdown message project option to Yes.

## Setting the Monitor Interval

The Monitor Interval option (Tools > Options) controls how long (in seconds) Enterprise HelpDesk waits before:

- Checking for messages from a Web view
- Checking for user activity in a Web view
- Terminating a user session when logging off users.

The default interval is 60 seconds. If your Web server is on a slow Internet connection and you want to reduce network traffic and bandwidth usage, you can try increasing the monitor interval. Too large an interval, however, will mean that administrators will have to wait a long time when performing any action that involves logging off users.

## Repairing and Compacting

### About the Repair and Compact Tool

HelpDesk Admin includes a tool for repairing and compacting Microsoft Access database files. This tool is available from the Tools menu (Repair and Compact), but to repair and compact project database files, you must select a project first.

### About the Database Files

The Repair and Compact dialog box displays a list of databases and their locations. The list of includes both common databases (databases

shared by all projects) and project-specific databases. Note that while SQL Server databases are listed, you cannot repair and compact them.

#### Project-specific databases:

Issue database	.dat (Jet/Access)
	_DAT (SQL Server)
Project definitions	.def (Jet/Access)
	_DEF (SQL Server)
Temporary database used by HelpDesk Admin	.usr (Jet/Access)

#### Databases shared by all projects:

Web view definitions	censusweb.mdb (Jet/Access)
	CENSUSWEB_MDB (SQL Server)
User and contact information	users.mdb (Jet/Access)
	USERS_MDB (SQL Server)
Licenses	Licenses.mdb (Jet/Access)
	LICENSES_MDB (SQL Server)

## Compacting Database Files

Compacting optimizes the performance of Microsoft Access databases and can help prevent data corruption. If you make frequent changes in a

database, parts of the database may become fragmented. We strongly recommend that you periodically repair and compact your databases.

#### To compact database files:

- 1 In the Project list, click a project.
- 2 In the Tools menu, click Repair and Compact.
- 3 In the Repair and Compact dialog box, select the database files you want to compact.

Note that SQL Server databases cannot be repaired and compacted with this tool.

## Repairing Damaged Database Files

Repairing files allows you to recover corrupted or damaged Microsoft Access databases.

#### To repair a database file.

- 1 Make a copy of the damaged database file so that you have a backup.
- 2 Delete the .ldb file if it is present. You must close the corresponding database file before you delete the .ldb file.
- 3 If the database file is project-specific, click a project in the Project list.
- 4 In the Tools menu, click Repair and Compact, and then select the files you want to repair.
- 5 Click Start to run Repair and Compact on the selected files.

## Running Security Repair

The Security Repair utility program repairs and compacts CenSys.mdw. CenSys.mdw is the system workgroup file that stores security settings such as user group permissions and passwords.

CenSys.mdw may become bloated and stop working. Symptoms include changes in user permissions, such as the inability to log on, or an increase in file size (normal file size is around 160 KB).

Security Repair works on the copy of CenSys.mdw found in the local HelpDeskTools folder (for example, C:\Program Files\PC-Duo Enterprise\HelpDeskTools). This prevents users from accidentally running the program on the CenSys.mdw on the database server.

#### To repair and compact CenSys.mdw:

- 1 Make sure no one is editing users, groups, or passwords.
- 2 Copy CenSys.mdw from the HelpDeskServer folder to the HelpDeskTools folder.
- 3 On the Start menu, point to Programs and then click PC-Duo Enterprise. Point to HelpDesk and then click Security Repair.
- 4 Copy CenSys.mdw back to the HelpDeskServer folder.

## Checking Integrity

### About the Integrity Editor

The Integrity Editor (available from the Tools menu) allows you to remove database locks and validate the integrity of your databases. The integrity tasks apply to both SQL Server and Microsoft Access databases.

## Remove Locks

**Locks on Project Definitions** Removes locks on project definitions, such as reports, queries, fields, and sorts.

If you get "locked by another user" messages when you try to use HelpDesk Admin, run the Remove Locks task to remove the locks.

### Locks on Users and Logon Sessions

Removes locks on users and logon sessions. Users are locked while someone is editing a record in the users database (the users.mdb file or, in SQL Server, the USERS\_MDB database).

Sessions shown in the Logons Editor can be locked. For example, you may not be able to remove a logon that is several weeks old because it is locked. Run Remove Locks to unlock the logon.

## Validate Integrity of Fields

This task verifies that the issue database and the project definition database are in-sync and have the same set of fields. The task also checks primary keys and indexes.

For example, suppose your issue database is damaged and cannot be repaired, and that your backup of the issue database is not in-sync with the current project definitions database (the definitions database has new fields that are not in the backup issue database). By running the Validate Integrity of Fields task, you can synchronize the backup issue database with the current project definitions database.



## Validate Relationships

This task verifies that built-in related fields are set correctly in the issue database. In the HelpDesk project, the only built-in related fields are State and Progress. See “Editing the Progress and State Lists” on page 26 for a description of the relationship between these two fields.

Validate Relationships does not apply to field relationships created with the Workflow Editor.

## Validate Integrity of Issues

This task verifies that the issue database and the revision history are in-sync, by checking the revision numbers stored in the different tables of the database.

## Enabling Auto Repair

If you have problems running HelpDesk Admin, try using the Enable Auto Repair option (Tools menu).

Enable Auto Repair tries to repair HelpDesk Admin by fixing broken references, linking tables, and recreating objects.

To turn on auto-repair, click Enable Auto Repair in the Tools menu. Then exit HelpDesk Admin and log back on. While auto-repair is turned on, HelpDesk Admin runs in “repair mode”, which may be slower than normal mode.


To turn off auto-repair, click Enable Auto Repair again.

## Entering License Keys

When you receive a new license key, or when you want to enable the SQL Server functionality of PC-Duo Enterprise HelpDesk SQL Enabled, you use HelpDesk Admin to enter your license key.

PC-Duo Enterprise HelpDesk SQL Enabled requires both the Access Enabled and the SQL Enabled license keys. The Access Enabled license key is the base license that specifies the number of concurrent-use licenses. The SQL Enabled license key enables SQL Server support.

### To enter your license key:

- 1 Log on to HelpDesk Admin.
- 2 On the Tools menu, click Licenses.
- 3 In the Product list, click a product.
  - Access Enabled to enter a PC-Duo Enterprise HelpDesk Access Enabled license key.
  - SQL Enabled to enter a PC-Duo Enterprise HelpDesk SQL Enabled license key.
- 4 Click , enter your license key, and click Apply.

**Number of Licenses** Shows how many users can run Enterprise HelpDesk concurrently. The Access Enabled license key determines the number of concurrent users (to see the number of concurrent users, click Access Enabled in the Product list).

**License Type** Evaluation licenses are temporary licenses that have an expiration date. Concurrent licenses are permanent licenses that allow a specified number of users to use Enterprise HelpDesk simultaneously.

**Expiration Date** Shows the date at which evaluation licenses expire and Enterprise HelpDesk stops working.

## Releasing Databases

Some Enterprise HelpDesk administrative tasks start a Shutdown Process. Examples of such tasks include relocating databases, creating projects, applying changes in the Field Editor, generating Web views, running integrity tasks, and repairing and compacting databases.

The Shutdown Process logs off users and releases databases. During the Shutdown Process, you may see a “Still releasing databases” message.

When you get the “Still releasing databases” message, you can:

- Click Cancel to stop trying to release the databases, and start logging off users. Do this only if you are sure that no one is using the databases.
- Try to manually release the databases and then click OK. To release the databases:
  - Unload the virtual directories used by Enterprise HelpDesk.
  - Stop the Mq Issue Agent service.
  - Exit all Enterprise HelpDesk programs.
  - Exit any programs (such as Microsoft Access or SQL Server Enterprise Manager) that may be accessing the databases.

Note that if you set the option Tools > Options > Always verify locked databases to No, Enterprise HelpDesk will not try to release databases during the Shutdown Process. In general, setting Always

verify locked databases to No is not recommended, unless you know there is a process that regularly accesses the databases but does not affect Enterprise HelpDesk.

## Backing Up

### About Backing Up

You should regularly back up your Enterprise HelpDesk databases. Besides backing up all the issue data entered into the system, you should also (though perhaps less frequently) back up the files and databases that define your projects and Web views.

#### Backing Up PC-Duo Enterprise HelpDesk

**Access Enabled** By default, PC-Duo Enterprise HelpDesk Access Enabled databases use the Jet/Access database engine, and are located in the HelpDeskServer folder on Web server. To back up the Jet/Access databases, you just have to back up the databases files.

#### Backing Up PC-Duo Enterprise HelpDesk SQL

**Enabled** In PC-Duo Enterprise HelpDesk SQL Enabled, most Access databases can be migrated to SQL Server. After migration, the databases are located in an admin-specified folder on a SQL Server computer, which may or may not be the same computer as the Web server

To back up SQL Server databases, you can use the SQL Server backup functionality to do incremental or complete backups of the databases.

**Locating databases** By default, all databases are stored in the HelpDeskServer folder on your Web server. However, the databases can be

relocated to different folders on different computers. For example, the databases may be relocated to a separate SQL Server computer.

To locate the databases, log on to HelpDesk Web Admin and go to the Relocation tab.

**Attachments** By default, attachments are stored on the Web server. For example, the files attached to issue #3 in the HelpDesk project are stored in the folder

HelpDeskServer\HelpDesk\Data\Attachments\3

Attachments may be relocated to a separate file server. To check the location of the attachments, log on to HelpDesk Web Admin, go to the Relocation tab, and click Relocate Attachments.

**Web views** By default, Web views are stored on the Web server in the HelpDeskServer folder:

HelpDeskServer\CensusWeb\Views\CensusWebVD\

To check the location of your Web views, log on to the Web View Editor and in the shortcut bar click URL.

## WHAT TO BACK UP

### Databases

Databases that use the Jet/Access database engine are located in the HelpDeskServer folder on the Web server. Databases that are migrated to SQL Server may be located in a different folder or on a

different SQL Server computer. Use HelpDesk Web Admin (Relocation tab) to check the location of your databases.

	Jet/Access	SQL Server
<b>Issue database</b>	<project>01.dat	<project>01_DAT
<b>Global databases</b>	users.mdb licenses.mdb censusweb.mdb	USERS_MDB LICENSES_MDB CENSUSWEB_MDB
<b>Project definitions</b>	<project>01.def	<project>01_DEF
<b>Security database</b>	CenSys.mdw	—
<b>Temp database</b>	<project>03.usr	—

### Files

In addition to the databases, there are a number of files you should backup. In particular, you should back up the attachments (the files attached to issues). By default, attachments are stored on the

Web server, but they can be moved to a separate file server. Use HelpDesk Web Admin (Relocation tab) to check the location of the attachments.

<b>Attachments</b>	By default, the attachments for a project are stored in HelpDeskServer\<project>\Data\Attachments This location can be changed.
<b>Project versioning</b>	HelpDeskServer\<project>.cen
<b>System files</b>	HelpDeskServer\CenSession.xml HelpDeskServer\CenInfoSession.xml
<b>Web view files</b>	Customized Web view files are located in the folder HelpDeskServer\CensusWeb\CUSTOMIZEDFILES\ Generated Web view files are located in the folder HelpDeskServer\CensusWeb\Views\CensusWebVD\
<b>Project folder</b>	The project folder is located in HelpDeskServer\<project>

## Backing Up Issues

To back up the issue data stored in a project, you need to back up:

- The issue database, which stores all the issue information entered into the Enterprise HelpDesk system.
- The files attached to issues. These files are stored outside of the issue database, in the file system.

**What to backup** All issue information (except for attached files) is stored in the issue database.

Database engine	Database
Jet/MSAccess	<project>01.dat
SQL Server	<project>01_DAT

By default, attachments are stored in the project folder (for example, C:\Program Files\PC-Duo Enterprise\HelpDeskServer\HelpDesk\Data\Attachments). Note that the attachments may be stored in a different folder or on a different computer.

---

*To check the location of the databases, log on to HelpDesk Web Admin and click the Relocation tab.*

*To check the location of the attachments, log on to HelpDesk Web Admin, click the Relocation tab, and click Relocate Attachments.*

---



---

*You can use HelpDesk Admin to verify the location of the issue database. In the Project list, click the project to display the Project Properties. The Project Location specifies the location of the issue database.*

---

## Backing Up Projects

Projects include the definitions of fields, queries, sorts, layouts, reports, and notifications.

**What to backup.** Project definitions are stored in the definitions database.

Database engine	Database
Jet/MSAccess	<project>02.def file
SQL Server	<project>02_DEF database

In addition to the definitions database, there are several related files you should also back up.

Project File	Description
<project>.cen	Used for project initialization and versioning
<project>03.usr	Access database used by HelpDesk Admin

Note that Enterprise HelpDesk automatically backs up the tblDtsFields table in the definitions database. This table contains the definitions of the fields in the project. The backup copies of the table are stored in the definitions database.

## Backing Up the Users Database

The users database contains all user and contact information, and is shared by all projects.

**What to backup** If at least one project uses SQL Server, the user data is stored in a SQL Server database. Otherwise, the user data is stored in a Microsoft Access .mdb file. The users database is located in the HelpDeskServer folder (for example, C:\Program Files\PC-Duo Enterprise\HelpDeskServer).

Database engine	Database
Jet/MSAccess	users.mdb
SQL Server	USERS_MDB

## Backing Up System Files

We recommend you do a general backup of the files in the HelpDeskServer folder.

**What files to backup** You should backup these files:

- Censys.mdw (security database that contains users, groups, and passwords).
- The license database.

Database engine	Database
Jet/MSAccess	Licenses.mdb
SQL Server	LICENSES_MDB

- CenSession.xml
- CenInfoSession.xml

Enterprise HelpDesk automatically creates backup copies (in the HelpDeskServer folder) of CenSys.mdw and CenSession.xml when the files change. A mirror of CenSys.mdw is also available (the mirror file is named CenSys\_mir.mdw).

## Backing Up Web Views

**What to backup** You should backup these databases, files, and folders:

- The database of Web view definitions and settings.

Database engine	Database
Jet/MSAccess	censusweb.mdb
SQL Server	CENSUSWEB_MDB

- The CUSTOMIZEDFILES folder. This folder contains all the customized Web view files (for example, custom reports).
- The generated Web view files. Each Web view has its own folder. For example:

```
C:\Program Files\PC-Duo Enterprise
\HelpDeskServer
\CensusWeb\Views\CensusWebVD
\HelpDesk_HelpDesk
```

- The project folders. Each project has its own folder. For example:

```
C:\Program Files\PC-Duo Enterprise
\HelpDeskServer\HelpDesk
```

The project folder stores attachments, the reports used to format notifications, the macro70.bas file, and the queue of notification messages.

Note that the attachments may be stored on a different computer. To check the location of the attachments, log on to HelpDesk Web Admin, click the Relocation tab, and click Relocate Attachments.

## Automatic Backups

Enterprise HelpDesk automatically backs up:

- The tblDtsFields table in the project definitions database. This table contains the definitions of the fields in the project.
- CenSession.xml

- CenSys.mdw

You can disable these automatic backups by setting the Enable Backups option to No (in the Tools menu, click Options).

## Performing Hot Backups

Hot backups are backups performed while the Enterprise HelpDesk system is in use. Hot backups are ideal for 24-hour-a-day operations.

To perform hot backups, the Enterprise HelpDesk administrator has to use database-specific tools:

- To back up data in a SQL Server database, use the built-in SQL Server backup utility.
- To back up Jet/MSAccess databases, use a third-party tool like FMS Total Visual Agent.

## Restoring Backups

After restoring backups of the issue database and the project definitions database, use the Integrity Editor to validate the integrity of fields, relationships, and the issue database.

## Troubleshooting Problems with Attachment Fields

### Uploading Large Attachments

On Windows Server 2003 systems, the default size limit for uploaded files is 4096 KB. If a user tries to upload an attachment that exceeds this limit, the user may get "The page cannot be displayed" or "Cannot find server or DNS Error" error messages.



### To increase the upload limit for attachments:

- 1 Using your favorite text editor, open the file
 

```
C:\Program Files\Common Files
  \MetaQuest\Scripts\IIS\MqWVDConfig.vbs
```

 The above assumes that C: is your system drive.
- 2 Set the constant `UPLOAD_FILE_MAX_SIZE` to the maximum size (in bytes) for uploaded attachments.
 

For example:

```
UPLOAD_FILE_MAX_SIZE = 1048576 ' 1 MB
UPLOAD_FILE_MAX_SIZE = 5242880 ' 5 MB
UPLOAD_FILE_MAX_SIZE = 10485760 ' 10 MB
```
- 3 Re-create the virtual directories where you want the new size limit to apply. Note that re-creating virtual directories will log off users.
  - a. Start the Web View Editor.
  - b. In the shortcut bar, click  URL.
  - c. Click  to open the Web View Wizard.
  - d. In the Web View Wizard, click Next until you get to the last page of the wizard, and then click Finish. This will re-create the virtual directories associated with the existing URL.
  - e. Click Yes each time the Wizard asks if you want to re-create a virtual directory and reset its properties.
 

A URL (such as //Server/helpdesk) has several associated virtual directories (for example, helpdesk, helpdesk00, helpdesk01, and helpdesk02).

### Fixing 404 Errors

When Enterprise HelpDesk is installed on a Windows Server 2003 system, users may get 404 errors (File not found) when trying to open attachments. This is because in Windows Server

2003, IIS 6.0 only accepts requests for static files with extensions that it recognizes. If an attached file has an unknown file extension, IIS denies the request and returns the 404 error page.

The known extensions that IIS will serve are controlled by the MIME Types settings.

**To define a MIME type for a specific extension:**

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

**Notes**

- You may need to restart the World Wide Web Publishing Service before your changes take effect.
- For more information on MIME types, see MIME Types in the IIS 6.0 Manager Help.
- The URLScan tool can also be configured to block processing of certain file name extensions. Verify these settings.



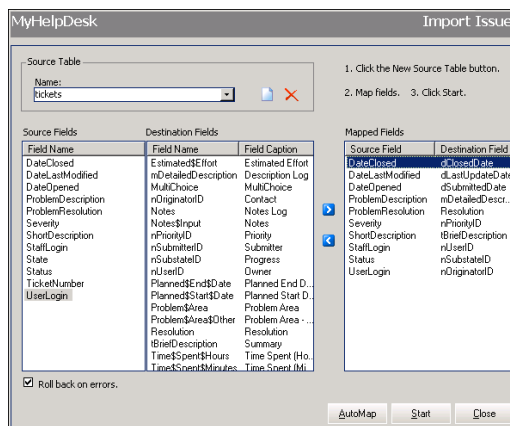
# Chapter 14: Importing Issues

## About Importing Issues

Enterprise HelpDesk stores most of its issue data in the table tblIDs of the issue database (<project>01.dat for Microsoft Access, <project>01\_DAT for SQL Server). To import issue data into this table, you use the Import Issues command (File menu) in HelpDesk Admin.

Projects created with previous versions of Enterprise HelpDesk may also store information in the table tblFixInformation. In previous versions of Enterprise HelpDesk, fields added to the Resolution tab were stored in tblFixInformation.

### Import Issues



**Destination fields** Destination fields are the fields in the Enterprise HelpDesk database table tblIDs.

**Mapped fields** You map source fields to destination fields. When you click Start, the mapping determines how the source fields are copied to the destination fields.

### To import issues:

- 1 Prepare your issue data and the Enterprise HelpDesk database.

- 2 Import issue data into a source table.

A source table is an intermediate table that holds the issue data you want to import into tblIDs and tblFixInformation.

- 3 Map the fields in the source table to the fields in tblIDs and tblFixInformation.

- 4 Click Start to create new records in tblIDs and tblFixInformation and to copy the imported issues from the source table into these new records.

## What Can You Import?

Enterprise HelpDesk uses Microsoft Access functionality to import data, so you can import from any of the formats and applications supported by Microsoft Access:

- Microsoft Access (databases other than the open database)
- Delimited text (values separated by commas, tabs, or other characters)
- Fixed-width text (values arranged so that each field has a defined width)

**Source table** You import issues from a source table, which could be a table in a Microsoft Access database, a table in a SQL Server database, a delimited text file, or a number of other formats.

**Source fields** Source fields are the fields imported from the source table

- Microsoft Excel (versions 2.x, 3.0, 4.0, and 5.0)
- Lotus 1-2-3 or 1-2-3/W (.WKS, .WK1, and .WK3 files)
- Paradox (version 3.x or 4.x .DB files)
- FoxPro (version 2.0 and 2.5 .DBF files)
- dBASE III and dBASE IV (.DBF files)
- Btrieve (with the data definition files FILE.DDF and FIELD.DDF)
- SQL databases, using ODBC drivers
- HTML

With Enterprise HelpDesk, you can import data into any of the fields in the tblIDs table. This table contains most of the issue data.

You cannot use Enterprise HelpDesk to import data into the following tables:

- tblUser, which contains user information such as the user's logon name, full name, e-mail address, and telephone number.
- tblAttachment, which contains the names of the files attached to different issues.
- Any of the tables that contain the possible values for choice lists.

## How New Records are Created

When you click the Start button, Enterprise HelpDesk creates new records in tblIDs and tblFixInformation, and copies the data from the source table into the new records.

In general, if there is no mapping for a field or the imported data is invalid, Enterprise HelpDesk leaves the field blank. However, there are

exceptions. The following summarizes how Enterprise HelpDesk handles fields when it creates new issues.

**Issue Number** You cannot import issue numbers. Enterprise HelpDesk automatically assigns issue numbers to issues.

**Owner (nUserID)** You can import the full name of a user or the ID of the user in tblUsr.

If there is no mapping or the user name is not found in tblUsr, the field is left blank.

**Submitter (nSubmitterID)** You can import the full name of a user or the ID of the user in tblUsr.

If there is no mapping or the user name is not found in tblUsr, the name of the current user is stored in the field.

**Contact (nOriginatorID)** You can import the full name of a user or the ID of the user in tblUsr.

If there is no mapping or the user name is not found in tblUsr, the name of the current user is stored in the field.

**Progress** You can import the ID of a choice value or the choice text. If there is no mapping for a choice list field, Enterprise HelpDesk sets the Progress field to the choice with ID = 0 (by default, New).

**State** You cannot import State values. Enterprise HelpDesk sets the State field based on the Progress field.

**Time and Date fields** You can import time and date values. If you do not map a date or time field, Enterprise HelpDesk sets the field to the current date or time. See the tblSubstate choice table for the mapping of Progress values to State values.

The Closed Date field value is imported only if the State is Closed.

Imported date values should use the format yyyy/mm/dd.

Imported time values should use the time format specified in the Regional Options of Windows Control Panel.

**Choice lists** You can import either the choice ID (the nID of the choice in the Enterprise HelpDesk choice table) or the choice text.

## Before You Import

**Add fields for imported data** Compare the issue data you want to import against the fields in tblIDs and tblFixInformation. If you want to import additional issue data for which there are no corresponding fields in these two tables, use the Field Editor to add the required fields.

**Create a Number field to hold imported IDs or record numbers** If you want to import the IDs or record numbers of your data records, create a numeric field in Enterprise HelpDesk. You can then map your record IDs to this field when you import your data.

**Create users and contacts** Add users and contacts in Enterprise HelpDesk before importing data that contains user names.

If you want to import user names into the Owner, Submitter, and Contact fields, the names you import must match the full names assigned to the users in Enterprise HelpDesk. *You must use the users' full names, not their logon names.*

For example, if you import a set of issues owned by "Erick Yanez" and there is no such user defined in Enterprise HelpDesk, the Owner field is left blank.

Note that you can import the numeric ID for a user in the tblUser table (users database).

**Customize Enterprise HelpDesk choice lists to match the imported data** In Enterprise HelpDesk, customize choice lists to match the values you want to import. You could also change the values in the imported data to match the Enterprise HelpDesk choice lists. You could do this in the original issue data. Or you could use Microsoft Access to modify the source table created when you imported the original issue data.

**If you are importing text files** If your issue data is in a text file, the first data record should contain the field names. Otherwise, Enterprise HelpDesk assigns the fields the names 1, 2, 3, and so on. This makes it harder to map the fields.

Also, the first data record should have no blank fields. Microsoft Access uses the first data record to determine the data types of the fields. For example, if a date field is blank, Microsoft Access will import it as a text value, and you won't be able to get this value into a Enterprise HelpDesk date field.

**Back Up Projects** Make a backup copy of the issue database before you import any data. If you make a mistake mapping the fields, having a backup copy allows you to change the mapping and try again.

**Log off users** Make sure no one is using the project database while you import issues. Ask all users to exit Enterprise HelpDesk before you start to import issues.

## Importing Issues into a Source Table

You don't import issues directly into the Enterprise HelpDesk tables. Instead, you import the issues into a source table. Enterprise HelpDesk copies the imported data into its tables after you define a mapping between the fields in the source table and the Enterprise HelpDesk fields.

### To import issues from a file:

- 1 On the File menu, click Import Issues.
- 2 Click New Source Table to import data from a text file, spreadsheet, or database table into a Microsoft Access table (the source table).
- 3 In the Files of Type list, click the file format you want to import.

To import issues from another Enterprise HelpDesk database (or from any other Microsoft Access database), click Microsoft Access.

- 4 Click the file you want to import, and then click Import.

To import issues from an Enterprise HelpDesk Access database, select the *project01.dat* file.

- 5 In the Import Objects dialog box, select the import options you want.

If you are importing from a text file or spreadsheet, select the First Row Contains Field Names check box.

If you are importing from a Microsoft Access database, select the tables you want to import.

- 6 Click OK to import the data.

Enterprise HelpDesk creates a source table named after the file you selected.

If you want to import another file, repeat steps 4 and 5. When you've finished importing, click Close.

### To import issues from a SQL database:

- 1 On the File menu, click Import Issues.
- 2 Click New Source Table.
- 3 In the Files of type list, click ODBC.
- 4 In the Select Data Source dialog box, click the Machine Data Source tab.
- 5 Find the SQL Server data source and click OK.
- 6 In the SQL Server Login dialog box, type your SQL Server login ID and password.
- 7 Click Options, and in the Database list, click a database.

To import issues from an SQL Server database, click the issue database.

- 8 Click OK.
- 9 In the Import Objects dialog box, select that tables you want to import.

For SQL Server databases, the table to import is *dbo.tblIDs*.

- 10 Click OK.

## Combining Multiple Source Tables

When you import issues into Enterprise HelpDesk, you work with one source table at a time. If your issue data is stored in two or more tables, you'll need to combine those tables into a single source table before you can map the source fields to the destination fields.

First, use the Import Issues dialog box to import each file into a separate source table. Then use Microsoft Access to define a query that joins these source tables into a single table.

## Importing Issues from Enterprise HelpDesk Projects

In Enterprise HelpDesk projects, issue data may be split across two tables (tblDts and tblFixInformation) in the issue database. This happened in previous versions of PC-Duo Enterprise when you added new fields to the Resolution tab: the new fields were stored in tblFixInformation.

You need to merge the two tables before you can map the fields.

### To import issues from Microsoft Access .dat files:

- 1 Add tblDts and tblFixInformation to the list of source tables.
- 2 In the Source Table list, click qryMergeCensusTables.

This query adds the combined fields from tblDts and tblFixInformation to the Source Fields list.

- 3 Click Auto Map, and then click Start.

### To import issues from a SQL Server issue database:

- 1 Add dbo.tblDts and dbo.tblFixInformation to the list of source tables.

The source tables are named dbo\_tblDts and dbo\_tblFixInformation.

- 2 Create a new query to merge dbo\_tblDts and dbo\_tblFixInformation. See “Creating Queries to Merge Source Tables” on page 123.
- 3 In the Source Table list, click the new query.  
This query adds the combined fields from dbo\_tblDts and dbo\_tblFixInformation to the Source Fields list.
- 4 Click Auto Map, and then click Start.

## Creating Queries to Merge Source Tables

The qryMergeCensusTables query merges two source tables named tblDts and tblFixInformation. If the source tables you want to merge have different names, you need to create a new query based on qryMergeCensusTables.

### To create a new query for merging source tables:

- 1 Exit HelpDesk Admin and open Program Files\HelpDeskTools\Admin.mdb in Microsoft Access.
- 2 In the Objects list, click Queries. Click qryMergeCensusTables and click Design.
- 3 In the View menu, click SQL View.
- 4 In the SQL statements, replace all occurrences of tblDts and tblFixInformation with the names of the source tables you want to merge.
- 5 In the File menu, click Save As and type a name for the new query.
- 6 Close Admin.mdb.
- 7 Open Program Files\HelpDeskTools\Admin.mde.

- 8 Open the table tblImport and add a new record. In the tName column, type the name of the query. In the nID column, type a unique, numeric ID for the query (use the next available nID).
- 9 Close Admin.mde.

The new query will now be available in the Source Table list of the Import Issues dialog box.

## Mapping Fields

After you create a source table, you need to define a mapping between the fields in the source table and the fields in tblDts and tblFixInformation. Enterprise HelpDesk uses this mapping to copy the imported data into the new records it creates in tblDts and tblFixInformation.

### To map a source field to a destination field:

- 1 Click a field in the Source Fields list.
- 2 Click a field in the Destination Fields list. The data in the source field is copied to this field when you click the Start button.
- 3 Click the right arrow button to map the fields.

### To remove a mapping:

- 1 In the Mapped Fields list, click a mapping.
- 2 Click the left arrow button.

### Mapped Fields

Source Field	Destination Field
DateClosed	dClosedDate
DateLastModified	dLastUpdateDate
DateOpened	dSubmittedDate
ProblemDescription	mDetailedDescr...
ProblemResolution	Resolution
Severity	nPriorityID
ShortDescription	tBriefDescription
StaffLogin	nUserID
Status	nSubstateID
UserLogin	nOriginatorID

**Mapping Text Fields** Text fields, such as tBriefDescription, have a limit of 255 characters. Memo fields store large numbers of characters (in Access, up to 64000 characters; in SQL Server, up to maximum length of  $2^{31}-1$  (2,147,483,647) characters).

**Mapping Memo Fields** Import data into the mDetailedDescription and Notes\$Log fields, not into the Description\$Input and Notes\$Input fields.

**Importing Choice Lists** Import either the choice text or the numeric ID of the choice in the choice table.

### Importing Users, Submitters, and Contacts

Import either the full name of a user, or the numeric ID for that user in the tblUser table (users database).

# Chapter 15: Integrating Inventory

## About Inventory

Help desk integration with PC-Duo Enterprise Inventory makes a wealth of information about a user's PC immediately available to help desk staff. All a help desk analyst has to do is type the computer name, and all the software and hardware information stored in the PC-Duo Enterprise site database becomes available.

---

*Regularly publish the hardware and software inventory data in the offline area to the PC-Duo Enterprise site database. This ensures that help desk staff always have the latest inventory data.*

---

**Software and Hardware Details** In a Web view, the Inventory tab displays a summary of the inventory information for the user's computer, and includes a set of detailed reports.

Only the computer name is stored in the Enterprise HelpDesk database. Web views use the computer name to dynamically get the inventory information from the PC-Duo Enterprise site database.

**INVENTORY TAB** The Inventory tab provides a wide range of software and hardware information for a user's computer. The tab displays a summary of the user's system, and provides a set of detailed reports that provide system configuration details, software and hardware change histories, environment variable settings, and much more.

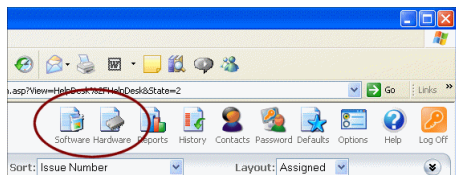
The screenshot displays the 'Inventory' tab in a web application. The interface is divided into several sections:

- User Information:**
  - User Name: Administrator
  - Owner Name: Andrew Patti
  - Owner Department: Technical Support
  - Owner Telephone: 1478
  - Owner Location: Downstairs
  - Domain Name: ENGINEERING
- Client Information:**
  - Client Name:  (with a search icon)
  - IP Address:  (with a search icon)
- System Configuration:**
  - PC Make: Dell Computer Corporation
  - PC Model: Dimension 4500S
  - OS Name: Windows XP Professional
  - OS Version: 5.1
  - OS Build: build 2600, Service Pack 1
  - Network Card: Intel(R) PRO/100 S Management Adapter - 2000
  - CPU: Pentium 4
  - CPU Speed (MHz): 2000
  - Memory Size (MB): 254
  - Display Driver: Intel(R) 82845G/GL/GE/PE/GV Graphics Controller
  - System BIOS Version: DELL - 6
  - System BIOS Date: 07/25/02
- Reports:** A list of reports with expandable arrows:
  - Hardware Change History
  - Software Change History
  - Software Inventory Summary
  - System Summary
  - User Information
  - BUS Devices
  - Drives
  - Environment Variables
  - Fixed Drives

At the bottom, there is an 'Issue:' field with the value '11', a status bar that says 'Ready. Click New to create a new issue.', and a toolbar with buttons for 'New', 'Save', 'Copy', 'Cancel', and 'Print'. The bottom-left corner shows 'All Assigned Issues' and the bottom-right corner shows 'Local intranet'.

**Site-Wide Inventory Reports** In addition to the Inventory tab, which provides computer-specific information, Web views include a set of general software and hardware inventory reports. These site-wide reports provide information for all computers.


### Site-Wide Inventory Reports



**Remote Control** By default, Enterprise HelpDesk adds Remote Control buttons to the fields (such as Computer Name) used to query the PC-Duo Enterprise site database for Inventory information.

### 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.

## How to Integrate Inventory

### To integrate an Enterprise HelpDesk project with PC-Duo Enterprise Inventory:

- 1 Link the project to a PC-Duo Enterprise site database.

- 2 If necessary, modify the query that retrieves software and hardware inventory information from the site database. By default, Enterprise HelpDesk uses the Computer Name field to select inventory information from the site database.
- 3 Add the Inventory tab to Web views.

## Linking Projects and Site Databases

When you link a project to a site database, inventory information from that database will be available in all Web views of the project that include the Inventory tab. You can link each Enterprise HelpDesk project to a different site database, or multiple projects to the same site database. You cannot link a project to more than one site database.

By default, a new project is linked to the same site database as its base project.

### To link a project to a PC-Duo Enterprise site database:

- 1 Log on to HelpDesk Web Admin.
- 2 Click the Inventory tab.
- 3 In the Project list, click the project whose Web views will display inventory information.
- 4 If the project is already linked to a site database, click Remove.
- 5 Click Link to open the Link Site Wizard.
- 6 Click Next to search the local computer for PC-Duo Enterprise site databases.



Enterprise HelpDesk needs to download and install an ActiveX control, so you may see a Security Warning dialog. If you do, allow Enterprise HelpDesk to install the ActiveX control (it is used to detect site databases on your computer).

When the wizard finishes searching the computer, it displays a list of detected sites.

- 7 Under Detected Sites, click the site you want to link to the project.

If the site you want to link to is not listed under Detected Sites, you can manually link to the site by clicking Other Sites.

- 8 Click Next.
- 9 Click Finish.

## Editing Links

After a project is linked to a site database, you can edit the link.

- If the database location changes, you can update the location used by Enterprise HelpDesk.
- If the database logon information changes, you can change the name and password used by Enterprise HelpDesk to connect to the database.
- You can change the name and description of the site. This information is displayed on the Inventory tab when you select a project.

Each project has a separate copy of the link information. For example, if the location of a site database changes, you need to edit the link for each project linked to that site database.

**To edit the link between a project and a site database:**

- 1 In the Project list, click a project.
- 2 Click Edit.
- 3 Edit the link information.
- 4 Click Apply, or click Cancel to discard your changes.

## Removing Links

Removing a link removes the information used by the project to connect to the site database. It does not remove any data from the issue database (because none of the inventory information is stored in the issue database).

If a project is no longer linked to a site database, you should remove the Inventory tab from the Web views of the project. Otherwise users will get an error if they try to view one of the Inventory reports.

**To remove the link between a project and a site database:**

- 1 In the Project list, click a project.
- 2 Click Remove.

## Defining the Query

By default, Enterprise HelpDesk uses the Computer Name field to select inventory information from the site database. The default query looks like this:

Client Name = Computer Name

Client Name is a field in the site database that stores the unique network name of a computer. Computer Name is a text field in the Enterprise HelpDesk project.

To use a different site database field, such as User Name (the user name for a Windows user account), you have to:

- 1 Add a new text field to the Enterprise HelpDesk project (such as Windows User Name) so help desk staff can enter the value that will be used in the query.
- 2 Change the query. For example:  
User Name = Windows User Name


**Inventory Fields** The list of Inventory fields that you can use in a query come from the NODES table in the site database.

The Inventory field should be a field that has unique values. Otherwise Enterprise HelpDesk may retrieve inventory data for more than one computer. In this case, Enterprise HelpDesk displays the inventory data for the first computer found, which may or may not be the right computer.

**HelpDesk Fields** The list of HelpDesk fields includes all text and number fields that are not on the Contact tab.

## Adding the Inventory Tab to Web Views

**To add the Inventory tab:**

- 1 Log on to the Web View Editor, and in the shortcut bar, click  Fields.
- 2 In the Tab list, click Overview. Add the Computer Name field to the Export To View list.
- 3 In the Tab list, click Inventory. Add all the Inventory fields to the Export To View list.

You have to export at least the Client Name field. To make sure all the Inventory reports work, export all the Inventory fields.

---

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

---

## Hiding the Software and Hardware Report Buttons

Adding the Inventory tab also adds the Software and Hardware reports to the Web view. You can use group permissions to control access to these reports.

To hide the buttons, disable these features:

- Report Viewer - Hardware Inventory
- Report Viewer - Software Inventory

## Manually Linking to Other Sites

If Enterprise HelpDesk does not automatically detect the site you want to link to, you can manually create the link. You will need to know the database type, name, and location, and whether you need a user account and password to log on to the site database. See “Gathering Information about the Site Database” on page 129.

### To manually link a project to a site database:

- 1 Log on to HelpDesk Web Admin.
- 2 Click the Inventory tab.
- 3 In the Project list, click a project.
- 4 Click Link to open the Link Site Wizard, and then click Next.
- 5 Click Other Sites and then click Next.
- 6 In the Site Name box, type a name for the site. This name is used only by Enterprise HelpDesk, and does not change the name of the site in PC-Duo Enterprise.
- 7 In the Description box, type a short description of the site.
- 8 In the Type list, click the type of database you want to link to.
- 9 Specify the database location and name.

If you are connecting to a Microsoft Access database:

- Click Browse and locate the database file (an .mdb file).

Look in the network, not the local computer, to locate the database. By default, site databases are located in the PC-Duo Enterprise Data\Databases folder (for example, C:\PC-Duo Enterprise Data\Databases).

If you are connecting to a SQL Server database:

- a. In the Name box, type the name of the SQL Server database.
- b. In the SQL Server box, type the name of the SQL Server. The name of the SQL Server is typically the computer name of the server.

**10** If you need to log on to the site database, type the user name in the User Name box, and the password in the Password and Confirm Password boxes.

**11** Click Test to verify that Enterprise HelpDesk can connect to the database.

## Gathering Information about the Site Database

Before you can integrate PC-Duo Enterprise Inventory with Enterprise HelpDesk, you need to know a few things about the PC-Duo Enterprise site database:

- What type of database is it? (Access or SQL Server?)
- If it is a Microsoft Access database, what are the name and location of the Microsoft Access .mdb file?

- If it is a SQL Server database, what are the names of 1) the SQL Server and 2) the SQL Server database?

Typically, the name of the SQL Server is the name of the computer on which SQL Server is installed.

- Do you need a user account and password to log on to the site database?

If you have access to a PC-Duo Enterprise console, you can find this information yourself. If not, ask the person responsible for administering PC-Duo Enterprise.

**To use the PC-Duo Enterprise console to check the database type, name, and location:**

- 1 In the console tree (the left pane), expand the site, and then click Site Management.
- 2 In the Details area (right 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 use the PC-Duo Enterprise console to check the logon information:**

- 1 In the console tree (the left pane), click Enterprise Management.
- 2 In the Details area (the right pane), click Logon Information.


# Chapter 16: Integrating Remote Control

## About Remote Control in Enterprise HelpDesk

From inside a Web view, a help desk analyst can take control of a user's computer to investigate problems and provide support. To start a remote control session, all the help desk analyst has to do is type a computer name in a field and click the Remote Control button beside the field.

### 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 Web view must be running in Internet Explorer.
 

The Remote Control button loads a page that contains an ActiveX control. This ActiveX control allows the help desk analyst 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.

## Setting Up Remote Control


### To add remote control to a Web view:

- 1 Add a text field where users can enter the computer name or IP address.
 

This field is used to identify the PC-Duo Client on the user's computer. The HelpDesk project includes a Computer Name field for this purpose.
- 2 Add the Remote Control button to the field.
- 3 Generate the Web view.

## Adding Remote Control Buttons

### To add the Remote Control button to a field:

- 1 Log on to the Web View Editor.
- 2 In the shortcut bar, click  Remote Control.
- 3 In the Available Fields list, expand the tab that contains the field.
 

If you do not see the field, select the Show All check box to show all available fields.
- 4 Select the Can Connect check box for the field.
- 5 Generate the Web view.

When you select the Can Connect check box for a field, the Web View Editor automatically sets the URL and URL Button CSS attributes of the field.

The URL field attribute is set 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:

```
HelpDeskServer\CensusWeb\Views
  \CensusWebVD\RC\rcviewer.asp
```

The `RCviewer.asp` file is installed with Enterprise HelpDesk. 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.

The URL Button CSS field attribute specifies the CSS class used for the button.

## Configuring PC-Duo ActiveX Remote Control

To configure PC-Duo ActiveX Remote Control, you edit the file `RCviewer.asp`, which is located in the folder

```
HelpDeskServer\CensusWeb\Views
  \CensusWebVD\RC\RCViewer.asp
```

`RCViewer.asp` contains a number of variables that allow you to set options and defaults.

After you customize `RCViewer.asp`, copy the file to

```
HelpDeskServer\CensusWeb\CUSTOMIZEDFILES
  \#Project#HelpDesk\RC
```

This ensures that the next time you generate a Web view, the customized copy of `RCViewer.asp` is copied to the output folder.

**DEFAULT\_SECURITY\_KEY** Specifies the security key used by PC-Duo ActiveX Remote Control when it connects to clients.

The ActiveX control does not support licensing, so you cannot type an asterisk “\*” to use the license key serial number as the security key.

**DEFAULT\_COMPRESS** Enables (1) and disables (0) compression. By default, compression is disabled.

**DEFAULT\_ENCRYPT** Enables (1) and disables (0) encryption. The encryption type is 56bit DES encryption. By default, encryption is disabled.

**DEFAULT\_SCALE\_TO\_FIT** Specifies whether the remote screen is scaled to fit in the browse window when the remote control session starts. Set to 0 to turn off scaling.

Users can turn on scaling after the remote control session starts (by selecting the Scale to Fit check box).

**DEFAULT\_SCROLL\_BARS** Specifies whether the view window has scroll bars when the remote control session starts. Set to 0 to turn off scroll bars.

Users can turn on scroll bars after the remote control session starts (by selecting the Scroll Bars check box).

**DEFAULT\_VIEW\_TYPE** Specifies the default viewing mode (Watch, Share, or Control). Users can change the viewing mode after the remote control session starts.

**DEFAULT\_INIT** Specifies the name displayed by the PC-Duo Client during a remote control session. Allows the remote users to identify who is controlling their computer. “\*” means use the computer name.

## Checking Client Security Key Settings

PC-Duo ActiveX Remote Control cannot connect to clients that use the licence key serial number as a security key.

**To check if a client is using the serial number as a security key:**

- 1 In the Client Configurator, edit the Master Profile.
- 2 On the Users tab, the Security Key box contains the security key.

If the Security Key box contains an asterisk (\*), then the client is using the serial number, and the PC-Duo ActiveX Remote Control will not be able to connect to the client.

## Removing Remote Control Buttons

**To remove the Remote Control button from a field:**

- 1 Log on to the Web View Editor.
- 2 In the shortcut bar, click  Remote Control.
- 3 In the Available Fields list, expand the tab that contains the field.
- 4 Clear the Can Connect check box for the field.
- 5 Generate the Web view.





# Chapter 17: Customizing Enterprise HelpDesk

## Power Customizations

This section covers a variety of ways to customize Enterprise HelpDesk, all of which are considered “power customizations”.

Power customizations involve using the Microsoft Access development environment (or the SQL Server Query Analyzer), Visual Basic, Javascript, and other advanced techniques to customize Enterprise HelpDesk.

## About the Databases

**Issue database** Stores the issues and their revision histories.

**Project definitions database** Stores all project-related definitions, including fields, queries, sorts, layouts, reports, and notifications.

**Users database** Stores user accounts, contacts, and the information entered on the Contact tab.

Database	Jet/Access	SQL Server
Issue	<project>01.dat	<project>01_DAT
Project definitions	<project>02.def	<project>02_DEF
Users	users.mdb	USERS_MDB

---

*See Appendix B, “Databases.”, for more information on the databases and tables referred to in this chapter.*

---

## Editing Databases

Some customizations require that you edit tables in the Enterprise HelpDesk databases.

### To edit a table in an Access database:

- 1 Start Microsoft Access and open the database.
- 2 Under Objects, click Tables.
- 3 Locate the table you want to edit, and double-click it.
- 4 Locate the row you want to modify and make your changes.
- 5 Click in another row, or close the table, to save your changes.

### To edit a table in a SQL Server database:

- 1 Start the SQL Query Analyzer.
- 2 In the Object Browser, locate the database and table you want to edit.
- 3 Right-click the table and click Open.
- 4 Locate the row you want to modify and make your changes.
- 5 Click in another row, or close the table, to save your changes.

## Creating an Attachments Field

### Create an attachments field:

- 1 Open the project definitions database.
- 2 Open the tblDtsFields table.
- 3 Copy the record for the Attachments field and paste it into a new record.
- 4 Change the nID, tTableName, tName, tCaption, tLabelCaption, and tBoundControlName fields.
- 5 If you want to put the new attachments field on a different tab, change the nDestinationTabID field.

tblDtsFields field	Description
nID	Unique ID for the field.
tTableName	Name of the attachments table in the issue database. The attachments table stores information about attached files.  Also, the name of a table in the users database (the table is named <tTableName>Temporary).
tName	Name of the field in the attachments table of the issue database. Stores the name of an attached file.
tCaption	Label used in choice lists.
tLabelCaption	Default label for the field in a Web view.
tBoundControlName	Internal name for the field.

### Create an attachments table

- 1 In the issue database, copy tblAttachments. Use the tTableName of the new attachments field as the name.
- 2 Change the name of the tAttachments field in the new table. Use the tName of the new attachments field as the new name.

### Create a temporary attachments table




In the users database, copy the tblAttachmentsTemporary table. Name the new table <tTableName>Temporary.

### Add a record to tblDtsTables

In tblDtsTables (project definitions database) copy the record for the attachments table. Change tTableName and tTableNameTemp to the names of the new attachments tables in the issue and users databases.

## Customizing URL Buttons

URL buttons are implemented as A elements with background images.

Each of the default URL buttons (URLButton , MailToButton , RemoteControl ) has four CSS classes, along with four associated :hover classes. The Web View Editor automatically determines which CSS class to use based on the field type and the field attribute settings. For example, the CSS classes used for URLButton are determined as follows:

When	These CSS classes are used
Column Span=1	URLButtonState1 URLButtonState1: hover

When	These CSS classes are used
Column Span=2 CSS Class = MemoFieldWidth	URLButtonSpanTwoState1 URLButtonSpanTwoState1: hover
Column Span=2 CSS Class = SpanTwoWidthOne	URLButtonTwoWidthOneState1 URLButtonSpanTwoWidthOneState1: hover
Field already has a button (for example, a date field).	URLButtonSecondButtonState1 URLButtonSecondButtonState1: hover

These CSS classes are defined in the CensusMain.css style sheet in CensusWeb\Views\CensusWebVD\Theme\css.

Each different pair of CSS classes positions the button differently, by changing the value of the CSS left property.

The :hover pseudo classes change the background image to give a rollover effect.

To define your own buttons, copy the URLButton classes, change the class names, and point the background-image property to your button images. For example:

```
.MyButtonState1
{
    background-image:
        url(../images/buttons/mybutton_off.gif);
    background-repeat:no-repeat;
    display:block;
    position:absolute;
    left:80%;
    width:24px;
    height:24px;
    top:0px;
}
```

For button rollovers, you'll need two versions of your button image. Your button images should have a one or two pixel margin (so there's some space between the field and the button).

Alternatively, you could adjust the left property.

To use these new classes, just use MyButton as the value of the URL Button CSS attribute.

## Customizing the Inventory Tab

You can easily customize the list of reports that appears on the Inventory tab. You can:

- Remove reports.
- Reorder the list.
- Change report names (captions).
- Add separators between reports.
- Change the title of the reports list (by default, the title is "Reports").

To customize the list of reports on the Inventory tab, edit the file tmplInventoryTab.rec, which is located in the folder

```
HelpDeskServer\CensusWeb\CUSTOMIZEDFILES
  \#Project#HelpDesk\#AllWebViews#\Misc
```

In tmplInventoryTab.rec, the reports list is stored in an array named arrReports. arrReports is an array of arrays, that is, each element in arrReports is itself an array. Each of these arrays contains information about a different report.

The following code fragment shows how a report is added to the list:

```
// start Reports list
arrReports = [

    // array of report information
    [ GetOpenReportOnClickFunction(...),
      "<caption>", "<tooltip>", "<html-markup>" ]

    ] // end of Reports list
```

**GetOpenReportOnClickFunction(...)** returns the onClick event handler, which opens the report when a user clicks it. Do not edit this function call.

**<caption>** is the report name displayed in the list.

**<tooltip>** is the text displayed when a user points to the button beside a report.

In `tmplInventoryTab.rec`, the caption and tooltip are specified by text that looks like this:

```
<Mq:ReportCaption>155.10</Mq:ReportCaption>
```

When you generate a Web view, this text is replaced with the name of the report.

**<html-markup>** is html markup that is inserted into the list after the report. For example, you can add separators by adding “`<hr />`”.

#### To reorder the list of reports:

- 1 In `tmplInventoryTab.rec`, change the order in which the reports are added into the `arrReports` array.
- 2 Some reports add a separator (“`<hr/>`”), so you may have to edit the report arrays to put the separators in the right places.
- 3 Generate the Web views that include the Inventory tab.

#### To remove reports:

- 1 In `tmplInventoryTab.rec`, comment out (or delete) the reports that you want to remove.
- 2 Generate the Web views that include the Inventory tab.

#### To change a report name:

- 1 In `tmplInventoryTab.rec`, replace the text that looks like this:

```
“<Mq:ReportCaption>155.10</Mq:ReportCaption>”
```

with the report name you want to see.

Remember, the tooltip is the second element in the array, and the caption is the third.

- 2 Generate the Web view.

#### To add a separator between two reports:

- 1 In `tmplInventoryTab.rec`, find the array for the first of the two reports.

- 2 Change the fourth element of the report array from “” to “`<hr/>`” (or to whatever HTML you want to use as a separator).
- 3 Generate the Web views that include the Inventory tab.

#### To change the title of the reports list:

- 1 In `tmplInventoryTab.rec`, find this `document.write` statement (near the end of the file):

```
document.write(
    m_objWebPart.GetHTML_ListContainer(
        "Reports",
        "../theme/images/images/ListImage.gif",
        arrReports
    )
);
```

- 2 Change the first argument to `GetHTML_ListContainer()` from “Reports” to the title you want to see.
- 3 Generate the Web views that include the Inventory tab.

## Customizing Reports with Crystal Reports

### Building Custom Reports

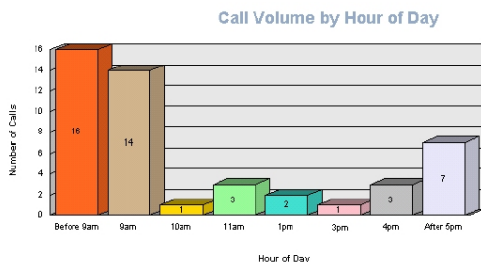
Using Crystal Reports, you can add features such as charts, formulas, field highlighting, and running totals to a listing report. You can also import graphics (such as company logos) and completely reformat a listing report.

---

To build custom reports, you need Crystal Reports v8.5 or v9.0. Crystal Reports must be purchased separately from Crystal Decisions or another supplier. You also need a Report Creation API license.

---

## A Customized Listing Report



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

## Step 1: Creating a Listing Report

A custom report is based on a listing report. The listing report defines the data (the issues and fields) that will be available in Crystal Reports when you customize the report.

### To create a new listing report:

- 1 In HelpDesk Admin, create a new listing report in the Report Editor with the desired query and sort.
- 2 Add all the fields you want to use in the customized report.

---

*Do not select the Custom check box.*

---

## Step 2: Create an .rpt File

Crystal Reports uses the .rpt file format to save reports. When you view a report in a Web view, HelpDesk Web creates an .rpt file for the report. The .rpt file is saved inside the view folder, for example, in:

```
C:\Program Files\PC-Duo Enterprise
  \HelpDeskServer\CensusWeb\Views
    \CensusWebVD\HelpDesk_HelpDesk\Reports
```

For each report, Enterprise HelpDesk requires two .rpt files: one for the portrait orientation, and one for the landscape orientation.

### To create an .rpt file:

- 1 In HelpDesk Admin, set the Standard Report Engine option to Crystal Reports 9 or Crystal Reports 8.5, so Enterprise HelpDesk uses Crystal Reports for listing reports.
- 2 Log on to a Web view and click Reports to open the Report Viewer.
- 3 Click the Listing tab, click the new report, and then click View.
- 4 Save a copy of the report from the Report Viewer and use this as your working copy. When you save a report from the Report Viewer, the .rpt file includes the issue data, so you can preview the report in Crystal Reports. The .rpt file created by the Web view does not include any issue data.
- 5 Click Show and then in the Layout list, click Landscape.
- 6 View the landscape version of the report to create the .rpt file for the landscape orientation.

You don't need to save the landscape report from the Report Viewer. You can create the customized version of the landscape report from the customized portrait report.

### Step 3: Move the Report to the Custom Tab

To move a listing report to the Custom tab:

In HelpDesk Admin, open the listing report in the Report Editor and select the Custom check box.

### Step 4: Customize the Report in Crystal Reports

To customize the report in Crystal Reports:

- 1 Open the .rpt file with Crystal Reports. Use the copy of the report you saved from the Report Viewer.
- 2 Edit the report. For example, you can insert graphs, change fonts and colors, insert custom headers and footers, group and sort fields, hide fields, add summary fields (such as count or average), and much more.
- 3 Save the .rpt file.
- 4 Copy the .rpt file to the Reports folder and rename the .rpt file so it uses the default report name.
- 5 Log on to the Web view and open the report.

### Step 5: Copy the customized report to the CustomizedFiles folder

When you generate a Web view, the contents of the Reports folder are deleted. To save your customized reports and make sure they are copied every time you generate a Web view, you have to copy the .rpt files to the CustomizedFiles folder.

See “Customizing Web View Files” on page 96 for more information on the CustomizedFiles folder.

## Customizing HTML Reports

### About HTML Reports

By default, Web views use HTML to display Listing reports. You can customize this HTML by editing the XML files that define the HTML page template.

- TmplRpt\_listing\_<type>.xml

HTML template for an HTML report page, including the table that contains the report data.

- ValueCell\_listing\_<type>.xml

HTML template for a table cell that displays a field value.

- CaptionCell\_listing\_<type>.xml

HTML template for a table cell that displays a field caption.

<type> is either “tabular” or “multicolumn” (the two types of listing reports).

You can find these files in the Reports folder of a Web view, for example:

```
C:\Program Files\PC-Duo Enterprise
  \HelpDeskServer\CensusWeb
    \Views\CensusWebVD
      \HelpDesk_HelpDesk\Reports
```

These XML files are dynamically created the first time you view a report.

Enterprise HelpDesk generates the HTML reports by transforming raw XML data into HTML using an XSL style sheet. The three .xml files are templates for the XSL style sheet.

## Changing the CSS Styles

The CSS styles used by the HTML reports are defined in the TmplRpt\_listing\_<type>.xml file.

---

*Reports are used to format attachments to e-mail notifications. Using an embedded style sheet ensures that notification attachments are formatted. If you want to use an external style sheet, you must use an absolute URL to locate the style sheet.*

---

## Placeholders

The empty elements (such as <ReportHeader/> and <TableCells/>) in TmpRpt\_listing\_<type>.xml are placeholders. When Enterprise HelpDesk generates a report, it replaces these placeholders with report-specific data.

- <ColumnHeaders/> is a placeholder for the field titles.  
The file CaptionCell\_listing\_<type>.xml contains the HTML template for a field title, where <CellWidth /> and <CaptionCell /> are the width and title from the Report Editor.
- <TableCells/> is a placeholder for the field values.  
The file ValueCell\_listing\_<type>.xml contains the HTML template for a field value.
- <ReportCaption /> is the name given to the report in the Report Editor.
- <ReportHeader /> is the title text from the Page Editor. <ReportHeaderCSS /> is the formatting applied to the title text.
- <PageHeader /> is the header text from the Page Editor. <PageHeaderCSS /> is the formatting applied to the header text.

- <PageFooter /> is the footer text from the Page Editor. <PageFooterCSS /> is the formatting applied to title text.

---

*To see the generated HTML, open a report in a Web view and then view the page source.*

---

## Customizing the Report Used to Print Issues

The information in this section applies only if you use Crystal Reports for listing reports. See “Viewing Reports” on page 35 for more information on using Crystal Reports for listing reports.

The report used to print issues is named “Current Issue - Detailed”. If you edit this report in the Report Editor (of HelpDesk Admin), the changes apply to all Web views of the project.

Each view has two versions this report:

```
rptListingGCurrent$Record$-DetailedPortrait.rpt
rptListingGCurrent$Record$-DetailedLandscape.rpt
```

You can find these files in the

CensusWebVD\<<project>\_<view>\Reports folder, where <project> is the name of the project and <view> is the name of the Web view. The portrait version of the report is used to print issues.

### To customize the report:

- 1 View the portrait version of the report in a Web view. You can either print an issue or view the report with the Report Viewer.  
Viewing the report creates the .rpt file.
- 2 In the Report Editor (HelpDesk Admin), mark the report as a custom report (select the Custom check box).

This prevents Enterprise HelpDesk from overwriting the customized report if the report definition changes.

- 3 Using Crystal Reports, customize the report (add graphics, change fonts, rearrange and align fields).
- 4 Put a copy of the customized report in

```
CUSTOMIZEDFILES
  \#Project#<project>
    \#WebView#<view>
      \Reports
```

When you regenerate the Web view, the customized version of the report is copied to the Web view folder.

## Deleting Users

You can disable users, but this does not delete the user from the database, because existing issues may refer to the user (as either the owner, submitter, or contact). If you don't want to see disabled users in the Contact, Owner, and Submitter fields, you can either:

- Delete the user from the users database.
- Remove disabled users from the Contact, Owner, and Submitter choice lists.

However, if an existing issue references the user in its Owner, Submitter, or Contact field, the field will be empty. In some cases this may cause an "invalid use of null" error.

If existing issues reference disabled users, it may not be practical to delete the user accounts for ex-employees or contractors, because you probably want to keep a historical record of who reported, submitted, and resolved issues. In that case, you may want to add some sort of prefix to the names of disabled accounts.

Before you delete a user or remove the user from the choice lists, you should check if any existing issues reference the user.

### To check if a user is referenced by existing issues:

- 1 Open the users database, and open the tblUser table.
- 2 Find the record for the user you want to delete, and get the value in the User ID field.

For example, if you want to delete the demo user, the User ID is 2.

- 3 Open the issue database for the project.
- 4 Open tblDts and look for the user ID in the columns of choice list fields that use tblUser. For example, nUserID (Owner), nOriginatorID (Contact), and nSubmitterID (Submitter)

To sort the table by user ID, click in the nUserID, nOriginatorID, or nSubmitterID column. Then in the Record menu, click Sort and then click Sort Ascending or Sort Descending. Then scroll through the records to see if the user owns any records.

Note that the revision history (the tblDts\_History table in the issue database) also references users. And while unlikely, queries, summary reports, time reports, and notifications may also reference specific users. The definitions of queries, reports, and notifications are in the project definitions database.

If existing issues do reference the user, you can always reassign open issues, but closed issues can be a problem. You may want to keep a historical record of who reported, submitted, and resolved an issue. If so, you have to keep the disabled users.



## Removing Disabled Users from Choice Lists

Instead of deleting users from the users database, you can prevent the Owner and Contact lists from showing disabled users. However, if an existing issue references the deleted user in its Owner or Contact field, the field will be empty.

### Removing disabled users from choice lists:

- 1 Open the project definitions database.
- 2 Open tblDtsFields and find the owner (nID = 11) and contact (nID = 13) records.
- 3 In the tWhere field, add "And fDeleted = 0" to the Where clause. For example:

```
Where ((([nID] >= 0 And [tName] <> ") Or [tName] = '<User>') And fOriginator = 0 And fDeleted = 0
```

## Adding a Choice List of Users or Contacts

### To add a choice list of users:

- 1 In the Field Editor, create a new field.
- 2 In the Type list, click Multi-Choice List or Single Choice List.
- 3 In the Table Containing Choices list, click tblUser.  
  
tblUser cannot be viewed or edited in the Choice Editor.
- 4 Apply the changes (click Apply or Close).
- 5 Open the project definitions database.

- 6 Open tblDtsFields and find the record for the new field. In the tWhere field, type:

```
Where ((([nID] >= 0 And [tName] <> ") Or [tName] = '<User>') And fOriginator = 0
```

The [nID] >= 0 condition removes the macros defined in tblUser (the users database):

User ID	User Name
-4	<Contact>
-3	<User>
-2	<Previous Owner>
-1	<Owner>

The user with nID = 0 is the <None> macro.

The fOriginator = 0 condition removes contacts, so that the list contains users only.

### To add a choice list of users and contacts:

Use this tWhere clause:

```
Where ((([nID] >= 0 And [tName] <> ") Or [tName] = '<User>')
```

## Timestamping

### Description

```
<script type='text/javascript'>
document.write(
  parent.objCustomCode.getCodeAfterField(
    '%fieldname%',
    'mem_29_txtDetailedDescription' )
)
</script>
```

### Description Log

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

### Notes

```
<script type='text/javascript'>
document.write(
    parent.objCustomCode.getCodeAfterField(
        '%fieldname%',
        'mem_56_mem_56_Notes' )
    )
</script>
```

### Notes Log

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

## Adding TimeStamping

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.

### Step I: Add two memo fields:

Use the Field Editor to create two memo fields (one for input of new data, and one for displaying the timestamped log). For the input field, clear the Show in Choice Lists and Maintain Revision History check boxes.

### Step II: Get the name of the timestamp log field:

You need to get the internal name of the timestamp field. The internal name is a name that looks like "mem\_58\_mem\_58\_FieldName" (and that is not a typo).

If you have Microsoft Access, you can get the internal name by opening the project definitions database and looking in the tBDtsFields 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.

If you don't have a copy of Microsoft Access, generate a Web view for the project. Then get the value of the name attribute of the text area control associated with the timestamp log field. You can find this in the tmplRecord.html file, which is located in the HTML folder of the view:

```
CensusWebVD\<project>\_<view>\HTML
```

### Step III: Set the HTML code after control attributes:

Before you generate a Web view, you must export the two fields and set their HTML code after control attributes.

- 1 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>
```

## Customizing Timestamping

By default, each time a new entry is added to the timestamp log, a line that looks like this is added:

```
December 11,2001 4:38 PM    analyst (New)
```

You can customize the way the timestamp log is formatted by editing MoveControlData() in Js\CustomCode.js. For example, you could insert a line of dashes to separate entries, add tabs (t), or add more line breaks (r):

```
objTargetControl.value="-----\r" +
    getDate() + "\r" +
    objSourceControl.value + "\r\r"
    objTargetControl.value + "\r";
```

getDate() returns a string that includes the date, time, name of the current user, and current value of the Progress field.

objSourceControl.value is the new input to add to the timestamp log, and objTargetControl.value is the content of the timestamp log.

**TIMESTAMPING WITH ONE MEMO FIELD** You can implement timestamping with just one memo field. To do this, you use the HTML code before control attribute to insert a text area control above the timestamp log field. This text area control is not tied to any database field. It exists only to allow input, which is copied into the timestamp log field when you save the issue. The advantage to this approach is that you avoid storing an extra memo field in the issue database. The disadvantage is that you cannot use HelpDesk Admin or the Web View Editor to customize the input text area (for example, to change the caption or position of the control).

**Html code after control:**

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

**Html code before control:**

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

**New function in CustomCode.js:**

```
function getInputMemoField( inputFld, logFld )
{
    var strOutput;

    strOutput+="<textarea class='MemoFieldWidth' ";
    strOutput+="name='"+ inputFld + "' ";
    strOutput+="wrap=physical rows=10 cols=73";
    strOutput+="onfocus=\"parent.MemoGotFocus('"+ inputFld + "')\" ";
    strOutput+="onchange=\"parent.OnMemoRecordChanged('"+ inputFld + "')\" ";
    strOutput+="onkeypress=\"parent.OnMemoRecordChanged('"+ inputFld +
        "')\"></textarea><br>";

    strOutput+="<script type='text/javascript'>";
    strOutput+="document.write(parent.objCustomCode.getCodeAfterField('"+ inputFld + "',"+
        logFld + "'))</script>";
    strOutput+="</script>";

    return strOutput;
}
```

**New declaration in CustomCode.js:**

```
// Declaration of the public functions
this.getInputMemoField=getInputMemoField;
```

## Customizing Notifications

### Changing the Format of Attachments

One of the choices in the Include list (Notification Editor) is Detailed. Detailed attaches a report to the notification message. This report includes most, if not all, of the fields for an issue.

If you do not use Crystal Reports, attachments can be either 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.

See “Viewing Reports” on page 35 for more information on using Crystal Reports for listing reports.

#### 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).

nFormatType constants:

NoFormat	0	Excel40	20
CrystalReport	1	Excel50	21
DataInterchange	2	Excel50Tabular	22
RecordStyle	3	ODBC	23
RichText	4	HTML32Standard	24
Comma Separated Values	5	Explorer32Extend	25
TabSeparatedValues	6	NetScape20	26

CharSeparated Values	7	Excel70	27
Text	8	Excel70Tabular	28
TabSeparatedText	9	Excel80	29
PaginatedText	10	Excel80Tabular	30
Lotus123WKS	11	PortableDocFormat	31
Lotus123WK1	12	HTML40	32
Lotus123WK3	13	CrystalReport70	33
WordForWindows	14	ReportDefinition	34
Excel21	18	ExactRichText	35
Excel30	19	XML	36

### 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 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 macro70.bas file.

This function should return the content you want to include in the e-mail message.

macro70.bas is located in the project sub-folder of the HelpDeskServer folder (for example: HelpDeskServer\HelpDesk\macro70.bas)

- 2 Open the project definitions database, and in the tblMacro table, add a row for the new function.

tName is the name of the macro.

tFunctionName is the name of a function defined in macro70.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.

Use the same tName as you did in tblMacro.

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 you'll end up with a plain text e-mail message that contains RTF or PDF and is never sent. This will hold up all your notifications.

## Example Macros

This function returns a string:

```
Public Function
GetCustomSubject(oCensusApplication,
lngDtsRecordID, oExpression, recRevisionHistory)
    GetCustomSubject = "Your subject goes here."
End Function
```

This function returns 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
```

This example shows how to write a function that takes the revision history as an argument and extracts a field value.

```
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
```

In the SELECT statement, tBriefDescription is the internal name for the Summary field. You can find the internal field names in the tName column of the tblDtsFields table in the project definitions database.

## Adding New Notification Reports

Enterprise HelpDesk 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.

### To add a new report for notifications:

- 1 In HelpDesk Admin, use the Report Editor to define a new listing report.
- 2 Save and preview the report.
- 3 Exit HelpDesk 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 that will appear in the Include list in the Notification Editor.
nType	2 = include in message body 3 = attachment

Field	Description
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	<p>4 = rtf 8 = text 14 = word 31 = pdf 32 = html40</p> <p>See “Changing the Format of Attachments” on page 147 for more format type values.</p> <p>When nType = 2, nFormatType must be 8 (text).</p>

The report should now be available in the Include list of the Notifications Editor.

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.

#### To create an .rpt file for your notification report:

- 1 View the report in a Web view.

This creates an .rpt file in the CensusWebVD\<project>\_<view>\Reports folder. For example:

```
C:\Program Files\PC-Duo Enterprise
  \HelpDeskServer\CensusWeb\Views
  \CensusWebVD\HelpDesk_HelpDesk\Reports
```

- 2 Copy the .rpt file to the HelpDeskServer\<project>\Reports folder. For example:

```
C:\Program Files\PC-Duo Enterprise
  \HelpDeskServer\HelpDesk\Reports
```

- 3 Rename the file by removing “portrait” (or “landscape”) from the .rpt file name.

## Submit-only Views Without Persistent Cookies

Submit-only views use persistent cookies to store contact information (such as the user’s name and e-mail address). You can set up submit-only views so that submitters do not have to enter their contact information. Consequently, the submit-only views will use session cookies only.

To do this, you enter the contact information into Enterprise HelpDesk yourself, and then provide each user with their own specific URL.

#### To set up submit-only views that do not use persistent cookies:

- 1 Use HelpDesk Web Admin to create contacts if the submit-only view is intended for people who do not have Enterprise HelpDesk user accounts and who you want to allow to submit bugs directly into Enterprise HelpDesk. If the submit-only view is intended for people who are already have Enterprise HelpDesk user accounts, the user information already exists in Enterprise HelpDesk.
- 2 Send everybody who will submit issues their personal URL for the submit-only view.



The personal URL for a contact will look something like this:

```
http://server/helpdesk/logon.asp
?View=HelpDesk%2FReport%20Issue&CookieInfo
13=14;Emily
```

The first part of the URL is simply the URL for the Enterprise HelpDesk logon page. The second part of the URL (in bold) is the query string. The View= part of the query string specifies the project and view:

```
View=<project>%2F<view>
```

%2F is the escape sequence for a forward slash (/).

The CookieInfo13= part of the query string specifies the user's contact information:

```
CookieInfo13=<User ID>;<Personal Name>
```

<User ID> is the numeric ID assigned to the contact or user. You can find this value in the tblUser table of the Users database. <Personal Name> is the name of the contact or user.

Spaces in the project, view, and personal name must be replaced with the escape sequence %20.

## Branding the Web View

### Replacing Logos

To replace the logo, edit the td.Logo1 and div.Logo rules in CensusMain.css. The background-image property specifies the logo image.

Note that Enterprise HelpDesk uses two versions of the logo, "logo1" for light backgrounds (Web view page) and "logo" for dark backgrounds (logon page).

```
/* logo on a Web view page */
```

```
td.Logo1
{
    background-image:url(../images/logos/logo1.gif);
    background-repeat:no-repeat;
    display:block;
    left:27px;
    width:200px;
    height:60px;
    position:absolute;
}
```

```
/* logo on the Enterprise HelpDesk logon page */
```

```
div.Logo
{
    background-image:url(../images/logos/logo.gif);
    background-repeat:no-repeat;
    display:block;
    left:27px;
    width:200px;
    height:60px;
    position:absolute;
    border:3px solid orange;
}
```

### About Branding Web Views

You can customize the look of a Web view by editing the CensusMain.css style sheet in CensusWeb\Views\CensusWebVD\Theme\css.

Put a copy of your customized style sheet in the CUSTOMIZEDFILES folder. For example, in #AllProjects#\Theme\css or #Project#\HelpDesk\Theme\css.

## View Toolbar

The view toolbar is the top part of a Web view, where the logo and the Help, Log Off, and other buttons are displayed.

`body.TopToolbarBody` sets the background color.

`td.LogoI` sets the logo image displayed in the toolbar.

## Summary List Toolbar

The toolbar has three parts: the top (with the Query, Sort, and Layout lists), the middle (the Ad-hoc Query Editor), and the bottom (used for bottom rounded corner images).

### For the top part:

- `body.ToolbarBody` sets the background color. This class is also used by many dialog boxes, such as Attach File, History, and Options.
- `ToolbarLeft`, `ToolbarCenter`, and `ToolbarRight` set the background images. `ToolbarCenter` also sets the font properties for the captions.

### For the middle part:

- `body.ToolbarM` sets the background color.
- `ToolbarMLeft`, `ToolbarMCenter`, and `ToolbarMRight` set the background images. `ToolbarMCenter` also sets the font properties for the captions.

### For the bottom part:

- `body.ToolbarB` sets the background color.
- `ToolbarBLeft`, `ToolbarBCenter`, and `ToolbarBRight` set the background images.

## Summary List Header

The appearance of the heading row for the Summary List is controlled by:

- `headerSummaryList`
- `HeaderSummaryListCellCenter`
- `HeaderSummaryListCellLeft`
- `HeaderSummaryListCellRight`

`headerSummaryList` sets properties for the entire table. The three `HeaderListSummaryCell` classes are used to set background images. If you don't want to use images, you can comment out the `HeaderListSummaryCell` classes and use `headerSummaryList` to set the background and text colors.

## Summary List

`body.SummaryListBody` formats the page background and text.

The appearance of links in the Summary List are controlled by `body.SummaryListBody a:link` and `body.SummaryListBody a:visited`.

To change the shading of the rows in the list, edit these CSS classes. The two sets of CSS classes allow for rows with alternating shading.

- `SummaryList1`
- `SummaryList1Hover` (for Internet Explorer)
- `SummaryList1HoverN` (for Netscape)
- `SummaryList2`
- `SummaryList2Hover` (for Internet Explorer)
- `SummaryList2HoverN` (for Netscape)

## Tabs

The appearance of the selected tab is controlled by:

- `TabsLeftCornerUp`

- TabsBackgroundUp
- TabsRightCornerUp

The appearance of the unselected tabs is controlled by:

- TabsLeftCornerDown
- TabsBackgroundDown
- TabsRightCornerDown

For example, you could replace the background images or use solid colors instead of images.

To customize the font used for the text on the tabs, edit TabsBackgroundDown and TabsBackgroundUp.

The area to the right of tabs (where the next/previous page controls are located) can be styled with tabsBody (the background color) and tabsBorder (the bottom border), and PageNavigation (the “Page X of Y” text).

To put a dividing border between the Summary List and the tab area, use border-top with tabsBody.

## Form

Each tab in a Web view is a form that contains a table. The HTML looks like this:

```
<body class="RecordBody" >
  <form name="Record">
    <table class="RecordTab" >
```

So, for example, to change the background color of the tabs, edit the body.RecordBody class in CensusMain.css.

To apply styles to the form element, you can use this selector in the style sheet:

```
body.RecordBody form { ... }
```

## Field Captions

Field captions in a Web view are formatted with the CSS classes normalfield, requiredfield, and disabledfield.

## Form Elements

The CSS class applied to a form element is specified by the CSS Class field attribute in the Web View Editor. You can customize the default CSS classes or define your own and apply them to fields through the Attribute Editor.

The default CSS classes for form elements are TextBoxWidth, ComboBoxWidth, and MemoFieldWidth, InputAttachment (for the Attachments box), and InputCalendar (for date fields).

## Command Bar

The command bar is the bar at the bottom of the page that contains the Issue box and the New, Save, Cancel, and Print buttons.

body.CommandBarBody sets the background color for the command bar. You can set the text color here (except for the text in the message area).

CommandBarBLeft, CommandBarBCenter, and CommandBarBRight specify the background images for the command bar.

CommandBarMsgLeft, CommandBarMsgCenter, and CommandBarMsgRight specify the background images for the message area (e.g.: “Ready. Click New to create a new issue.”) of the command bar.

ControlsCaptionDark sets the style for the “Current Issue” label.

CurrentRecord and CurrentRecordHover set the style for the Current Issue text box.

## Branding the Dialogs

### About Branding Dialogs

Dialogs are pages that users open by clicking a button. This includes the Attachments, Reports, Revision History, Password, Options, and Contacts dialogs.

Most of the dialogs use the same style sheet as the Web view. However, the Contacts and Password dialogs use the CensusMain.css style sheet found in CensusWebVD\Admin\THEME\css.

### Common Styles for All Dialogs

body.toolbarBody sets the background color for the dialog pages (except for the Reports dialog, which uses body.ReportsBody).

The box with rounded corners is a set of background images specified by these classes:

- BoxTLeft, BoxTCenter, and BoxTRight
- BoxMLeft, BoxMCenter, and BoxMRight
- BoxBLeft, BoxBCenter, and BoxBRight

### Attachments Dialog

body.toolbarBody sets the background color for the page.

DialogLabel formats the captions.

InputFile and InputFileHover format the text boxes.

The list of attached files is displayed in a table. HeaderSummaryListCellCenter formats the heading row (where the "File Name" and "Remove" captions are displayed).

SummaryList1 and SummaryList2 format the list of files.

DialogLabel formats the file names.

### Reports Dialog

body.ReportsBody sets the background color for the page.

The appearance of the tabs is controlled by the same CSS classes that apply to the tabs in a Web view (see "Tabs" on page 152).

The "Report Name" caption uses the normalfield class.

The <select> element that lists the available reports uses the ReportList class.

The "Layout:" and "Viewer Type:" captions use the AdminNormalTextDarkBG class. The corresponding <select> elements do not use a CSS class, but you can use their IDs (LayoutType and ViewerType) with ID selectors in the CSS file.

### Revision History Dialog

This dialog uses only the common styles.

### Options Dialog

body.toolbarBody sets the background color for the page.

Captions use the normalfield class.

Form elements (such as `<input>`) are in a `<TD>` that uses the `normalfield` class, but the form elements themselves have no class.

## Contacts Dialog

This dialog uses the `CensusMain.css` style sheet in `CensusWebVD\Admin\THEME\css`.

`body.RecordBody` sets the background color for the page.

The caption for the Display list uses the `DialogLabel` class, and the `<select>` element uses `AdminComboBoxWidth`.

On the input form for contact information, the captions use `requiredfield` and `DialogLabel`. The form elements all use `AdminComboBoxWidth`.

## Password Dialog

This dialog uses the `CensusMain.css` style sheet in `CensusWebVD\Admin\THEME\css`.

`body.toolbarBody` sets the background color for the page.

`normalfield` formats the captions "Old Password", "Password", and "Confirm Password".

`AdminTextBoxWidth` and `AdminTextBoxWidthHover` format the text boxes.

`AdminNormalTextDarkBG` formats the "Password can contain a maximum of 14 characters" message.

# Branding the Logon Pages

## About Branding the Logon Page

The heights of some of the table cells are hard-coded in `CensusWebVD\logon.asp`.

`LogonBody` sets the background color for the page.

The images and background colors for the box with rounded corners are set by these classes:

- `div.Logon-t-left`, `td.Logon-t-center`, `div.Logon-t-right`
- `td.Logon-m-left`, `div.Logon-m-center`, `td.Logon-m-right`
- `div.Logon-b-left`, `td.Logon-b-center`, `div.Logon-b-right`

Note the mix of `div` and `td` elements. If you want to replace the images with colors and borders, set the left and right classes to the background color and use the center classes to define your border.

`div.Logo` inserts the Enterprise HelpDesk logo.

`div.Logon-decor-img` inserts the keyboard image with the orange border

`LogonForm` positions the logon form (the Logon Name and Password text boxes).

`div.LogonField` and `div.PwdField` position the form elements.

`div.LogonCaption` formats the "Logon Name" and "Password" labels.

`input.LogonInput` and `input.LogonInputHover` format the text boxes.

`a.LogonState1` and `a.LogonState1:hover` set the images used for the Logon button.

`HelpState1` and `HelpState1:hover` set the images used for the Help button.

## ValidateLogon Page

The ValidateLogon page displays the available views. With a few exceptions (documented below), this page uses the same styles as the Logon page.

The heights of some of the table cells are hard-coded in `CensusWebVD\validatelogon.asp`.

`ExitState1` and `ExitState1:hover` specify the images used for the Log Off button.

`div.ViewList-m-center` is used instead of `div.Logon-m-center`.

`div.ViewList-decor-img` is used instead of `div.Logon-decor-img` to display the keyboard image with the orange border

`div.ViewLinks` positions and sizes the area used to display the list of available views. This class also adds the vertical orange bar.

`div.LogonCaption` formats the "Click the view you want to open" string.

`ViewListCaption` formats the DIVs that contain the project names.

`ViewList-Link`, `ViewList-Link:link`, `ViewList-Link:visited`, and `ViewList-Link:hover` format the view names, which are hyperlinks.

## Customizing the Timesheet

### Adding Rows

By default, the timesheet project allows users to track weekly time spent for up to four different projects. If you need to track time for more than four different projects or tasks, you can add more rows to the timesheet.

### Step 1: Create fields in the Field Editor

- 1 Create a new choice list for selecting projects. Copy the `Project1` field and name it `Project5`.
- 2 Create the input fields for the days of the week.
  - a Copy the `P1HRsMon` field and name it `P5HrsMon`.
  - b Copy `P5HrsMon` and name it `P5HrsTue`.
  - c Copy `P5HrsTue` and name it `P5HrsWed`.
  - d Continue until you have input fields for all seven days of the week.
- 3 Create a field to hold the weekly total. Copy `Proj1TotalWkHrs` and name it `Proj5TotalWkHrs`.
- 4 Click Apply to add the fields to the project.

### Step 2: Export the new fields to the view

- 1 In the Web View Editor, click the timesheet view in the Project / View list.
- 2 Under Fields, click the last field (`Product4`) in the Export to View list. Click Attributes, and delete the value of the Html code after control attribute.
- 3 Move the new fields from the Available list to the Export to View list.
 

The new fields are added to the end of the Export to View list. The order of the fields does not matter.
- 4 Click the last field in the Export to View list. Click Attributes, and set the value of the Html code after control attribute to "-->".

### Step 3: Edit timesheet.js

- 1 Open `timesheet.js` in your favorite text editor. You can find this file in the folder:

```
CensusServer\CensusWeb\CUSTOMIZEDFILES
  \#Project#Timesheet\#AllWebViews#\Js
```

This is the file to edit if you want to add a row to all Web views of your timesheet project. If you want to add rows to only certain Web views, you'll need to create a new folder. For example:

```
CensusServer\CensusWeb\CUSTOMIZEDFILES
  \#Project#Timesheet\
    #WebViews#Timesheets_MyTimesheets\Js
```

- At the top of the file, declare and initialize a variable that holds the ID of the new row:

```
var PROJ_FIVE_ID=4;
```

- In the WriteTimesheetGrid() function, create a new array that holds the row information, and store this new array in m\_arrTimesheet:

```
m_arrTimesheet[PROJ_FIVE_ID]=new Array(
  "cbo_97_cbo_97_Project5"
  + INNER_ARRAY_SPLITTER +
  INNER_ARRAY_SPLITTER
  + strProjComboOptions,
  "nbr_98_nbr_98_P5HrsMon",
  "nbr_99_nbr_99_P5HrsTue",
  "nbr_100_nbr_100_P5HrsWed",
  "nbr_101_nbr_101_P5HrsThu",
  "nbr_102_nbr_102_P5HrsFri",
  "nbr_103_nbr_103_P5HrsSat",
  "nbr_104_nbr_104_P5HrsSun",
  "nbr_105_nbr_105_Proj5TotalWkHrs"
  + INNER_ARRAY_SPLITTER +
  CONTROL_TYPE_TOTAL);
```

Use the ID of the new row (PROJ\_FIVE\_ID) as an index into the m\_arrTimesheet array.

In the new array, specify the names assigned to form controls in the generated html. These names are based on the tBoundControlName, which you can find in the tblDtsFields table of the project definitions database. For example, if the tBoundControlName is cbo\_97\_Project5, then the form control name is cbo\_97\_cbo\_97\_Project5.

#### tblDtsFields

tblDtsFields : Table		
nID	tName	tBoundControlName
97	Project5	cbo_97_Project5
98	P5HrsFri	nbr_98_P5HrsFri
99	P5HrsMon	nbr_99_P5HrsMon
100	P5HrsTue	nbr_100_P5HrsTue
101	P5HrsWed	nbr_101_P5HrsWed
102	P5HrsThu	nbr_102_P5HrsThu
103	P5HrsSat	nbr_103_P5HrsSat
104	P5HrsSun	nbr_104_P5HrsSun
105	Proj5TotalWkHrs	nbr_105_Proj5TotalWkHrs
*	0	

- 4 Add a call to `GetTimesheetProjRow()` for the new row. Put this call before the call to `GetTimesheetDayTotalRow()`.

```
// Calls to GetTimesheetProjRow() for previous rows
```

```
strHTML+=m_oTimesheet.GetTimesheetProjRow(
    m_arrTimesheet[PROJ_FIVE_ID]
);
```

```
// call to GetTimesheetDayTotalRow()
```

#### Step 4: Update layouts, queries, sorts, and reports

Any layouts, queries, sorts, or reports that use values from the rows in a timesheet must be updated.

For example, the Current Issue - Detailed report is used to print the current timesheet. If you don't update this report, it won't show the rows you added.

#### Step 5: Regenerate the Web views

If you get javascript errors when you try to open the Web view, log off and fix `timesheet.js`. You don't have to regenerate the Web view, but you will have to copy `timesheet.js` from the `CUSTOMIZEDFILES` folder to the Web view folder.

## Changing the Timesheet Starting Day

The weekly timesheets can start on any day of the week. By default, the weekly timesheets start on Monday.

#### To change the timesheet starting day

- 1 In the Web View Editor, click the timesheet view in the Project / View list.

- 2 Under Fields, click the last field before the fields that make up the actual timesheet. By default, this is the Weekly Total Hours field.

- 3 Click Attributes and then click the attribute value of the Html code after control attribute. This should take you to the end of the line of text, where you'll see the `START_MONDAY` constant as the last argument to a function.

- 4 Change this to the new starting day. Use one of these constants:

```
START_MONDAY
START_TUESDAY
START_WEDNESDAY
START_THURSDAY
START_FRIDAY
START_SATURDAY
START_SUNDAY
```

## Creating a Timesheet

When you create a new project based on the Timesheet project, you need to add the timesheet to a Web view of the new project. After that, you can simply copy the Web view to create more views of the new project.

#### Timesheet

Project:	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Project Total
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Daily Total:	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

#### To add a timesheet to a Web view

- 1 Export the fields displayed above the timesheet (by default: Employee, Weekly Start Date, and Weekly Total Hours).



- 2** Enter the following HTML into the Html code after control attribute of the last field currently in the Export to View list.

Instead of typing in this HTML, you can copy the HTML code after control value from the Weekly Total Hours field in the original Timesheet / Timesheet Web view.

```
<script type="text/javascript" src="../../js/Timesheet.js">
</script>
<select name="TS_cbo_vals" class="HiddenObject">
<WC@53></WC@53>
</select>
<script>
WriteTimesheetGrid
(
  escape(document.Record.TS_cbo_vals.innerHTML),
  START_MONDAY
);
</script>
<!--
```

- 3** Export the timesheet fields. The order does not matter.
- DailyTotalMon, ..., DailyTotalSun (7 fields)
  - P1HrsMon, ..., P1HrsSun (7 fields)
  - P2HrsMon, ..., P2HrsSun (7 fields)
  - P3HrsMon, ..., P3HrsSun (7 fields)
  - P4HrsMon, ..., P4HrsSun (7 fields)
  - Proj1TotalWkHrs, ..., Proj4TotalWkHrs (4 fields)
  - Project1, ..., Project4 (4 fields)
- 4** Enter the string “-->” (without the quotation marks) into the Html code after control attribute of the last field in the Export to View list.



# Appendix A: Installing Enterprise HelpDesk

## Supported Configuration

Enterprise HelpDesk supports two possible configurations: Standard and Distributed. In both configurations, all Enterprise HelpDesk components are installed on the Web server. The difference between the two configurations is the location of the databases.

### Standard Configuration

- All Enterprise HelpDesk components are installed on the Web server.
- All databases are located on the Web server. By default, the databases are Microsoft Access databases, but you can relocate them to SQL Server (if you have a license for PC-Duo Enterprise HelpDesk SQL Enabled).

---

*If you intend to relocate databases to SQL Server, we recommend you use the Distributed configuration.*

---

### Distributed Configuration

This configuration requires PC-Duo Enterprise HelpDesk SQL Enabled.

- All Enterprise HelpDesk components are installed on the Web server.
- All databases are in SQL Server, and are located on a separate SQL Server computer (the database server).

To set up a distributed configuration, you first install Enterprise HelpDesk in the standard configuration. Then you use HelpDesk Web Admin to relocate the databases from the Web server to the SQL Server computer.

### Configuration Options

Both configurations allow you to install additional copies of HelpDesk Admin and the Web View Editor on other computers. For example, you may want to install a copy of the Web View Editor on your computer, so you can edit and regenerate existing Web views from your desk.

---

*To create new Web views, you must use the Web View Editor installed on the Web server. Copies of the Web View Editor installed on other computers can edit and regenerate existing Web views, but cannot create new Web views.*

---

## Installing Enterprise HelpDesk

To successfully install and configure Enterprise HelpDesk, you must run the Setup program as a domain administrator.

## Installing a Distributed Configuration

To set up a distributed configuration, you first install Enterprise HelpDesk in the standard configuration (everything on the Web server). Then you use HelpDesk Web Admin to relocate the databases from the Web server to the SQL Server computer.

## User Accounts and Groups Created by Setup

The Enterprise HelpDesk setup program creates a domain user account that is used to access the Enterprise HelpDesk database, to access the PC-Duo Enterprise site database, and for anonymous access to the Web views. To modify the domain account used by Enterprise HelpDesk, start HelpDesk Admin and in the Tools menu, click Windows Account.

Setup also creates a domain group named CensusAdminsGroup. Members of the CensusAdminsGroup group (or of the local Administrators group on the HelpDeskServer computer) have the required permissions to perform any task with HelpDesk Web Admin.

A user who is not a member of either of these groups will use the Web anonymous user account (by default, CensusUser) to run HelpDesk Web Admin tasks, and this account cannot perform IIS-related tasks such as unloading virtual directories (when logging off users), and may not be able to relocate databases to other computers.

By default, Setup adds all members of the domain Administrators group to the CensusAdminsGroup group. You can add new members to the CensusAdminsGroup whenever you want to grant full access to Web Admin. The

CensusAdminsGroup is also added to the local Administrators group on the HelpDeskServer computer.

If Setup cannot create a new domain group, you can use an existing domain group. We recommend that this group be used exclusively for controlling access to Web Admin.

If no domain administrators are added to the group that controls access to HelpDesk Web Admin, then only local administrators of the HelpDeskServer computer have full access to HelpDesk Web Admin.

## Selecting Components

If you select the Custom setup type, you can select which components to install.

### HelpDesk Server Components

**HelpDesk Server** HelpDesk Server includes the project databases that contain the issues and definitions (such as queries, reports and layouts) for Enterprise HelpDesk projects.

**HelpDesk Web Server** HelpDesk Web Server is the server component of HelpDesk Web. The HelpDesk Web Server installation includes a Microsoft Windows service (Mq Issue Agent) that takes care of generating and sending e-mail notifications.

HelpDesk Web Server also includes HelpDesk Web Admin, a Web-based administration tool. HelpDesk Web Admin allows you to administer users, choice lists, workflow, tabs, and e-mail notifications.

## HelpDesk Admin Components

**HelpDesk Admin** HelpDesk Admin is a Microsoft Windows application for administering Enterprise HelpDesk projects. For example, you use HelpDesk Admin to create projects, create users and user groups, customize fields, and set up e-mail notifications.

**Web View Editor** Web View Editor is a Microsoft Windows application that you use to create Web views for your Enterprise HelpDesk projects. Web views are Web-based applications that provide access to Enterprise HelpDesk projects through a Web browser.

## User Account for Notifications

Setup prompts you for a user account that can be used to run the notification service on the Web server and access the Enterprise HelpDesk projects (found on the computer where HelpDesk Server was installed).

This Windows user account should be a domain user account that has at least Power User-level permissions.

## Entering Your License Information

During installation, you must enter the PC-Duo Enterprise HelpDesk Access Enabled license key. The PC-Duo Enterprise HelpDesk Access Enabled license key enables PC-Duo Enterprise HelpDesk Access Enabled.

**License Type** Evaluation licenses allow you to use Enterprise HelpDesk for a predetermined period of time. At the end of that period, you can no longer run Enterprise HelpDesk unless you provide a valid license key.

Concurrent licenses are permanent licenses that allow a specified number of users to use Enterprise HelpDesk simultaneously. With concurrent licensing you do not need a license for every user who will use Enterprise HelpDesk. You need licenses only for the maximum number of simultaneous users (users logged on at the same time).

For example, if you have 30 users who need access to Enterprise HelpDesk, but you don't expect more than 20 to log on at the same time, you need only 20 licenses. When all 20 licenses are in use, no additional users will be able to log on.



# Appendix B: Databases

## Overview

PC-Duo Enterprise HelpDesk Access Enabled supports Jet/Access databases; PC-Duo Enterprise HelpDesk SQL Enabled adds support for SQL Server.

By default, all Jet/Access databases are stored in the HelpDeskServer folder (for example, C:\Program Files\PC-Duo Enterprise\HelpDeskServer). SQL Server databases are located on the SQL Server computer in a folder specified by the Enterprise HelpDesk administrator.

**Project databases** An Enterprise HelpDesk project includes two main databases:

- A database of issues (and their revision histories).
- A database of definitions, which contains the queries, sorts, layouts, reports, notifications, fields, and tabs available in the project.

**Users database** In addition to the project databases, there is a database of users. The users database is shared by all projects.

## Issue Database

### Database

**Microsoft Access** The issues are stored in the file <project>01.dat, where <project> is the name of the Enterprise HelpDesk project.

**SQL Server** The issues are stored in the <project>01\_Dat database, where <project> is the name of the Enterprise HelpDesk project. The database consists of these files:

- <project>01\_Dat.mdf  
The master data file (MDF) of the database.
- <project>01\_Dat\_log.LDF  
Log file that holds the log information used to recover the database. There must be at least one log file for each database, although there can be more than one.

### Tables

**tblIDs** Stores most of the information entered for an issue. This includes most of the fields on the Overview, Description, and Detail tabs, as well as the information entered on any custom tabs added to the project.

**tblFixInformation** In previous releases of Enterprise HelpDesk, new fields added to the Resolution tab were stored in tblFixInformation. The default fields are stored in tblIDs.

As of Enterprise HelpDesk 2.2, any new fields added to the Resolution tab are stored in tblIDs.

**tblAttachments** Stores any files attached to an issue.

**tblRevisionHistory** Stores the revision history for issues.

# Project Definitions Database

## Database

**Microsoft Access** The project definitions database is named <project>02.def, where <project> is the name of the Enterprise HelpDesk project.

**SQL Server** The project definitions database is named <project>02\_DEF, and consists of these files:

- <project>02\_DEF.mdf
- <project>02\_DEF\_log.LDF

## Tables

**tblDtsFields** Defines the fields available in an Enterprise HelpDesk project. The Field Editor in HelpDesk Admin provides a user interface for editing most of the columns in this table.

In tblDtsFields, the tWhere column specifies a Where clause that controls the contents of a choice list. The HelpDesk project uses the Where clause to build the Contact, Owner, and Submitter choice lists.

For example, this Where clause removes macros (such as <User>) and contacts from the Owner list:

```
Where ([nID] >= 0 And [tName] <> ")Or [tName] = '<User>') And fOriginator = 0
```

- The [nID] >= 0 condition removes the macros defined in tblUser:

User ID	User Name
-4	<Contact>
-3	<User>
-2	<Previous Owner>
-1	<Owner>

The user with nID = 0 is the <None> macro.

- The fOriginator = 0 condition removes contacts, so that the list contains users only.
- tName is the name of the user.

**tblState** Specifies the list of choices for the State field. The State field is a read-only field that is set based on the Progress field.

**tblSubState** Specifies the list of choices for the Progress field. Each possible substate corresponds to a possible State value (Open or Closed).

**Choice List Tables** A choice table specifies the possible values for a choice list field. Each row in a choice table includes an nID, a tName (the choice text), and optionally, an nChoiceID (for non-alphabetical choice lists).

In the issue database, multi-choice fields store a semi-colon separated list of the tName values (the choice text strings), not the nID values.



## Users Database

### Database

All Enterprise HelpDesk projects share the same database of users. The users database also stores global choice lists.

**Microsoft Access** The user database is named users.mdb.

**SQL Server** The user database is named USERS\_MDB, and consists of these files:

- USERS\_MDB.mdf
- USERS\_MDB\_log.LDF

### Tables

**tblUser** Lists the users and contacts. Users have logon names and passwords. Contacts are people who report issues, but do not have a logon account.

If you add a field to the Origin tab, the field is added to tblUser, not tblIDs. The Origin tab is a read-only tab that displays user and contact information. The user and contact information is actually entered in HelpDesk Web Admin (Security tab). This allows user and contact information to be entered once for all issues, instead every time for each issue.

## Other Project Files

<project>03.Usr is a Microsoft Access database. It contains a number of temporary tables used by HelpDesk Admin.

<project>.cen controls project initialization and versioning.

## Other Databases

These databases are shared by all projects:

- censusweb.mdb (CENSUSWEB\_MDB in SQL Server) stores Web view definitions. Used by the Web View Editor.
- Licenses.mdb (LICENSES\_MDB in SQL Server) stores licensing information.



# Appendix C: Relocating Enterprise HelpDesk Installations

## About the Relocation Wizard

Enterprise HelpDesk includes a Relocation Wizard for moving Enterprise HelpDesk installations from one computer to another.

When you relocate Enterprise HelpDesk, the Relocation Wizard:

- Logs off all users.
- Unloads the virtual directories used by Enterprise HelpDesk.
- Stops the Mq Issue Agent service.
- Detaches local SQL Server databases.
- Backs up the HelpDeskServer and HelpDeskTools folders before relocating them.
- Copies Enterprise HelpDesk to another computer and disables the original installation.
- Regenerates all your Web views after Enterprise HelpDesk is relocated. The Web views are all regenerated in the default CensusWeb/Views/CensusWebVD folder.

The Relocation Wizard relocates SQL Server databases if:

- The SQL Server databases are local to the source computer.
- The version of SQL Server on the target computer is greater than or equal to the version of SQL Server on the source computer.

## Before You Relocate

**Check Permissions** You must run the Relocation Wizard with a user account that has Full Control permission for the HelpDeskServer folders on all computers (current location and new location).

**Close all copies of HelpDesk Admin and the Web View Editor** This includes all copies of the programs, not just those installed on the Web server.

**Relocate Projects** If you have any projects located outside of the HelpDeskServer folder, use HelpDesk Admin to move the projects into the HelpDeskServer folder. After you relocate Enterprise HelpDesk, you can use HelpDesk Admin to move the projects back outside of the HelpDeskServer folder.

**Back Up** The Relocation Wizard backs up your HelpDeskServer and HelpDeskTools folders, but you may want to create your own backups.

**Log Off Users** The Relocation Wizard logs off users, but you may want to inform users ahead of time that Enterprise HelpDesk will not be available.

## How to Relocate Enterprise HelpDesk

### To relocate Enterprise HelpDesk:

- 1 Log off all Web view users and close all copies of HelpDesk Admin, HelpDesk Web Admin, and the Web View Editor.
- 2 Clean install Enterprise HelpDesk components on the destination computers (the computers to which you want to relocate).
- 3 Run the Relocation Wizard on the destination computer.
- 4 Update client copies of HelpDesk Admin and the Web View Editor.
- 5 Test the relocated installation. Check that you can open the relocated projects and Web views, and that you can run HelpDesk Admin, HelpDesk Web Admin, and the Web View Editor.

The Relocation Wizard regenerates all Web views in the default HelpDeskWeb/Views/CensusWebVD folder.

- 6 Remove the old copies of Enterprise HelpDesk.

---

*We strongly recommend that you perform a clean installation of Enterprise HelpDesk on the destination computer. Otherwise, you may have problems relocating to the destination computer.*

*For example, suppose you perform a clean install of HelpDesk Server, create a project, and migrate it to SQL Server. If you then try to relocate another HelpDesk Server to that computer, the relocation may fail because database files are locked on the destination computer.*

*SQL Server database files are locked while the SQL Server services (mssqlserver and sqlserveragent) are*

*running. As a result, the Relocation Wizard may not be able to relocate project databases and other databases such as USERS\_MDB.*

---

## Relocating Enterprise HelpDesk

In Enterprise HelpDesk 5.0, all Enterprise HelpDesk components are installed on one computer: the Web server. The Relocation Wizard allows you to move Enterprise HelpDesk to a different computer.

### To relocate Enterprise HelpDesk:

- 1 On the target computer, perform a clean install of Enterprise HelpDesk 5.0.
- 2 On the target computer, run the Relocation Wizard program MqRelocateTool.exe. The program is located in the HelpDeskTools\Support\Relocation folder.
- 3 In the Logon Name and Password boxes, type the name and password of an Enterprise HelpDesk user. The user must be a member of the Admins group, or of a group with the same permissions.
- 4 Under Relocate From, enter the location of the current HelpDesk Server. Use a UNC path (for example, "\\NANP\HelpDeskServer").
- 5 If the Computer Name or Local Path boxes are not filled in automatically, type in the missing information.

Computer Name is the name of the computer where the current HelpDesk Server is located.

Local Path is the location of the current HelpDesk Server relative to a root directory (for example, "C:\Program Files\HelpDeskServer").

- 6 Under Relocate To, HelpDesk Server is the location where you installed HelpDesk Server on the target computer. By default, HelpDesk Server is installed in the Program Files\HelpDeskServer folder.  
  
HelpDesk Tools is the location of HelpDesk Admin and the Web View Editor on the new computer. The default location is the Program Files\HelpDeskTools folder.
- 7 Select the Show Advanced Options check box to show the computer name of the target computer. If for some reason the computer name is incorrect or missing, you can type in the name.
- 8 Click OK to start the relocation.

## If Something Goes Wrong

If something goes wrong when you relocate Enterprise HelpDesk:

- Check the error log. The Relocation Wizard creates an error log in the HelpDeskServer\Relocation folder of the computer where you run the wizard.  
  
The folder name includes the date and time, so the path to the error log looks something like this:  
  
HelpDeskServer  
  \Relocation\_02-20-2003\_10.44.50  
    \RelocationErrorLog.txt
- Check that there is enough free disk space on the new server. Typically, the amount of disk space required is at least twice the size of the current HelpDeskServer folder.
- If you are relocating SQL projects, you'll have to reattach the databases to the SQL server before you can try again.

## Updating Client Programs

After you relocate Enterprise HelpDesk, you must update any client programs. Client programs are copies of HelpDesk Admin and the Web View Editor installed on computers other than the Web server.

To update the client programs on a computer, you run the MqRelocateClients.exe program on that computer.

When the Relocation Wizard finishes, it puts a copy of the MqRelocateClients.exe program in the HelpDeskServer\Relocation\_<timestamp> folder.

If you send the MqRelocateClients.exe program to users to run, you must also send the INI file located in the same folder as MqRelocateClients.exe.

## Enabling Enterprise HelpDesk after Relocation

The Relocation Wizard copies a Enterprise HelpDesk installation to a different computer and disables the original installation. Sometimes you may want to continue using the original installation. For example, you may want to copy Enterprise HelpDesk so you can test an upgrade, but continue using the original installation.

### To enable after a relocation:

Apply the following steps to the original Enterprise HelpDesk installation.

- 1 Reattach all SQL Server databases.

To prevent users from using old databases, the Relocation Wizard detaches all Enterprise HelpDesk databases that are in SQL Server.

Reattach the <project>\_DAT databases and the USERS\_MDB database using the .mdf or .ldf files in your HelpDeskServer folder.

## 2 Rename licenses.mdb.

Locate a file in the HelpDeskServer folder with a name that looks like Licenses.mdb\_2004-06-18\_20.23.21.bak. If there are several files like this, use the one with the most recent date in the name.

## 3 Allow users to log on.

- In the HelpDeskServer folder, open the file census.ini. Find the [SessionControl] section, and if Enabled=0, change it to Enabled=1.
- Start HelpDesk Admin and click Tools > Integrity. Select the Remove Locks check box and click Start.
- In the CensusWebVD folder (by default, HelpDeskServer\CensusWeb\Views\CensusWebVD), locate a file with a name like Logon.asp\_bck\_logoff. If this file exists, delete the Logon.asp file and rename Logon.asp\_bck\_logoff to Logon.asp.
- In the CensusWebAdmin folder (by default, HelpDeskServer\CensusWeb\Views\CensusWebAdmin), locate a file with a name like Logon.htm\_bck\_logoff. If this file exists, delete the Logon.htm file and rename Logon.htm\_bck\_logoff to Logon.htm.

## 4 Restart the notification Service.

If you use notifications, open Services and start the Mq Issue Agent service.

To open Services, click Start, click Control Panel, double-click Administrative Tools, and then double-click Services.

# Index

## Symbols

- < less than operator 29
- <= less than equal operator 29
- > greater than operator 29
- >= greater than equal operator 29

## Numerics

- 1-tier configuration 161
- 2-tier configuration 161
- 404 errors 117

## A

- ActiveX 131
- Ad-hoc Query Editor 54, 84, 88
- admin user account 12
- Admins group 7, 10, 11
- Alignment attribute 89
- Always verify locked databases option 112
- analyst user account 12
- anonymous user account 94
- <Any> macro 64
- Assigned Work Team field 49
- attachments 117
  - moving 106
  - relocating 106
- Attachments command (Tools menu) 106
- Attachments field 22, 136
- attributes, field 89–93
- authentication method 51
- Automatically Update Choice List attribute 13, 90

## B

- backups 112–117, 169

- bandwidth usage, reducing 108
- bar charts 36, 38, 40
- base projects 7
- branding 152, 155
- BugTrk project 8
- buttons, URL 92
- byte field size 23

## C

- captions 9, 14, 21, 23, 90
- categories, user 49
- .cen file 167
- CenInfoSession.xml 116
- CenSession.xml 116
- CensusAdminsGroup group 3, 100, 162
- CensusMain.css 90, 98, 151, 151–156
- CensusUser account 95, 162
- CensusUser user account 3, 100
- CensusWebVD folder 97
- CenSys.mdw 109, 116
- check boxes 23
- Child Issues tab 88
- Choice Editor 21
- choice lists
  - Allow Choice Order Sort 26
  - automatically setting value 58
  - creating relationships 58
  - custom reports 9, 10
  - database tables 166
  - defined 23
  - editing 10, 25–27
  - field labels 23
  - global 48, 167
  - importing 121
  - Number of Visible Items attribute 92
  - of users and contacts 143
  - Progress field 10, 25
  - searching 29
  - showing selected items 92
  - sorting 26, 32
  - tooltips 93
  - updating in Web views 13, 90
- choice order sort 30
- client programs 171
- Closed Date field 27
- Closed Time field 27
- Column Span attribute 14, 90
- ComboBoxWidth CSS class 90
- compression 132
- Computer Name field 126
- Contact field 12, 13
- Contact tab 23, 43
- Contacts 43
- contacts
  - adding choice lists of 143
  - assigning to work teams 48
  - defined 2
  - importing 120, 121
  - submit-only views 12, 86
- Contains operator 30
- cookies 150
- copying HelpDesk 171
- cross-tab reports 36, 37, 40
- Crystal Reports 35, 138–140
  - See *Also* custom reports
- CSS classes 14, 90, 136
- CSS style sheets 98, 151, 151–156
- currency fields 23
- Current Issue - Detailed report 9, 13
- current users 20
- Custom Report Engine option 35
- custom reports
  - choice list changes 10
  - creating 138–140
  - CustomizedFiles folder 140

- deleted fields 10
- fields not exported 13
- for specific Web views 142
- multi-choice lists 9
- CustomCode.js 91, 145, 146
- CustomizedFiles folder 13
  - backing up 116
  - custom reports 140, 142
  - explained 96
  - new projects 13

## D

- data corruption 109
- databases
  - backing up 112–117
  - compacting 109
  - DAT 114, 165
  - described 108
  - editing tables 135
  - field definitions 115
  - importing issues 119
  - inventory 125, 126
  - issue 1, 114
  - locked 112
  - project definitions 19
  - releasing 112
  - removing locks 110
  - repairing 109
  - site 129
  - synchronizing issues with
    - project definitions 111
    - users 167
- Databases command (Tools menu) 105
- date fields 23, 29, 120
- date formats 98
- .def file *See* project definitions
- default projects 7
- default values 47, 95
- definitions database *See* project definitions
- Description attribute 87
- Destination Tab 21, 23
- DHTML 91
- Display All Read-Only Fields As
  - Text attribute 87, 91

- Display Read-Only Field As
  - Text attribute 90
- distributed configuration 161
- DNS Error 117
- domain user accounts 94
- double field size 24

## E

- Editor attribute 89
- e-mail submission 101
- employee user account 12
- <Empty> macro 64
- Enable Auto Repair command
  - (Tools menu) 111
- Enable Backups option 117
- encryption 132
- error log 171
- errors
  - "Cannot find server or DNS Error" 117
  - "The page cannot be displayed" 117
  - 404 File not Found 117
- escalation levels 68
- escalation rules 69
- escape sequences 93
- Exchange Server Integration
  - wizard 101

## F

- features
  - described 11
  - enabling and disabling 53
- Field Editor
  - overview 21
  - See Also* fields
- %fieldid% variable 89
- %fieldname% variable 89, 92
- fields
  - adding to issues 22
  - Aligning attribute 89
  - Alignment attribute 89
  - attributes 89–93
  - automatically setting value 58

- captions 9, 14, 23, 90
- changing size 9
- changing type 9
- choice lists
  - automatically updating 90
  - defined 23
  - updating in Web views 13
- Column Span attribute 90
- Computer Name 126
- CSS Class attribute 90
- currency 23
- custom reports 13
- date 23
- decimal numbers 23
- default values 95
- deleting 8, 9, 10, 24
- Destination Tab 21, 23
- disabled 22
- Display Read-Only Field As
  - Text attribute 90
- editing 8–10
- Editor attribute 89
- exporting to Web views 13, 14, 87
- form elements 90
- hiding 24, 93
- integer numbers 23
- inventory 128
- labels 9, 21, 90
- layout in Web views 14
- Layouts 88
- Maintain Revision History 23
- memo 23, 91
- number 23
- queries 13
- read-only 21, 22, 87, 90
- related 58
- renaming 9, 23
- required 22, 88
- security 21, 22
- Show in Choice Lists 22
- Show Selected Items in Text
  - attribute 92
- Show Selected Items In
  - Tooltip attribute 93
- size 23
- sorts 13
- spanning columns 90
- tabs 9, 23



- tblDtsFields 115
- text 23, 91, 92
- time 23
- timestamping 144–145
- types of 23
- updating styles 9
- URL Button CSS attribute 92
- URL buttons 92
- Visible attribute 24, 93
- Width attribute 91
- yes/no 23
- %fieldvalue% variable 89, 92, 132
- file uploads 117
- form elements
  - CSS classes 90

## G

- global choice lists 48, 167
- global databases 105
- group leader user account 12
- groups
  - adding users 52
  - Admin 11
  - creating 51
  - defined 43
  - deleting 51
  - feature permissions 53–55
  - Guests 11
  - project access permissions 11, 17, 19, 56
  - removing users 52
  - setting permissions 10–11
  - Users 10
  - Web view access permissions 11, 87
- Groups command (Tools > Web menu) 51
- Guests group 11

## H

- HelpDesk
  - copying to another computer 171

- moving to another computer 169
- HelpDesk Admin 2, 25, 111, 163
- HelpDesk project 8
- HelpDesk Server 162
- HelpDesk Web Admin 3, 25, 99
- HelpDesk Web Server 162
- HelpDeskServer folder 115
- Html code after control
  - defined 91
  - timestamping 144, 146
- Html code before control
  - defined 91
  - timestamping 146

## I

- Import Issues 119
- importing users 44
- integer field size 24
- Integrity command (Tools menu) 110, 172
- inventory
  - about 125
  - adding tab 128
  - customizing reports list 137
  - extracting information 127
  - fields 128
  - linking to database 125, 126
  - site databases 129
- issue database
  - backing up 115
  - DAT 165
  - described 1, 165
  - importing 119
  - synchronizing with project definitions 110
  - synchronizing with revision history 111
  - tblAttachments 165
  - tblDts 165
  - tblFixInformation 165
- issueagent user account 80
- issues
  - deleting 107
  - importing 119

- linking 88
- numbers 120
- printing 9, 13, 141
- recycling numbers 107
- submitting via e-mail 101
- See *Also* fields
- Issues per Page attribute 87

## J

- Javascript 91

## K

- keyword searches 30
- Knowledge Base views
  - described 86
  - URLs 93

## L

- labels
  - changing 23
  - choice lists 23
  - Field Caption 21, 23
  - See *Also* captions
- layouts
  - defining 32–33
  - exported fields 88
- licenses 111, 163
- Licenses command (Tools menu) 111
- licenses database 116
- Like operator 31
- line charts 40
- Load Issues Not In Query attribute 87
- locks 110, 172
- locks, database 112
- logging off users 107, 169
- logon accounts 11, 43
- logon sessions 20
- Logon.asp 93, 97, 155
- Logons Editor 110
- Logons Editor command (Tools menu) 107

logos 151, 152, 155  
long integer field size 24

## M

macro65.bas 148  
macros  
  <Any> 64  
  defining 148  
  <Empty> 64  
  <New Issue> 63  
  <None> 29, 41  
  <Today> 29  
  <User> 29, 77  
  <User in Group> 59, 63, 77  
  <Value of Field> 49, 64  
mail server options 80  
MAPI 80  
Maximum Notification Retries  
  option 81  
Memo fields 89  
memo fields 91  
  defined 23  
  timestamping 144–145  
MemoFieldWidth CSS class 14,  
  90  
MIME types 118  
Monitor Interval 108  
moving HelpDesk 169  
Mq Issue Agent 79, 80, 162  
Mq Issue Agent service 112  
Mq.Evaluator service 71  
multi-choice lists 9, 23

## N

network traffic, reducing 108  
<New Issue> macro 63  
<None> macro 29, 41  
normal Web views 86  
Not Like operator 31  
Notification - Detailed Record  
  report 9  
Notification - Summary report 9  
notification service 79, 80, 162

notifications  
  attachments 147  
  bounces 81  
  contents 148  
  copying to new projects 18  
  e-mail contents 78  
  escalation rules 70  
  examples 75–76  
  field updates 23  
  file formats 147  
  formatting 9  
  Include macros 148  
  mail server options 80  
  maximum retries 81  
  Mq Issue Agent service 112  
  retries 81  
  send failures 81  
  setting up 14, 79–80  
  sharing between projects 18  
  user account 80, 163  
  when conditions 77  
  workflow 78  
number fields 23  
Number of Characters attribute  
  92  
Number of Visible Items  
  attribute 92

## O

options  
  Always verify locked  
    databases 112  
  Custom Report Engine 35  
  Enable Backups 117  
  Maximum Notification Retries  
    81  
  Monitor Interval 108  
  Send immediate shutdown  
    message 108  
  Send Invalid Notifications To  
    81  
  Server Mail Interval 80  
  Server Mail Sender 80  
  Server Mail System 80  
  Server MAPI Profile 80  
  SMTP Server 80  
Standard Report Engine 35,  
  139  
Owner field 12, 13, 120

## P

pages, report 41  
pages, Summary List 87  
passwords 50, 54, 80, 95  
performance  
  number of projects 7  
  optimizing 109  
  updating choice lists 13  
permissions 169  
pie charts 36, 38  
Priority field 30  
Problem Area field 30  
Progress controlled by parent  
  field 88  
Progress field  
  automating workflow 57  
  child issues 88  
  choice table 10  
  database table 166  
  editing 25, 26  
  importing 120  
  relationship with State 26  
  renaming 9  
project definitions  
  backing up 115  
  .def file 166  
  described 19  
  macros 148  
  Progress choice table 10  
  synchronizing with issue  
    database 110  
  tables 166  
  tblIDsFields 115, 166  
  tblState 166  
  tblSubstate 10, 166  
  user choice lists 143  
project folder 115  
projects  
  access permissions 7, 11  
  administering 1  
  base projects 7  
  BugTrk 8

- creating 7, 13, 17
- current users 20
- customized files 13
- database engine 19
- databases 105
- defined 17
- definitions database 1, 19
  - See *Also* project definitions
- deleting 19
- deleting issues 107
- folders 115, 116
- Groups Allowed to Open 11, 17, 19, 56
- HelpDesk 8
- hiding users 50
- importing issues 119
- location 19
- one vs. many 7
- properties 19
- relocated 169
- styles and notifications 18
- templates 19
- properties, project 19

## Q

- queries
  - Contains operator 30
  - dates 29
  - defining 29–31
  - exporting to Web views 88
  - keyword searches 30
  - <None> macro 29
  - relational operators 29
  - Revision Number field 29
  - rolling back 13
  - <Today> macro 29
  - <User> macro 29
  - Web views 13
  - wildcards 31
  - work teams 49

## R

- RCviewer.asp 132
- read-only fields 22, 87, 90
- Read-Only For 21, 22

- read-only Web views 86
- regional settings 98
- regular expressions 31
- relationships, between issues 88
- relocate
  - attachments 106
- Relocate command (Tools menu) 105, 106
- Relocation Wizard 169
- remote control
  - about 131
  - adding button 131
  - compression 132
  - encryption 132
  - inventory 126
  - removing buttons 133
  - requirements 131
  - security key 132
  - security keys 133
  - setting up 131
- removing locks 172

## repair

- databases 109
- security 109
- Repair and Compact command (Tools menu) 108, 109
- Report Creation API 35

## reports

- adding fields 9
- Current Issue - Detailed 9, 13, 141
- customizing 138–140, 140–141, 142
- HTML 140, 140–141
- listing 38
- Notification - Detailed Record 9
- Notification - Summary 9
- pages 41
- summary 36
- time 39–41
- trend 39–41
- viewing 35

## required fields 88

- revision history
  - enabling/disabling 23

- synchronizing 111
- Revision Number field 29, 75, 76
- .rpt files 139, 141

## S

### security

- fields 21, 22
- logon accounts 43
- permissions
  - discussed 10–11
  - features 53–55
  - projects 56
  - Web views 87
  - user groups 43, 51, 56
- security keys 131, 132, 133
- Security Repair program 109
- Send immediate shutdown message option 108
- Send Invalid Notifications To option 81
- Server Mail Interval option 80
- Server Mail Sender option 80
- Server Mail System option 80
- Server MAPI Profile option 80
- service level agreements 69
  - creating 72
  - defined 67
  - disabling 73
  - escalation levels 68
  - operational hours 71
  - reporting 72, 73
  - running programs 71
  - service types 73
  - setting up 67
  - target times 67
- service types 73
- services 79, 80, 112, 162
  - Mq.Evaluator 71
- sessions, logon 107
- Set Up Global Group command 4
- Show Selected Items in Text attribute 92

- Show Selected Items In Tooltip attribute 93
  - Shutdown Process 112
  - single choice lists 23
  - single field size 24
  - site databases 129
  - SMTP Server option 80
  - sorts
    - choice order 26, 32
    - defining 31–32
    - exported fields 13
  - SpanTwoWidthOne CSS class 90
  - SQL Query Analyzer 135
  - SQL Server
    - DEF database 115
    - issue database 115
    - USERS\_MDB database 116
  - standard configuration 161
  - Standard Report Engine option 35, 139
  - State field 26, 120
  - style sheets (CSS) 90, 151, 151–156
  - styles
    - copying to new projects 18
    - defined 17
    - editing fields 9
    - sharing between projects 18
  - submit-only views
    - contacts 12, 150
    - cookies 150
    - described 86
    - logon accounts 12
    - URLs 93, 150
  - Submitter field 12, 13, 64, 120
  - Summary List 84, 87
  - system workgroup file 109
- T**
- tabs
    - adding fields 23
    - Contact 23
    - editing 27
    - Inventory 128
    - moving fields 9
  - tblAttachments 120, 136, 165
  - tblDts 119, 142, 165
  - tblDtsFields 115, 143, 166
  - tblFixInformation 165
  - tblRevisionHistory 165
  - tblState 166
  - tblSubstate 10, 166
  - tblUser 120, 121, 124, 142, 167
  - templates, project 19
  - text area form elements 23
  - text fields 23
  - text reports 37, 40
  - TextFieldWidth CSS class 90
  - time fields 23, 120
  - time formats 98
  - Timeout attribute 87
  - timesheet.js 156
  - timesheets
    - adding rows 156
    - adding to Web views 158
    - changing starting day 158
  - Timesheets projects 156, 158
  - timestamping 144–145
  - tmplInventoryTab.rec 137
  - tmplRecord.html 144
  - To 151
  - <Today> macro 29
  - Tools
    - Options 108, 112
  - Tools menu
    - Attachments command 106
    - Databases command 105
    - Enable Auto Repair command 111
    - Integrity Editor command 110
    - Licenses command 111
    - Logons Editor command 107
    - Options command 117
    - Relocate command 105, 106
    - Repair and Compact command 108, 109
    - Web > Groups command 51
    - Web > Users command 47
    - Web command 2, 3, 83, 99
  - Windows Account command 162
  - traffic, network 108
  - troubleshooting
    - Admin problems 111
    - data corruption 109
    - logon problems 109
    - performance 109
    - removing locks 110
    - security 109
- U**
- Update test 23, 75
  - uploaded files 117
  - URL attribute 92
  - URL Button CSS 92, 132, 136
  - URL buttons 92
  - URLs, for Web views 93, 151
  - <User in Group> macro 59, 63, 77
  - <User> macro 29, 77
  - users
    - adding choice lists of 143
    - adding to groups 52
    - admin account 12
    - analyst account 12
    - anonymous access account 94
    - assigning to work teams 48
    - authentication 47, 51
    - backing up database 115
    - categories 49
    - CensusUser account 95
    - database 167
    - default values 47
    - defined 43
    - deleting 142
    - disabling 12, 50
    - editing user information 50
    - employee account 12
    - group leader account 12
    - group membership 52
    - hiding in projects 50
    - importing 44, 120, 121
    - issueagent 80
    - logging off 107, 112, 169

- logon accounts 11
  - MDB database 116
  - notifications account 163
  - passwords 50, 80
  - removing from choice lists 143
  - removing from database 142
  - removing from groups 52
  - removing locks 110
  - roles and responsibilities 5
  - submit-only Web views 86
  - Web view permissions 87
  - windows account 94
  - work teams 48
  - Users command (Tools > Web menu) 47
  - users database 167
  - Users group 10, 87
  - users.mdb 167
  - USERS\_MDB database 167
  - USR database 167
- V**
- validatelogon.asp 156
  - <Value of Field> macro 49, 64
  - Vertical Alignment attribute 89
  - view toolbar 84
  - virtual directories
    - creating 94
    - defined 93
    - Logons Editor 108
    - re-creating 117
  - Visible attribute 24, 93
- W**
- Web Admin command (Tools > Web menu) 3, 99
  - Web View Editor 2, 83, 163
  - Web View Editor command (Tools > Web menu) 2, 83
  - Web Views
    - Timesheets 156, 158
  - Web views
    - access permissions 11, 87
    - columns 14
    - copying 85
    - creating 83
    - CSS 98
    - custom reports 142
    - CustomizedFiles folder
      - backing up 116
      - custom reports 140, 142
      - explained 96
      - from base project 13
    - customizing 91, 96, 151, 151–156
    - date formats 98
    - default values 95
    - defined 1, 83, 84
    - deleting 86
    - description 87
    - disabling features 54
    - Display All Read-Only Fields
      - As Text attribute 91
    - exporting fields 13
    - exporting queries 88
    - generating 12–14, 90
    - Groups Allowed to Open 11
    - groups allowed to open 87
    - hiding fields 93
    - inserting custom code 91
    - Inventory tab 128
    - Knowledge Base 86
    - layout of fields 14, 89
    - layouts 88
    - Load Issues Not In Query 87
    - logging off users 107
    - normal 86
    - permissions 54
    - printing issues 13
    - queries 13
    - read-only 86
    - read-only fields 91
    - regenerating 14
    - renaming 86
    - style sheets 98, 151, 151–156
    - styling form elements 90
    - submit-only 12, 86
    - Summary List 87
    - time formats 98
    - timeouts 87
    - URLs 93
    - user interface elements 84
    - virtual directories 93
    - web views
      - work teams 49
  - When 43
  - when conditions 77
  - Width attribute 91
  - wildcards, in queries 31
  - windows account 94
  - Windows Account command (Tools menu) 162
  - Windows NT domains 44
  - Windows Server 2003 117
  - work teams
    - assigning users 48
    - defining 48
    - overview 48
    - queries 49
    - web views 49
  - workflow
    - applying changes to web views 65
    - automating 57
    - conditions 59
    - dependent values rules 58
    - disabling 65
    - macros 64
    - <New Issue> macro 63
    - notifications 78
    - performance costs 59
    - planning 5
    - possible values rule 58
    - projects 59
    - related fields 58
    - rules
      - default names 64
      - defining 63, 64
      - deleting 63
      - described 60
      - disabling 65
      - editing 62
      - evaluating 65
      - examples 57–58
      - format of 59
      - renaming 64
    - Submitter field 64

- templates
  - creating 60
  - described 60
  - editing 61
  - properties 64, 65
- test operators 59
- user groups 63
- work teams 48

## Y

- yes/no fields 23