HP OpenView Service Desk 4.5

Service Desk Administrator's Guide

First Edition

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Preface

This document describes procedures for configuration and maintenance of HP OpenView Service Desk 4.5. Included in the document are instructions for setting up and maintaining user accounts and roles, localization, database maintenance and backup.

This guide is intended for use by any application administrator who has the responsibility to set up and maintain the Service Desk application server for client usability. This will generally mean ensuring Service Desk meets the procedural requirements of the user organization. HP OpenView Service Desk 4.5 is an extremely flexible product, and virtually all functionality is customizable. This great flexibility, however, implies that careful consideration must be applied to the set up and maintenance of the product.

This guide is organized as follows:

- Chapter 1, "Reviewing the Server Status," on page 31 describes the information displayed in the Server Status Console.

- Chapter 2, "Accounts Administration," on page 43 explains how to create and maintain accounts and roles.

- Chapter 3, "Implementing Languages from the Localization Pack," on page 81 describes how to install a localization pack.

- Chapter 4, "Business Logic," on page 97 provides guidance on using database and UI rules.

- Chapter 5, "Opening Forms from the Command Line," on page 137 explains how to use the command line interface to pass data from third party software to Service Desk.

- Chapter 6, "Configuring Service Pages," on page 149 details the processes required to configure Service Desk Service Pages.

- Chapter 7, "Multiple Servers," on page 171 describes how to use Service Desk in a multiple server environment.

- Chapter 8, "Multiple Sessions," on page 179 explains how multiple clients sessions can be set up on a single client PC.

- Chapter 9, "Reporting," on page 187 provides explanations of the reporting facilities provided by Service Desk.

- Chapter 10, "Using E-mail with Service Desk," on page 215 describes how to set up Service Desk for inbound and outbound e-mail messaging.

- Chapter 11, "Archiving," on page 249 explains how to archive Service Desk items.

- Chapter 12, "Administrator Console Export Settings," on page 265 describes how to use the export settings functionality in the administrator's console.

- Chapter 13, "System Maintenance," on page 285 suggests procedures for backing up your Service Desk system.

- Chapter 14, "Database Sizing," on page 297 provides information on how to maintain sufficient "growing" space on your database. This Chapter can be used in conjunction with the two Excel spreadsheets, `SD Oracle8 sizing.xls` and `SD SQL Server sizing.xls`, provided on the Service Desk Windows® CD-ROM.

- Chapter 15, "Support Tools," on page 309 explains how to use the support tools provided with Service Desk 4.5.

Revision History

When an edition of a manual is issued with a software release, it has been reviewed and tested and is therefore considered correct at the date of publication. However, errors in the software or documentation that were unknown at the time of release, or important new developments, may necessitate the release of a service pack that includes revised documentation. Revised documentation may also be published on the Internet, see "We Welcome Your Comments!" in this preface for the URL.

A revised edition will display change bars in the left-hand margin to indicate revised text. These change bars will only mark the text that has been edited or inserted since the previous edition or revised edition.

When a revised edition of this document is published, the latest revised edition nullifies all previous editions.

Table 1   **Revision History**

Edition and Revision Number	Issue Date	Product Release
First Edition	July 2002	Service Desk 4.5

Related Publications

This section helps you find information that is related to the information in this guide. It gives an overview of the Service Desk documentation and lists other publications you may need to refer to when using this guide.

The Service Desk Documentation

Service Desk provides a selection of books and online help to assist you in using Service Desk and improve your understanding of the underlying concepts. This section illustrates what information is available and where you can find it.

NOTE This section lists the publications provided with Service Desk 4.5. Updates of publications and additional publications may be provided in later service packs. For an overview of the documentation provided in service packs, please refer to the readme file of the latest service pack. The service packs and the latest versions of publications are available on the Internet, at http://support.openview.hp.com/cpe/patches and http://ovweb.external.hp.com/lpe/doc_serv respectively. See the section "We Welcome Your Comments!" in this preface for the URLs.

- The Readme.htm files on the Service Desk CD-ROMs contain information that will help you get started with Service Desk. The Readme files also contain any last-minute information that became available after the other documentation went to manufacturing.

  The Service Desk 4.5 server is coded in Pure Java and is platform independent. The installation software for each platform varies. Service Desk is therefore distributed on three CD-ROMs, one each for Microsoft Windows (2000 and NT4), HP-UX, and Sun Solaris. A different readme file is available on each CD-ROM.

- The *HP OpenView Service Desk: Release Notes* give a description of the features that Service Desk provides. In addition, they give information that helps you:

  — compare the current software's features with those available in previous versions of the software;

  — solve known problems.

The Release Notes are available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM . The file name is `Release_Notes.pdf`.

- The *HP OpenView Service Desk: User's Guide* introduces you to the key concepts behind Service Desk. It gives an overview of what you can do with Service Desk and explains typical tasks of different types of Service Desk users. Scenario descriptions are provided as examples of how the described features could be implemented.

  The User's Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `User's_Guide.pdf`.

- The *HP OpenView Service Desk: Supported Platforms List* contains information that helps you determine software requirements. It lists the software versions supported by Hewlett-Packard for Service Desk 4.5.

  The Supported Platforms List is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Supported_Platforms_List.pdf`.

- The *HP OpenView Service Desk: Installation Guide* covers all aspects of installing Service Desk.

  The Installation Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Installation_Guide.pdf`.

- The *HP OpenView Service Desk: Administrator's Guide* provides information that helps application administrators to set up and maintain the Service Desk application server for client usability.

  The Administrator's Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Administrator's_Guide.pdf`.

- The *HP OpenView Service Desk: Data Exchange Administrator's Guide* explains the underlying concepts of the data exchange process and gives instructions on exporting data from external applications and importing it into Service Desk. The data exchange process includes importing single service events and batches of data.

  The Data Exchange Administrator's Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Data_Exchange.pdf`.

- The *HP OpenView Operations Integration Administrator's Guide* explains the integration between Service Desk and HP OpenView Operations for Windows and UNIX®. This guide covers the installation and configuration of the integration and explains how to perform the various tasks available with the integration.

  The OpenView Operations Integration Administrator's Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `OVO_Integration_AG.pdf`.

- The *HP OpenView Service Desk: Migration Guide* provides a detailed overview of the migration from ITSM to Service Desk, to include an analysis of the differences in the two applications. Detailed instructions in this guide lead through the installation, configuration and other tasks required for a successful migration.

  The Migration Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Migration_Guide.pdf`.

- The *HP OpenView Service Desk: Web API Programmer's Guide* contains information that will help you create customized integrations with Service Desk using the Service Desk Web API. This API is particularly suited for developing Web applications.

  The Web API Programmer's Guide is available as a PDF file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Web_API_pg.pdf`.

- The *HP OpenView Service Desk: Data Dictionary* contains helpful information about the structure of the application.

  The Data Dictionary is available as an HTML file on the HP OpenView Service Desk 4.5 for Windows CD-ROM. The file name is `Data_Dictionary.htm`.

- The *HP OpenView Service Desk 4.5 Computer Based Training* (CBT) CD-ROM is intended to assist you in learning about the functionality of HP OpenView Service Desk 4.5 from both a user and a system administrator perspective. The CD-ROM contains demonstration videos and accompanying texts that explain and show how to perform a wide variety of tasks within the application. The CBT also explains the basic concepts of the Service Desk application.

The *HP OpenView Service Desk 4.5 Computer Based Training* (CBT) CD-ROM will be shipped automatically with the regular Service Desk software. The CBT will be available for shipment shortly after the release of the Service Desk software.

- The online help is an extensive information system providing:

  — procedural information to help you perform tasks, whether you are a novice or an experienced user;

  — background and overview information to help you improve your understanding of the underlying concepts and structure of Service Desk;

  — information about error messages that may appear when working with Service Desk, together with information on solving these errors;

  — help on help to learn more about the online help.

  The online help is automatically installed as part of the Service Desk application and can be invoked from within Service Desk. See the following section entitled "Using the Online Help" for more information.

Reading PDF Files
You can view and print the PDF files with Adobe® Acrobat® Reader. This software is included on the HP OpenView Service Desk 4.5 CD-ROM. For installation instructions, see the `readme.htm` file on the CD-ROM.

The latest version of Adobe Acrobat Reader is also freely available from Adobe's Internet site at http://www.adobe.com.

Using the Online Help
You can invoke help from within Service Desk in the following ways:

- To get help for the window or dialog box you are working in, do one of the following:

  — Press **F1**.

  — Click the help toolbar button 🔃.

  — Choose `Help` from the `Help` menu.

  — Click the help command button ⬜ Help ⬜ in a dialog box.

- To search for help on a specific subject using the table of contents or the index of the help system: choose `Help Contents & Index` from the `Help` menu.

When you are in the help viewer, you can find help on how to use the help system itself by clicking the `Help` toolbar button:

Service Desk also provides tooltips and "What's This?" help for screen items like buttons, boxes, and menus.

A *tooltip* is a short description of a screen item. To view a tooltip, rest the mouse pointer on the screen item. The tooltip will appear at the position of the mouse pointer.

"What's This?" help is a brief explanation of how to use a screen item. "What's This?" help generally gives more information than tooltips. To view "What's This?" help:

1. First activate the "What's This?" mouse pointer in one of the following ways:

   - Press **Shift+F1**.

   - Click the "What's This?" toolbar button ▶?.

   - Choose `What's This?` from the `Help` menu.

   - In dialog boxes, click the question mark button ? in the title bar.

   The mouse pointer changes to a "What's This?" mouse pointer ▷?.

2. Then click the screen item for which you want information. The "What's This?" help information appears in a pop-up window.

To close the pop-up window, click anywhere on the screen or press any key on your keyboard.

Typographic Conventions

The table below illustrates the typographic conventions used in this guide.

Font	What the Font Represents	Example
Italic	References to book titles	See also the *HP OpenView Service Desk: Installation Guide*.
	Emphasized text	*Do not delete* the System user.
Bold	First-time use of a term that is explained in the glossary	The **service call** is the basis for incident registration.
`Courier`	Menu names	You can adjust the data view with the commands in the `View` menu.
	Menu commands	Choose `Save` from the menu.
	Button names	Click `Add` to open the Add Service Call dialog box.
	File names	To start the installation, double-click `setup.htm`.
	Computer-generated output, such as command lines and program listings	If the system displays the text `C:\>dir a:` `The device is not ready` then check if the disk is placed in the disk drive.
`Courier bold`	User input: text that you must enter in a box or after a command line	If the service call must be solved within 30 minutes, enter **`30`**.

Font	What the Font Represents	Example
Courier italic	Replaceable text: text that you must replace by the text that is appropriate for your situation	Go to the folder *X*:\\Setup, where *X* is your CD-ROM drive.
Helvetica bold	Keyboard keys A plus sign (**+**) means you must press the first key (**Ctrl** in the example), hold it, and then press the second key (**F1** in the example).	Press **Ctrl+F1**.

We Welcome Your Comments!

Your comments and suggestions help us understand your needs, and better meet them. We are interested in what you think of this manual and invite you to alert us to problems or suggest improvements. You can submit your comments through the Internet, using the HP OpenView Documentation Comments Web site at the following URL:

http://ovweb.external.hp.com/lpe/comm_serv

If you encounter errors that impair your ability to use the product, please contact the HP Response Center or your support representative.

The latest versions of OpenView product manuals, including Service Desk manuals, are available on the HP OpenView Manuals Web site at the following URL:

http://ovweb.external.hp.com/lpe/doc_serv

Software patches and documentation updates that occur after a product release, will be available on the HP OpenView Software Patches Web site at the following URL:

http://support.openview.hp.com/cpe/patches

1 Reviewing the Server Status

This chapter explains the layout and functionality of the application server status console.

Application Server Status Console

Whether the application server status interface is displayed or not depends on the `Show Server Status` check box that is located on the `General` tab of the `Server Settings Editor` (see *Configuring the Application Server* in the *HP OpenView Service Desk: Installation Guide*). This check box is not checked by default when the application server is installed. The server status console will not be displayed until the checkbooks is checked and the server service started. The check box setting is only picked up when the server is started. If the check box is cleared once the server is running, or the GUI is closed using the `Close` button, the console will still not be displayed until the check box has been checked again and the server re-started.

The Server Status console allows you to monitor the current situation of the application server.

Use the `Stop Server` button to close the server status and stop the server running.

Use the `Refresh` button to display the latest values in all fields. The values are updated at regular intervals, but the `Refresh` button can be used to force the interval.

The `Close` button closes the server status console, while the server remains running. This is effectively the same as clearing the `Server Interface` check box on the `General` tab of the `Server Settings Editor`, and the server must be restarted for the interface to be displayed again.

The following data is displayed:

Logfile tab

The `Logfile` tab contains the following fields:

Figure 1-1   **Application Server Interface - Logfile tab**
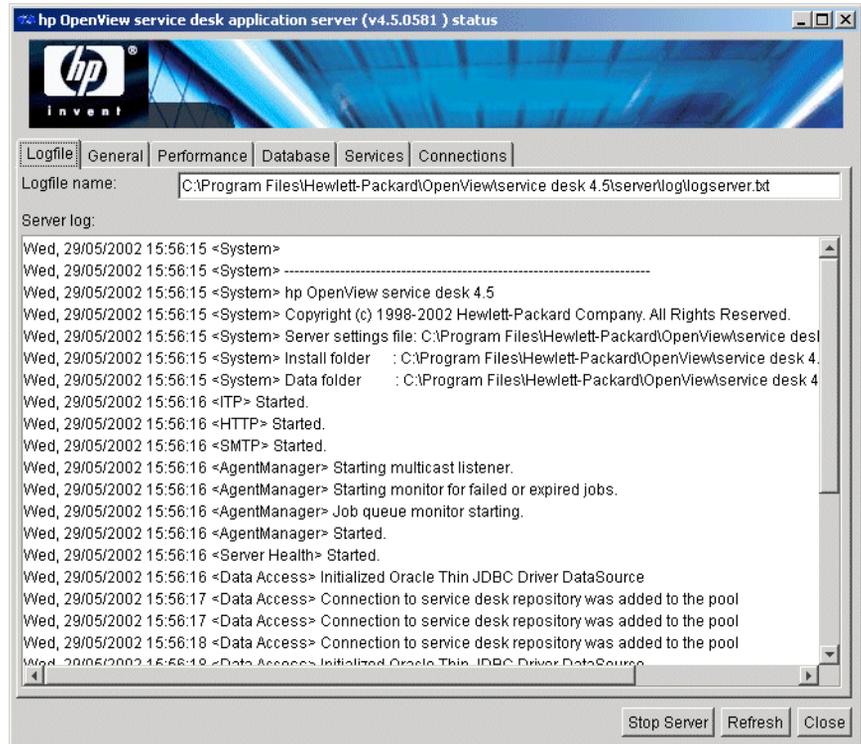
Logfile name

The full path and file name of the server log is displayed.

Server log

The Server Log field displays all events, excepting database rule events, that have occurred on the server. The log records all events since the server was last started until the screen buffer is full, at this point the log is truncated back to half the number of events. This is done to make room for new events to be recorded without using up too much memory. The actual logfile at the location given above does not get truncated.

NOTE	There is no record of errors at the server startup before the server log file is initialized.

General tab

The General tab contains the following fields:

Figure 1-2   **Application Server Interface - General tab**
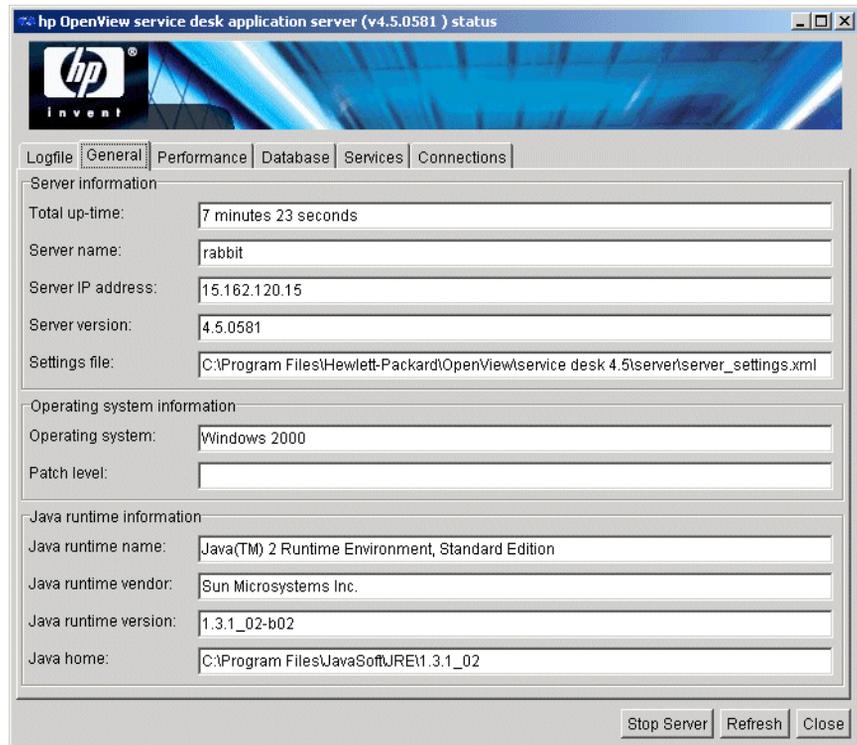
Server information

- `Total up-time:` This field displays the total amount of time since the server was last started.

- `Server name:` This field displays the name of the machine where the server is installed.

- `IP Address:` The IP address of the server machine is displayed.

- `Server version:` This field displays the version number of the server software.

- `Settings file:` The full path and file name of the server settings file is given.

Operating system information

- `Operating system:` The operating system the application server is running on.

- `Version:` The version number of the operating system software.

- `Architecture:` The machine that the server is running on.

Java™ runtime information

- `Java runtime name:` The name of the Java runtime software installed on the server is displayed.

- `Java runtime vendor:` This field displays the supplier of the Java runtime software be used by the server.

- `Java runtime version:` This field displays the version number of the Java runtime software be used by the server.

- `Java home:` The full path and file name for the Java runtime software is given.

Performance tab

The `Performance` tab shows data related to how the application server is performing:

Figure 1-3   **Server Status Console - Performance tab**
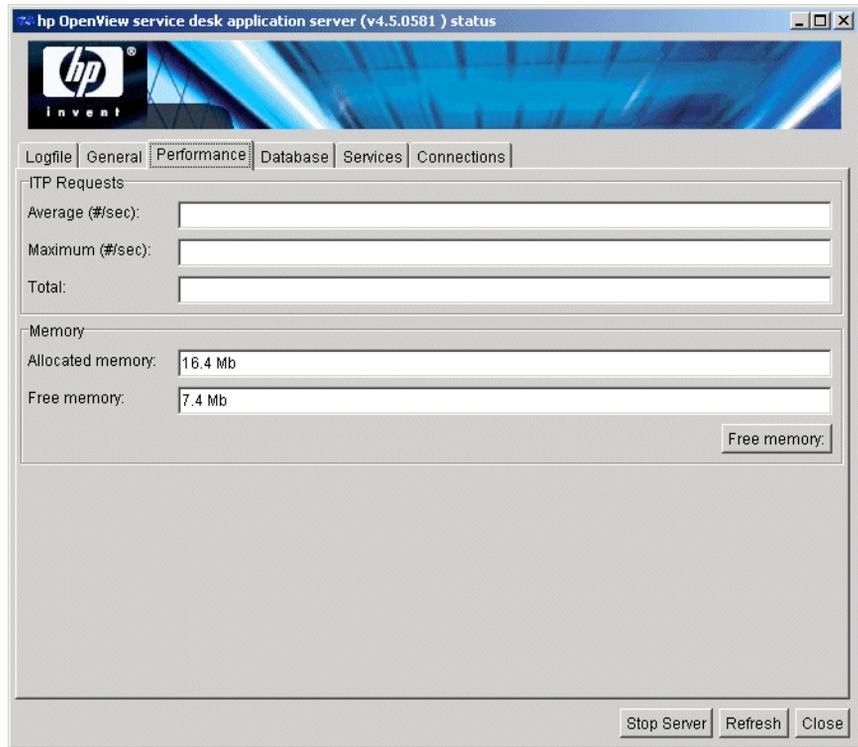
ITP Requests

These figures provide a rough estimation of the server's workload. If the figures become to high it may be worth considering adding an extra server to the multiple server environment.

- Average (# requests): the average number of itp requests per second. This figure is calculated by counting the number of itp requests per minute and dividing the count by 60.

- Maximum (# requests): this figure represents the highest level the Average value has reached since the server was started.

- Total: the total number of itp requests made since the server was started.

Memory

The memory the Virtual Machine makes available for Service Desk. The sum of the allocated memory and free memory equals the total memory made available for the server by the virtual machine.

- `Allocated Memory`: the amount of memory currently allocated in the virtual machine.

- `Free Memory`: the amount of memory available for Service Desk but currently unallocated.

Clicking the `Free Memory` button forces the virtual machine's garbage collector to clean up the memory.

Database tab

The `Database` tab shows details of the database used by the application server:

Figure 1-4   **Server Status Console - Database tab**
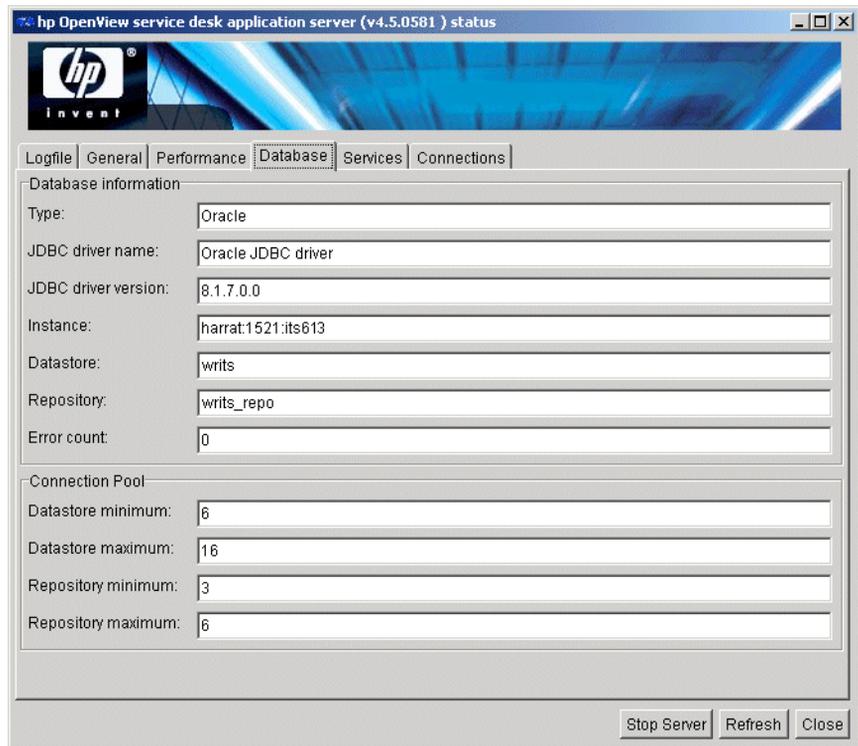
Type

This field shows the type of database currently used by Service Desk.

JDBC driver name

This field shows the type of Java Database Connectivity (JDBC) driver used by the server.

JDBC driver version

This field shows the current version of JDBC driver used by the server.

Instance

This field shows the name of the database server instance. In the case of a server connection to an Oracle database the instance field will display the servername, port number and sid (Oracle instance identifier) in the

form `servername:port:sid`. A SQL Server database may show only the server name. See the Chapters 2 and 3 in the *HP OpenView Service Desk Installation Guide*.

Datastore

This field shows the account name for the datastore user.

Repository

This field shows the account name for the repository user.

Error Count

This field shows the number of errors registered in the log file displayed on the `General` tab.

Connection Pool

The connection pool settings are defined using the advanced button on the `Connection` tab of the `Database Account Properties` dialog box. This is described in the *Configuring the Application Server* of the *HP OpenView Service Desk 4.5 Installation Guide*.

- `Datastore minimum`: the minimum number of connections the server should keep open to the datastore account.

- `Datastore maximum`: the maximum number of connections the server should keep open to the datastore account.

- `Repository minimum`: the minimum number of connections the server should keep open to the repository account.

- `Repository maximum`: the maximum number of connections the server should keep open to the repository account.

Services tab

The `Service` tab shows details of the services provided by the Service Desk application server.

The Services and the port numbers they use are defined using the Configuration Editor. This is described in the *Configuring the Application Server* of the *HP OpenView Service Desk 4.5 Installation Guide*.

Figure 1-5 **Server Status Console - Services tab**
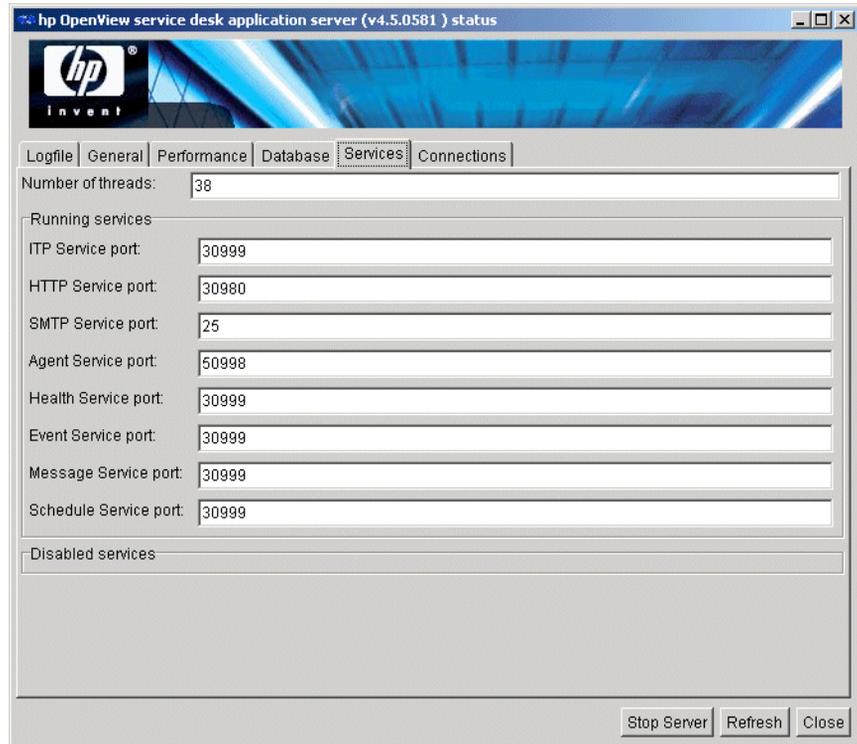
Number of Threads

The number of threads currently being used by the server, this will vary and is related to the number of services running.

Running Services

These field show the service currently be run by Service Desk.

- `ITP Service Port`: shows the port number the ITP service listens on, this is set on the `ITP` tab of the configuration editor.

- `HTTP Service Port`: shows the port number the HTTP service listens on, this is set on the `HTTP` tab of the configuration editor.

- `SMTP Service Port`: shows the port number the SMTP service listens on, this is set on the `SMTP` tab of the configuration editor.

- `Agent Service Port`: shows the port number to Service Desk Agent communicates on.

- `Health Service Port`: shows the port number used by the health service. The health service communicated through the itp port to monitor how many servers are currently running in the network. A list of active servers is maintained in the database.

- `Event Service Port`: shows the port number used for Service Desk events. Events are communicated through the itp port.

- `Message Service Port`: shows the port number used for messages. Messages are communicated through the itp port.

- `Schedule Service Port`: shows the port number used for scheduled tasks. Scheduled tasks are communicated through the itp port.

Disabled Services

When the `Activate ITP`, `HTTP`, or `SMTP protocol` check box on the relevant tab page of the configuration editor is cleared, the service is disabled. Disabled services are moved from the `Running Services` list above to the `Disabled Services` list.

Connections tab

The `Connections` tab shows details of the clients and servers:

Figure 1-6   **Application Server Interface - Connections tab**
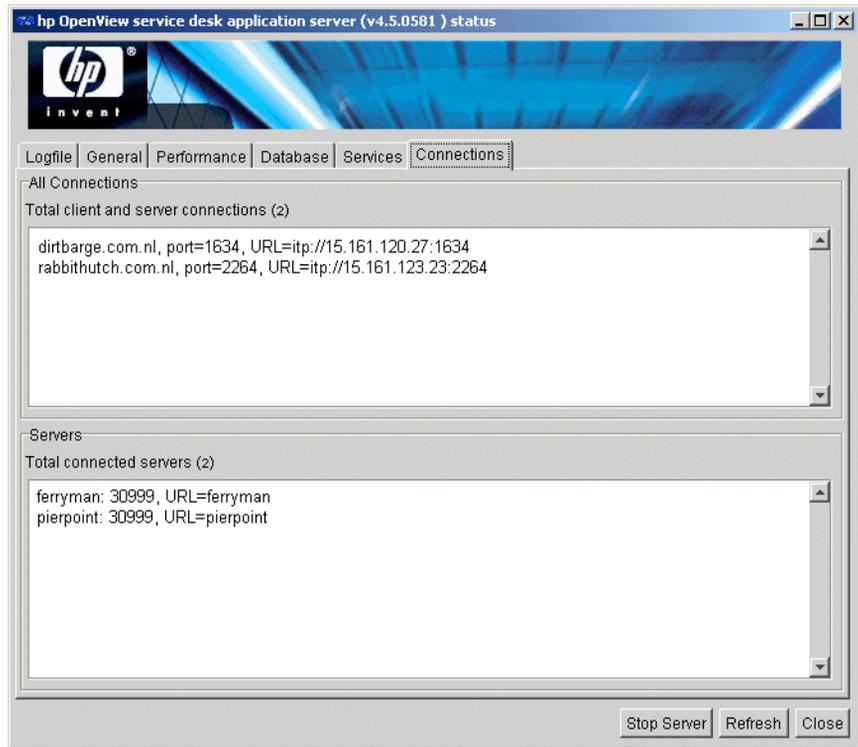
Total client and server connections

This field shows a list of all itp connections, both clients and servers, currently connecting to the application server process.

Servers

The Servers field shows a list of all servers currently running in the multiple server environment. The list will update within a few minutes of a server disconnecting or connection to the Service Desk environment.

2 Accounts Administration

This chapter discusses the administration and maintenance tasks associated with User and Administrator Accounts, their permitted access rights and other security related issues.

Accounts

In a typical set-up, Service Desk requires three types of accounts you will need to set up; a database user, an application administrator, and at least one end user. This relationship between client, server, and database is not affected by the number of clients or the number of servers used in a multiple server environment.

When you install the Service Desk application server, you will also have to define a new, or specify an existing, database administrator account. This account is only used for the installation and configuration. Once the database is setup and the application server installed, Service Desk will not use it again.

Types of Accounts

As mentioned above, there are three types of accounts:

- Database user accounts.
  The Service Desk application server uses these to communicate with the database, and they are set up at installation using the sever settings editor (see *Chapter 5, Configuring the Application Server* in the *HP OpenView Service Desk 4.5: Installation Guide*). Once these are set up, they will not normally be modified. If you are using an SQL Server database there is only one database user needed per Application Server - Database relationship, but if you are using an Oracle database there could be one or two accounts (a single user, or a database user and a repository user) per AppServer - Database relationship. By Application Server - Database relationship we refer to the communication between a single application server and a single database. The database and server accounts are accessible by selecting `Programs` from the start menu, then `hp OpenView service desk 4.5` and then finally `Accounts` from the service desk sub menu.

- Service Desk Administrator account.
  Each installation of the Service Desk application server must have at least one Service Desk administrator account. This administrator account has all the roles and authorization requirements to access every function of the Service Desk application. The Service Desk administrator does not count as one of your licensed users.

The Administrator account has the default user name of "system" with the default password of "servicedesk", both are case sensitive.

- User accounts.
  The number of end user accounts, using the Service Desk client software, is dictated by the number of licenses purchased, and their access to Service Desk functionality is limited by the Roles assigned to them. Roles are assigned to user accounts by the Service Desk administrator at the time the accounts are created and they can be modified at any time. The Service Desk user account details are stored in the file user_settings.xml in the user's Windows profile by the connections wizard.

  The client accounts used to connect to the application server are maintained using the client account screen described in the section *Client Account Settings* of *Chapter 6, Installing the Client* in the *HP OpenView Service Desk 4.5: Installation Guide*.

  The users will not have to enter their log on name and password each time they start Service Desk as it will be read from the Windows registry, although you can specify that clients must log on each time they connect to application server (see "Logon Screen" on page 78). However, each time a user tries to access Service Desk from a client machine that he has not used before, the connection wizard will be started. When the connection is made entries will be added to the Windows registry.

  There are two variations of the standard client account. These are non-UI accounts for integrations and Service Pages (SP) users. These accounts can not log in to Service Desk, but they can send data to the application server and database. However, they are not counted among the licensed users.

Licensing

For information about how to get and install your license keys, see Chapter 4 of the *HP OpenView Service Desk 4.5 Installation Guide*.

Three types of licenses are supported with Service Desk 4.5:

- Named user licenses:

A named user license allows you to create the specified number of Service Desk user accounts that will have access to the Service Desk graphical user interface (GUI) no matter how many other users are connected (as long as the maximum number of named users specified in the license is not exceeded). Such an account is especially suited for system administrators and key users that need to be able to access the application at all times. A named user can access up to three sessions at the same time.

• Concurrent user licenses:

A concurrent user license allows the specified number of Service Desk user accounts access to Service Desk simultaneously (not counting the named users that are connected). You can create as many concurrent user accounts as you wish, but no more than the licensed number of concurrent user accounts can access Service Desk at the same time. Concurrent users can access multiple sessions at the same time, but each session counts as a concurrent user.

• Module licenses:

A module license gives all your named and concurrent users access to the module or modules specified in the module license.

You always need one or more module license in addition to your named and concurrent user licenses.

You must not create more user accounts than your license permits. If you have used a temporary license key to create more users than you have a permanent license for, you must delete the extra users before the temporary license key runs out. If you do not, all user access to Service Desk will be denied at the expiry date. A system administrator however, will still be able to access Service Desk.

When entering your license key in Service Desk, enter it exactly as shown, without quotation marks; it is case-sensitive.

Creating Accounts

Once you have created their accounts, the users must connect to the Server using the Connections Wizard before they can log onto the Service Desk client on their machine.

The first time a user logs on the connection wizard will guide him through the connection procedure. To complete this wizard the user will need to know the following information:

- server host name

- account name

- initial password

It is worth bearing in mind before creating user accounts that it may be worthwhile to prepare some standards in advance. For instance, you may decide that the user's login name for Service Desk should be the same as that for NT to minimize confusion, or that the Friendly Name (which the user can edit in the wizard) should follow some sort of specific format for consistency.

Before users can access Service Desk, their accounts must each be assigned a Role. There are two ways to assign a role to an account, one is described at the end of this section, and the other is described in the following section that discusses Roles.

NOTE   To create a Service Pages User Account see "Service Pages User Accounts" on page 150.

To create an account, do the following:

1. Start the Service Desk application server.

2. From the `Tools` menu, choose `System`.

3. In the `Administrator Console`, expand the `Security` node below the Service Desk icon.

4. In the `Access` branch, select `Application Account`.

Figure 2-1   Administrator console dialog box
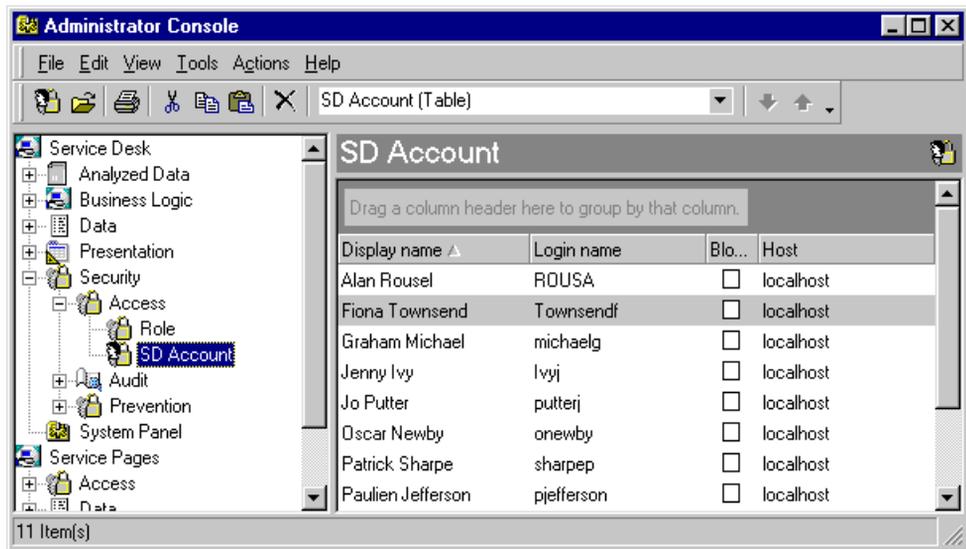
5. Right-click in the `Account` **view and choose** `New Application`
`Account` **from the popup menu. The Account dialog box is displayed:**

Figure 2-2   **Account dialog box**

6. Type the name to be displayed when referring to this account. This is the name that will normally be displayed, for instance, in the Active Service Desk sessions tab page.

7. Enter the Login name that the user will use to log in to Service Desk. This may be the same as the user's NT log in, but it is not required.

8. Enter a password, and confirm the entry. This may be the same as the user's NT password. The rules for the passwords are described below in the section "Setting the Password Limitations" on page 79. If you provide the user with a password they can change it by using Options from the Tools menu and then selecting Accounts and then Change Password.

9. Enter the name of the users 'home' machine in the `Host` field, this will be used by the Service Desk agent when processing actions. If the user logs onto Service Desk from a different machine, actions processed by the agent will still be routed to the user's home machine unless this field is changed to the new machine.

10. Enter the user's `Default language`, by selecting a language from the drop down list. Only languages displayed in the list have been installed in the Service Desk database for localization.

11. Select the user's `Default time zone` from the drop down list. All records are stored on the database as Greenwich Mean Time, and adjusted by the difference dictated by the user's time zone setting when created, viewed, or modified.

12. Choose an Account type from `Named User`, `Concurrent User`, or `Integration` user. A Named User is a user who is specifically named in a license agreement, a Concurrent User is one of a specified number of users in a license agreement who can be logged on at any one time (named users and concurrent users are counted separately for licensing), and an Integrations user is an account created for passing data to and from other software programs. An Integrations user is not counted in the license agreement.

13. Use the `Blocked` check box if you want to ensure that the account cannot be used. This may be a useful alternative to deleting an old or redundant account, as described below. A blocked account is no longer counted in the licensing.

Relating Accounts to Person Items in Service Desk

Before an account can be used, a Service Desk person record must be created (or an existing one modified) and the account name linked to the person record using the `Account` field in the person record. For more information about creating and modifying Person items see the Service Desk Online Help.

Modifying Accounts

Once created, a user account can be changed at any time.

To modify an account:

1. Start the Service Desk application server.

2. From the `Tools` menu, choose `System`.

3. In the `Administrator Console`, **expand the** `Security` **node.**

4. In the `Access` **branch, select** `Application Account`.

5. Select the account you want to modify. Right-click in the `Account` view and choose `Open` from the popup menu.

6. In the account dialog change the details as required.

Blocking and Removing Accounts

User accounts can be fully removed from the system, or blocked so that they cannot be used.

When you delete an account you must first remove or re-assign any associated records in the database, for example, service calls. For this reason it is often preferable to block an account rather than physically delete it. Once an account is blocked it no longer counts towards the total for licensing purposes.

To block an account:

1. Start the Service Desk application server.

2. From the `Tools` menu, choose `System`.

3. In the `Administrator Console`, **expand the** `Security` **node.**

4. In the `Access` **branch, select** `Application Account`.

5. Select the account you want to block. Right-click in the `Account` view and choose `Open` from the popup menu.

6. In the accounts dialog box, use the `Blocked` check box to ensure that the account cannot be used.

To remove an account:

1. Start the Service Desk application server.

2. From the `Tools` menu, choose `System`.

3. In the `Administrator Console`, **expand the** `Security` **node.**

4. In the `Access` **branch, select** `Application Account`.

5. Select the account you want to remove. Right-click in the `Account` view and choose `Delete` from the popup menu. A popup dialog box is displayed.

6. Choose Yes to delete the account. If the account has no links to other items, for example, a person record, or work orders, it will be deleted. If the account does have links to other items a dialog box will be displayed listing all the associated items:

Figure 2-3   **Account - Remove linked items dialog box**
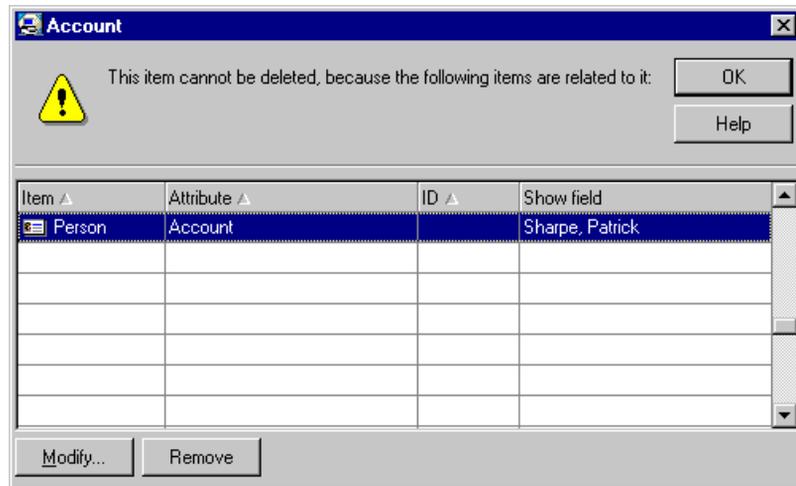
7. You can select each item individually and click Modify or Remove. Modify will enable you to access the linked record and edit it in such a way to break the link between the record and the account. For instance, in the Person record you can remove the account name from the Account field. This will ensure the connection between the person record and the Application Account is broken, but the person record will still be linked to any related service desk items. This will retain the system's data integrity. Remove will physically remove the record from the database, and you will lose the data. When all linked items have been removed or modified, you can delete the account.

Adding a Role to an Account

Before an account can be used to access Service Desk, a Role must be assigned to the account.

To assign an existing role to a new account:

1. Start the Service Desk application server.

2. From the Tools menu, choose System.

3. In the `Administrator Console`, **expand the** `Security` **node.**

4. In the `Access` **branch, select** `Application Account`.

5. **Right-click in the** `Account` **view and choose** `New Account` **from the popup menu. The Account dialog box is displayed. Create a new account as described above in the section "Creating Accounts" on page 46.**

6. **Click the** `Roles` **tab, and select the check boxes for the roles that the user needs. An account can have multiple roles.**

Figure 2-4   Account - Adding a role to an account
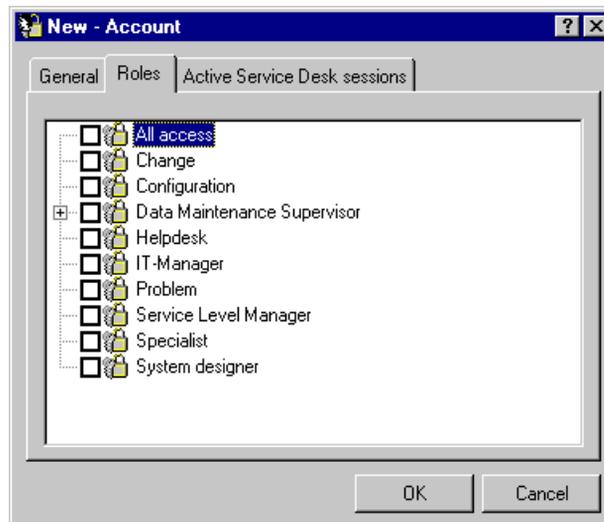
Roles

The access rights that an account has to Service Desk are defined by applying a Role, or multiple roles, to the account.

Role gives a user access to items and specific rights to manipulate those items. An item is a specific type of database record, for instance a Service Call, a Work Order, or a Change. There are 11 types of items used in Service Desk. Each item type can be Inserted (created), Modified (edited), Viewed (read), and Removed (deleted). Some item types also have templates that need to be maintained.

A role therefore can be created for each particular job function in an organization that needs access to Service Desk. Roles can be combined to create high level roles, or tailored for single individuals.

To create a Role:

1. Start the Service Desk application server.

2. From the Tools menu, choose System.

3. In the Administrator Console, expand the Security node.

4. In the Access branch, select Role.

Figure 2-5   Administrator console dialog box
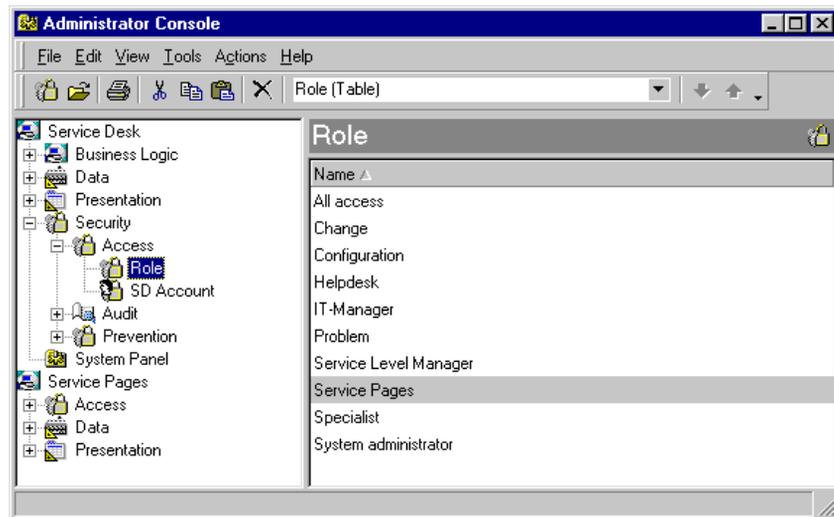
5. Right-click in the `Role` view and choose `New Role` from the popup menu. The Role dialog box is displayed:

Figure 2-6 **Role dialog box**
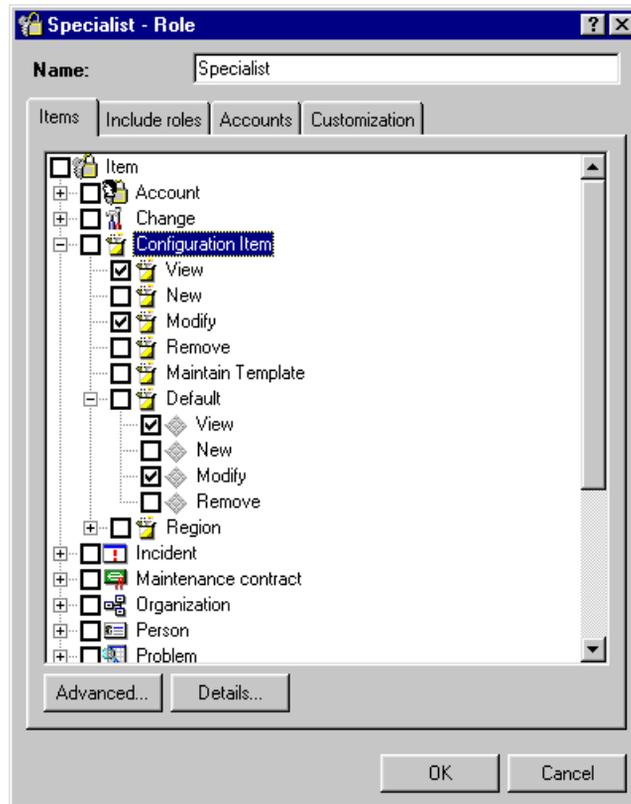
6. Enter a name for the new Role, this is the name that will be displayed in the Role view of the Administrator Console.

7. Select the check boxes for the access rights you want the role to have. If you select the main check box for each item (to the left of the icon), all the access rights for that item will be selected. If you don't want to give the role the ability to use all access rights for any item, select just the access rights needed.

8. Roles can be fine tuned to allow or deny access to particular fields, forms, views, templates, and actions using the Advanced button.

9. Roles can be used to grant access to view, modify, create, and remove items only when assigned to the users who a specific role. These rights can be applied to History lines too. To set these access rights select the required item and click the Detailed button. Entitlements

to perform these specific actions in customer created folders are also granted using the Detail button. See "Folder Entitlements" on page 67.

Advanced Item Access

For fine tuning, access to selected items can be further defined so that specific fields, forms, views, templates, and actions can be hidden from all users with particular roles.

To allow or restrict access to fields, forms, views, templates, and actions:

1. In the role dialog box select the item you wish to further define. Click Advanced. The Advanced Item Access dialog box is displayed.

2. Click the tabs to select fields, forms, views, templates, or actions.

3. When you select the Fields tab, a list displays all fields available for the item you selected in the Roles dialog box. The default is that all fields are writable. Select the fields that you want to make invisible, or view only, to the user with the previously select role. Click the Write, View, or Hide buttons.

Figure 2-7   **Roles - Item Access dialog box**
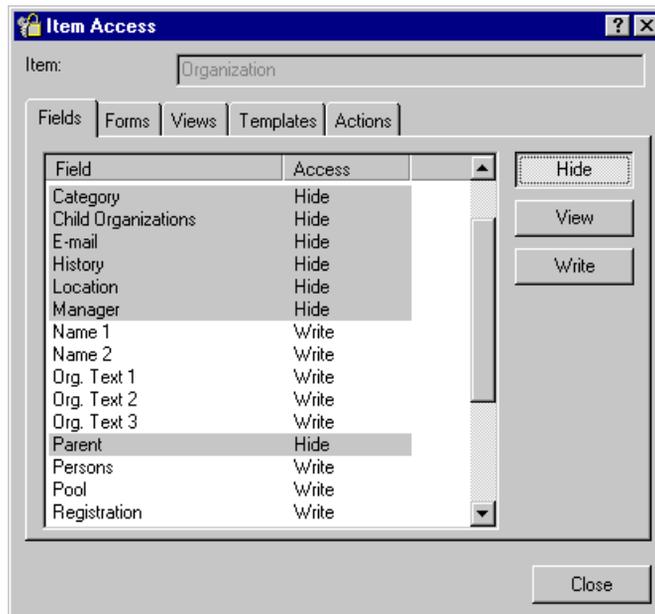
4. Select the forms, views, templates, or actions tabs and do the following: The default is that there are no forms, views, templates, or actions assigned to the item, these can be added to the item by either creating new or adding existing ones. To create new forms, views, templates, or actions click the Add button (this procedure is described in the on-line help). To add existing forms, views, templates, or actions click the Relate button and select an item from the displayed list.

Figure 2-8   **Roles - Forms, Views, Templates, and Actions dialog box**
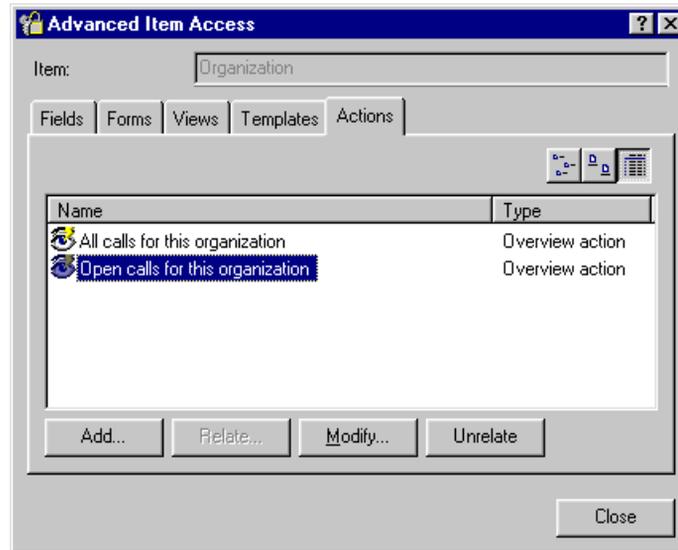
5. Once forms, views, templates, or actions have been added they can be modified or removed by clicking on the `Modify` or `Unrelate` buttons.

6. With forms, views, and templates, you can define one of the available items as a default.

Detailed Item Access

Detailed Item Access will allow you limit users with a particular role to only being able to do specific actions like view, modify, create, or delete, when the service desk item is assigned to them, or their workgroup. These limitations can be applied to history lines too.

To define assignment access rights to an item:

1. In the role dialog box select the item you wish to further define access rights to. Click `Detailed`. The `Detailed Item Access` dialog box is displayed.

2. Select the `Access` tab. Select the check boxes for the rights the user should have (these will default from the item check boxes in the Role dialog box). You can select whether the user can view and modify all items, or only items that are assigned to the user, or assigned to the user's workgroup. Click `OK`.

Figure 2-9   **Detail Item Access dialog box**

To define assignment access rights to item history lines:

1. In the role dialog box select the item you wish to further define access rights to. Click Detailed. The Detailed Item Access dialog box is displayed.

2. Select the History Line tab. Select the check boxes for the rights the user should have (these will default from the item check boxes in the Role dialog box). You can select whether the user can view and modify history lines for all items, or only items that are assigned to the user, or assigned to the user's workgroup. Click OK.

Figure 2-10   **Detailed Item Access - History Lines dialog box**
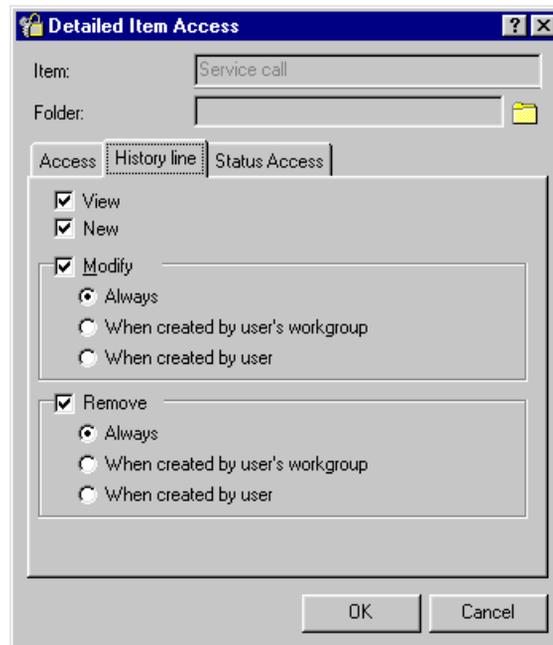
Including Roles within Roles

On some occasions it may be more efficient to combine two or more existing roles to create a new role, rather than to duplicate the work.

However, it should be remembered that any existing roles you use to create a new role may already have other roles included within them. When a role is created using a combination of existing roles, the new role will have the access rights of all the included roles. This could mean that the new role may end up having as much access as the system administrator role.

To include a role within a role:

1. Access the `Role` dialog box as described above.

2. In the `Role` dialog box, click the `Include Roles` tab.

3. Select the roles to be included in the new or modified role.

Figure 2-11   **Role - include role**
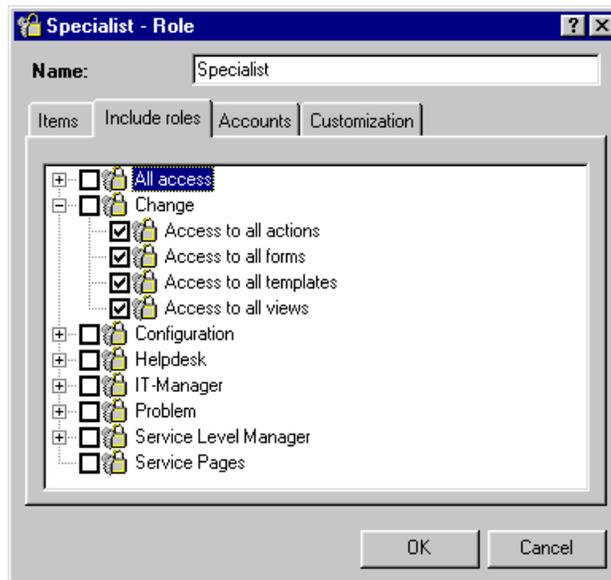
Linking Roles and Accounts

Roles can be linked to one or more existing user accounts at the time the role is created, or at any time using the method described below. The dialog box displays all your licensed users.

To link a role to an account:

1. Access the Role dialog box as described above.

2. In the Role dialog box, click the Accounts tab.

3. Select the check boxes for the accounts that will utilize the new or modified role.

Figure 2-12   **Role - Link accounts**
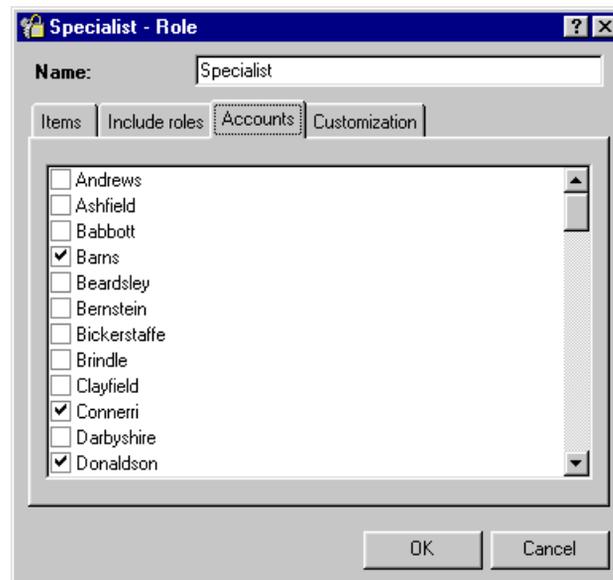
Customization Rights for a Role

Using Roles you can authorize users to customize their shortcuts and
tool bars. With this ability they can set up Service Desk to be more in
tune with the procedures and work load of their job function.

1. Start the Service Desk application server.

2. From the `Tools` menu, choose `System`.

3. In the `Administrator Console`, expand the `Security` node.

4. In the `Access` branch, select `Role`.

Figure 2-13   **Administrator Console dialog box**
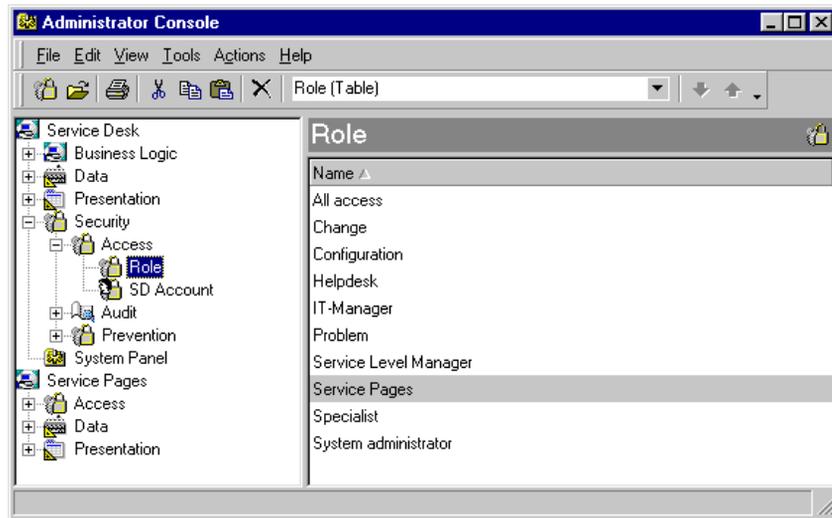
5. Right-click the Role you want to edit and select `Open` from the pop-up menu. The Role dialog box will be displayed:

Figure 2-14   **Customization - Role dialog box**
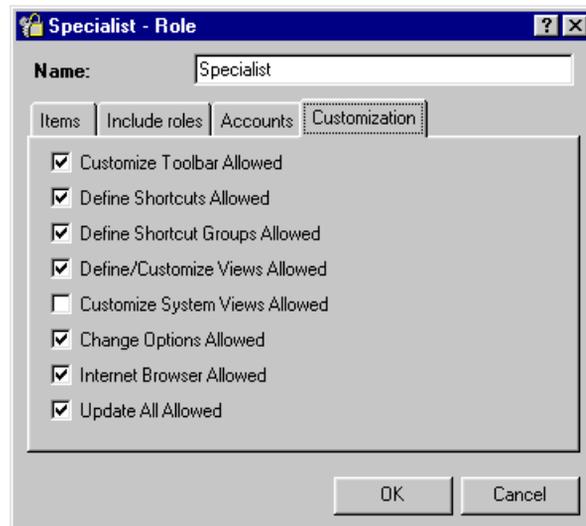
6. Check the boxes of those features you want to allow on the role, the default is all boxes but `Customize System Views Allowed` checked. When you clear a check box, the option is not allowed for the role and is grayed out from any menu where it might appear.

- `Customize Toolbar Allowed` - **When allowed the users can access the** `Customize` **option of the** `Toolbars` **submenu on the** `View` **menu and customize their toolbars.**

- `Define Shortcuts Allowed` - **When allowed the users can add or remove shortcuts in the Service Desk shortcut bar.**

- `Define Shortcut Groups Allowed` - **When allowed the users can add or remove shortcut groups in the Service Desk shortcut bar.**

- `Define/Customize Views Allowed` - **When allowed the users can access the** `Define Views` **option of the** `Current View` **submenu on the** `View` **menu on the toolbar and define their own views.**

- `Customize System Views Allowed` - **If this check box is not selected (default), when a user uses the** `Define/Customize Views` **feature they are unable to modify the actual views propagated by the system. They only make the changes to a copy of the system view.** `Customize System Views Allowed` **enables**

the users to edit the view propagated to their client. However, their personal customizations will stop any new view propagated by the system administrator from being installed on their machine as the new view cannot overwrite the modified one.

- `Change Options Allowed` - **When allowed the users can access the** `Options` **option of the** `Tools` **menu on the toolbar.**

- `Internet Browser Allowed` - **When allowed the users can open an internet browser in the Service Desk interface.**

- `Update All Allowed` - **When allowed the users can update a group of selected Service Desk items. For example, it is possible to select a group of service calls and change a particular field value to the same value in all the selected service calls simultaneously. However, this process uses a great deal of system resources and is best avoided. Clearing the** `Update All Allowed` **check box stops this feature being used.**

Folder Entitlements

Folders are a resource for pooling data across Service Desk items, for example a folder could be created for a customer called Inventions inc. and all services calls, work orders, etc. can be stored in this folder.

Using the Folder Entitlements feature is a way to further refine user access capabilities. This is done by providing the means to limit access to folders for each Service Desk item. The effect this will have on the user is that when they do a Quick or Advanced Find, or they create a view, they will only be able see items in the folders they have access to. For example, a user with a particular role could be permitted to modified service calls for Inventions inc. but only view work orders. The users will only be able to create, view, modify, or delete those items in the folders that their folder entitlements permit.

New Service Desk items are assigned to folders by making a selection using the `Folder` field on the item's form. This field is not in any forms by default and so must be added to forms using the Form Designer before folder entitlements can be effective. For more information about using Form Designer, see the Service Desk Online Help.

Creating Folders

Before folder entitlements can be set, folders must exist.

To create folders:

1. From the `Tools` menu select `System` to open the `Administrator Console`.

2. In the `Administrator Console`, expand the `Data` branch.

3. In the `Data` branch open the `Codes` branch and then the `General` branch.

4. In the `General` branch select `Folder`.

Figure 2-15   Administrator Console Folder view
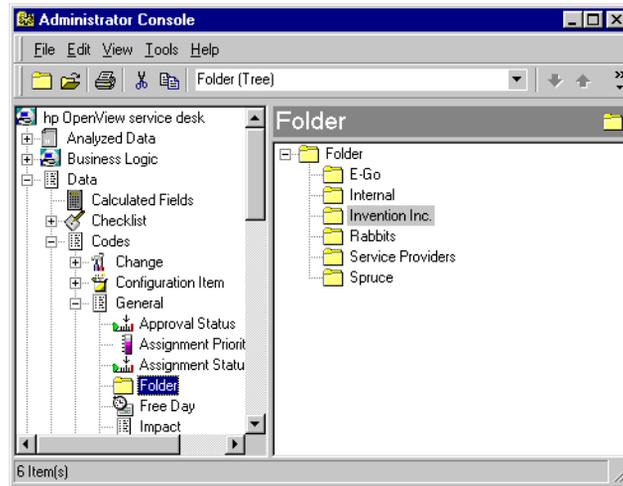
5. Right-click on the root level in the Folder view (you can create sub folders by right clicking on existing folders). Select New Folder from the pop-up menu, and enter a folder name in the New - Folder dialog box. Click Ok.

Figure 2-16   New - Folder dialog box
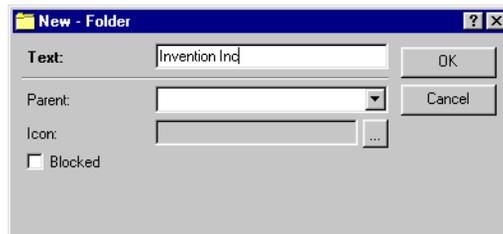
Enabling Folder Entitlements

To enable the folder entitlements feature:

1. From the Tools menu select System to open the Administrator Console.

2. In the Administrator Console, select System Panel and then General Settings.

3. In the `General Settings` **dialog box select the** `Enable Folder Entitlement` **check box.**

Figure 2-17   Enable Folder Entitlements
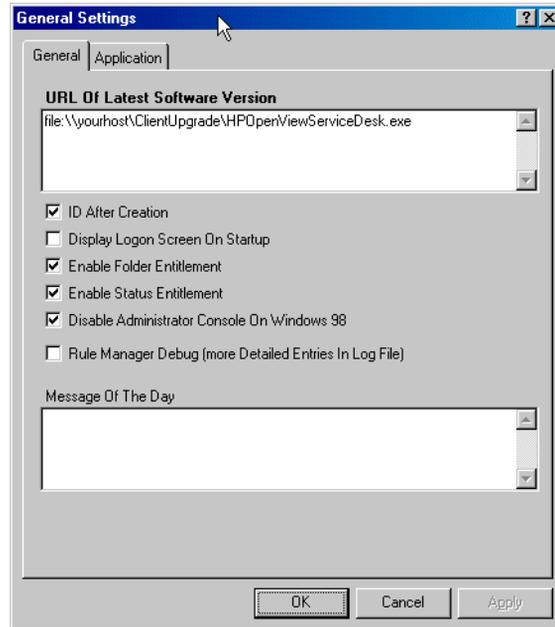
Setting Folder Entitlements

Folder entitlements are set up and maintained in the `Items Tab` of the `Roles` screen. Just as access can be granted for Role items, so too can the access rights to perform view, create, modify, and delete actions for items in folders and history lines be granted.

Folder access entitlements and history line entitlements can both be set so that the user can only modify items in their own workgroup, or items they have created themselves. For folder access these same restrictions can be applied to views. For history lines these restrictions can be applied to delete rights.

To set entitlements for Folder Access:

1. From the `Tools` menu, choose `System`.

2. In the `Administrator Console`, expand the `Security` node.

3. In the `Access` branch, select `Role`.

4. Right-click on the Role you want to modify in the `Role` view and choose `Open` from the popup menu. The Role dialog box is displayed:

Figure 2-18   Role dialog box
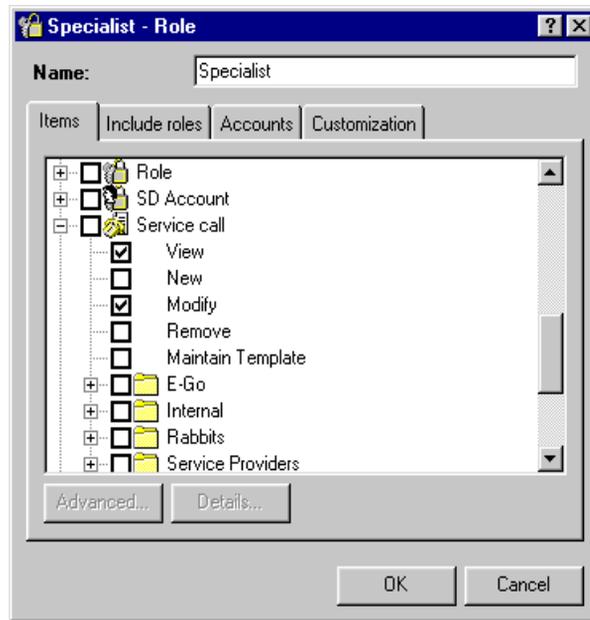
5. Expand the `Item` you want the entitlement to apply to, by clicking on the plus sign.

NOTE   When you apply entitlements to an Item, all access rights granted at the higher level will be cascaded down to the lower levels. For example, if you give a role Modify access at item level, all subfolders will also have modify rights. By granting folder entitlements you are extending the users access rights in the subfolders. So, an account that has Modify rights set at the highest level, may have its rights extended to also include New, or Delete in a subfolder. Any rights given at a higher cannot be denied at a lower level.

6. Select the folder you want to set Entitlements for, and click the `Detail` button. The `Detailed Item Access` dialog box is displayed:

Figure 2-19   Entitlements - Folder Access dialog box

7. Select the check boxes for the entitlement capabilities you want to allow. Any access rights cascaded down from the higher level are unavailable.

8. Select the History line tab. To grant entitlements for viewing or editing the history lines, select the required check boxes.

Figure 2-20   Entitlements - History line dialog box
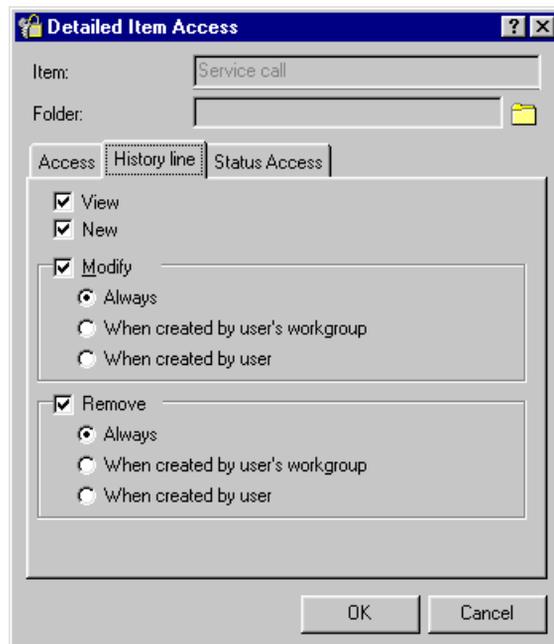
Status Entitlements

Using the Status Entitlements feature is a way to further refine user access capabilities. This is done by providing the means to limit user access to only a specified range of Statuses. Users will only be able to modify those items that are in the statuses their entitlements permit.

To enable the status entitlements feature:

1. From the `Tools` menu select `System` to open the `Administrator Console`.

2. In the `Administrator Console`, select `System Panel` and then `General Settings`.

3. In the `General Settings` dialog box select the `Enable Folder Entitlement` check box.

Figure 2-21   Enable Status Entitlements
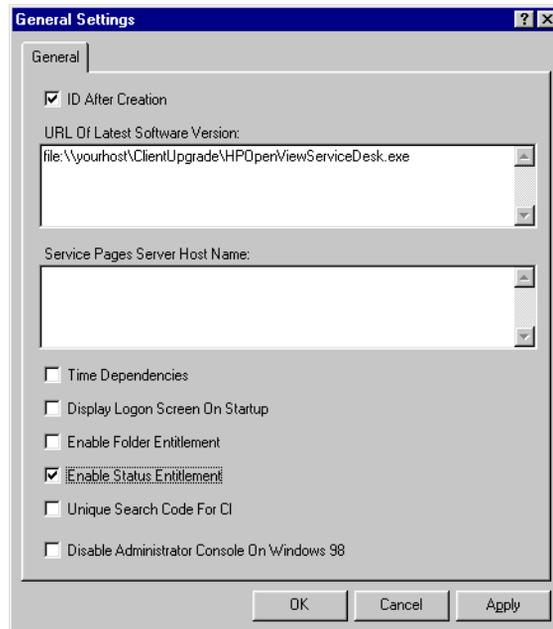
Setting Status Entitlements

Status entitlements are set up and maintained through the `Items Tab` of the `Roles` screen. Access granted to Role items can further refined so that the user can only have the access rights to view, modify, and delete items in a certain status, or within a specified range of statuses.

To set status entitlements for an item:

1. From the `Tools` menu, choose `System`.

2. In the `Administrator Console`, expand the `Security` node.

3. In the `Access` branch, select `Role`.

4. Right-click on the Role you want to modify in the `Role` view and choose `Open` from the popup menu. The Role dialog box is displayed:

Figure 2-22   **Role dialog box**
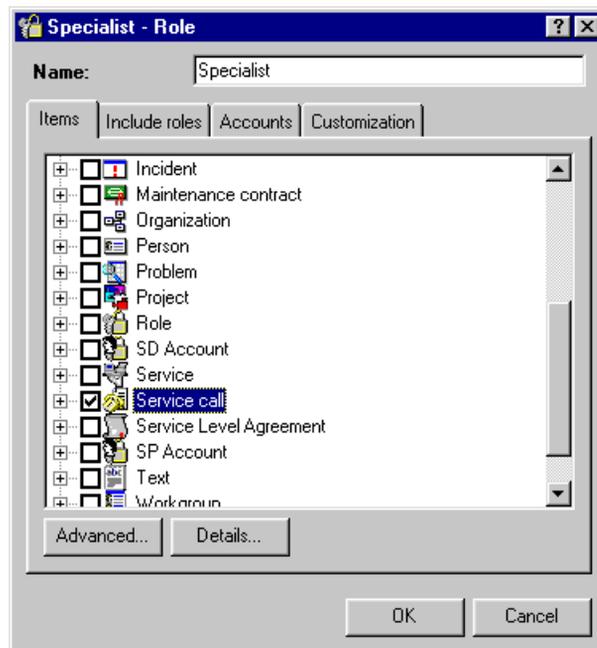
5. Select the Item you want the status entitlements to apply to, and
   click the Detail button. The Detailed Item Access dialog box is
   displayed:

Figure 2-23   Entitlements - Status Access tab page
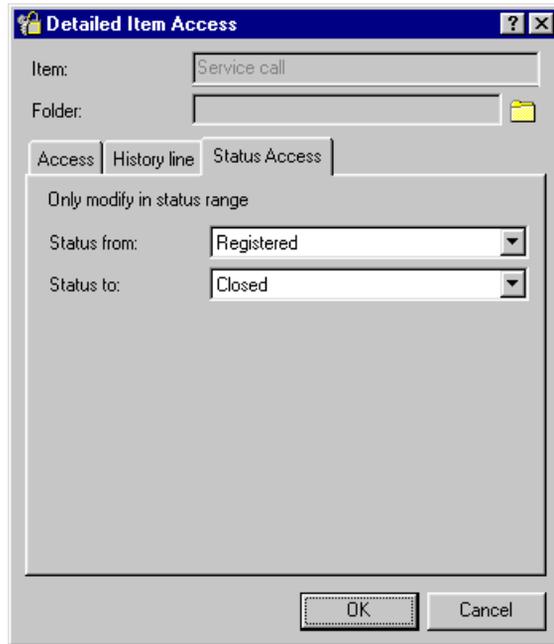
6. Click the Status Access tab. Select a status from the drop-down list for each of the Status from and Status to fields to define a range. To limit the entitlement to a specific status select the same status for each field. Click OK.

NOTE   When Roles are combined (see "Including Roles within Roles" on page 61) you can only extend, not limit, the range at lower levels. Thus the final range of the combined Roles will be from the lowest status to the highest status specified in any of the included Roles.

Windows Startup Account Authorization

It is important that the Windows (2000 or NT) account that starts up the HP OpenView Service Desk Service has access rights to all servers, drives, and folders that Service Desk may need to use.

If the startup account does not have sufficient rights, some of the functionality of Service Desk may not be available. For example, one feature of Service Desk is that it can be set up to automatically create a service call when it receives an e-mail from a customer, and include with the service call as an attachment. However, e-mail messages are stored in a specified attachments folder (sometimes on a dedicated file server). If the startup account does not have access rights to this folder a service call is not created and the e-mail message is not stored.

Ensuring that the startup account has sufficient access right is also relevant when making database dumps to shared drives, the startup account must have access to the shared drive.

When Service Desk was installed the default startup account for the service was set as the system account.

To check or change the start up account:

1. From the Windows `Start` menu choose `Settings`.

2. Select `Control Panel` from the Settings submenu. The Control Panel dialog box will be displayed.

3. Double-click on the `Services` icon in the `Control Panel` dialog box. The Services dialog box will be displayed.

4. In the Services dialog box select `HP OpenView Service Desk Service` and click the `Startup` button. The `Service` dialog box is displayed.

5. The currently selected startup account is shown in the `Log On As` area of the Service dialog box. To change this account select the `This Account` radio button and choose an account using the 'more' button.

NOTE   Regardless of which account you choose to set as the startup account, it is recommended that you switch off the password expiry period.

Security

Service Desk provides a logon screen to ensure that only users with properly authorized Service Desk user accounts can log on to the system.

Logon Screen

Service Desk can be set up to display a dialog box whenever a user tries to connect to the application server. The user will be required to enter their user name, password, and the database to which they will connect. This feature applies to all client connections.

To enable the Display Logon Screen:

1. Start the Service Desk application server.

2. From the Tools menu, choose System.

3. In the Administrator Console, select System Panel.

4. In the System Panel view double-click the General Settings icon.

5. In the General Settings dialog box select the Display Logon Screen On Startup check box.

Figure 2-24 **General Settings dialog box**
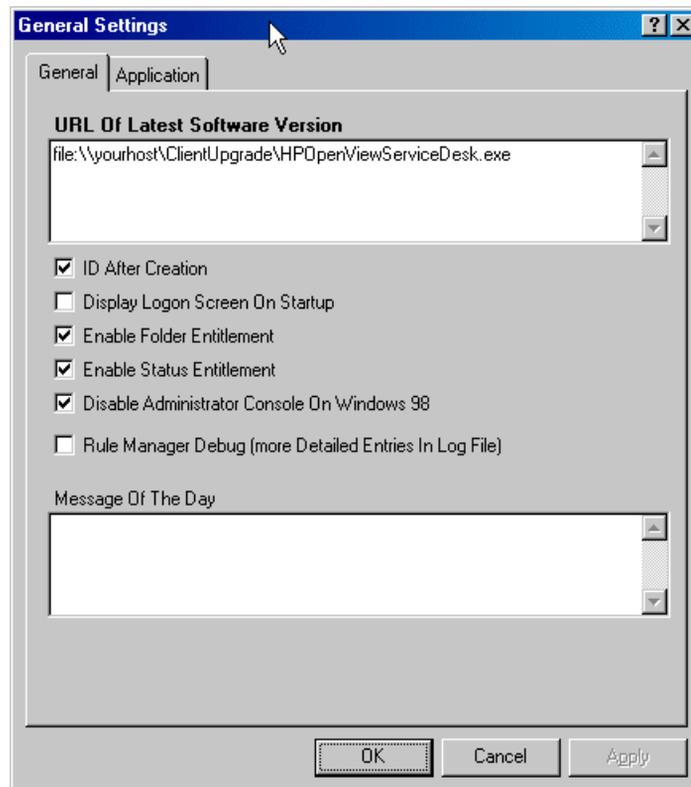
Setting the Password Limitations

You can define the limitations and requirements for user defined account passwords. The password limitations will apply to all user accounts.

To set the password limitations:

1. In the Administrator Console, select System Panel, and double-click the Password Settings icon.

2. In the Password Settings dialog box select the settings you want to enforce and click OK.

Figure 2-25   Password Settings dialog box
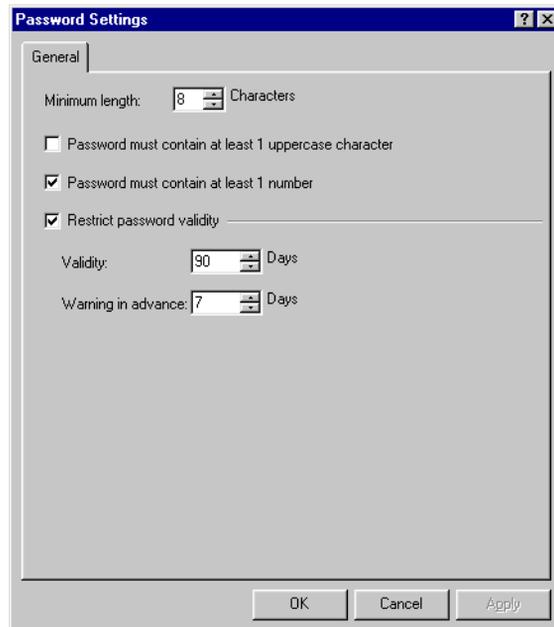
3 Implementing Languages from the Localization Pack

This chapter explains how to implement the translated user interface and online help supplied in the Service Desk localization pack.

About the Localization Pack

Shortly after the release of the English language version of Service Desk, a localization pack will be available from the HP OpenView Software Patches Web site at http://support.openview.hp.com/cpe/patches. The localization pack contains translations of the Service Desk user interface for the following languages:

- French

- German

- Spanish

- Japanese

- Korean

- Simplified Chinese

- Traditional Chinese

To enable Service Desk client users to work with one or more of these language versions, you must first implement the localization pack on the application server and import the translated text into the Service Desk database. Then the localization pack must be installed on the client machines. After that, the users can select their preferred language. The next sections explain how to implement the localization pack on the application server and the client machines.

The localization pack consists of:

- Data Exchange import files for the translated labels and messages. After installing the localization pack, you must import these .xml files into the Service Desk database with Service Desk's Data Exchange function. This is explained in "Implementing Languages on the Application Server" on page 84.

- Translated online help files.
  These files are automatically installed when you install the localization pack. More information about these help files can be found in "Online Help Files" on page 93.

- Files containing translated error messages for sd_event and sd_export.
  These files are automatically installed when you install the

localization pack. More information about these files can be found in
"Translated Error Messages for sd_event and sd_export Errors" on
page 94.

Implementing Languages on the Application Server

To install the localization pack on the application server and import the translated labels and messages, perform the following steps:

Step 1. Download the localization pack from the HP OpenView Software Patches Web site at http://support.openview.hp.com/cpe/patches.

Step 2. Install the localization pack: open the downloaded .exe file and follow the instructions displayed on the screen.

NOTE   The following steps must be repeated for each language you want to implement.

Step 3. Create a new language in Service Desk:

1. Choose System from the Tools menu to open the Administrator Console.

2. Open the System Panel node and then Regional Settings. The Regional Settings dialog box opens:

Figure 3-1 **The Regional Settings dialog box**
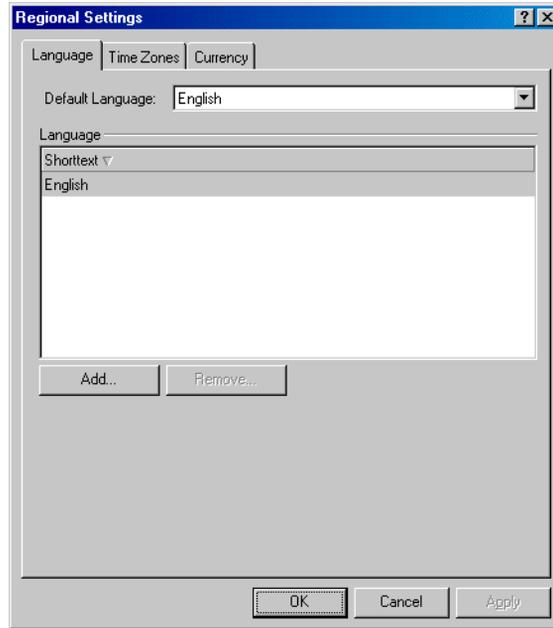
3. In the Regional Settings dialog box, select English in the Default Language box.

4. Click Add. The New Language dialog box appears.

5. In the New Language dialog box, select the new language from the drop-down list. Select only one of the language versions shown below: if you select a different language, for example Spanish (Modern), the localization will fail as the localization packs are available for the specified version of each language only.

Table 3-1 **Languages Available in the Localization Pack**

Windows NT®	**Windows 2000**
German (Standard)	German (Germany)
French (Standard)	French (France)
Spanish (Traditional Sort)	Spanish (Spain - Traditional Sort)
Japanese	Japanese

Table 3-1   **Languages Available in the Localization Pack (Continued)**

Windows NT®	Windows 2000
Korean	Korean
Chinese (PRC)	Chinese (PRC)

6. Click OK in the New Language dialog box.

7. Click OK in the Regional Settings dialog box. You return to the Administrator Console.

The new language is created, based on the English labels and messages: Service Desk copies the English text to the new language. The next step is to replace the English text in the new language by the translated text:

Step 4. Import the translated labels and messages:

a. Import the .xml file containing the translated labels and messages:

NOTE   The import process described below makes use of Service Desk's Data Exchange functionality. For more information about Data Exchange, refer to the *Data Exchange Administrator's Guide*.

1. In the Administrator Console, open the Data node, then Data Exchange and Data Exchange Task.

2. Double-click the import mapping sd_lang.

Figure 3-2   Opening the sd_lang import mapping
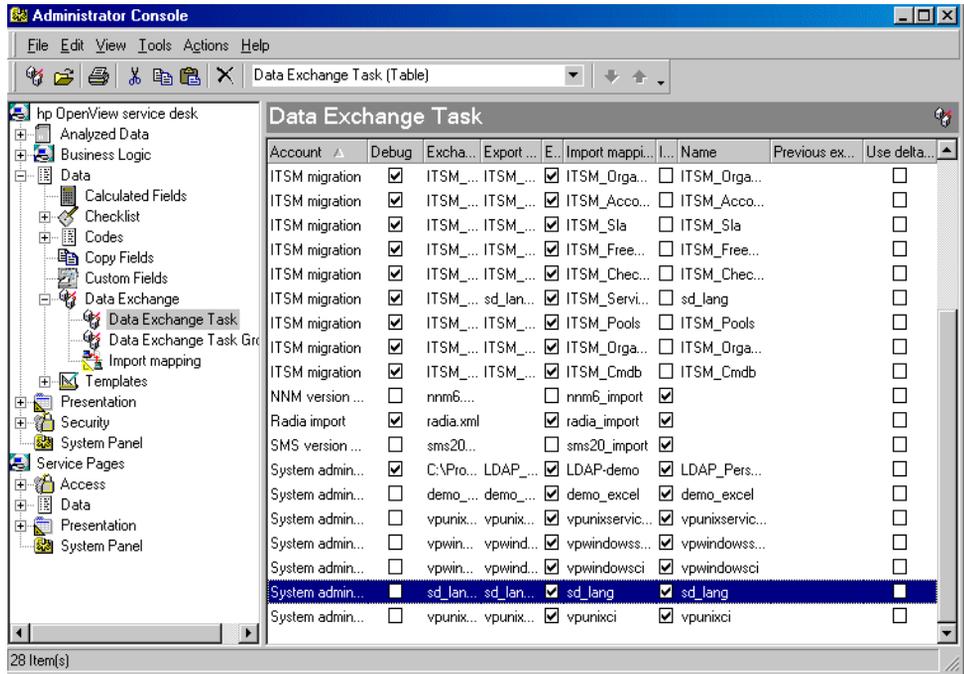
3. The Data Exchange Task - Sd_lang dialog box appears:

Figure 3-3   Data Exchange Task dialog box
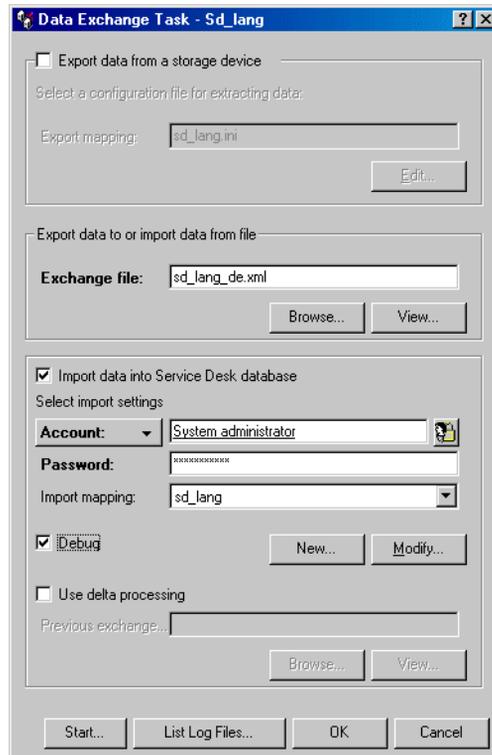
Fill in the Data Exchange Task - Sd_lang dialog box as follows:

- Clear the Export data from a storage device check box.

- Click the Browse button under the Exchange file box to select the .xml file for the language you want to import. The .xml files are located by default in the data_exchange\xml subfolder of the folder where Service Desk is installed, for example: C:\Program Files\Hewlett-Packard\OpenView\Service Desk 4.5\Server\data_exchange\xml. Select one of the following files:

  sd_lang_de.xml for German

  sd_lang_es.xml for Spanish

  sd_lang_fr.xml for French

sd_lang_ja.xml for Japanese

sd_lang_ko.xml for Korean

sd_lang_zh-cn.xml for Simplified Chinese

- Select the Import data into Service Desk database check box.

- In the Account box, enter the user name of a Service Desk account that is authorized to import data into the Service Desk database, for example **System administrator**.

- In the Password box, enter the password for the account.

- In the Import mapping box, select the import mapping sd_lang.

- Select the Debug check box if you want additional information in the log files. Log files will be created during the import process; if the Debug check box is selected, more information will be logged than with the check box cleared.

- Clear the Use delta processing check box.

4. Click Start.

5. A dialog box appears asking if you want to exchange data now. Click OK to start the import process.

   The import process will take a few hours; the exact duration depends on the processing speed of the machine. During the import process, error messages may be displayed on the screen. These messages are also logged in the log file. After the import process is completed, you can check if the import was successful, as described in the next step.

Step 5. Verify that the import was successful:

a. Examine the import log files.

Two log files are created during the import process:

- sd_lang_imp_error.log
  This file contains information about serious errors only.

- sd_lang_imp.log
  This file contains information about serious errors as well as other information, including information about successful actions.

The log files are located in the `data_exchange\log` **subfolder of the folder where Service Desk is installed, for example** `C:\Program Files\Hewlett-Packard\OpenView\Service Desk 4.5\Server\data_exchange\log`.

To examine the log files:

1. **In the Data Exchange Task dialog box, click the** `List log files` **button.**

2. **Open the** `sd_lang_imp_error.log` **or** `sd_lang_imp.log` **file.**

3. **Check the log file for errors and warnings.**

   The following errors and warnings can be ignored:

- `Attribute not defined: Comments on entity x (ID=y)`

- `No changes to save (including stack trace in debug mode)`

- `Program error: the attribute "Language" of this label text cannot be modified, because the label text record was opened in view mode or because the attribute is read-only while processing attribute Language (text can appear in the imported language).`

- `Program Error: the attribute "Localizable item" of this label text cannot be modified, because the label text record was opened in view mode or because the attribute is read-only while processing attribute Object ID (text can appear in the imported language).`

- `More than one item found while processing attribute Object ID`. **This is a common error message in the** `LABELS` **section and can be ignored there.**

The following are common errors:

- `The maximum length of 255 characters has exceeded while processing attribute "Text".`
  Most texts, like message texts and "What's this" texts, have a limit of 255 characters. The text is imported, but it is truncated to 255 characters.

- `com.hp.ifc.ext.ExternalException: you are not allowed to create new items of this type.`
  The text has not been imported. During the import process, the translated texts can only replace existing texts in the new language: the import process can only update existing objects in the repository; it cannot create new objects. This error occurs if a text in the imported .xml file does not exist in the new language. This occurs if:

  — Views, actions, forms, or tab controls have been removed after Service Desk was installed, so the object cannot be translated anymore.

  — No language has been created yet. In this case all imported items result in this error message.

b. Check the new language in the repository.

The localization pack contains two SQL scripts that allow you to verify that all texts for the new language have been translated in the repository. During the installation of the localization pack, these .sql files have been placed in the `data_exchange\sql` subfolder of the folder where Service Desk is installed, for example: `C:\Program Files\Hewlett-Packard\OpenView\Service Desk 4.5\Server\data_exchange\sql`. **To check the repository:**

  1. Run one of the SQL scripts, depending on your database:

     - For an Oracle database, run `checkloc-oracle.sql` in SQL*Plus®, as the SD repository owner, for example `sd_repo`.

     - For a SQL Server database, run `checkloc-sqlserver.sql` in the Query Analyzer (for SQL server), as the SD repository owner, for example `sd_repo`.

  2. Examine the log file `checkloc.log` on:

- Items that have not been translated: these items do not have a recent modification date.

  This is not necessarily an error: this also occurs if the translated text in the imported .xml file is the same as the original English text. In that case, the import log file sd_lang_imp.log will contain the message No changes to save for this text.

  If you suspect there is an error, you can find out what the message is in the import log file: the log file checkloc.log mentions an object ID for the unchanged text. In the .xml file, search for an entry that has this object ID as its OID value (PROPERTY NAME="OID", VALUE="*the searched object ID*"). Then look up the ID value of the object this entry belongs to (PROPERTY NAME="ID"). Look up the found ID in the import log file sd_lang_imp.log or sd_lang_imp_error.log.

- Items that have a new creation date in English (language code 1033). These items have been added by an upgrade or by a user, for example new form titles or tab controls. The imported .xml file does not contain translations for these items. These items must be translated manually, in the Administrator Console. More information about translating items manually can be found in the online help.

NOTE   You can use the same import procedure to import an extended or modified localized .xml file, to fit your specific needs. For example, extra form titles can be added or translations can be changed. As long as the .xml-specific format remains correct, you can alter the file or take portions to do partial imports.

Implementing Languages on Client Machines

After a language has been implemented on the application server, the following steps must be performed on client machines to enable Service Desk users to use the language:

1. Download and install the localization pack as described in Step 1 and Step 2 on page 84.

NOTE   Instead of installing the complete localization pack, you can choose to copy only the files needed for a specific language to the client system. See "Required Files" below.

2. To use the language, select it in Service Desk:

   a. Choose `Options` from the `Tools` menu.

   b. In the Options dialog box, click the `General` tab.

   c. From the `Language` list, select the language you want to work in.

   d. Click `Apply`.

   e. Close and restart Service Desk for the changes to be applied.

Required Files

This section explains which files must be placed on the client machines. If you install the localization pack, all of these files, for all of the available languages, are placed on the user's system automatically. To save disk space, you can choose to copy to the client machine only those files that are needed for the language the user wants to work with.

Online Help Files

The localization pack creates a locale folder for each language and places the translated online help files in these folders. The locale folders are created in the `repo\locales` subfolder of the folder where Service Desk is installed, for example `C:\Program Files\Hewlett-Packard\ OpenView\Service Desk 4.5\Server\repo\locales`. The following locale folders are created:

- `1031` for German
- `1034` for Spanish (Traditional Sort)
- `1036` for French
- `1041` for Japanese
- `1042` for Korean
- `2052` for Chinese (Simplified)

The `1033` folder contains the files for English (US).

The locale folder for the language the user wants to work with must be copied into - or created in - the `repo\locales` folder on the client machine. At least the following files must be copied into the locale folder to enable the client user to work with the translated online help:

- all .chm files
- all .h files

Translated Error Messages for sd_event and sd_export Errors

While most of the Service Desk messages are translated in the .xml file imported on the application server, the translations for the error messages for `sd_event` and `sd_export` are in separate files in the localization pack.

The translated message files for `sd_event` and `sd_export` are only used for Service Desk integrations. They only need to be installed on server and client machines where Service Desk integration software is installed.

The message files are installed in the same locale folders as the online help files (see "Online Help Files" on page 93). The message files are named `sd_event_`*`languagecode`*`.msgs` and `sd_export_`*`languagecode`*`.msgs`, where *`languagecode`* is one of the following language codes:

- `de` for German
- `es` for Spanish (Traditional Sort)
- `fr` for French
- `ja` for Japanese
- `ko` for Korean

- `zh-cn` for Chinese (Simplified)

The language code `en-us` is for English (US).

The .msgs files for the language the user wants to work with must be copied into the locale folder for that language. For example, for a user who wants error messages returned by `sd_event` to be displayed in German, the `sd_event_de.msgs` file must be placed in the `repo\locales\1031` folder.

For integrations with software applications running under Windows, the translated message file or files for `sd_event` must also be placed on the machine the integrated software application runs on. For example, if you work with Service Desk's OVO for Windows (OVW) integration and OVW is installed on a different machine than Service Desk, the translated `sd_event_`*`languagecode`*`.msgs` file or files must also be placed on the OVW machine. On those machines, the .msgs file must be placed in the folder where the `sd_event.exe` file is located.

By default, the `sd_event` and `sd_export` messages will be displayed in US English. You can change that with the LANGUAGE keyword in the configuration files. In the `sd_event.ini` file, the LANGUAGE keyword can be specified under [SD_EVENT]; in `sd_export` (extractor) .ini files, it can be specified under [SYSTEM]. For example, to display `sd_event` error messages in German, include the line LANGUAGE="DE" under [SD_EVENT] in the `sd_event.ini` file.

4 Business Logic

This chapter explains how you can use Business logic in Service Desk to create Database and UI Rules to automate your business processes.

About Database Rules

Database Rules are stored on the application server. When the application server is closed they are downloaded to the Service Desk database. Service Desk can apply database rules when an item is created or modified, only created, only modified, or deleted in the database. When the conditions you set for the rule are met, the action you specified for the rule will be executed. Three different type of actions are available; Command Exec action, Send E-mail action, and Update Data in Service Desk action.

Scenarios for Using Database Rules

A number of example database rules are available in the demo data for Service Desk. For example you can use database rules to:

- Send a notification showing a banner on the screen of the Service Level Agreement manager when an SLA is going to expire within 28 days.

- Send an acknowledgement message to an external application.

- Send an e-mail message to the help desk manager when a service call is overdue.

- Send an e-mail message to a group when they need to approve a change.

- Update a change when a service call or other item is modified in the database.

Technical Overview of Database Rules

The following diagram shows the overall concept of how database rules are managed within Service Desk:

Figure 4-1   **Rule Manager Concept**
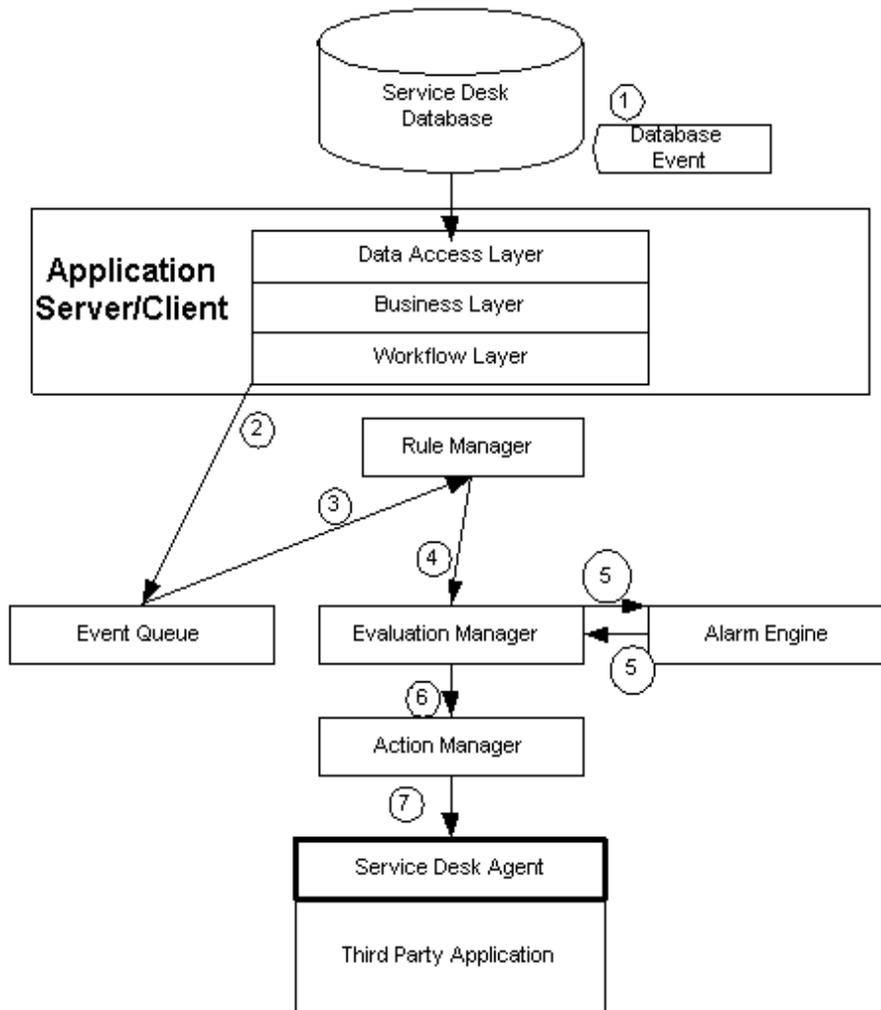
1. An event occurs in Service Desk.

2. The event is sent to the Event Queue by the Service Desk workflow layer.

3. The Rule Manager takes the event from the queue and checks to see if there is an applicable rule for the event. If a rule does not exist for the event, the event will be discarded.

4. Events that fit a rule are sent to the Evaluation Manager to check the conditions set for the rule.

5. If no conditions exist or if all conditions are met the event is sent to the Action Manager and executed.

   • Events with timed conditions are sent to the Alarm Engine.

   • An alarm goes off at the time specified by the timed condition and the timed condition is evaluated by the Evaluation Manager. Non-timed conditions are not re-evaluated, they are only evaluated once.

6. When the timed condition is met the event is sent to the Action Manager.

7. The Action Manager initiates the task specified by the action.

NOTE   E-mail actions and Update Service Desk database actions do not use the Service Desk agent.

Creating Database Rules

The procedure below explains how to create a database rule. As an example we will create a rule to display a Banner for top priority service calls:

Step 1. Select the item in Service Desk that this rule will apply to:

1. From the `Tools` menu select `System`. In the Administrator Console double-click `Business Logic` and then `Database Rules`.

2. Select a Service Desk item, for example the `Service Call` item:

Figure 4-2 **Select a Service Desk Item**
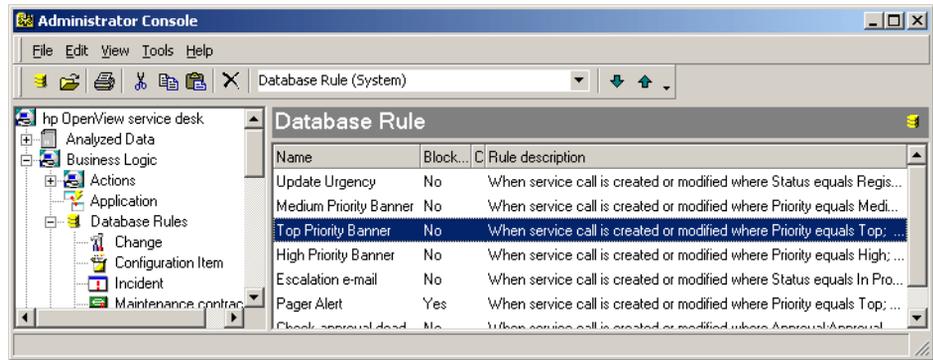
3. Right-click in the Database rule window and select `New Database rule` from the menu that appears.

Step 2. Specify when to apply the rule and what conditions to apply:

1. Specify when you want to apply the rule. For this example we want to apply the rule to all service calls that are created or modified, so select "`When service call is created or modified`".

Figure 4-3   **When to Apply the Rule**
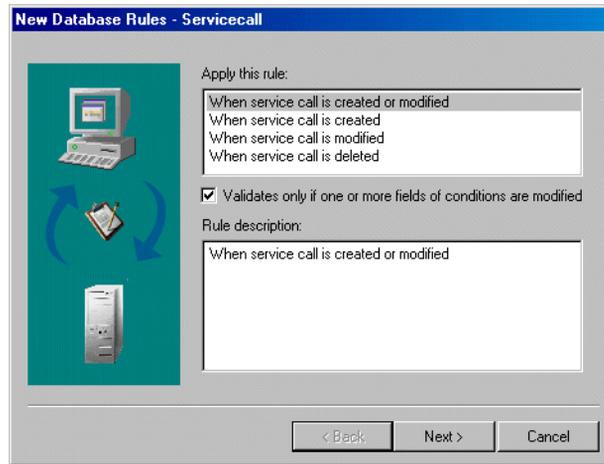
Selecting the "Validates only if one or more fields of conditions are modified" will cause the rule to be evaluated when one or more fields that are specified in the conditions for the rule are modified. For example, if you create a rule that is triggered when an item is modified and a condition is set for the information field, the rule will only be triggered when the information field is modified. If the check box is cleared the rule can be triggered whenever any field in the item is modified.

Click Next to continue.

NOTE   If you select When *item* is deleted you will not be able to set any conditions for the database rule and the actions available will be limited. You will be able to use the Command Exec Action and the Send E-mail Message action. It will not be possible to enter Field information for those actions, because once the item is deleted the field data for the item is no longer available. Information such as the host and e-mail addresses can be typed in.

2. In the following dialog box, click Add to set conditions for the database rule

Figure 4-4   **Add Conditions to the Rule**
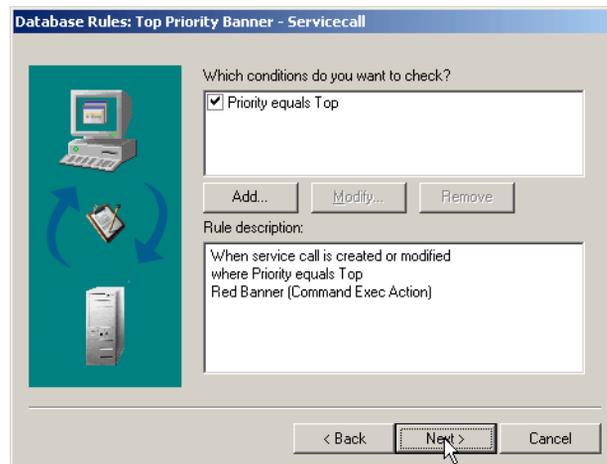
   3. Use the Field button in the Condition dialog box to enter the fields
      for this item you want the rule applied to:

Figure 4-5   **Configure Conditions for the Rule**
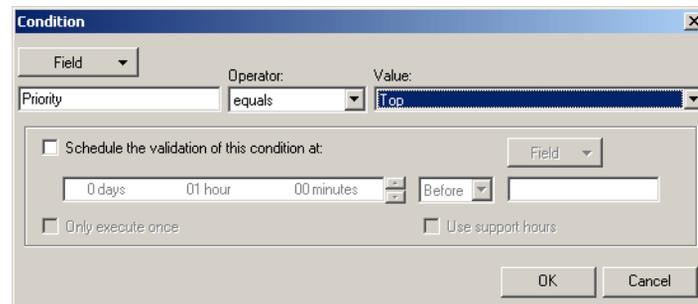
   4. Enter an Operator using the drop-down arrow.

   5. Put your cursor in Value field and use the Field button to select the
      value you want the fields selected to be measured by. For example,
      this rule will be applied when the Priority field contains the value:
      Top.

   6. Select Schedule the validation of this condition at check
      box to enter a timed value for this condition. Set a time range, and
      then a field using the Field button. Setting a time period for the
      condition is not mandatory.

If you selected the `Schedule the validation of this condition at:` check box and are creating a database rule for a service call or an incident, the `Use support hours` check box will be available. Select this check box if you want the timed condition to take support hours listed for the applicable SLA into account. If the check box is clear, support hours will not be considered and the scheduled execution of the action will be based upon a 24-hour clock.

Select the `Only execute once` check box to limit the number of times a timed condition triggers an action.For example (without selecting the check box): a rule is created to be evaluated when an item is modified. A timed condition is added to execute the action defined for the rule 30 minutes after the triggering condition is met. The result is that every time the item is modified a new action will be scheduled for execution 30 minutes after the modification that triggered it.

7. Click `OK`, then `Next` to continue.

Step 3. Add actions to the database rule:

1. Click `Add` to add an action.You must specify at least one action for the rule. You can select the `Command Exec` action, `Send E-mail Message` action or the `Update Data` action. For this example the Command Exec action is used to activate the banner program:

NOTE
Multi word parameters (parameters containing spaces) can be used if they are enclosed within quotation marks. For example: sd_event information="multiword information". However, if you need the quotes to be passed on to another application the quotes must be preceded by a backslash as an escape character. The example becomes: sd_event "information=\"multiword information\""

Figure 4-6   **Add Actions to the Rule**
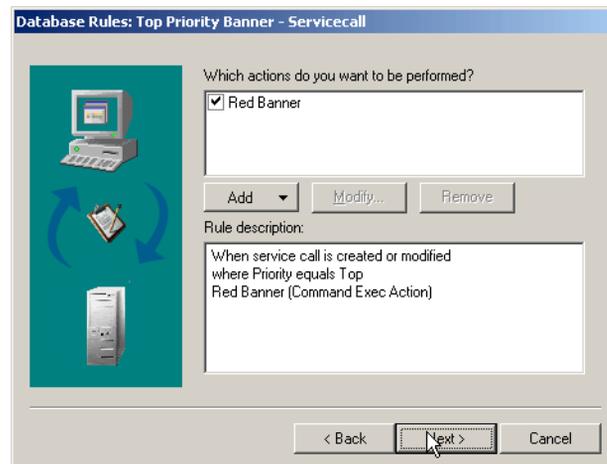
2. Enter an identifying Name for the action:

Figure 4-7 **Create a Command Exec Action**

3. In the `Description` field, enter a brief explanation of the action that will be performed.

4. In the `Host` field, enter the name of the computer the action will take place on. In the `Host` field you can use the `Field` button to specify the host. If the action is in response to a message sent by an external application the host name can automatically be taken from that account and filled in.

   If you are responding with an acknowledgement message to an external application, the host will come from the account, for example **ManageX_event**, that originally sent the incident (external event) to Service Desk.

5. Clear the `Blocked` check box to activate this action. You can create more than one action for every rule, and use the `Blocked` check box to turn some of the actions off.

6. In the `Command line` field, enter the command you want to execute, for example: `banner.exe`

7. In the `Parameters` field define additional information for the command by inserting parameters using the `Field` button. In the previous figure for example, we want the service call ID number and the text to say that the item is assigned. It is possible to add more parameters than this.

8. Click `OK` and then `Next` to continue.

Step 4. Turn on the action:

1. In the `Name` field enter an identifying name for the rule. This name will appear in the database rule window for that item.

2. Clear the `Block this rule` check box to turn the rule on.

3. Enter a category to organize your database rules:

Figure 4-8   Add Name and Category to a Database Rule
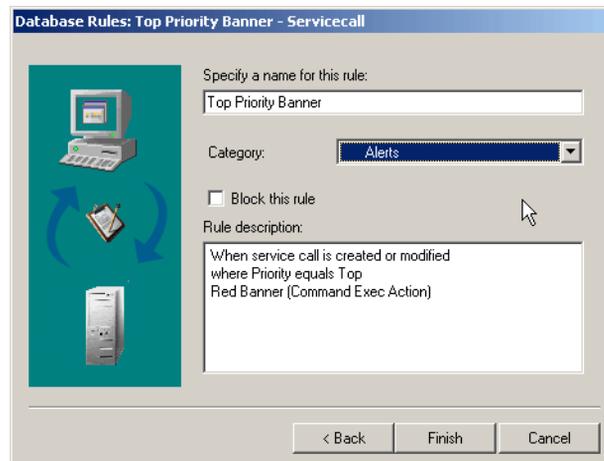
You can use the drop-down button to select from a list of available categories, or you can create your own categories.

To create a category: in the System Administrator's console select `Data`, then `Codes`, then `General`. Open the `Rule Category` option and right-click in the view and select `New rule category`. Type the name of your new category in the dialog box that appears.

You can organize your categories by: selecting the rule and then using the `Move up` and `Move down` arrows on the toolbar. There are two types of views possible; the `Database Rule (System)` view and the `Rules by Category (System)` view. It is only possible to move rules in the `Database Rule (System)` view:

Figure 4-9   **Viewing and Moving Rules**
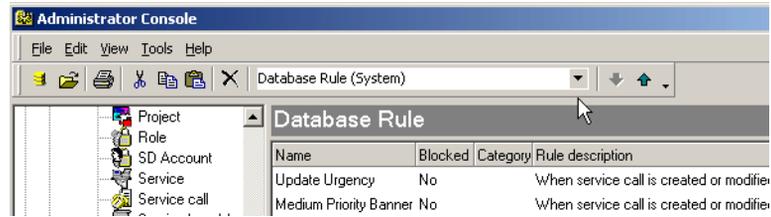
NOTE   The order a rule is listed in the `Database Rule (System)` view will determine the order they will be executed in when more than one rule is triggered by the same event. The order of items in the Category view does not affect the order they are executed in.

About UI Rules

UI Rules are used to execute actions when fields in the graphical user interface of Service Desk are modified. The action specified in the rule will take place immediately in the current data form. The key difference between UI rules and database rules is that database rules are evaluated by events in the database and UI rules are evaluated by events in the graphical user interface. Actions executed for a UI rule affect the current form or record that is being viewed.

UI rules evaluate the information entered in a field. For text and data fields the evaluation takes place as soon as the cursor leaves the field. When a drop-down list is used the field is evaluated when a value is selected from the list.

UI rules can improve time critical processes by:

- Guiding users to enter the correct data in a form.

- Automatically entering data in a form.

- Restraining users from entering irrelevant or incorrect data.

- Providing problem solving data when needed.

- Providing a means of supporting the workflow process.

Scenarios for Using UI Rules

Following are a few example scenarios of how you can automate processes with UI Rules:

- A Help Desk employee enters a service call. When the Caller's name is entered, a list of other service calls assigned to the caller pops up. The Help Desk employee can examine the list to see what other problems the caller has experienced. This uses an Overview action.

- A Change manager closes a change. The Actual Finish field is automatically filled with the current date. This uses the Update data action.

• A specialist changes a service call's status to completed. Consequently, according to the regular workflow path, further assignment of the service call is restricted to the help desk group, no other group can modify the service call. This uses the limit field value range action.

Technical Overview for UI Rules

UI rules are managed in similarly to database rules, see "Technical Overview of Database Rules" on page 98. The key differences are that the rules are triggered by an event in the user interface and not the database, and that the actions are not executed by an agent because they are executed on the same machine. Timed conditions are not used for UI rules, so the alarm engine is not used.

Creating UI Rules

To create a UI Rule:

Step 1. Select the item in Service Desk that this rule will apply to:

1. From the `Tools` menu select `System`. In the Administrator Console double-click `Business Logic` and then `UI Rules`.

2. Select a Service Desk item, for example the `Service Call` item:

Figure 4-10   **Select a Service Desk Item**
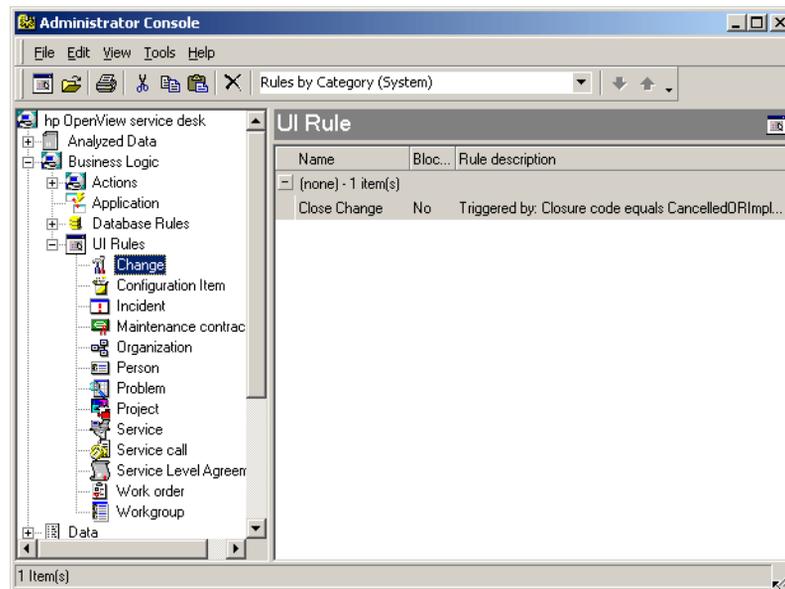
3. Use an existing rule or right-click in the UI Rule window and select
   New UI Rule from the menu that appears.

Step 2. Specify the conditions for the rule.

1. In the following dialog box, click Add to set preconditions for the
   database rule:

Figure 4-11   Add Preconditions for a UI Rule
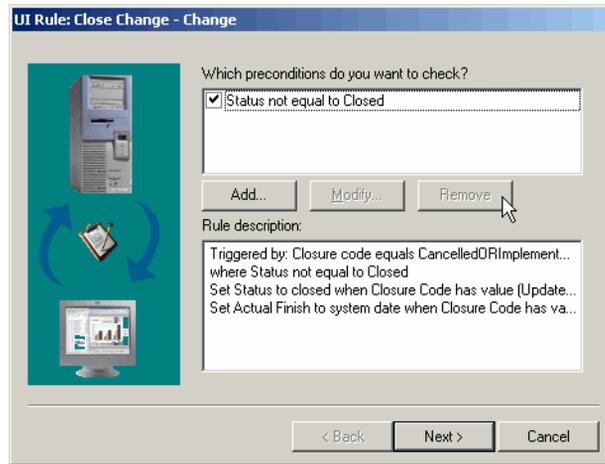
2. Enter the preconditions, defining under which conditions you want the rule to be evaluated. You must enter at least one field.

   Pre-conditions are only used in UI rules and are used to specify a condition that needs to exist before a rule will be evaluated. Pre-conditions do not trigger the execution of an action, they specify when to evaluate the rule:

Figure 4-12   Add Preconditions for the Rule
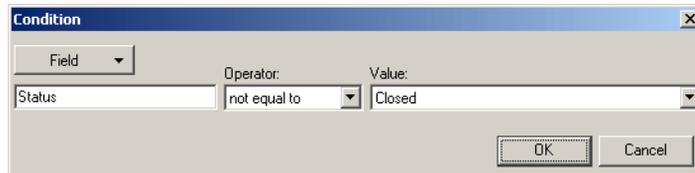
3. Set the triggering conditions that you want to use to trigger the action. When a triggering condition is met it starts the action. A triggering condition is necessary for a UI rule to be executed:

Figure 4-13   Add Triggering Conditions
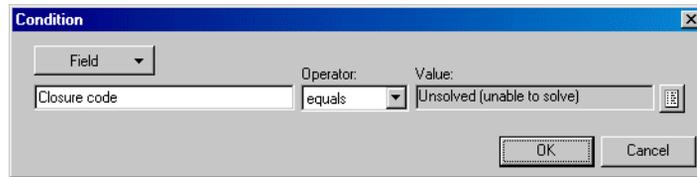
  Step 3. Add actions to the rule.

     1. Click Add to add an action. You must specify at least one action for
      the rule. You can select the Command Exec Action, Update Data
      action, Smart Action, Overview Action, System Action, or the Limit
      Field Value Range action. UI rules do not require a host name in the
      Command Exec Action. For additional information about how to
      configure actions, see "About Actions" on page 117.
      For this example the Update Data action is used to create two
      actions for this rule:

NOTE   Multi word parameters (parameters containing spaces) can be used if
      they are enclosed within quotation marks. For example: sd_event
      information="multiword information". However, if you need the
      quotes to be passed on to another application the quotes must be
      preceded by a back slash as an escape character. The above example
      becomes: sd_event "information=\"multiword information\""

Figure 4-14   Add Actions to the Rule
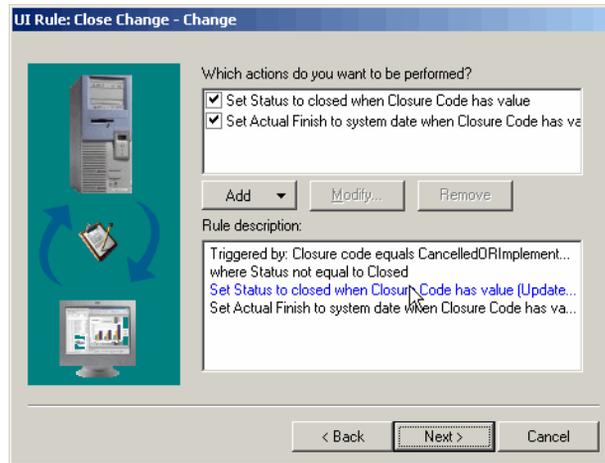
2. Enter an identifying Name for the action:

Figure 4-15   Update Data Action Example
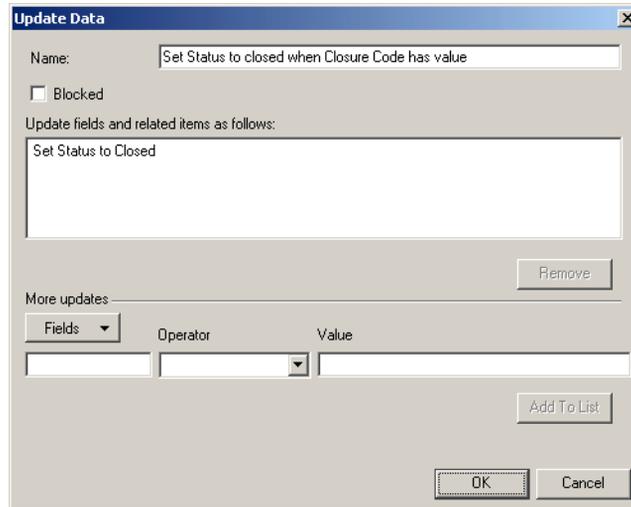
3. Clear the Blocked check box to turn on this action.

4. To enter information in the Update fields and related items as follows window, use the More updates portion of the dialog box to select parameters and then click Add to List to enter them in the window.

5. You can add multiple actions to each rule. To add additional actions click `OK` to return to the previous dialog box, and then click `Add`.

NOTE   For additional information on updating data actions, see "Creating Update Data Actions" on page 121.

Step 4. Name the rule and turn it on or off:

1. In the `Specify a name for this rule` field, enter an identifying name for the rule. This name will appear in the UI Rule window for that item.

Figure 4-16   Add the Name and Category
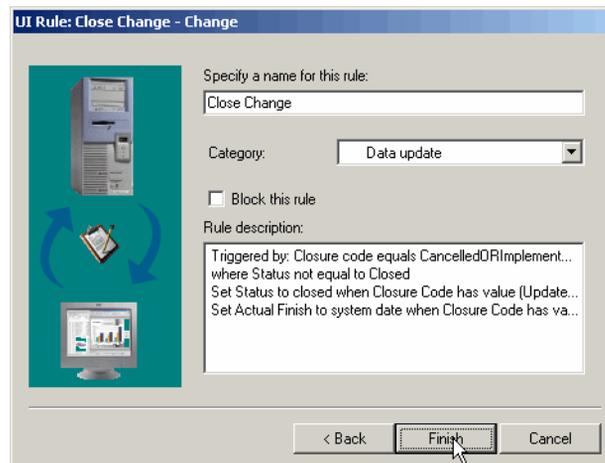
2. Enter a `Category` to group this rule with similar UI rules.

   You can use the drop-down button to select from a list of available categories or you can create your own categories.

   To create a category: in the System Administrator's console select `Data`, then `Codes`, then `General`. Open the `Rule Category` option, right-click in the view, and select `New rule category`. Type the name of your new category in the dialog box that appears.

You can organize your categories by: selecting the rule and then using the arrows on the toolbar. There are two types of views possible; the UI Rule (System) view and the Rules by Category (System) view. It is only possible to move rules in the UI Rule (System) view:

Figure 4-17   Viewing and Moving Rules
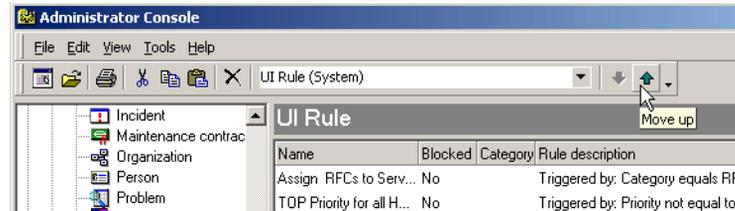
3. Clear the Block this rule check box to turn the rule on.

About Actions

Actions are executed when the conditions for a rule are met. A number of different actions can be configured and triggered both on the client computer and off.

The following actions can be triggered by a database rule on the machine that triggered the action or on another machine:

- Command Exec Action

- Update Data

- Send e-mail message

The following actions can be triggered by a UI rule. The actions are executed on the same machine that they are triggered on:

- Command Exec Action

- Update Data

- Limit Field Value Range

- Smart Actions

- Overview Actions

- System Actions (not configurable)

Access Rights

Database and UI rules are created by system administrators who have system administrator access rights. As a consequence, a user who does not have the same access rights may inadvertently trigger an action that is beyond that person's access rights.

The following example demonstrates one possible scenario:

Your system administrator created a rule that sets the Status of a service call to Closed when the Actual Finish date is entered. A specialist enters the Actual Finish date in a service call (after completing it), but does not have the rights to change the status of a service call item. The rule is triggered, the service call is automatically given the Closed Status, and the history line will show that the Actual Finish field was entered by the specialist and that the status was changed by the system administrator.

Creating Command Exec Actions

The Command Exec Action is used to execute a command with a set of parameters specified by you. This action can be used to send event information to a third-party application, or to start another application such as a banner program, for example. A number of examples are provided with the demo data for Service Desk.

To configure a Command Exec Action:

1. Enter a Name for the action in the action dialog box:

Figure 4-18   Command Exec Action

2. In the Description field, enter a brief explanation of the action that will be performed.

3. Enter the name of the Host computer the action will take place on. If the action is in response to a message sent by an external application, the host name will automatically be taken from that

account and filled in. For example, if an acknowledgment message is being sent to ITO, the host will come from the account that originally sent the incident to Service Desk.

UI rules don't require a host machine because they are executed locally.

4. Enter the `Command` you want to execute, for example:
   `c:\programfiles\ITO\Bin\ITO_ack.exe`

5. In the `Parameters` field, define additional information for the command by inserting parameters using the `Field` button.

Creating Send E-mail Message Actions

The Send E-mail Message action uses parameters to determine the message text used when sending e-mail messages. For example, this action can be used to send an e-mail message about a service call to a manager when the service call is approaching the resolution deadline. The parameters entered might include; the Service call number, the person the service call is assigned to, the deadline, status, caller, and the text from the Information field.

To configure the action:

1. Enter a `Name` for the action.

2. In the `Send to` field, enter the e-mail addresses where the e-mail messages should be sent. You can also use the `Field` button to enter field related addresses such as [person:Assignment], this will send the e-mail message to the person or group selected:

Figure 4-19   Send E-mail Message Action
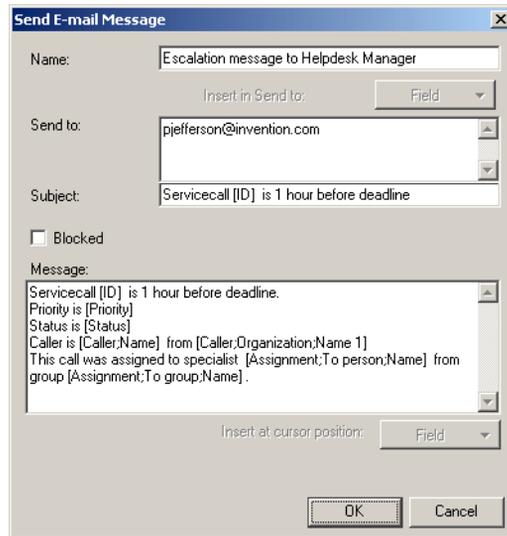
3. Enter the Subject. Use the Field button to insert the service call number or other information taken from the Service Desk item.

4. In the Message window compose the e-mail message to be sent by inserting parameters with the Field button, for example:
   Service call [Number] is almost overdue.
   Specialist [Assignment to person].
   Deadline [Deadline].
   Status [Status].
   Caller [Caller].
   Information [Information]. (information from the Service call information field will be inserted)

NOTE   Outbound mail settings must be configured properly, refer to "Using E-mail with Service Desk" on page 215 in the *Administrator's Guide* for additional information.

NOTE	To enable sending an e-mail message to a specific machine you may have to add an "MX" record to the DNS tables to explicitly allow that machine to use it's SMTP port. (There are two kinds of DNS authorizations: A scheme that allows anything that is not forbidden, and a scheme that needs explicit approval for anything that is possible.)

You can check whether your machine is registered at the DNS tables by running the following from a DOS prompt: `C:\> nslookup -type=mx <hostname>`

If the DNS tables are set up OK, then the *<hostname>* machine should appear in the list of MX preferences and one of the mail-exchanger settings points to *<hostname>*.

Creating Update Data Actions

The Update Data action is used to update data in the Service Desk database. For example, you could use this action to automatically enter the Actual Finish date when a service call is put in a Closed status.

It is possible to configure the action to set an attribute using a selected static value or to dynamically update a field with the value of another field.

NOTE	When creating an update value the new value will always be a replacement for the current value and cannot be added to the current value.

Update using a static value

1. Enter a Name for the action:

Figure 4-20   Update Data Action
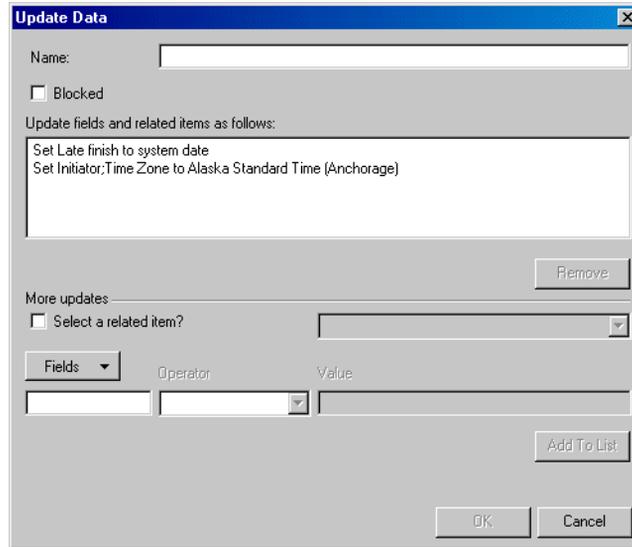
2. Use the `Field` button to select the fields you want updated, then select an `Operator` using the list button.

NOTE   If you copy information between fields and the source field is longer than the destination field the information can be truncated; for example, if you try to copy the contents of the information field to a Name field.

---

3. Select the value to be applied to the field using the `list` button.

4. Use the `Add to List` button to move the information you selected to the `Assign new values to fields` window.

5. If you are creating an Update Data action for a Database Rule you will have the additional option of updating fields in related items.

   To update the field of related item:

   a. Select the `Select a related item?` check box and use the drop-down arrow in the field on the right to select a related item. The items shown are dependent on what item the rule is based on.

b. You can select from a list of fields available for the related item by clicking Fields.

c. Select an Operator with the drop-down arrow and then select the value that you want to apply to the field:

d. Click Add to list to add the update. You can select additional items and fields for updating.

Figure 4-21   **Update Data and Related Item Fields**
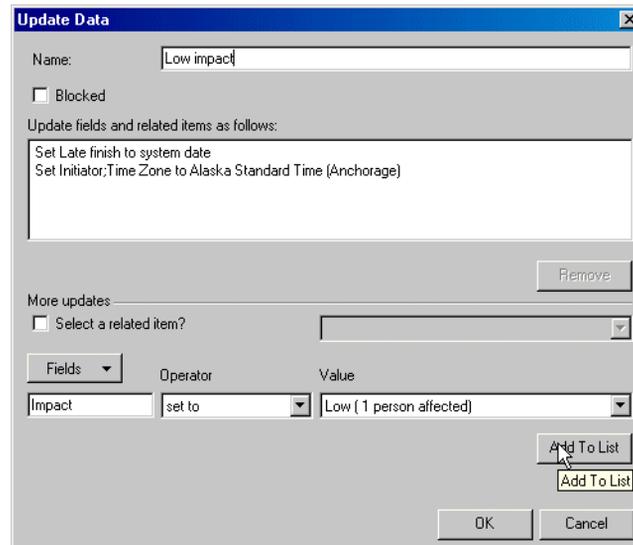
NOTE   It is not possible to update a related item with a *many to one* relationship. For example, you cannot create an action to update the status of a Change when all of the work orders related to it are closed. *One to many* relationships are possible, such as the example mentioned above. *Many to many* updates, such as multiple work orders updating multiple configuration items are also possible.

Update using a dynamic value

1. Enter a Name for the action:

Figure 4-22   **Update Data Action**
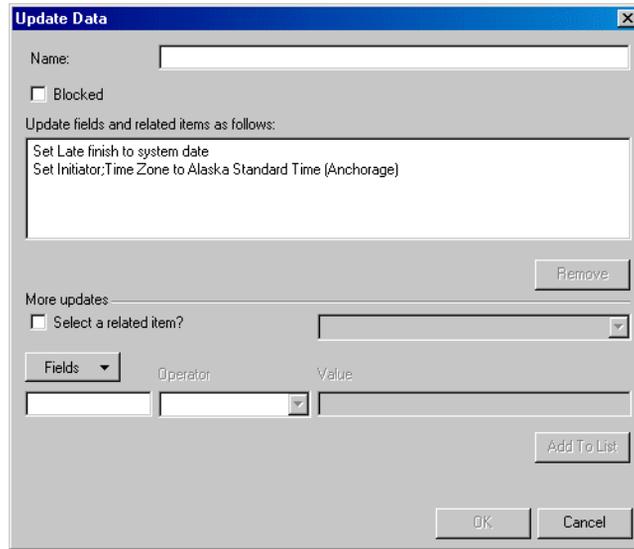
2. Use the `Field` button to select the fields you want updated.

3. Select an `Operator` *set to value of*.

NOTE   The layout of the next field will change on setting this operator
                  value. The label will change from Value to Field and a button will be
                  visible to the right of the field.

**NOTE**   Multi word parameters (parameters containing spaces) can be used if
                  they are enclosed within quotation marks. For example: sd_event
                  information="multiword information". However, if you need the
                  quotes to be passed on to another application the quotes must be
                  preceded by a back slash as an escape character. The above example
                  becomes: sd_event "information=\"multiword information\""

Figure 4-23   Add Actions to the Rule
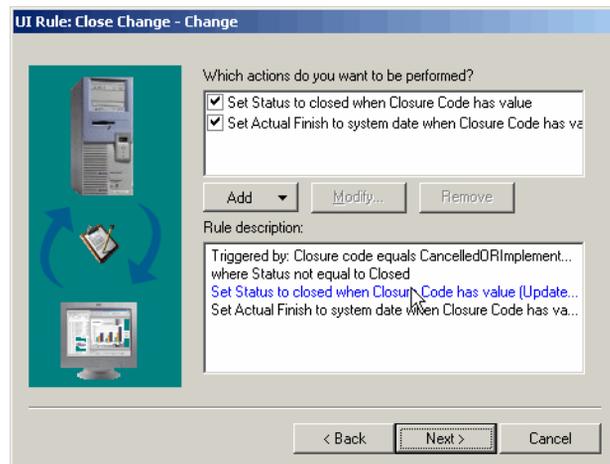
Figure 4-24   Update dynamic data
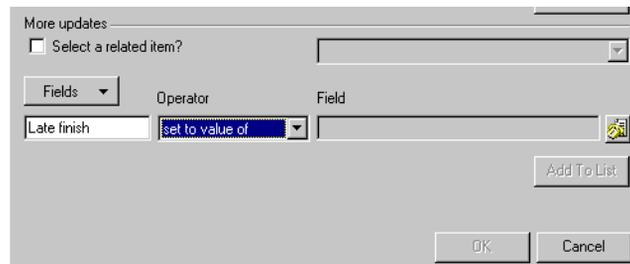
4. Select the value to be applied to the field using the button to the right of the text box.

Figure 4-25   Dynamic data field button
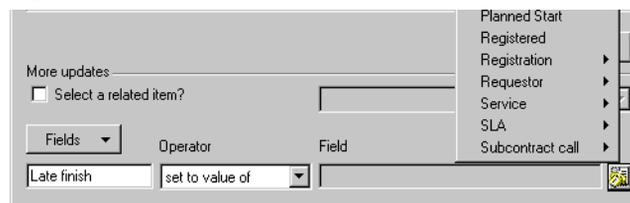
5. Use the Add to List button to move the information you selected to the Assign new values to fields window.

NOTE   The list shown by using the button to the right of the Field text box only lists fields of the same type as the selected base field; but not the same field.

Creating Limit Field Value Range Actions

This action makes it possible to limit the options available in a field. The field can be limited by setting fixed options or by making the options available dependent on the option selected in another field in the form.

To create a Limit Field Value Range action:

1. Enter the Name you want to give this action:

Figure 4-26   Limit Field Value Range Action

2. Clear the Blocked check box to turn the action on.

3. Click Fields to select the field you want to place a limitation on.

4. Use the drop-down arrow to select an Operator from the list. The operators available are based on the item and the field you have selected to limit.

5. Use the drop-down arrow in the Value field to enter the limit.

6. Click Add To List to enter the selection. Repeat this process to limit more fields, if required.

Creating Smart Actions

Smart actions call an external application when you are working in Service Desk. You can call the application using parameters that may or may not be dependent on fields in the Service Desk item you are working with. For example, you can create a smart action to open a knowledge base program when you enter data in one of the fields in a service call. When adding a smart action to a UI rule you will select from a list of smart actions that the system administrator has already configured.

For information about creating Smart Actions refer to the Online Help.

The following dialog box shows a configured smart action:

Figure 4-27   **Smart Action - Activating Knowledge base**
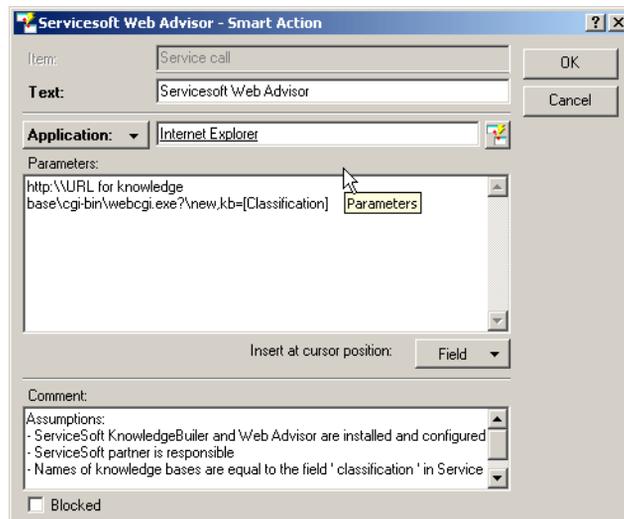
Creating Overview Actions

Overview Actions can be used to define a view. When the shortcut is activated the overview you defined is presented. Overview actions are usually related to an item you are currently working with. For example, you can activate an overview showing all of the open calls for a caller when you are working on a service call for that person. A number of examples are available in the demo data provided with Service Desk.

When adding an Overview Action to a UI rule you will be selecting from a list of overview actions that have already been created by your system administrator.

For additional information about creating Overview actions, refer to the Online Help.

The following dialog box shows a configured Overview action:

Figure 4-28   **Overview Action dialog box**
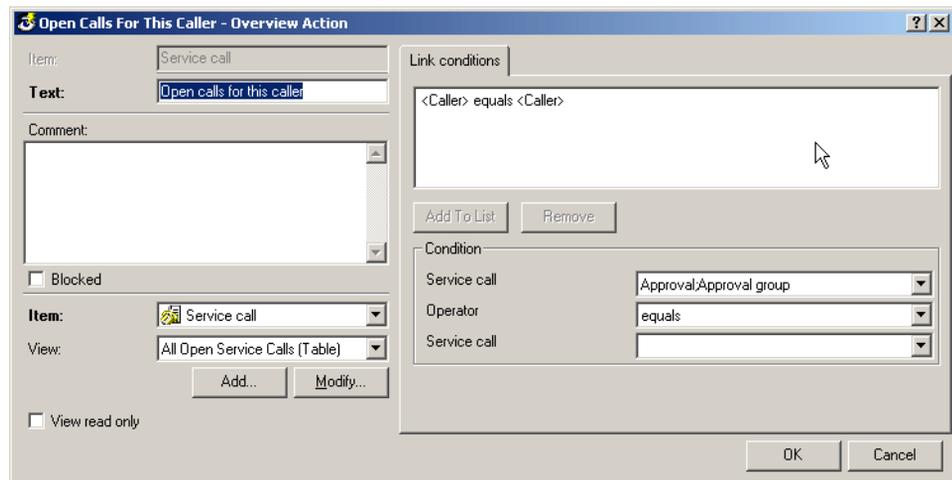
Creating System Actions

System actions are actions that have been defined by the developers of Service Desk. The system actions are complex actions that cannot be modified. You can select existing actions for use. For example, you can create a UI rule to start the Checklist system action whenever the caller is entered in a service call. The checklist provides a list of questions to guide the help desk engineer in answering the service call.

For additional information about System Actions or the Checklist, refer to the Online Help.

Sending Failed Actions

When a Rule Manager action cannot reach the agent it is intended for, that action is stored on the Service Desk application server with the agent's name. Events can be stored for up to 24 hours before they expire.

When the agent is active again it calls the Service Desk application server and gathers the actions assigned to it. The Service Desk application server is only capable of storing events that failed to reach the agent. If the server goes down all of the waiting actions will be lost. Scheduled actions are not discarded after 24 hours, they are saved in the database until the time comes for them to be executed.

Rule Manager Reports

A detailed report containing information on the UI and database rules is available from the Business Logic tree within the Administrator console. To view the separate directories and reports for the database and UI rules expand the Business Logic tree.

The view for the database and UI rules will contain the following descriptions:

Table 4-1 **Report information**

Column	Information
Name	Name of the rule
Blocked	Yes/No
Category	Rule category
Condition	Lists all the conditions in the rule
Actions	Lists all the actions in the rule

NOTE The view cannot be modified.

Figure 4-29 **Rule view**

The report can be printed by selecting Print on the File menu.

View Scheduled Rule Actions

Whether an action associated with a database or UI rule is executed depends on the condition that has to be met.

This condition can be scheduled. This means that the validity of this condition is not an issue the moment the rule is triggered but at a later moment in time.

An overview of all the scheduled tasks is available for viewing by the system administrator. This view can be found within the Administrator console under Business Logic/Scheduled Tasks.

There are two types of tasks reported in this view, they are database rule actions and SLA reports.

The columns within the view show the following information:

Table 4-2   **Details of scheduled actions view**

Field	Information
Date	Time/date of action
Type	Rule or SLA
Description	Short name of the rule plus an associated entity id
Server	Application server name or IP address

NOTE   An overview of all scheduled tasks are only available to users with administrator rights.

To view a table of scheduled tasks:

1. Select System from the Tools menu.

2. Select Business Logic.

3. Select Scheduled Tasks.

An example of the view of scheduled tasks:

Figure 4-30 **Scheduled tasks view**
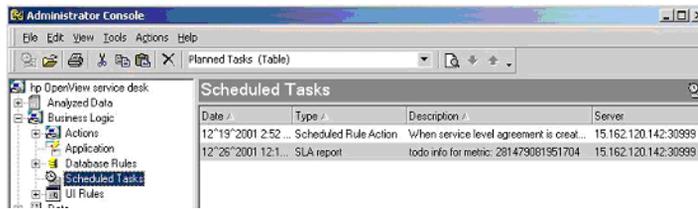
There are two types of tasks: database rule action and SLA report. A view shows all the scheduled tasks. A task can be opened in a form. Tasks can be printed as a multi-record report.

NOTE   It is not possible to delete scheduled actions.

Rescheduling of Scheduled Tasks

All scheduled tasks are assigned to a particular server and if, for any reason, this server is not connected or working at the time the task is scheduled the task will not be executed and therefore become overdue.

To avoid tasks becoming deleted, it is possible to reschedule the task to another server from the Scheduled Tasks view.

NOTE It is not possible to reschedule a task before the server the task has been assigned to is disconnected or not working. If a server is scheduled to be offline during the time that actions are due to be executed it is not possible to reschedule them until the server is actually disconnected.

To Reschedule a Task

The Administrator discovers that a server that has been assigned tasks has not been able to execute them due to for example, being offline.

NOTE If the server was not down, but just connected to another database at the time of execution, the task will not be able to be rescheduled. If you wish to reschedule a task because you are moving a server to a different database the rescheduling must be completed while the server is not connected to the network.

1. Open the View Schedule Tasks form from the Administrator Console.

2. Choose `Reschedule Tasks` from the `Actions Menu`.

3. In the Reschedule Tasks window select `OK` to reassign the tasks to the server currently connected.

Figure 4-31   **Reschedule tasks**

NOTE   The rescheduling process cannot be aborted.

Monitoring Rule Actions

It is possible to monitor actions performed by the rule manager for Database rule information and UI rule information.

To enable monitoring of the rule actions open the General Settings dialog within the administrator console. (`../hpOpenView/System Panel/General Settings`) and check the check box `Rule Manager Debug (More Detailed Entries in Log Files)`.

Figure 4-32   **Administrator Console /General Settings**
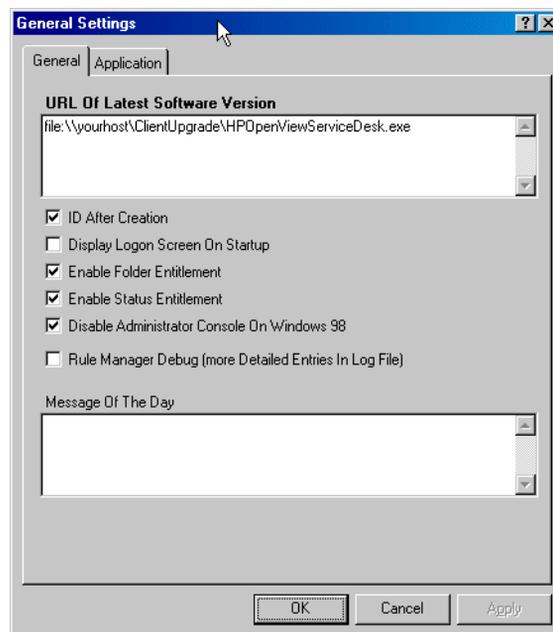
The information that can be monitored includes the following:

- an object of a particular entity is changed and verified

- a condition is fulfilled

- a scheduled action has been executed

- an action has been scheduled (DB rules)

Database rule information is written to the file `logserver.txt` and UI rule information is written to `logclient.txt`.

About the Agent

The Service Desk agent is only used to execute Command Exec Actions. It is not used when performing actions to update the Service Desk database. For installation and activation instructions refer to the *HP OpenView Service Desk: Installation Guide*.

5 Opening Forms from the Command Line

Included with Service Desk is an executable that can be started by other products to initialize specific parts of Service Desk.

Examples of Use

The command-line interface can be used in various integrations. In a command-line integration an external application calls Service Desk classes and passes arguments in the call. The call can be made through the DOS prompt.

For example: help desks often make use of CTI (Computer Telephony Integration) applications. CTI applications are used to route telephone calls automatically to the right help desk employee. The CTI application can call external programs, passing the telephone number of the caller over the command line. The command string passed along the command line can identify and search for all previous or open Service Calls from that caller. The help desk employee can then see an overview of the service calls logged by the caller in the Search Results dialog box before picking up the telephone.

NOTE   The application triggering the command line action and Service Desk (client) must be installed on the same computer.

Defining a Command Line Argument

Use the executable `sd_dataform.bat` to open a specific form in Service Desk from the command line of another application. The form can be a standard form, or one created specially for the purpose, but the form must exist before it can be called by the executable. You will need to know the exact name of the form for the command line argument. Forms are created and edited in the `Form Designer` feature of the Administrators Console. To open the `Form Designer`, select `System` from the `Tools` menu, then open the `Forms` branch from the `Presentation` node.

Command Line Syntax

The syntax for the command line is:

```
<service desk path\bin> SDDataForm <Form name> <Display
option> <Search criteria>
```

For example:

```
SDDataForm "Service call" -ListAlways ID=200
```

The above example searches for the form Service Call, and any service call records with the ID number 200. The results are displayed in the Search Results dialog box even if no matching database records are found. Each element of the command line argument is in the following section.

General Rules for Arguments

When composing command line arguments, the following points should be kept in mind:

- Whenever a form name or field name value contains any character not recognized by DOS or that DOS gives a different meaning (for example a space,' >' symbol, or a period) the form name or search criterion must be included in quotation marks. If you need to include a string in quotation marks, you cannot include quotes within quotes. A single set of quotation marks must include all illegal characters in the argument.

- All arguments are case-sensitive.

- The search value entered in the command line argument must be identical in format to the value stored in the database. For example, if a CTI application identifies a telephone number of an incoming call as 0123456789, but the number is stored on the database as 012 345 6789 (with spaces), no occurrences of the telephone number will be found, and the search will fail.

- Command Line arguments must contain the path variable unless the DOS command indicates the correct directory (folder) at the DOS prompt. The executable file sd_dataform.bat is located in the Service Desk client\bin folder of both the client and server installations.

- The client user must have access rights to the form being called.

Command Line Executable

The executable file used by Service Desk to do a database search, and open forms from data passed via the command line is sd_dataform.exe. This executable is located in the Service Desk \client\bin.

Sd_dataform.bat must be named first in the command line string unless DOS needs to be told where to find it, in which case the path to its location must be included. If the DOS prompt is already in the \bin directory nothing needs to be inserted before sd_dataform.bat. For example:

With a prompt in the correct folder:

```
C:\Program Files\Hewlett Packard\OpenView\service desk
4.5\client\bin\> sd_dataform.bat .....
```

Without a prompt in the correct folder:

```
C:\>Program Files\Hewlett Packard\OpenView\service desk
4.5\client\bin\sd_dataform.bat .....
```

Alternatively, the path can be set in the Windows Environment Path settings to ensure the prompt is in the correct folder. There is a slight variation between Windows NT4 and Windows 2000 when setting the Environment Path.

To set the Environment path in Windows NT:

1. From the Start menu select Settings and then Control Panel.

2. In the `Control Panel` double-click the `System` icon, and then select the `Environment` tab.

3. Select `Path` from the list of systems variables.

4. Append `;<SD product path>\client\bin` or `;<SD product path>\client\bin` to the existing path variables, where <SD product path> is the actual path of Service Desk on your computer.

To set the Environment Variables path in Windows 2000:

1. From the `Start` menu select `Settings` and then `Control Panel`.

2. In the `Control Panel` double-click on `System`, and then select the `Advanced` tab.

3. Click `Environment Variables`.

4. Select `Path` from the list of variables and click `Edit`.

5. Append `;<SD product path>\client\bin` or `;<SD product path>\client\bin` to the existing path variables, where <SD product path> is the actual path of Service Desk on you computer.

Another alternative is to edit the `autoexec.bat` file, by appending the following to the `SET PATH` parameter:

`;<SD product path>\client\bin` or `;<SD product path>\Server\Bin`, where <SD product path> is the actual path of Service Desk on your computer.

Form Name

The first argument in the command string must be the name of an existing form. If two or more forms have the same name, the first one created will be used. There are several ways to find the name of a form: simply open the form in service desk and take the name from the title bar, generate the data dictionary (see "Generating a Data Dictionary" on page 198 for more information), or open the forms branch in the Administrator's Console (described below). The data dictionary will give you a full list of all form and field names in Service Desk. Each of these methods will provide the localized names.

To find the form names in the Administrator's Console, do the following:

Step 1. In Service Desk, choose `System` from the `Tools` menu.

Step 2. In the `Administrator Console`, open the `Presentation` node and then the `Forms` node.

Step 3. Find the `Form` you want from the list.

Step 4. Double-click the Form title to open the form to check if it is the form you require.

Display Options

The display options define how the results of a database search are treated. There are three possible outcomes of any database search; no matching records are found, one matching record is found, or multiple matching records are found. How Service Desk responds to these three possibilities can be defined using one of three display options:

- No option defined. The Service Desk default is that if you do not define a specific display option, the following actions will occur:

    1. When no records are returned from the search, a new form will be opened.

    2. When a single record is returned, that record will be opened automatically in Modify mode.

    3. When multiple records are found, the Search Results dialog box will open displaying a list of all returned records.

- `-ListAlways` will cause the Search Results dialog box to be displayed even when no records, or only one record is returned. The user will have to click the `New` button if they then want to create a new record.

- `-ForceNew` will cause a new instance of the named form to be displayed, regardless of any search criteria.

When Service Desk finds more than one item in a search, or when the display option is set as `ListAlways`, the Search Result dialog box is shown. To open an item shown in the Search Result dialog box, select it and click `Open`.

Figure 5-1   **CLI Search Results dialog box**

Search Criteria

Search criteria are optional, however if no criteria are set then a blank form will be displayed. Multiple criteria can be defined.

The search criteria syntax is:

`FieldnameOperatorValue`

There must be no spaces between the three elements of the search criteria; Field Name, Operator and Value. Spaces are allowed in the Field Name or in the Value as long as the whole name or value is enclosed in quotation marks. For example:

`Location=B1R103 "Outsourced to=HP"`

will find all configuration items located at location B1R103 that are out-sourced to HP.

Field Name

As with forms, there are several ways to find the name of a field: simply open the form in service desk and take the field name from the UI, generate the data dictionary (see "Generating a Data Dictionary" on page 198 for more information), or open the forms branch in the Administrator's Console (described below). The data dictionary will give you a full list of all form and field names in Service Desk. Each of these methods will provide the localized names.

To find the field names you need, do the following:

Step 1. In Service Desk, choose `System` from the `Tools` menu.

Step 2. In the `Administrator Console`, open the `Presentation` node and then the `Forms` node.

Step 3. Find the `Form` you want from the list.

Step 4. Double-click the Form title to open the form.

Step 5. The fields available for inclusion in the form are listed in the `Attributes` dialog box. Only the fields currently used in the form and thus displayed in the `Form Designer` dialog box should be used for a command line search.

Extended field names

You can use the fields of related items to find a service call. If you use field names of related items, the field name is extended with the item name. Use a period to separate the item name from the field name. For example, to open service calls using the caller's telephone number, you can use the field name: `Caller.PrimaryTelephoneNumber`. Or, to open a configuration item using the location's search code where the configuration item is placed, use: `Location.searchcode`.

NOTE   To see an example of what field names and extended field names are possible, open the `Advanced Find` dialog box. In the Advanced Find dialog box, click the `Advanced` tab and then click `Fields`. The names in the fields list can be used as field names. Names in submenus of the fields list must be used as extended field names.

Operators

You can use the operators shown in the following table:

Operator (Text)	Operator (Symbol)	Usage
Equal	=	is equal to
NotEqual	!=	is not equal to
GreaterThan	>	is greater than

Operator (Text)	Operator (Symbol)	Usage
GreaterThanOrEqualTo	>=	is greater than or equal to
LessThan	<	is less than
LessThanOrEqualTo	<=	is less than or equal to
Between		is included in the range defined by two values. Separate values with AND. Text strings with spaces or illegal characters should be identified by quotation marks.
NotBetween		is excluded from the range defined by two values. Separate values with AND. Text strings with spaces or illegal characters should be identified by quotation marks.
Contains		is one of a list. Separate values with AND or OR. Text strings with spaces or illegal characters should be identified by quotation marks.
NotContains		is not one of a list. Separate values with AND or OR. Text strings with spaces or illegal characters should be identified by quotation marks.
Empty		is empty (no value given, NULL)
NotEmpty		is not empty (value given, not equal to NULL)
Yesterday		date is equal to yesterday's date (system date -1)

Operator (Text)	Operator (Symbol)	Usage
Today		date is equal to today's date (system date)
Tomorrow		date is equal to tomorrow's date (system date +1)
Last7Days		date is one of the last seven days (Between system date and system date -7)
Next7Days		date is one of the next seven days (Between system date and system date +7)
LastWeek		date is one of the days of the last working week
ThisWeek		date is one of the days of this working week
NextWeek		date is one of the days of the next working week
LastMonth		date is one of last month
ThisMonth		date is one of this month
NextMonth		date is one of next month
StartsWith		text starts with ......, if the text string has spaces or illegal characters the string should be identified by quotation marks.

Standard DOS wildcards (*, ?) can also be used in values, for example: sm* will find Smith, Smythe, Smit, etc.

Whenever the text version of an operator is used it must be contained in square brackets, with no spaces around it. For example:

```
ID[Equal]251
```

If you need to include a string in quotation marks, you cannot include quotes within quotes. A single set of quotation marks must include all illegal characters in the argument.

NOTE
If you want the data found by the search criteria to be inserted automatically in the named form when a new form is called, insert a + symbol before each search criterion in the string that you want to be included in the form. If the criterion is enclosed by quotation marks, because of a space or illegal character, place the + symbol inside the quotes.

Value

The value searched for must be entered in the correct format for anything to be found, and if that value format contains a space or other illegal character, such as a period, the value must be contained in quotation marks.

To find an item by date, use the date format specified in the system settings of your computer, for example on April 27, 2001 use: 27/04/2001. The date format depends on the system settings of your computer.

Search codes must be capitalized. To find an item based on a search code, for example for Steven Barns use: BARNSS.

6 Configuring Service Pages

The service pages are secure Internet pages that enable your customers and specialists to report problems and access data over the Internet.

Service Pages User Accounts

To set up Service Pages Accounts there are four steps that are required:

- Define the Views and Templates.

- Define the Role settings.

- Create a user account, or allow users to create their own accounts.

- Set the password limitations.

All these settings are defined from the Service Desk Administrator Console. To open the Administrator Console do the following:

1. Start the Service Desk application server.

2. From the `Tools` menu, choose `System`.

3. The `Administrator Console` is displayed:

Figure 6-1   Administrator console dialog box
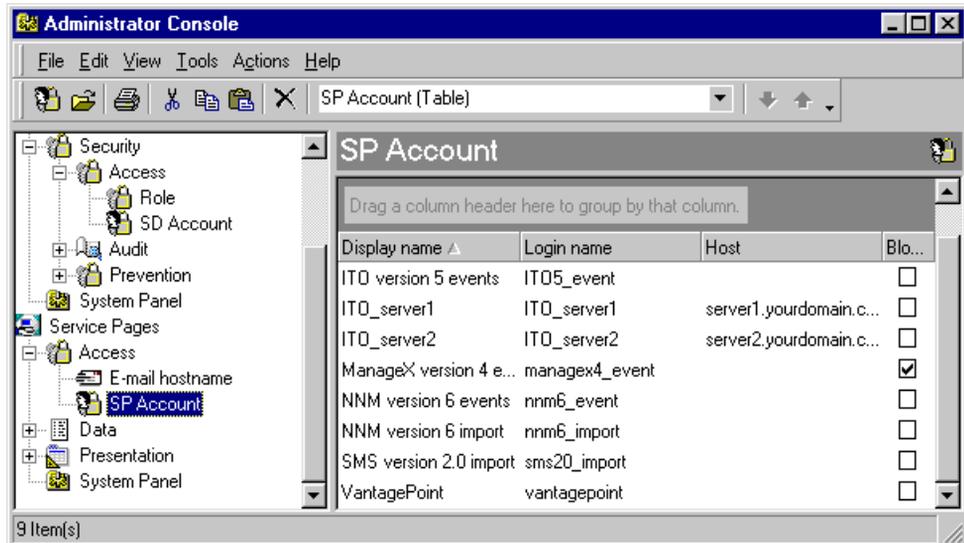
Defining Service Pages Views and Templates

To create and assign a View for Service Pages accounts:

1. In the Administrator Console expand the `Presentation node` **below the Service Pages icon, and open** `Views`.

2. **In the** `Views` **branch, select** `Service Call` **and right-click in the right hand pain, a popup menu is displayed.**

3. **In the popup menu choose** `New View`. **The New View dialog box is displayed. Enter a name for the new view in the** `Name` **field:**

Figure 6-2   New View dialog box
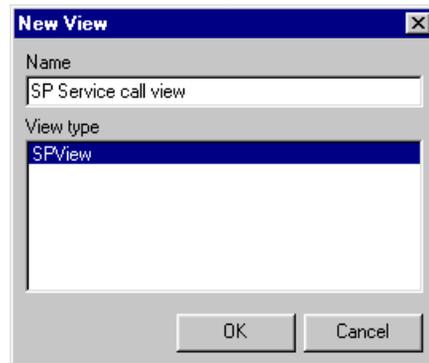
4. **Click** `OK`. **The** `View Summary` **dialog box is displayed. Click the** `Filter` **button to specify the conditions for the view. The Filter dialog box is displayed:**

Figure 6-3 **View Summary dialog box**
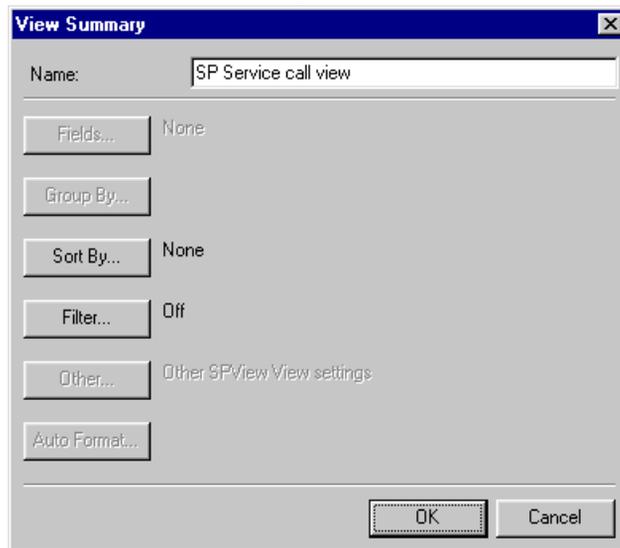
5. In the Filter dialog box, you can click the `More Choices` tab and select `Where I am: The Caller` check box in the list that is displayed. This will ensure that the end users will only be able to view their own Service Calls. Click `OK`:

Figure 6-4   **View Filter dialog box**
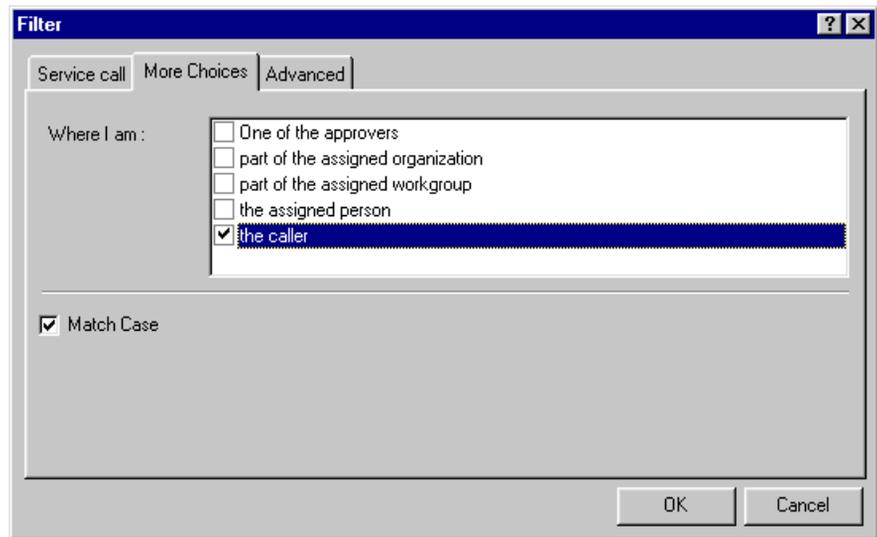
6. The View Summary dialog box will now show that the `Filter` is on. Click `OK`. The new view is now displayed in the list of available views.

7. In the Administration Console select `View Settings` below the `Service Pages`, and `Presentation` nodes.

8. Double-click on Service Call in the right hand pane, the `Service Call - View Settings` dialog box is displayed.

9. In the View Settings dialog box select a view from the drop-down list for `Full` and `Restricted lists` that can be viewed by the end users and Support Engineers. Click `OK`:

Figure 6-5   **Service Call - View Settings dialog box**
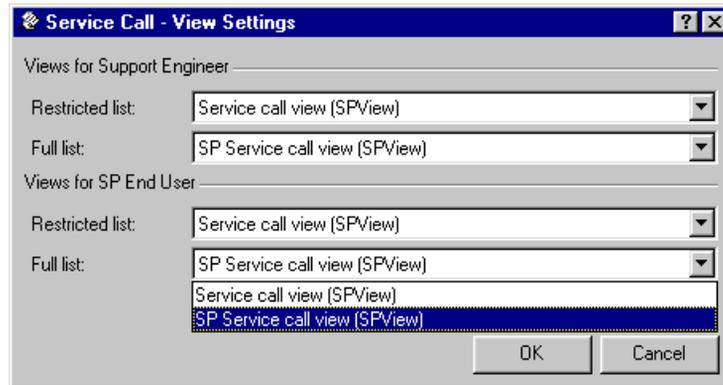
Existing Templates can be used for Service Pages accounts. For
information on creating new templates see the *Service Desk Online Help*.

NOTE   A Service Pages end user can only enter data to a limited subset of
Service Call fields, therefore the template used must contain default
values for any required fields that are not visible to the Service Pages
user.

To assign Templates for the Service Pages account:

1. In the Administration Console select `Template Settings` below the
   `Service Pages`, and `Data` nodes.

2. Double-click the Service Call template entry in the right-hand pane.

3. The `Service Call - Template Settings` dialog box is displayed.
   To select a template, click the icon adjacent to the `Template for
   insert` field:

Figure 6-6 **Template Settings dialog box**
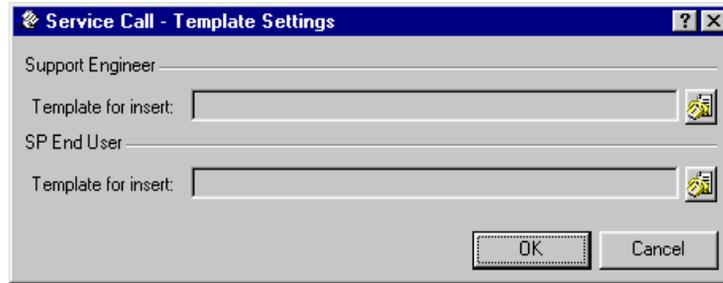
4. The `Choose Template` dialog box is displayed. Highlight the template you want. The check box in the right hand view indicates the currently selected default, there is no need to change this. Click `OK`.

Figure 6-7 **Choose Template dialog box**
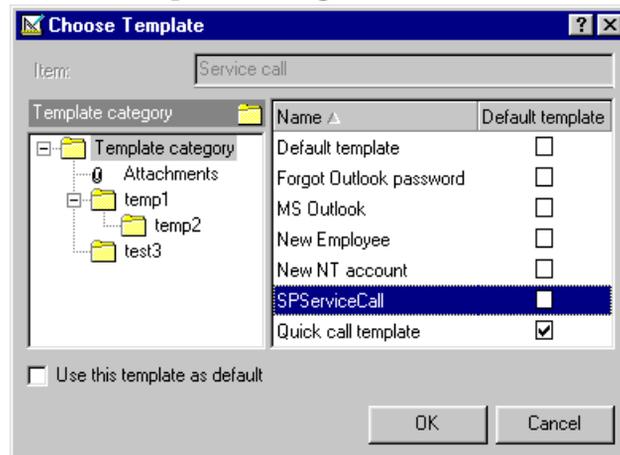
Defining Service Pages Role Settings

Once you have established which views and templates are to be used for the Service Pages Role other settings for the Role must be defined. These tasks are all accessed from the Service Desk part of the tree in the Administrator's Console.

1. If you plan to limit the access of users to just service calls that are in a particular status range then `Status Entitlement` **must be enabled. To do this select the Service Desk** `System Panel` **and double-click on the** `General Settings` **icon. The General Settings dialog box is opened. Select** `Enable Status Entitlement`, **click** `Apply` **and then click** `OK`:

Figure 6-8   **General Settings dialog box**
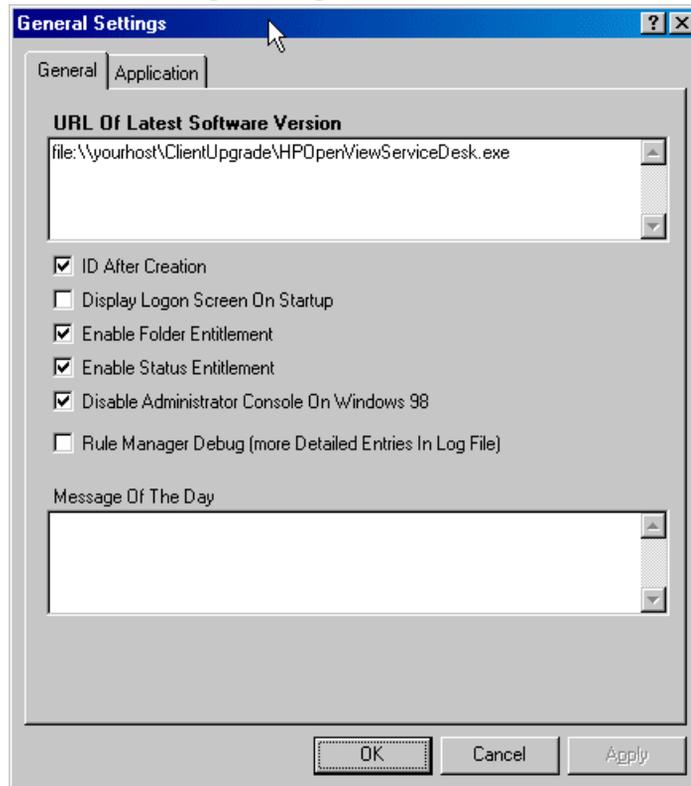
2. **In the Administrator Console select the** `Access` **node and then** `Role`. **Double-click the Service Pages role in the right-hand pane, the** `Service Pages - Role` **dialog box is displayed:**

Figure 6-9 **Service Pages - Role dialog box**
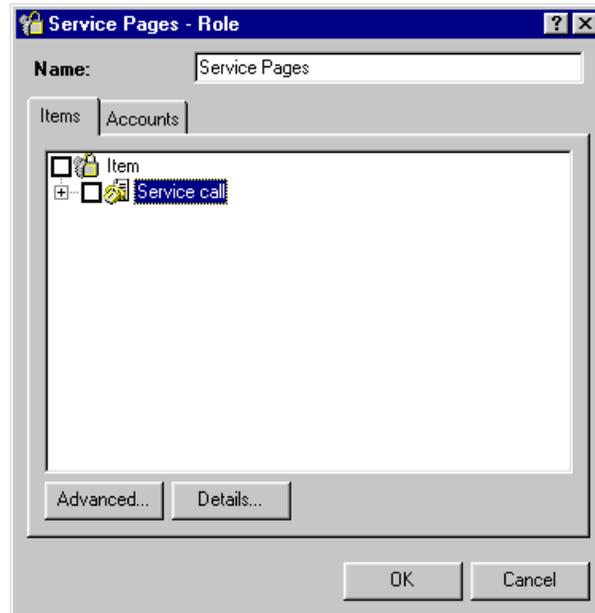
3. Highlight the `Service Call` item and click `Advanced`. The `Item Access` dialog box is displayed. If the views or templates you selected above are not displayed on the `Views` or `Templates` tab pages, click the `Relate` button and select them from the popup list. Click `OK` in the popup list, to return to the `Item Access` dialog box, and click `Close` to return to the `Service Pages - Role` dialog box:

Figure 6-10   **SP Role - Item Access dialog box**
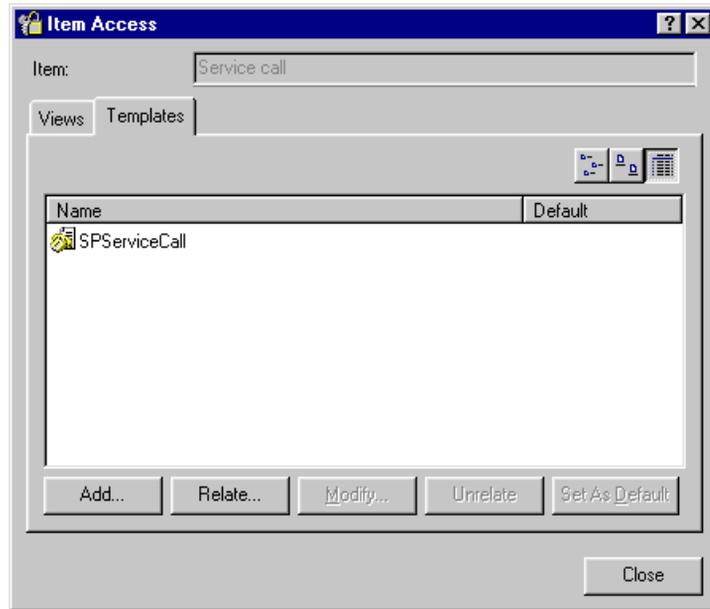
4. In the Service Pages - Role dialog box, allow the Role View, New, and Modify rights for Service Calls by expanding the Service Call item and checking the relevant sub-items check boxes:

Figure 6-11   Service Pages - Role dialog box
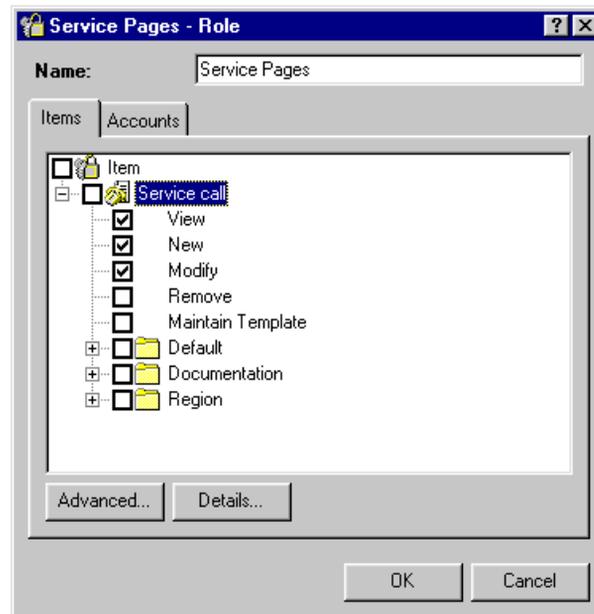
5. Highlight `Service Call` and click `Details`. The Detailed Item Access dialog box is displayed. The `Access` tab reflects the checked items on Role dialog box. Select the `History line` tab and select the `View` and `New` check boxes to enable the users to see and add new History lines.

Figure 6-12   **Service Pages History Line dialog box**
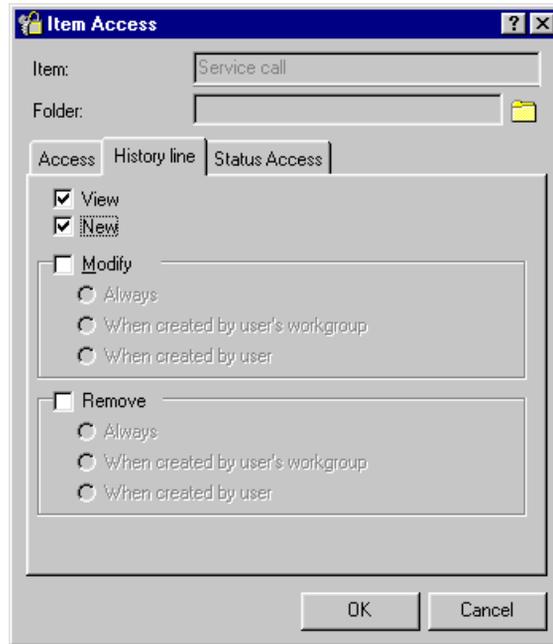
6. Click the `Status Access` **tab, and select the same status from the drop-down lists for both the** `Status from` **and** `Status to` **fields. This will restrict the end users Modify rights to only editing Service Calls that they have created and that are still in the selected status. The status you select will usually be the status set up on your system for service calls that have been created but not yet accepted by a specialist or work group:**

Figure 6-13   **Service Pages Status Access dialog box**
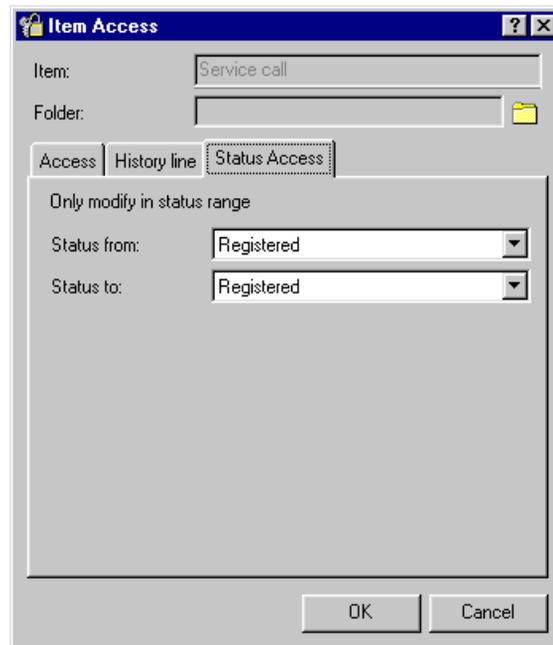
Create a Service Pages User Account

To create a Service Pages user, do the following:

1. In the Administrator Console, expand the `Access` node below the Service Pages icon. In the `Access` branch, select `SP Account`.

2. Right-click in the `Account` view and choose `New SP Account` from the popup menu. The Account dialog box is displayed:

Figure 6-14   **Account dialog box**
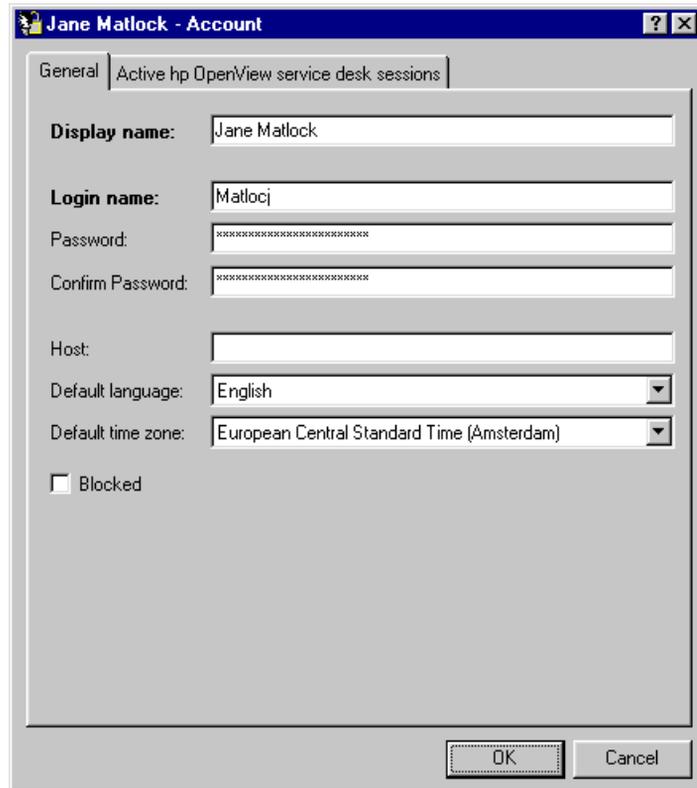
3. Type the name to be displayed when referring to this account. This is the name that will normally be displayed, for instance, in the Active Service Desk sessions tab page.

4. Enter the login name that the user will use to log on to Service Pages. This may be the same as the user's NT login, but it is not required.

5. Enter a password, and confirm the entry. Password rules are set up using the `Password Settings` in the `System Panel`. If you provide the user with a password they can change it by using `Options` from the `Tools` menu and then selecting `Accounts` and then `Change Password`.

6. Leave the `Host` field blank.

7. Enter the user's `Default language`, by selecting a language from the drop-down list. Only languages displayed in the list have been installed in the Service Desk database for localization.

8. Select the user's `Default time zone` from the drop-down list. All records are stored on the database as Greenwich Mean Time, and adjusted by the difference dictated by the user's time zone setting when created, viewed, or modified. See the Service Desk online help for more information.

9. Use the `Blocked` check box if you want to ensure that the account cannot be used. This may be a useful alternative to deleting an old or redundant account.

Relating Accounts to Person Items in Service Desk

Before an account can be used, a Service Desk person record must be created (or an existing one modified) and the account name linked to the person record using the `Account` field in the person record. For more information about creating and modifying Person items see the Service Desk Online Help.

Setting the Password Limitations

You can define the limitations and requirements for user defined account passwords. The password limitations will apply to all Service Pages accounts.

To set the password limitations:

1. In the Administrator Console, select System Panel below the Service Pages branch, and double-click the Password Settings icon.

2. In the Password Settings dialog box select the settings you want to enforce and click `OK`:

Figure 6-15   **Password Settings dialog box**
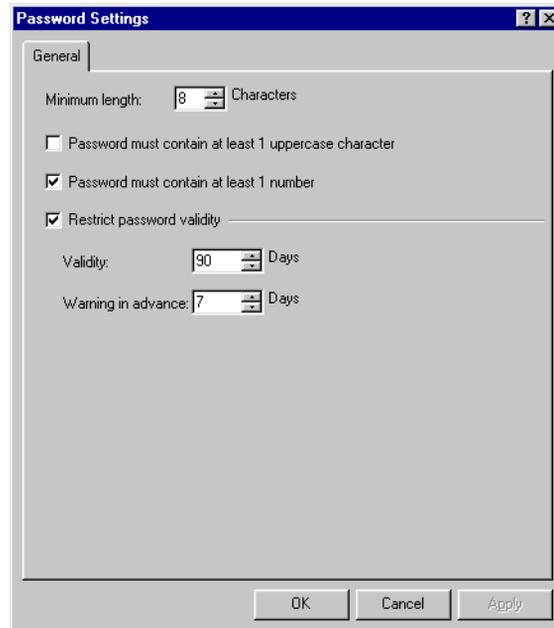
Setting the E-mail Host Name

By setting an e-mail host name you can define which end users are allowed to create their own Service Pages account on-line. Subject to two criteria, end users with an e-mail address from the specified host can create their own account. The two criteria are that a valid person record exists in Service Desk and that the person record has an e-mail address from the host name set in the e-mail field. A password for the new Service Pages account is returned to the e-mail address set in the person record.

To specify an e-mail hostname:

1. In the Administrators Console expand the `Access` branch below the `Service Pages` node, and select `E-mail hostname`:

Figure 6-16   Administrator's Console - E-mail Hostname view
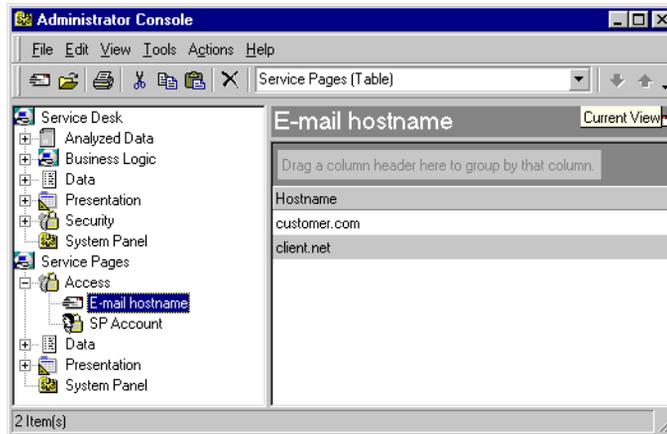
2. Right-click in the view pane, and choose `New E-mail Hostname` from the pop up menu. Enter the new host name in the `Hostname` field and click `OK`. You can block a hostname from being used by selecting the `Blocked` check box. This will block users from that e-mail domain from creating Service Pages accounts without removing the host name from the system. This ensures the integrity of any database records that have previously used this host name.

Figure 6-17   New E-mail Hostname dialog box

Setting up Service Pages Accounts for Support Engineers

Support Engineers are able to access Service Pages using their existing Service Desk accounts if Service Pages views and templates have been set up for them. Create views and templates for Support Engineers in the same way as for other users. Support Engineers, however, will require more views and templates as they will need to access not only service calls, but also incidents, problems, changes, and work orders via the Service Pages.

To enable Support Engineers full functionality through Service Pages:

1. Create templates for new service calls and incidents created in Service Pages.

2. Create views for service calls, incidents, problems, changes, and work orders in the same way as for other users.

3. Assign templates for new service calls and incidents.

4. Assign Service Pages views for service call, incident, problem, change, and work order overviews.

5. Assign the selected views and templates to the Service Desk support engineer role.

Setting Up E-mail Approval for Service Pages

Service Desk provides the facility for approval to be sought before specified actions can be performed. If this functionality is to work in conjunction with Service Pages, the fully qualified host name for the server where the Service Pages are resident must be entered in the General Settings dialog box.

To enter the Service Pages server name:

1. In the Administrator Console click the System Panel branch of the Service Desk node.

2. Double-click the General Settings icon, then click the Application tab. Enter the server name in the Service Pages Server Host Name field. Click OK:

Figure 6-18 **General Settings dialog box**
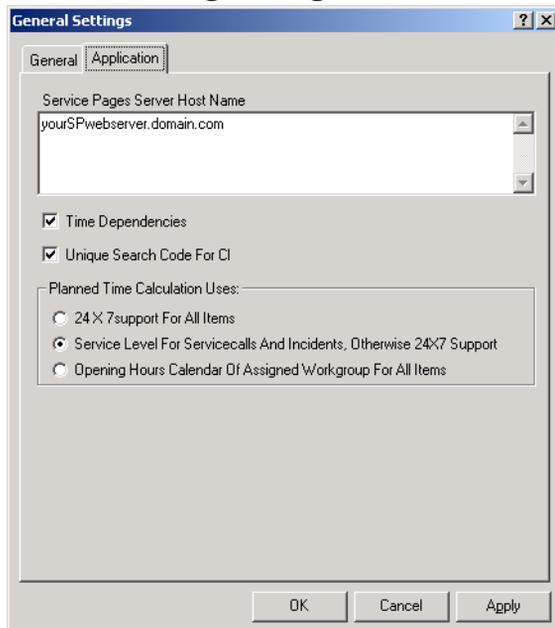
NOTE   If you use the Tomcat web server supplied on the installation CD, you must specify the port :8080 after the server name, for example,

SP_server1.invention-inc.com:8080

Configuring the Service Pages Interface

In the Service Pages, you can easily configure the links, fonts and the logo in the header.

To configure the links and the customer header, you must edit the HTML files. These can be found in the folder `\\Service Desk 4.5\Sp\SSP_Files`.

To configure the logo:

1. Go to the file `logo1.html`.

2. Open the file with an HTML editor.

3. In FrontPage editor, insert the graphic of your choice in the HTML line `<IMG src="xxxx.gif">`, where **xxxx** is the Hewlett Packard logo.

4. Save the file. Make sure that your editor has the character set defined as Multilingual (Unicode UTF-8) language.

To configure the links:

1. Go to the file `links.html`.

2. Open the file with an HTML editor such as Microsoft® FrontPage Editor.

3. Replace the default links by the links of your choice.

4. Save the file. Make sure that your editor has the character set defined as Multilingual (Unicode UTF-8) language.

To configure the font:

1. In the file `sd-sp.css`, change the default fonts to the fonts of your choice.

2. Save the file.

7   Multiple Servers

Running multiple servers gives a more robust and balanced environment. If an application server fails or the network to the server is broken, clients connected to that server automatically reconnect to the other application servers.

Multiple Application Server Environment

There is no limit to the number of application servers that can be installed on different machines on your network, and no configuring of these servers is necessary providing they all connect to the same database. When a client connects to the server that is defined in the client's connection settings, the server checks with the database and sees what the current load balance and weighting is on all the servers. If the defined server has a unbalanced number of connected clients, the new client session is routed to another server.

When the Service Desk Application Server software is installed, the `Multiple servers` check box on the `General` tab of the `Configuration Editor` is checked by default. If, after installation, the multiple servers are not communicating with each other, you should check this setting for each server. For more information about configuring the application server see "*Configuring the Application Server*" Chapter of the *HP OpenView Service Desk: Installation Guide*.

Service Desk application servers will only recognize others where `Multiple servers` check box on the `General` tab of the `Configuration Editor` is selected. If multiple servers have been installed, this parameter should not be changed as this will create problems.

Firewalls with port-mapping do not work with multiple servers. If you use a firewall with port-mapping, you must use a stand-alone application server and clear the `Multiple servers` check box on the `General` tab of the `Configuration Editor`.

NOTE   The only time you must clear the `Multiple servers` check box is when you are using a stand-alone application server with a firewall that uses port-mapping.

Starting Multiple Servers

In a multiple server environment, when a client connects to an application server, a list of all application servers that are currently running is sent to the client and stored in the file `srv.dat` in the user profile. When the application server that the client is connected to fails, the next server on the list takes over.

However, if, at the moment the client connects to the application server, there is only one server running, and afterwards more servers are started, the client will not know about the other servers. Thus, if the clients' server fails, no take-over will take place. This happen because the list is only sent to the client when it first connects at the start of a session. It is therefore recommended to start all your Service Desk application servers in the multiple server environment before clients start to connect.

When this happens, the client can be "manually" connected to another application server by changing the `hp OpenView service desk Server name` field in the account properties dialog box.

Service Desk Port Allocation

Communication between servers and client computers takes place via TCP/IP ports.

The Service Desk application server listens by default on port 30999 for incoming connections from Service Desk clients. The port number can be changed by modifying the ITP port value in the server configuration file `server_settings.xml`. If the port specified does not match the default 30999, then all clients will need to specify the correct port number when they connect to the application server.

To change the port number used by clients:

1. From the Start menu on the client, select Program Files and then hp OpenView service desk 4.5.

2. Select client and then client accounts. The hp OpenView service desk Accounts dialog box is displayed.

3. Select the Service Desk account being used by the client and click Modify. The account Properties dialog box is displayed.

4. In the hp OpenView Service Desk Server name field add the port number after a colon. For example, myappserver:12345, where 12345 is the new port number.

The Service Desk application server listens by default on port 30980 for incoming HTTP Post requests from the SD_event program. The port number can be changed by modifying the HTTP port value in the server configuration file `server_settings.xml`. If you change the default port number, SD_event needs to be told to use the new value. SD_event can use another port number by specifying the port number on the command line with the -p flag or by specifying a port entry in the SD_event configuration file.

The application server uses by default port 25 for SMTP connections. The port number can be changed by modifying the value in the server configuration file `server_settings.xml`.

The client listens by default on ports 30999-31019 for incoming requests from the application server.

The Service Desk Agent listens by default on port number 50998 for incoming requests from the Service Desk application server. The value of this port number cannot be changed. Communication between Service desk application servers and the database server also takes place via TCP/IP ports. If an Oracle database is used then the protocol is Oracle Net. Oracle Net uses port 1521. If a Microsoft SQL Server database is used the protocol is Tabular Data Stream. Tabular Data Stream uses port 1433. When running in a firewall environment, all network traffic destined for port numbers listed above must be able to pass the firewall.

Stopping Servers not Allocated Default Port

If you have multiple servers running, or an application server running, on a port other than the default port (30999), sd_servermanager should be used to select and stop the server(s).

Multiple Server Instances

Multiple instances of the Service Desk application server can be run on one machine, providing it has sufficient capacity. These server instances can be started by creating copies of the server configuration file server_settings.xml and starting separate instances of the application server using the different settings files. This can be achieved by running the start server batch file multiple times from the command line.

NOTE   The ITP default port number must also be changed when creating a configuration profile for a new instance.

Like multiple servers on different machines, you may want to use multiple instances for dedicated purposes.

Starting Multiple Instances on Windows NT or 2000

This procedure assumes you have installed and configured a Service Desk application server on the computer where you want to run multiple instances.

To run multiple instances:

1. Make a copy of the \server\server_settings.xml file of the installed server and place it in a different folder.

2. Run the server settings editor, this will open the original server_settings.xml for editing.

3. Use the editor to create a configuration profile for the new instance that you want to run. Click OK to save the modifications.

NOTE   Use a text editor to edit the xml file, if you want to add specific modifications that are not available in the server settings editor.

4. Navigate to the server folder and rename the server_settings.xml file to identify it.

5. Using the command prompt in the `server\bin` folder, run this command: `sd_server.bat start "/settings=<new name.xml>"`.

6. Repeat this process for any extra server instances you require.

7. Copy the unedited `server_settings.xml` back to its original location.

Installing Instances as Windows Services

To install instances as Windows services:

1. Make a copy of the `server\server_settings.xml` of the installed server and place it in a different folder.

2. Run the server settings editor, this will open the original `server_settings.xml` for editing.

3. Use the editor to create a configuration profile for the new instance that you want to run. Click `OK` to save the modifications.

NOTE   Use a text editor to edit the xml file if you want to add specific modifications that are not available in the server settings editor.

4. Navigate to the `server` folder and rename `server_settings.xml` to identify the file.

5. Copy the unedited `server_settings.xml` back to its original location.

6. Make a copy of the `server\bin\installservice.bat` of the installed server and place it in a different folder.

7. Edit the file `installservice.bat` and change the service name to the name you want to give the server instance.

8. Add "`/settings=<new name.xml>`" at the end of the `-start` argument. Save the file, and give the file a new name.

9. Install the service using the new version of `<new installservice>.bat`.

10. Repeat this process for any extra server instance services you require.

11. Copy the unedited `installservice.bat` back to it original location.

Starting Multiple Instances on UNIX® Platforms

This procedure applies to all supported UNIX platforms, and assumes you have installed and configured a Service Desk application server on the computer where you want to run multiple instances.

To run multiple instances:

1. Make a copy of the `server/server_settings.xml` of the installed server and place it in a different folder.

2. Run the server settings editor: this will open the original `server_settings.xml` for editing.

3. Use the editor to create a configuration profile for the new instance that you want to run. Click `OK` to save the modifications.

NOTE   Use a text editor to edit the xml file if you want to add specific modifications that are not available in the server settings editor.

4. Navigate to the `server` folder and rename `server_settings.xml` to identify the file.

5. Using the command prompt in the `server/bin` folder, start a server instance with this command: `cd /opt/OV/sd/server/bin; ./sd_server start "/settings=<new name.xml>"`.

6. Repeat this process for any extra server instances you require.

7. Copy the unedited `server_settings.xml` back to its original location.

Starting Server Instances on UNIX at Start-up

If you want the server instances to start when the UNIX server is started, you should add the lines for the command prompt to the `inittab`. If you are running the database on the same machine as the Service Desk application server instances, you are advised to let the database processes start first. For more information about adding entries to the `inittab`, consult the documentation for your UNIX system.

8 Multiple Sessions

Service Desk allows more than one Service Desk client (with the same version number) to be run on the same machine, at the same time.

Using Multiple Sessions

Use multiple sessions when you want to have multiple client installations of the same version of Service Desk connecting to different application servers with different databases. This need could arise when you have different application servers (and databases) for testing, development, and production (live system), or multiple production environments.

Do not use multiple sessions for different users on the same machine; this should be done by setting up proper profiles for each user within the operating system.

Defining Multiple Session Parameters

To use multiple sessions, the cache, account details, and user definable information must be separated and stored locally on the client machine. This is done by setting up /PROFILE and /USERFOLDER parameters that are read when Service Desk is started.

Multiple sessions are created using shortcuts. To set up multi-session shortcuts on Windows NT4:

1. Right-click on the desktop and select New from the popup menu and then Shortcut from the submenu. The Create Shortcut wizard is started.

2. In the Command line field type:
   ```
   C:\WINNT\wjview.exe com.hp.ifc.ui.AppConsole
   /PROFILE=clientAS1 /USERFOLDER="C:\Program Files\Hewlett
   Packard\OpenView\Service Desk 4.5\Client\clientAS1"
   ```

   You can replace the term *clientAS1* with anything you like; however it must be the same in both places:

Figure 8-1   **Shortcut Wizard Command Line dialog box**

NOTE   The path parameters depend on where `wjview.exe` and the Service
                     Desk folder are located on the machine. On Windows 2000
                     `wjview.exe` should be found in the `System32` folder and on Windows
                     98 in the `Windows` folder.

3. Click `Next` and enter a name for the shortcut, for example: `Service
   Desk Client AS1`. Then click `Finish`:

Figure 8-2   **Shortcut Wizard Shortcut Name**
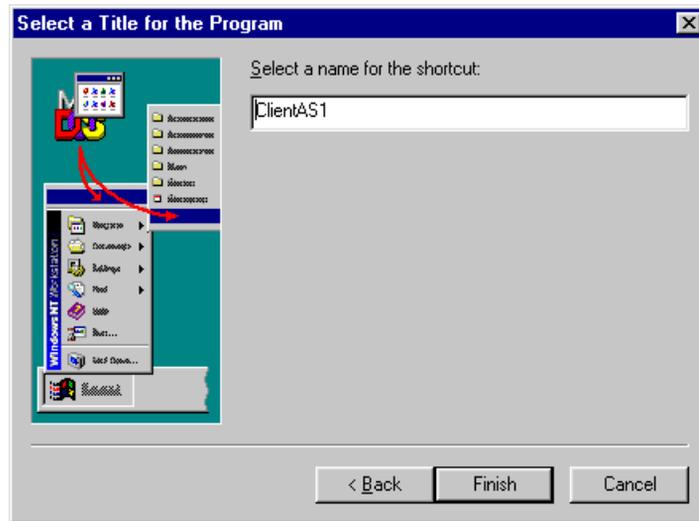
Once you have created the shortcut, the instance of the client software that is started by it still has to be connected to an application server and database. This must be repeated for each client shortcut you create:

1. When you use the shortcut for the first time, the Connection Wizard is started. You will be prompted for the application server name (for example, Application Server 1). Click Next.

Figure 8-3   **Connection Wizard Server Name dialog box**

2. Enter the Account Name and Password for the application server
   that the client should connect to. Click Next:

Figure 8-4   **Connection Wizard Account Name dialog box**

3. Enter a Friendly Name for the application server account name:

Figure 8-5   **Connection Wizard Friendly Name dialog box**
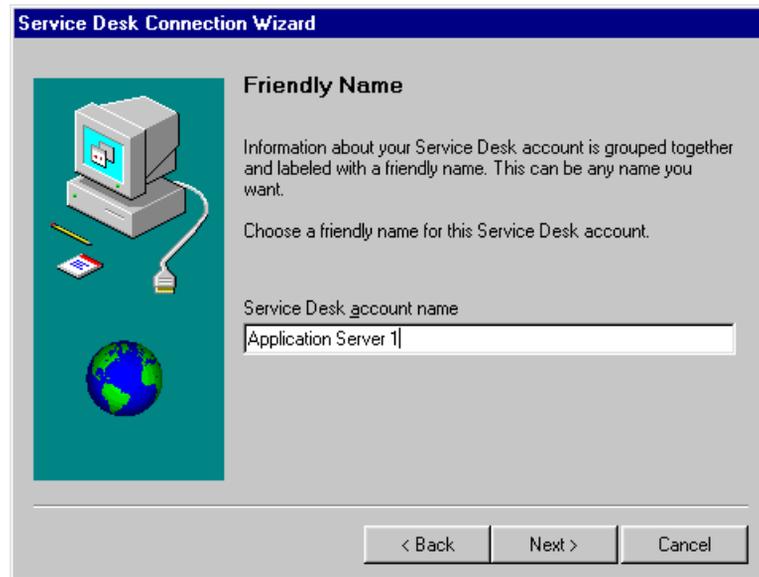
4. Click Next and then Finish. The Client shortcut will now connect to the application server with the specified account name.

When the client is running you will be able to identify each multi-session client you are using by the title bar and the task bar of the application window. This will show the /PROFILE parameter value, for example: clientAS1.

Service Desk Accounts

For each Client shortcut you create you will also need to create an Application Server Account shortcut. This will enable you to add, modify, view, or remove the account associated with the Client shortcut.

To create an Application Server Accounts shortcut, follow the instructions for creating a Client shortcut in the previous section, but modify the command line path to:

```
C:\WINNT\wjview.exe
com.hp.ifc.ui.options.AppServerAccountsDialog
/PROFILE=clientAS1 /USERFOLDER="C:\Program Files\Hewlett
Packard\OpenView\Service Desk 4.5\Client\clientAS1"
```

Logically you should name this shortcut to relate it to the Client shortcut, particularly if you are going to have a number of shortcuts. As with the Client, the dialog boxes started from this shortcut will display the value from the /PROFILE parameter in the title bar (for example, clientAS1).

9 Reporting

This chapter describes how you can create database views and a data dictionary for use with your third-party reporting tool. Using the information provided in this chapter, you can create reports based on your Service Desk database entries.

Introduction

Reporting is about the status of things, whether it is about the status of services or of the IT-infrastructure. A report can show the current status and possibly whether the status is improving or deteriorating.

A report can be comprised of a simple printout of a service call which can be useful as a reference. Value would be added to a report by combining the information from a number of separate items. This would give the reader a complete overview of the current situation.

To be able to offer the reader a report that presents the information in such a manner that it offers a complete overview suitable for analysis it might be necessary to use a third-party reporting tool.

Overview of Reporting Tools

Your Service Desk database provides the information used as a basis for your reporting tool. Your reporting tool, such as BusinessObjects, Crystal Reports, Microsoft Access, or Microsoft Excel, can access the information stored in Service Desk when you create database views and a data dictionary. If you are using Oracle for your Service Desk database, your reporting tool can view Service Desk entries using the ODBC or SQL*Net®. If you are using SQL Server, your reporting tool can view the Service Desk entries using the ODBC. Using queries defined in your Service Desk database views, you provide a view into your database which can be imported by your reporting tool to create professional reports, as shown in Figure 9-1.

Figure 9-1   Reporting Process

Service Desk

Service Desk
Database

Database Views

Third Party Reporting Tool
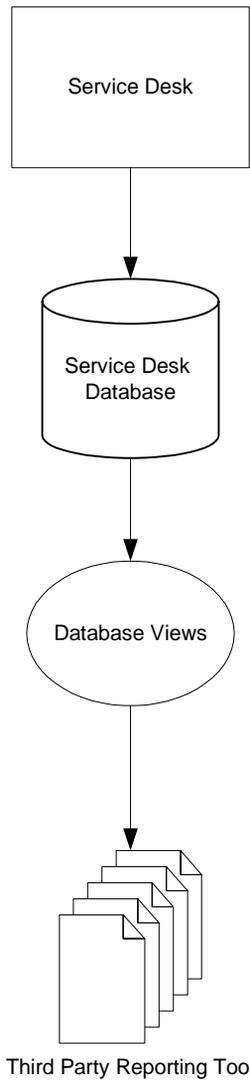
Performance Considerations

Service Desk 4.5 supplies two main reporting capabilities.

- The main Service Desk user console offers tables, charts, cards and explorer views you can use to create online overviews of data.

- The database contains reporting views you can use to create reports using an external reporting tool.

The reporting views offer all information in the database in a readable format. The tables Service Desk supplies are optimized for operational use and are hard to read from outside Service Desk. The reporting views collect the information from the operational tables and put that information together in a readable report format.

Single Reporting View Reports

You can use the reporting views directly from the operational database if you create reports that show the information from a single reporting view. Single reporting view reports can give you useful overviews of items. The count of items and application of simple functions such as the calculation of the sum or average of things can enhance the report.

Advantages

- Simple.

- Good performance with basic reports.

- Always up-to-date data.

Disadvantages

- Limited by the contents of the view.

- May influence Service Desk performance, influence depends on size of source tables.

The single reporting view reports supply the same kind of reports as those possible from the user console. External reporting tools supply better functionality to present reports on paper because you can control the layout of the report with much more detail than you can in the

Service Desk user console. You can use the external reporting tool, for example, to integrate Service Desk information in presentations and reports you supply to your customers that need high quality layout.

The single reporting view report is limited by the reporting view's contents. Reporting views only contain the information of one item, extended with basic information from related items. The views do not contain references to lists of items. For example, the service call view contains the name and search code of referred configuration items. However, the service call view does not contain the list of work orders related to that service call.

Using Reporting Views with Subreports

To create a report of service calls containing a list of related work orders based on reporting views, you need to use subreports. Not all reporting tools can create reports with subreports, Crystal Reports is an example of a reporting tool that has very flexible functionality to create subreports.

Advantages

- Moderately complex, requires knowledge of creating subreports.

- Reasonable performance for moderately complex reports.

- Always up-to-date data.

Disadvantages

- Usage depends on reporting tool.

- Limited by contents of views.

- May influence Service Desk performance.

Subreports can be used as a work-around for poor performance of joined views.

Copying Reporting Views to Tables

The poor performance of joined reporting views is not related to the information in the reports, it is limited to the reporting views. In reporting views, the information is collected from operational source tables by resolving a query. Resolving the query is normally quick, but when two views are joined the resolution time is multiplied exponentially. Joining tables does not have this drawback because the

information in a table does not have to be collected from source tables. By copying the contents of the views to tables, you consolidate the information and reports based on those tables should perform excellently.

Advantages

- Moderately complex, depending on the use of subreports and the target location of the copied table.

- Good performance with complex reports.

- Minimal influence on operational use of Service Desk.

- Contents can be copied to other database.

Disadvantages

- Copy task must be scheduled, this determines timeliness of data.

- Copy task requires coordination between report user and database administrator.

If you want to create reports that are beyond the limitations of a single reporting view report or you have a reporting tool that does not support subreports, you may prefer to copy the contents of the views you required to a table, the advantages being:

- Tables do not use time to collect information. In general reports based on tables have improved performance compared to reports based on views.

- You can use standardized names for your target tables. This can be useful when exchanging reports between different Service Desk implementations.

- The reporting views are in the operational database, when copying, you can copy the information in the reporting views to another database, this way you can supply an extra layer of security.

To prevent interference with operational use of Service Desk, it may be necessary to copy the contents of the reporting views at a moment that there is less use of Service Desk. For example, the copying action could be scheduled to perform once a day at midnight, but this would result in the copied information probably not being up-to-date to the minute.

How you copy information depends on your database, and where you want to copy the information to. Refer to your database manual to find how to copy the report view information to a table.

Data Warehousing

The use of data warehousing tools extends the possibilities for reporting considerably. Data warehousing means you copy information from an operational database to a reporting database. When copying the information you have the possibility to transform the information in order to optimize it for reporting. Data warehouses optimize the data for retrieval flexibility, standard reporting tasks, and performance of reports.

Advantages

- Eventually simple for reporting tool user, requires extra training.

- Excellent performance, both for reporting and Service Desk.

Disadvantages

- Highly complex implementation.

- Requires data warehouse tools.

Although implementing the data warehouse is complex it has the following advantages for reporting:

- Performance of reporting. The data is optimized for reporting, so most reports will have good performance no matter the size of the data warehousing database.

- Performance of Service Desk. The performance of Service Desk is not compromised as the information is copied away from the operational database.

- Flexibility of reporting. Data warehouses allow flexible creation of reports.

- Best way to customized reporting information to your organization. The steps required for data warehousing includes the transformation to your organization's reporting needs.

Using Operational Tables for Reporting

Tables do not have the same performance issues as reporting views have so you can use the operational tables directly and avoid copying the reporting views.

Advantages

- Good performance.

- Always up-to-date data.

Disadvantages

- Complex when creating reports.

- Could require ERD scheme generation tool, depending on database knowledge of report developer.

- Could influence operational database performance.

If you have a tool available that can read databases and create ERD schemes from database views, you can use such a tool to show the relations between the tables that are the sources for a view.

Generating Database Views

The first step in the reporting process is the generation of database views. Using database views, you can create a professional report, for example, by using the Crystal Report Wizard.

Service Desk gives you control over which parts of your database you can use. For this reason, you need to take additional steps to create the specific views into your database. Each view determines what information you want to form the basis of your report.

Database views are localized based on the language of your third-party reporting tool.

To generate database views:

1. In Service Desk, choose `System` from the `Tools` menu. The Administrator Console is displayed.

2. In the Administrator Console, select the `System Panel` icon.

3. Click the `Report Settings` icon. The Report Settings dialog box is displayed.

Figure 9-2   Report Settings
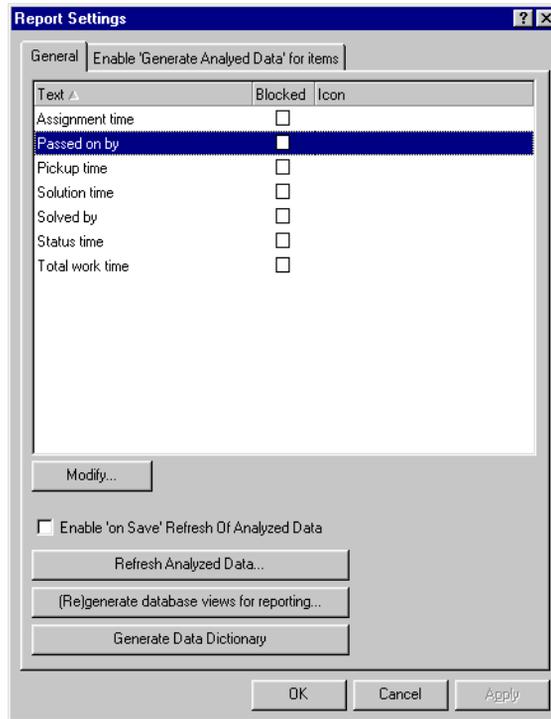
4. **Click** (Re)generate database views for reporting.

5. **Select a time zone in the** (Re)generate Database Views for Reporting **dialog box:**

Figure 9-3   Selecting a Time Zone for Database Views
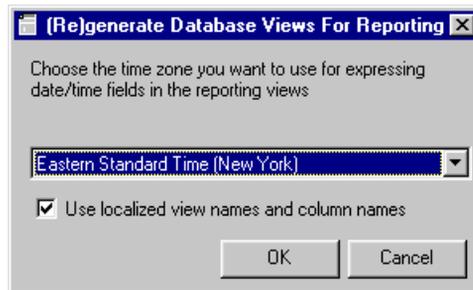
6. **Click** OK. **A Warning dialog box is displayed:**

Figure 9-4   **Warning Dialog Box**
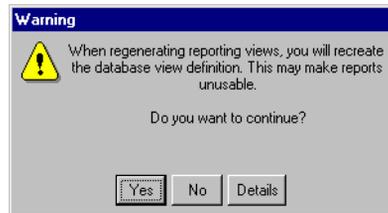
7. In the `Warning` **dialog box, click** `Yes` **to continue generating database views.**

8. **Service Desk will generate the database views.**

9. **Close the** `Report Settings` **dialog box by clicking** `OK` **or** `Apply`.

Generating a Data Dictionary

A data dictionary is a collection of descriptions of the data objects or items in the Service Desk database for the benefit of any users who need to refer to them.

Each data object or item is given a descriptive name, its relationship is described, the type of data is described, possible predefined values are listed, and a brief textual description is provided. This collection can be organized for reference into a book.

To generate a Data Dictionary:

1. In Service Desk, choose `System` from the `Tools` menu. The Administrator Console is displayed.

2. In the `Administrator Console`, double-click the `System Panel` icon.

3. Double-click the `Report Settings` icon. The Report Settings dialog box is displayed.

4. In the Report Settings dialog box, click the `Generate Data Dictionary` button. The Print Preview appears on your screen.

Figure 9-5   Print Preview of a Data Dictionary

5. You can choose to print or publish the Data Dictionary.

- Create a report in HTML format using your reporting tool by selecting Publish from the toolbar to save the Data Dictionary in HTML format; or

- Print your report using your reporting tool by selecting Print from the toolbar to print the Data Dictionary.

Figure 9-6   Publishing a Data Dictionary in HTML Format
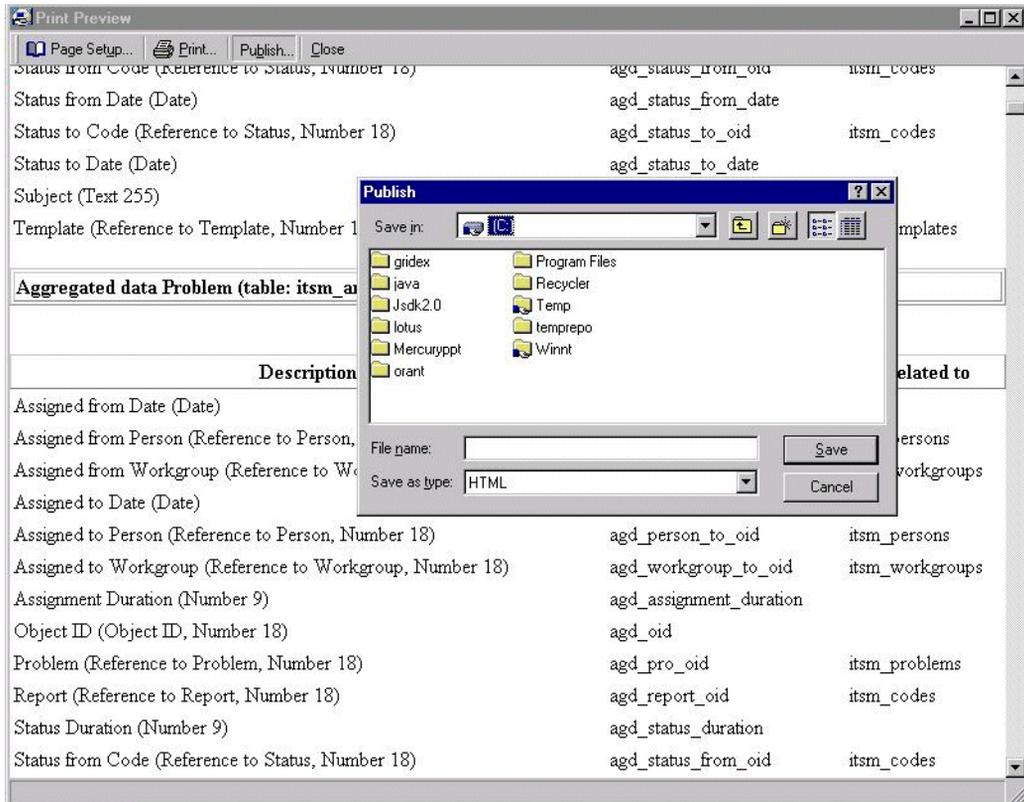
6. Click `Close` in the Data Dictionary Print Preview.

7. Click `OK` in the Report Settings dialog box.

Viewing Database Reporting Tables

After you have generated the database views and created the data dictionary, you will need to access the database. Consult your database administrator for the user name and password to access the database tables.

When viewing the database tables, you will note that all views created for reports have the prefix V_.

NOTE
In addition to operational data, repository data such as account information will be displayed in the database views. Although you cannot modify data using the database views, you will be able to view all repository information in the reporting tables.

You can import the database views with the V_ prefix into your reporting tool.

Gathering Reporting Data

To be able to gather service management reporting data and present it in tabulated form to the user, items must first be evaluated and the changed information stored.

Items can be evaluated in either one of two modes: batch mode or on-save mode.

If batch mode is used the history lines of items are evaluated. The disadvantage of using batch-mode is that a lot of items are evaluated at one time causing the performance of the operational database to drop during that period.

In on-save mode, the items are evaluated for changes as they are saved. This causes the action of saving a change to take slightly longer but it spreads any degradation of performance over normal operational time.

Batch Mode

Under some circumstances batch mode processing is needed to generate the reporting data. For example, the first time that analyzed data is generated or when the updating of the reporting database failed.

In batch mode, the reporting rule evaluates all items at a scheduled time. All relevant information is put in the database.

In batch mode, only the history lines are available to find the needed historic information.

Information that is evaluated and stored using batch mode can only be guaranteed accurate at the time of the update.

On-save Mode

In on-save mode, the reporting rule evaluates all items that are being saved at that time.

Information that is evaluated and stored using on-save mode will have a greater accuracy than that saved in batch mode due to data being constantly analyzed between changes and the running of a batch save process.

Using Database Views: Examples with Third-Party Reporting Tools

After creating your database views, you can use the views to create reports from your Service Desk database. Your third-party reporting tool accesses database tables to produce a report that you can edit and format, combining items such as data, charts, pictures and sound.

Because third-party reporting tools use a visual layout approach, you can specify the data that you want to appear to edit and format reports. You can decide the report format, using drag and drop techniques to arrange data, graphics, charts and text.

Creating Reports with Crystal Reports Designer

To create a new report based on Service Desk database views:

1. From the `File` menu, select `New`. The Report Gallery appears:

Figure 9-7   Crystal Reports Gallery
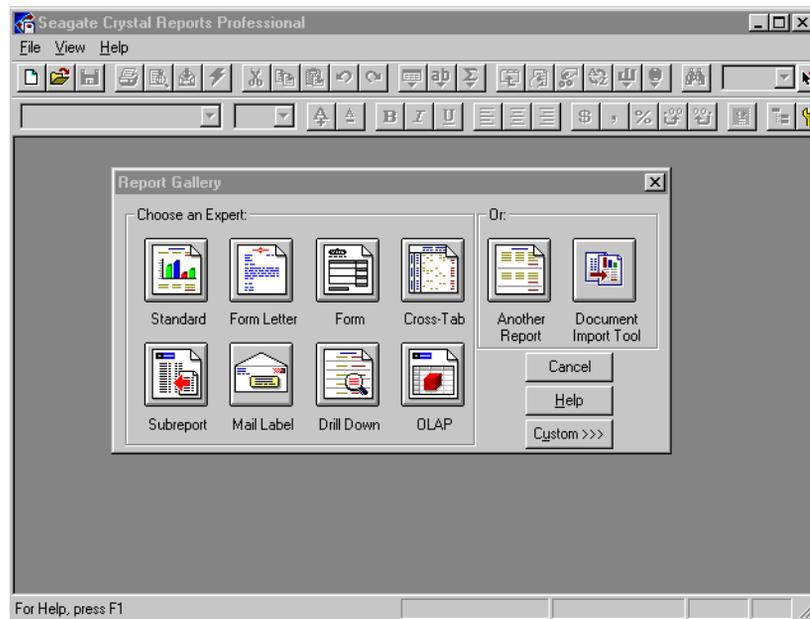
2. Select any report. For our example, we will choose Standard. The form Report Expert will appear.

3. Click SQL/ODBC. The Log On Server dialog box appears:

Figure 9-8   Crystal Reports Log On Server Dialog Box
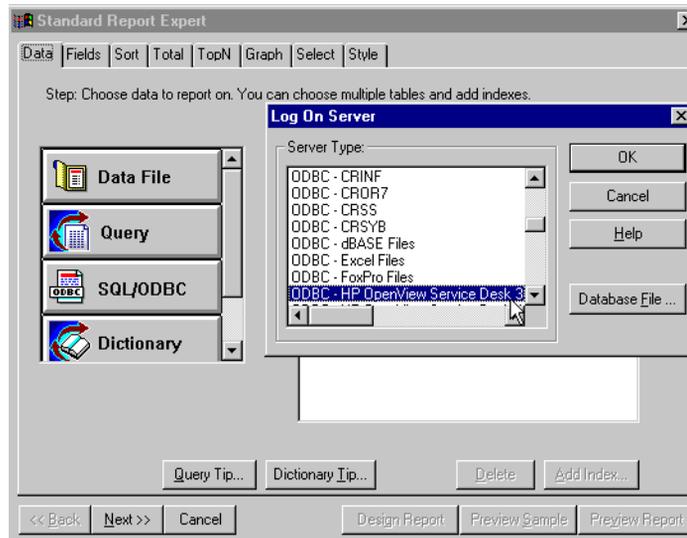
4. You must log on to the database where your Service Desk views were created. In our example, we are using HP OpenView Service Desk 4.5 and we select `ODBC HP OpenView Service Desk 4.5`. The `Choose SQL Table` dialog box appears.

5. In the `Choose SQL Table` dialog box, select all file types. Database view files will have the prefix V_. Double-click the database view files to be used in your report.

6. The database views which will be included in your report will appear in the Report Expert Fields pane. When finished, click `Done`.

7. Click the `Fields` tab in the `Report Expert` dialog box.

8. In the `Database Fields` pane, double-click the fields from your views to be included on your report. The selected database fields will appear in the `Report Fields` pane.

9. Click the `Sort` tab. Select a database view field to sort data. For additional information, please refer to Seagate Crystal Reports User's Guide.

10. Click the `Graph` tab. Select a format for your report graph by clicking the Crystal `Chart Type` or selecting `Custom Chart` to create your own. For additional information, please refer to Seagate Crystal Reports User's Guide.

11. Click the `Style` tab. You can design a report by adding a company logo, or making other stylistic changes. For additional information, please refer to Seagate Crystal Reports User's Guide.

12. When finished, click `Design Report`. The report you have created with your Service Desk database views will be displayed.

Adding Database Views to Existing Reports

Database views that you have generated can be added to existing reports. You can add Service Desk data to a financial report, for example. A report initially designed for financial information could import Service Desk database views and present IT infrastructure management statistics.

To add database views to an existing report:

1. Select `Add Database to Report` from the `Database` menu. The `Choose SQL Table` dialog box will appear.

2. Select the Service Desk database view files to include in your report. The database view files will have a V_ prefix.

3. The `Visual Linking Expert` will appear. Click OK.

NOTE
The Visual Linking Expert helps you link two or more database tables. For additional information on using the Visual Linking Expert, please refer to Seagate Crystal Reports User's Guide.

Creating Reports with BusinessObjects Designer

BusinessObjects utilizes universes to display database data without requiring users to have technical knowledge of databases. Universes are a tool to provide information about data in understandable terms.

Universes consist of classes and objects. For example, objects in a Service Desk database view could be configuration items, organizations, service calls, service call numbers, etc. By grouping objects together, you form classes. Classes group objects to form a general description. Each object links to data directly in your database view.

Universes provide the ability to query data to incorporate in your reports. When creating a query in BusinessObjects, you select objects from the universe and run a query on those objects.

To create a universe to access your database view:

1. Start BusinessObjects Report Designer.

2. Select New from the File menu. The Universe Parameters dialog box appears:

Figure 9-9   BusinessObjects Universe Parameters dialog box
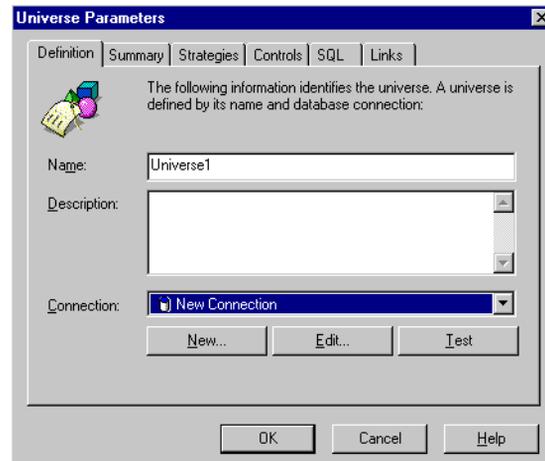
3. Enter a name for your universe in the Name field.

4. You will need to provide your universe with access to Service Desk data. To do this, you will need to indicate the database and the type of network you are working with and set the parameters to access the database views stored in your Service Desk database. Create a new connection for your universe by clicking New.

5. The Add a Connection dialog box will appear:

Figure 9-10   BusinessObjects Add a Connection dialog box
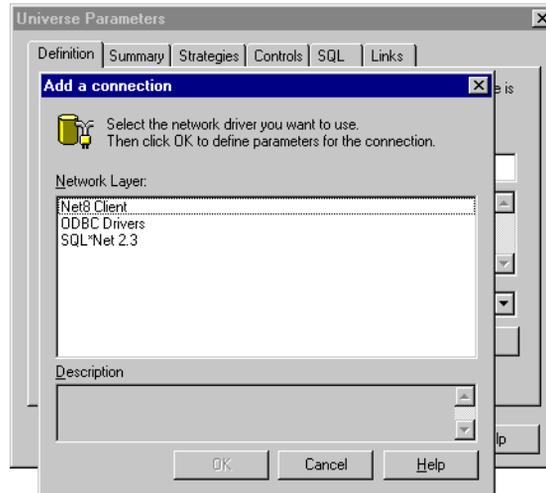
6. Select the network driver for your Service Desk database. For our example, we will select ODBC Drivers. Click OK.

7. Enter a name for the connection in the Name field.

8. Select a database engine from the Database engine drop-down list:

Figure 9-11   **BusinessObjects ODBC Drivers dialog box**
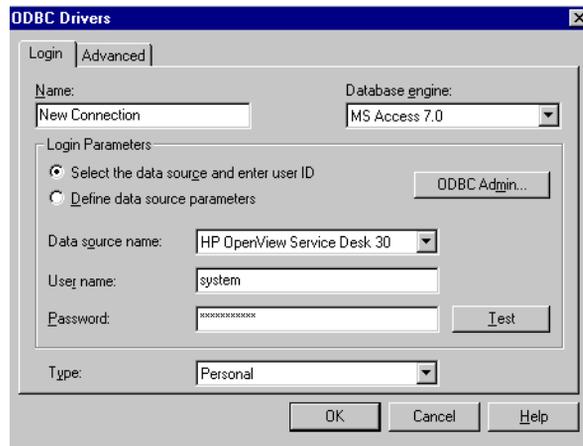
9. Select HP OpenView Service Desk 4.5 from the Data Source Name drop-down list.

10. Enter a user's name and password for the Service Desk database.

11. Click OK.

12. Select Tables from the Insert menu.

13. In the Table dialog box, click the database views you want to add to the universe structure. The database views will have the prefix V_.

   To add several database views, hold down the Control key while clicking each database view.

14. Click Insert.

When you have finished designing your report, you can use your basic design to create professional reports. For additional information, refer to the BusinessObjects User's Manual.

Chart Views

Charts are powerful overviews of items. A chart groups items and displays the absolute or relative size of the groups in a variety of ways. The chart view allows you to use numerous different styles of charts in which to present your information. Some of the charts will also allow you to view them in 3D. With a chart view, you have an easy-to-read, on-screen report that is printable.

Information that can be made available from charts is dependant on the filters and the settings of the x-axis, y-axis and series within the View settings dialog box. How to define these settings is detailed in Creating Chart Views.

The charts also provide easy access to items in the groups. This is done by clicking on a portion of the chart, this will display a table containing the items related to that portion, these items can then be selected to view more detailed information.

A chart groups items and shows the size of each group. The size of the group can mean different things, such as:

- the number of items in the group,
- the total of a summation of field values,
- the average value of a field in the group,
- the minimum of the maximum value of a field in the group.

Figure 9-12   Service Calls: Chart View
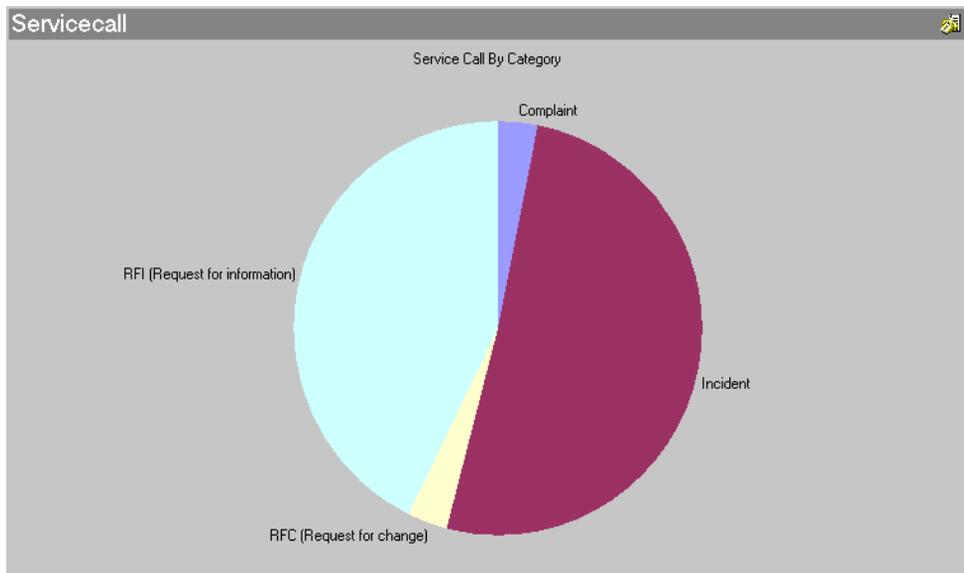
Creating Chart Views

To create a new chart view:

1. Select `View`, then `Current View`.

2. Select `Define View, a dialog box appears.`

3. Click `Add`, enter the View type and name in the dialog box.

4. Click `OK` to display the View Summary dialog box.

5. Select the `General` tab, from this form you have the options to:

   - Drill to a view using the pull-down menu.

   - Add a new view type by clicking `Add`, a popup dialog box is
     displayed.

   - Change the appearance of the chart by clicking `More` to display
     the ChartFX dialog box.

6. Select the `X-axis` tab, from this form you can:

   - Select a field by clicking `Quick Find` to the right of the field and
     select from the menu offered.

- Depending on the serie selected the option to select a display format for the serie may be available from a pull-down menu.

  Only fields requiring numbers and dates will have a display format available.

7. Select the `Y-axis` tab, from this form you have options to:

- To select a field or a secondary field by clicking `Quick Find` and selecting the appropriate fields from the menus displayed.

- Set upper and lower limits to the y-axis by selecting the limits box and either entering the limits directly into the fields or use `Quick Find` to the right of the field to select the values required.

  If limits are not defined then they will take the value of the maximum and minimum values of the fields.

8. Select the `Series` tab, from this form you can:

- Select a serie by clicking `Quick Find` to the right of the field and select from the menu offered.

- Depending on the serie selected the option to select a display format for the serie may be available from a pull-down menu.

  Only fields requiring numbers and dates will have a display format available.

9. Click `OK` and the new chart will appear in the table.

To view the result of your new chart Click `Apply view`.

NOTE   You cannot use the series option and the secondary field option for the same chart.

Customizing Chart Views

Chart views can also be customized. Customization will allow, amongst other things, to change the appearance of the chart using ChartFX dialog box.

To customize a chart view:

1. Select `View`, then `Current View`.

---

2. Select `Customize current view`, and then `Other`. A dialog box is
   displayed.

3. Follow steps 5 to 8 of Creating Chart Views.

4. Click `OK` and the customization is complete.

Using Charts in Other Applications

With Service Desk, you can also copy the chart for use in another
application, such as MS Word or Powerpoint. To do this:

1. Choose `Copy` from the `Edit` menu.

2. Switch to the application in which you wish to use the chart

3. Choose `Paste` from the other application's `Edit` menu.

10   Using E-mail with Service Desk

This chapter explains how you can configure an e-mail integration with
Service Desk. The following sections explain the options available for
e-mail messaging with Service Desk. Additional information is available
in the Service Desk Online help.

Example Scenario

The following is a hypothetical scenario of how e-mail messaging can be used with Service Desk:

1. A caller experiences a problem in the IT infrastructure and sends an e-mail message to Service Desk requesting service.

2. The e-mail message is received by Service Desk and a service call template is applied. The service call is completed based on information from the e-mail message and default values in the service call template.

3. The service call is automatically dispatched to the specialist who was entered by default from the service call template.

4. The specialist fixes the problem, and sends an e-mail message to Service Desk to update the service call with the solution and changes the status field to `Solved`.

5. A database rule is triggered and the caller is notified of the solution and that the service call is solved.

6. The caller applies the solution, then sends an e-mail message to Service Desk to change the Service Call status to `Closed`.

Sending E-mail Messages to Service Desk

E-mail sent to Service Desk is referred to as Inbound e-mail. Service Desk can accept e-mail messages from any standard SMTP based e-mail application. Information in the heading (From, To, cc, and Subject lines) determines what Service Desk does with the Inbound e-mail message. Information in the message body text is used to provide details for the action that is performed.

The e-mail message must be written in plain text. Attachments are accepted. Inline attachments, for example a graphic inserted into the body of the message, are not.

Inbound E-mail messaging makes it possible to:

- Create a service call.
- Change the status of a service call.
- Update the solution field of a service call.
- Request and receive a list of open service calls reported by the caller or assigned to the requestor.
- View details of a service call.
- Add a history line to a service call.
- Accept or reject the solution a specialist has entered for a service call.
- Recall a service call.
- Ask for help.

Service Calls can be created and updated via inbound e-mail messaging. Other items, such as CIs, Persons and Changes cannot be created or updated via e-mail messaging.

NOTE   For service calls to be created when an inbound e-mail message is received, and for that e-mail message to be saved as an attachment to the service call, the NT account that starts up the Service Desk service must have access rights to the server, where the e-mail attachments are stored.

The default start up account is the NT System account, either ensure that this account has access rights to the file server, or drive, or assign another account with the necessary rights as the start up account. Do this by selecting `Services` in the `Control Panel`. Then select the HP OpenView Service Desk service and click the `Startup` button. In the `Log On As` section of the dialog box change the account details.

Receiving E-mail Messages from Service Desk

Service Desk can send e-mail messages to people when they are assigned a service call, problem, change, work order, or other item, this is called Outbound e-mail. The person must be registered with a valid e-mail address in Service Desk.

Outbound E-mail messaging makes it possible to:

- Send notifications to the assignee, when a Service Desk item is assigned.

- Send a confirmation message to the caller when a service call is created for that caller.

- Send an e-mail message notifying the caller of entries, or changes to the status or solution field of a service call created by the caller.

The Rule Manager can also be used for sending e-mail messages based on events that occur in the Service Desk database.

Information on how to use the Outbound E-mail integration after it is configured is available in the Online help.

E-mail Integration Using Rule Manager

For information on configuring the Rule Manager to send e-mail messages, See "Creating Send E-mail Message Actions" on page 119.

Configuring the E-mail Integration

This section explains the options that are available to you for configuring Service Desk to send and receive e-mail.

The primary configuration tasks are:

- Set the `Activate the SMTP protocol` check box and the `Port number` in the server settings editor (For Inbound e-mail).

- Enter e-mail addresses for `Person` items (Mandatory).

- Select the option `Send me e-mail when items are assigned to me` in Service Desk. (Option to turn Inbound e-mail on or off at the client level)

- Enter `General` server settings in the System Administrator Console (Mandatory).

- Enter one or more `Inbound E-mail Addresses` for Service Desk in the System Administrator Console and link them to a service call template (Mandatory).

- Modify the default `E-mail Commands` in the System Administrator Console (optional).

- Modify the `E-mail Templates` used for Service Calls in the System Administrator Console (optional).

- Set your `Access Filters` in the System Administrator Console (optional).

- Define the `E-mail Priority Mapping` in the System Administrator Console (optional).

SMTP Settings

You will need to set the `Activate the SMTP protocol` check box and the `Port number` in the server settings editor, for Inbound e-mail. The other SMTP related configuration tasks can be performed in the Mail Properties dialog box in the System Administrators console.

Activate Outbound E-mail Messaging

Users who want to receive notifying e-mail messages from Service Desk when an item is assigned to them, or when an item needs their approval should select these options the Service Desk client application. This information is stored in the database by user account. System administrators can set this by default during installation.

1. From the `Tools` menu, select `Options` and then the `Advanced` tab.

2. Place a check mark in the `Send me e-mail when items are assigned to me` **check box, and the** `Send me e-mail if I need to approve an item` **check box:**

Figure 10-1 **Advanced User Options**
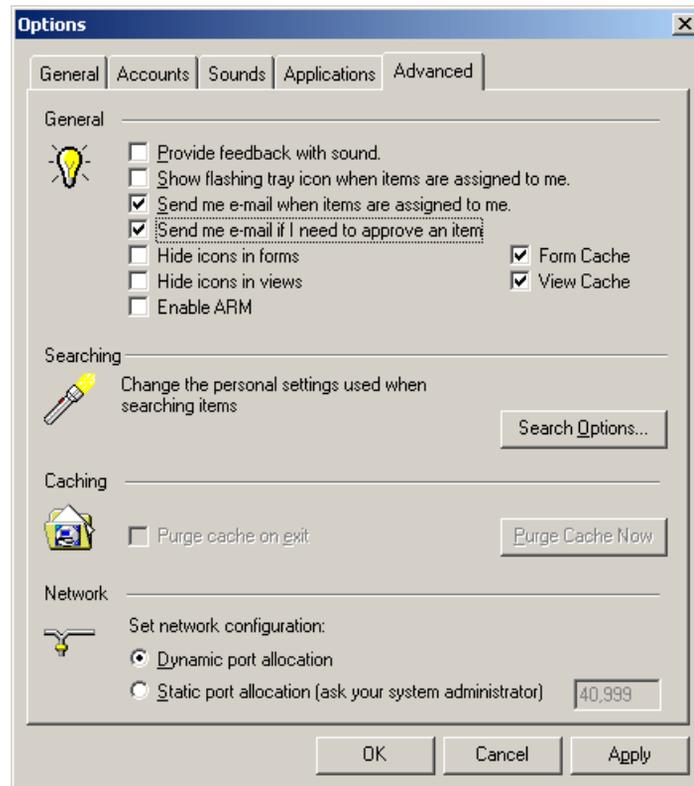
Entering E-mail Addresses

The `Person` item in Service Desk contains the `E-mail` field. Service Desk uses the e-mail field to send outbound e-mail to the person specified.

Service Desk can be used to send e-mail messages notifying external organizations and external persons when a service call is assigned to them, if they are registered in Service Desk as a member of a work group, or an external organization with a valid e-mail address.

You can set e-mail access filters to limit the addresses that Service Desk will accept Inbound e-mail messages from, see "Access Filter" on page 237 for additional information.

Entering General Settings for E-mail Messaging

You can perform the majority of configuration tasks for e-mail messaging in a series of tabbed pages located in the Administrator Console. From the Tools menu, select System. In the Administrator Console open the Service Desk System Panel and double-click the E-mail icon to open it:

Figure 10-2   **E-mail Properties**
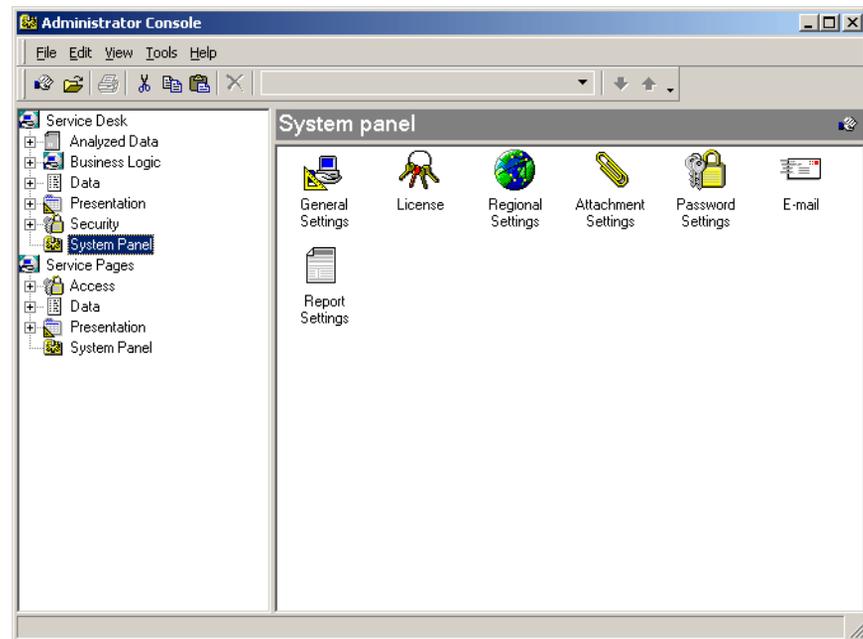
The E-mail Properties dialog box will open. The first tabbed page is the General tab for entering information about your e-mail server:

Figure 10-3   **General tab**

Complete the General tab page as follows:

1. Select the `Use New Command As Default` check box to create a new service call every time Service Desk receives an e-mail message with an undefined command in the subject field. For example, if you type **`Create Service Call`** instead of the `New` command, the result will still be a new service call. All unrecognized commands, will result in a new service call being created.

2. Select the `E-mail Debug` check box to add additional information to the log file when e-mail messaging errors occur. The application server log file is used for e-mail messaging.

3. Enter the complete name of your e-mail server in the `E-mail Server` field.

4. Enter your `SMTP port`. You will also need to set the `Activate the SMTP protocol` check box and the `Port number` in the server settings editor if you have not already done so. This is only required for Inbound e-mail.

5. In the `From Address` field, enter the return e-mail address. If you do not want this to appear create a `From Alias`.

NOTE   Entering the address for your Service Desk application server in the
                        From field or the Alias field is not recommended. Doing so may result
                        in multiple unwanted e-mail messages and Service Calls being
                        created.

6. In the `From Alias` field you can enter an alternate name that you
   want people to see when they receive e-mail messages from Service
   Desk. The Alias name will overwrite the `From Address`.

7. Use the `Reply To` field to enter the e-mail address you want people
   to use when replying to messages from Service Desk.

8. In the `Character Set` field, enter the character set that the e-mail
   recipient uses. The default is US-ASCII. If sending e-mail in other
   than US-ASCII format you may need to use the encoding option and
   you will need to use one of the character sets supported by Service
   Desk. Service Desk supports all character sets which are listed and
   implemented by Sun. More information can be found on the Sun Web
   site at: http://java.sun.com/j2se/1.3/docs/guide/intl/encoding.doc.html

   If your database or operating system does not support the character
   set used, the item you were creating or modifying may be corrupted.
   For example, a message sent using a Japanese character set will not
   appear correctly on a machine using an English Windows NT
   operating system. If the character set you use is not on the list, we
   recommend you use UTF-8.

   Refer to Table 10-1, "Commonly used character set names," on
   page 226 for examples of what can be entered in the character set
   filed. Note that these names are case sensitive and they are not
   definitive, you are free to enter other character set names if you
   wish.

9. The `Use base 64 encoding` option allows for customers to turn off
   message encryption and encoding. Encoding ensures the message is
   is not modified by servers or services between the sender and the
   receiver. BASE64 or Quoted printable encoding can be used.

10. Click `Send Test Mail` to verify that the settings are correct by
    sending a test message.

11. If you enter an account in the `E-mail Address For Logging E-mail Messages` field, all confirmation messages for handled messages will be Cc'd to that address.

12. If you enter an account in the `E-mail Address For Logging Wrong E-mail Messages` field, all responding error messages sent from Service Desk will be Cc'd to the address specified.

Table 10-1   Commonly used character set names

Character set name	Description
Big5	Traditional Chinese
EUC-JP	EUC encoding, Japanese
EUC-KR	EUC encoding, Korean
GB2312	EUC encoding, Simplified Chinese
ISO-2022-JP	Japanese (JIS X 0201 and JIS X 0208)
ISO-2022-KR	Korean
ISO-8859-1	Latin alphabet No. 1
ISO-8859-2	Latin alphabet No. 2
ISO-8859-3	Latin alphabet No. 3
ISO-8859-4	Latin alphabet No. 4
ISO-8859-5	Latin/Cyrillic alphabet
ISO-8859-6	Latin/Arabic alphabet
ISO-8859-7	Latin/Greek alphabet
ISO-8859-8	Latin/Hebrew alphabet
ISO-8859-9	Latin alphabet No. 5
KOI8-R	Russian
Shift_JIS	Japanese
US-ASCII	American Standard Code for Information Interchange

Table 10-1 **Commonly used character set names (Continued)**

Character set name	Description
UTF-7	Seven-bit Unicode Transformation Format
UTF-8	Eight-bit Unicode Transformation Format
windows-1250	Windows Eastern European
windows-1251	Windows Cyrillic
windows-1253	Windows Greek

NOTE   Additional information on encoding and MIME compliance is available
on the Internet at:
http://www.faqs.org/rfcs/rfc1521.html and
http://www.faqs.org/rfcs/rfc1522.html

Inbound E-mail Addresses

The Inbound E-Mail Addresses tab is used for entering one or more
e-mail addresses for Service Desk. Each e-mail address entered can be
linked to one Service Desk template for creating service calls:

Figure 10-4   **Inbound E-mail Addresses tab**
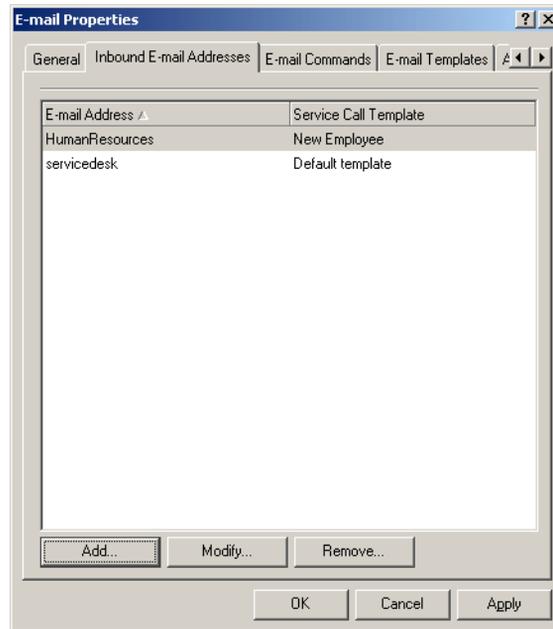
To add Inbound e-mail addresses and service call templates:

1. Click `Add` and enter the account name for the Service Desk e-mail
   address in the New-Inbound E-mail Address dialog box that will
   appear:

Figure 10-5   **Inbound E-mail Address**

2. Click the `Quick Find` **icon next to the** `Service Call Template` **field**
   to locate the template you want to use when the new service call
   command is received at this address.

3. Click `OK` when done to save your work. Repeat steps 1 and 2 to add
   additional addresses and link them to service call templates.

NOTE	Service calls contain mandatory fields. Before linking a template to a Service Desk address, you will need to enter a default value for the mandatory fields in that template. Mandatory fields are marked in Bold text in the template.

E-mail Commands

Commands are entered in the subject line of e-mail messages sent to Service Desk to tell Service Desk what action to perform. You can modify the options set for each command in the E-mail Command tab. You can set the access level for each command, specify if attachments are allowed, if a history line should be added in Service Desk, to send a confirmation message after a command is received and what template to use for the command.

Configuring E-mail Commands

Open the E-mail Commands tabbed page from the Mail Properties dialog box. The E-mail Commands tab shows the commands provided with the default settings:

Figure 10-6   **E-mail Command tab**
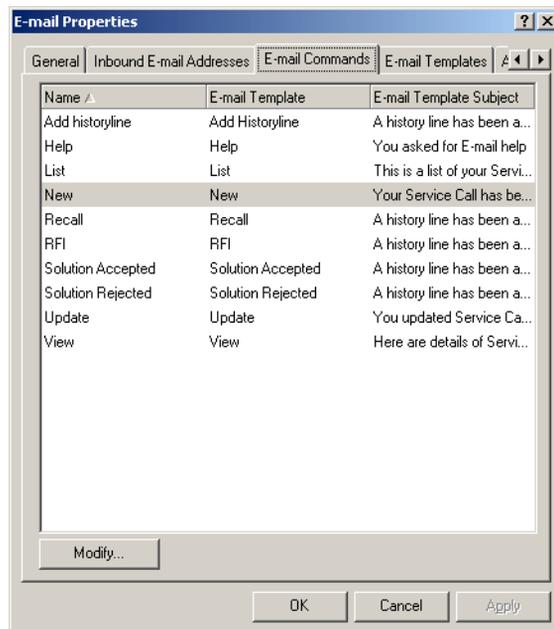
To edit an inbound e-mail command:

1. Select the command you want to edit and click `Modify`. The E-mail Command dialog box will appear:

Figure 10-7   E-mail-Command dialog box

2. In the Command field enter the command you want users to send to Service Desk. The Name field cannot be changed. For example, the New command could be called **Service** and inbound e-mail users would enter **Service** instead of New in the subject field of their e-mail message to create a service call.

3. Set the Access Level for each command by selecting one of the following options. These commands only apply to Inbound e-mail:

   • Unrestricted: all e-mail messages sent to a Service Desk address will be accepted. The Service Desk system administrator account will be used to provide access.

   • Only existing persons: The name in the From field of the e-mail message must match a Person registered in the Service Desk database. The callers name and e-mail address will be entered. The system account will be used for access. More than one name in the From field or a name not recognized as a Person in the Service Desk database will result in an error message reply.

   • Only existing Person with Account: The name in the From field of the e-mail message must match a persons that has an account in Service Desk. The name and account name will be entered in the service call. The roles and authorizations for that person's account will be used, for example, authorization to

create service calls, or authorization to change the Status field
when updating a service call. Only one name may be entered in
the `From` field or an error will occur.

- `Unavailable`: Turns the command off, e-mail messages will not
  be accepted for the command.

4. You can set additional access restrictions for commands:

- `Person does not have to be Caller or Assignee`: Any
  person in Service Desk has access to the command, if they meet
  the Access Level requirements. This is the only option available
  for the New service call command.

- `Person must be Caller`: the name or e-mail address of the
  person who wants to update a service call must match the
  original service call. Service Desk will first look at the service call
  `Caller` field, if Service Desk cannot find a matching person then
  it will look for the e-mail address in the `Information` field.

- `Person must be Assignee`: the name or e-mail address of the
  person who wants to update a service call must be the person
  that the service call is currently assigned to. If the service call
  was assigned to a group the assignee can be any person from that
  group.

  If a service call is assigned to an external person, only that
  person can update the service call, not any member of the
  external organization.

- `Person must be Caller or Assignee`.

5. Select the `Insert Attachments allowed` check box if you want
   Service Desk to accept attachments for the command.

6. Select the `Add History Line` check box if you want to add a history
   line when the command is executed. Enter the text you want the
   history line to start with in the `Subject History Line` field. For
   example, **New service call from e-mail**.

7. Enter the status you want new service calls and updates to receive in
   the `Status` field. If you do not select a status from the list, a status
   will not be entered when the command is executed unless a status is
   entered in the default template for the `New` service call command.

8. The `E-mail Template` field shows the e-mail template for reply
   messages that was assigned to the command in the E-mail Templates
   tabbed page. To change the template, go to the E-mail Templates tab.

9. Select the `Send Confirmation` check box if you want Service Desk to send a confirmation message to the sender of the e-mail message.

10. Select the `Send Attachments` check box if you want Service Desk to be able to forward attachments. If a Service Call is created with an attachment and this option is selected Service Desk will forward the attachment.

The following table lists all commands available for inbound E-mail, the actions available with that command and the programmed response from Service Desk:

Table 10-2   Overview of Inbound E-mail Commands

Command	Action	System Response	Remark
New	A new service call is created using attribute values from e-mail message and template.	Send e-mail reply to the caller with the details of the service call.	Automatic system response is optional. The caller will be identified using the e-mail address of the sender.
Update<id>	The service call specified will be updated based on the attribute values entered in the message.	Send e-mail reply to the sender with the details of the modified service call.	Automatic response is optional.
View<id>	A history line can be added to the service call specified by the <id>	Send e-mail reply to the sender with the details of the service call specified.	Service call attachments can also be sent (optional).

Table 10-2   **Overview of Inbound E-mail Commands (Continued)**

Command	Action	System Response	Remark
List	None	Send e-mail reply to sender with a list of all open calls from that sender.	Service calls announced by sender and service calls assigned to sender.
RE:RFI<id>	A history line will be added to the specified service call. You can change the status to additional info received, for example.	Send e-mail reply to sender; "Information is received".	Automatic system response is optional.
RE:Solution Accepted<id>	A history line can be added to the service call specified. Change the service call status to "solution accepted", for example.	Send e-mail reply to the sender; "Service Call closed"	Automatic system response is optional.
RE:Solution Rejected<id>	A history line can be added to the service call specified by <id>. Change to service call status, for example "solution rejected".	Send e-mail reply to sender "service call is not closed".	Automatic system response is optional. Caller has not accepted the solution.

Table 10-2   **Overview of Inbound E-mail Commands (Continued)**

Command	Action	System Response	Remark
Recall<id>	A history line can be added to the service call specified by <id>. Change to service call status, for example "recalled".	Send e-mail reply to sender "service call recalled".	Automatic system response is optional.
Help	None	Send e-mail reply to sender with e-mail help text.	Help text is editable.
no recognizable command	None	Send e-mail reply to sender with the original command and a failed message.	You can configure the integration to create a new service call for all e-mail messages that come in with an unrecognizable command.

E-mail Templates

E-mail templates exist for the reply message sent in response to commands sent via an e-mail message to Service Desk. The templates contain standard text and possibly some variable fields, for example the help text that is received after sending an e-mail to Service Desk with the Help command, or the confirmation message that will be sent when a new service call is created. You can edit the text in these templates to suit the needs of your company:

Figure 10-8   **E-mail Templates tab**

To modify the templates that Service Desk uses for sending e-mail to customers:

1. Select the command and template you want to modify and click `Modify`.

2. In the E-mail Template dialog box that appears, edit the information that will be in the `Subject` line of the e-mail by: Changing the text and using the `Field` button to insert variable parameters in the Subject field:

Figure 10-9 **E-mail Template dialog box**
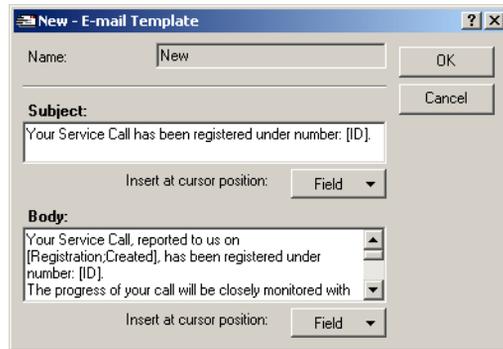
3. Edit the `Body` text in the same manner by typing text that you want to remain constant and using the `Field` button to enter parameters for information that will vary. Click `OK` when finished to save your changes.

NOTE You may notice some reply templates contain [?], this is used to show a variable value that was hard-coded in the template. See "Using Inbound E-mail" on page 240 for an explanation of what it represents in each template.

Access Filter

The access filter can be used to create a list of addressees that Service Desk will accept e-mail messages from and a list of addressees that Service Desk will not accept e-mail messages from. The * symbol can be used as a wildcard at the start and at the end of an address entry.

If no addresses are entered in the Access Filter tabbed page, Service Desk will allow all e-mail addresses.

If there is a conflict between an allowed address and a denied address, the allowed address will take precedence and the user will be given access. For example if `Jane_Doe@hp.com` is allowed and `*@hp.com` is denied, Jane Doe will be allowed access.

Figure 10-10   **Access Filter tab**
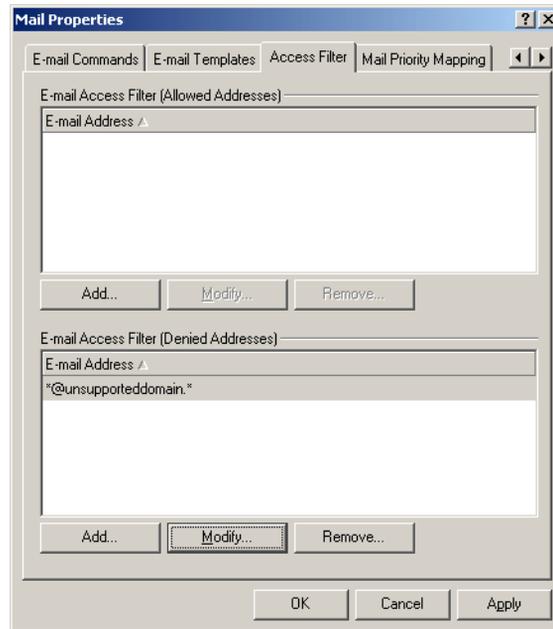
To set the access filter:

1. Click Add to add an address, Modify to make changes or Remove to remove an address from the list.

2. Click OK to save your data and close the dialog box, or Apply to save and continue working in this dialog box.

E-mail Priority Mapping

Incoming e-mail messages often have an importance level assigned to them in the external e-mail program by the sender. The importance level in the e-mail message represents the priority code in Service Desk that is assigned to that item.

Select an importance level and click Modify to change the default mapping:

Figure 10-11   **E-mail Priority Mapping tab**
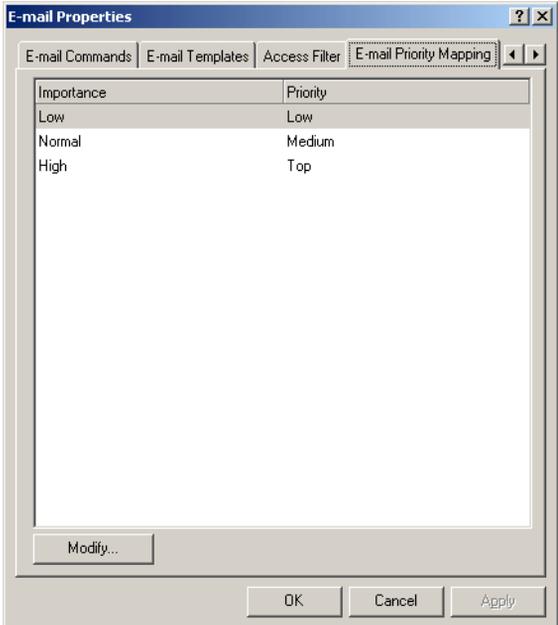
Using Inbound E-mail

The following sections explain how the commands work. The e-mail message must be written in plain text. Attachments are accepted. Inline attachments, for example graphics inserted into the body of the message, are not. If your e-mail program inserts footers, use the BEGIN and END tags to mark the message text.

After a command is sent, a confirmation message can be sent to notify the caller that the service call was created or that the creation failed. Confirmation messages are based on templates that can be modified in the E-mail Templates tabbed page, you will also need to select the Send Confirmation option for the command in the E-mail Command tabbed page. The message body of the confirmation message can be made of both fixed text, and keywords that will be substituted by service call specific information.

Using the New Command

When Service Desk receives the New command, a service call is created and the default values in the inbound e-mail template that is linked to that Service Desk e-mail address are copied into the new service call.

To use this command:

1. Enter an e-mail address for Service Desk in the To field. Service call templates are linked to Service Desk addresses. A number of service call templates can be created and linked to multiple Service Desk e-mail addresses:

Figure 10-12   New Service Call E-mail Message
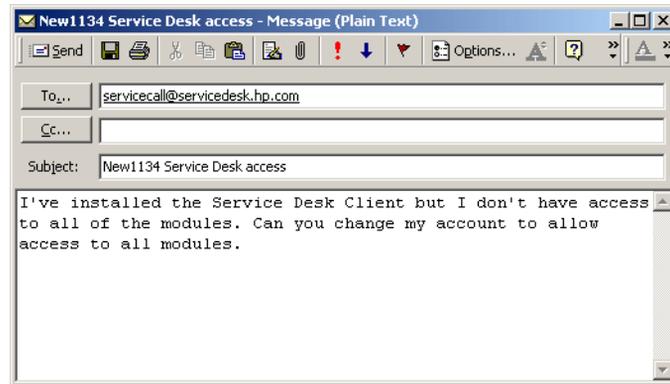
2. Use the e-mail account that you want Service Desk to use as the caller. Service Desk determines the caller for the service call by first trying to match the e-mail address in the From field with an e-mail address of a Person item in the Service Desk database. If the person cannot be found in the database, or there are multiple person items, the service call will not be created and a message will be sent back to the sender stating the error.

3. Enter the New command in the Subject field of the e-mail message.

4. Enter the service call description in the Subject field after the command. This text is copied to the Description field of the service call.

5. Enter additional information about the service call in the message body text. The text of the e-mail message body text will be copied to the Information field. If the text is too long it will be truncated and the complete message body text will be copied to an attachment. A comment will be inserted in the Information field: Warning: Text truncated, see attachment <*file name*> for complete e-mail text.

   Some e-mail programs insert footer text or graphics automatically into e-mail messages when they are sent. The Inbound e-mail program does not recognize these elements and the e-mail message will be rejected. To prevent this problem, insert BEGIN at the start of your message text, and END at the end of your message. If you use only BEGIN, everything after that point will be used. If you use only END, all text before that point will be used.

6. Additional information can be sent as an attachment if that option is allowed. The attachment option is set for each command in the E-mail commands tabbed page.

Using the `Update<id>` Command

The `Update<id>` command can be used to update service call information in a service call. All service call fields can be updated.

To use this command:

1. In the Subject line, enter the command `Update` followed by the service call ID, for example: `Update 3124.`

2. Enter the field you want to modify in the message body text followed by a colon or an equal sign (=), and the value. Each field must start on a new line. The field names and values used must match those used in the service call form:

Figure 10-13   **E-mail Update<ID> Command Message**
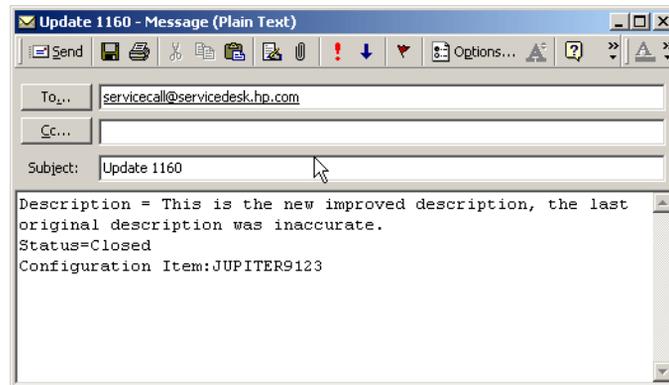
Using the `Add History Line<id>` Command

When Service Desk receives the `Add History Line<id>` command, the contents of the e-mail message body are copied to a new history line. If the text is too long, it will be truncated and the complete message body text will be put in an attachment and the following message inserted in the History line field: `Warning: Text truncated, see attachment <file name> for complete e-mail text.`

To use this command, enter the command `Add History Line` followed by the service call ID in the Subject line, for example: `Add History Line 3124`

The [?] represents a hard coded variable, in this case the [?] will be replaced with information from the History line field.

Using the `View <id>` Command

When Service Desk receives the `View <id>` command, an e-mail message containing the details of the service call, specified by the ID in the command, will be sent to the requester.

To use this command, in the Subject line, enter the `View` command followed by the service call ID, for example: View 3124.

The default attribute fields will be filled in with information for that service call.

Using the `List` Command

When Service Desk receives the `List` command, an e-mail message is sent to the requestor containing a list of all open service calls assigned to the caller and all open service calls announced by the caller. The service call ID and description is included. A service call is considered open when the Actual Finish field is empty.

To use this command, enter the `List` command in the Subject field.

Using the `RE:RFI<id>` Command

The `RE:RFI<id>` command is used to add additional information to the history line of a service call. When Service Desk receives the `RE:RFI<id>` command, a history line will be added to the service call specified by the ID. The service call status is changed to the status that is defined for that command in the E-mail Commands tab, for example, `Additional information received`.

To use this command, enter the `RE:RFI <id>` command in the Subject line, for example, `RE:RFI 3222`.

The [?] represents a hard coded variable, in this case the history line variable.

Using the `RE:Solution Accepted <id>` Command

When Service Desk receives the `RE: Solution Accepted <id>` command, it will change the status of the service call to the status specified for that command, solution accepted, for example. The status for each command is set in the E-mail Commands tab.

To accept the solution to a service call, in the Subject line, enter the `RE:Solution Accepted <id>` command.

Using the `RE:Solution Rejected <id>` Command

When Service Desk receives the `RE:Solution Rejected <id>` command, it will change the status of the service call to the status specified for that command, solution rejected, for example.

To reject the solution provided for a service call, enter `RE:Solution Rejected` in the Subject line.

Using the `Recall<id>` Command

The `Recall <id>` command is used to withdraw a service call. The service call will not be deleted from the Service Desk database. The status of the service call will be changed to the status specified for the command, Recalled, for example.

To use this command, in the Subject line, enter the `Recall <id>` command.

Using the `Help` Command

When Service Desk receives the `Help` command, an e-mail message will be sent to the person in the From field, containing a list of the commands available for use with Inbound e-mail and a short explanation for each. The help text can be edited by the system administrator.

To use this command, enter the `Help` command in the Subject line.

Troubleshooting E-mail Problems

This section is provided to assist you in identifying and solving errors in your Inbound or Outbound e-mail messaging.

You may want to start your troubleshooting process by verifying the following requirements are met:

- E-mail client is MIME compliant, see "Finding More Information" on page 248.

- Database, operating system, and Service Desk server, all support the character set used.

NOTE   Service Desk supports all character sets which are listed and implemented by Sun. If you are in doubt, use UTF-8. For more information please refer to the Sun Web site at: http://java.sun.com/j2se/1.3/docs/guide/intl/encoding.doc.html

Identifying Errors

When an error occurs because a command cannot be processed correctly by Service Desk, a Command not recognized message or a Mail Error message is normally created. A Mail Error message is generated when the e-mail command is not executed. A Command Not Recognized message will be sent when the command is partially executed. An e-mail message is sent to the person who sent the e-mail command. The e-mail message that caused the error will be sent to the E-mail address for Wrong e-mail.

Other errors may occur that are not directly related to the Service Desk e-mail program, or the commands used, for example differences in the supported character set.

The following table lists the possible cause of a variety of errors in your Inbound or Outbound e-mail messaging:

Table 10-3   **E-mail Errors**

Symptom	Cause	Solution
Items created or modified by Inbound e-mail are corrupted. For example a new Service Call is corrupt.	Database doesn't support the character set used.	Use a character set supported by Service Desk and your database.
E-mail sent by Service Desk appears garbled or malformed on the Client machine.	Client machine does not support encoding.	Turn off the encoding option in the General Settings dialog box and ensure the client platform is MIME compliant and supports the character set used. For example, Japanese character set may be readable if used on English operating system.
Inbound e-mail results in malformed or truncated characters in Service Desk. Characters appear as "?"	Unsupported character set was used.	Use a supported character set and if using a character set other than US-ASCII, use the encoding option.
Service call is not created.	Caller could not be determined for new service call creation.	Verify the Caller is a person in Service Desk and include an e-mail address. Check the Access Level set for the command.

Table 10-3　　　　　**E-mail Errors (Continued)**

Symptom	Cause	Solution
Service call is not changed.	No authorization for updating a service call. Includes the following commands: Update<ID> RE:RFI<ID> Recall<ID> RE:Solution<ID>	Change the authorizations for the person in Service Desk.
Nothing happens	No authorization for viewing service call data. Includes the following commands:Update<ID> View<ID>	Change the authorizations for the person in Service Desk.
Nothing happens	Command not recognized	Use the correct command syntax.
Service Desk rejects the Inbound e-mail	Message syntax not recognized because the e-mail program inserted additional text or graphics when the message was sent to Service Desk	The Inbound e-mail program does not recognize footers and graphics and the e-mail message will be rejected. To prevent this problem, insert BEGIN at the start of the message text, and END at the end of the message.

Error messages, sent from the Outbound e-mail program, can be modified from the e-mail templates tab. See "E-mail Templates" on page 235 for more information.

Finding More Information

Additional information which may be useful in troubleshooting problems with your E-mail integration with Service Desk can be found on the Internet at:
http://www.faqs.org/rfcs/rfc1521.html and
http://www.faqs.org/rfcs/rfc1522.html

11 Archiving

This chapter explains how to archive Service Desk items.

Overview

When information is archived, it is copied to a predetermined archive location, and is then deleted from the production database. The archived information is stored in XML format.

CAUTION   Archiving should not be used as a backup solution. Once information has been archived, it cannot be restored. For details of system backups, see "System Backup" on page 286.

Although the data exchange mechanism also exports and imports data in XML format, there is no connection between archiving and data exchange. Data exchange uses the common information model (CIM) XML data definition, whereas archiving uses one of two user-selectable XML formats: abstract or Service Desk-specific.

Structure of Archived Information

You can choose between two different XML structures when archiving. The relative merits of each variant is described below.

Service Desk-Specific XML Structure

The DTD of the Service Desk-specific XML structure is based on the Service Desk object model. The types of XML elements are the entities or item types in the Service Desk object model. The attributes of the individual XML elements correspond to the values of the attributes in the individual Service Desk objects they represent.

Abstract XML Structure

The DTD of the abstract XML structure is based on a generalized information model, where the XML elements reflect the abstract concepts of objects and their attributes. Reference is made to the Service Desk object model by identifying the relevant Service Desk entities or item types within the properties of the individual XML elements.

The advantage of the abstract XML variant is that the DTD does not depend on the details of a particular Service Desk implementation. This makes it very versatile. The disadvantage of the abstract variant is that for a particular implementation of Service Desk, programmers who transform XML to another format such as HTML need to fill in the actual details of the Service Desk implementation without any help from the structure of the XML.

Specifying Archiving Settings

You specify the information to be archived by defining views for each item type. Work orders, changes, projects, problems, service calls and incidents can all be archived. A separate XML file is created for each type of item. New XML files are created each time archiving is performed. The following figure shows the Views tab of the Archive Settings dialog box in which the archiving views and other archiving settings are specified:

Figure 11-1 **Archive Settings Dialog Box: Views Tab**
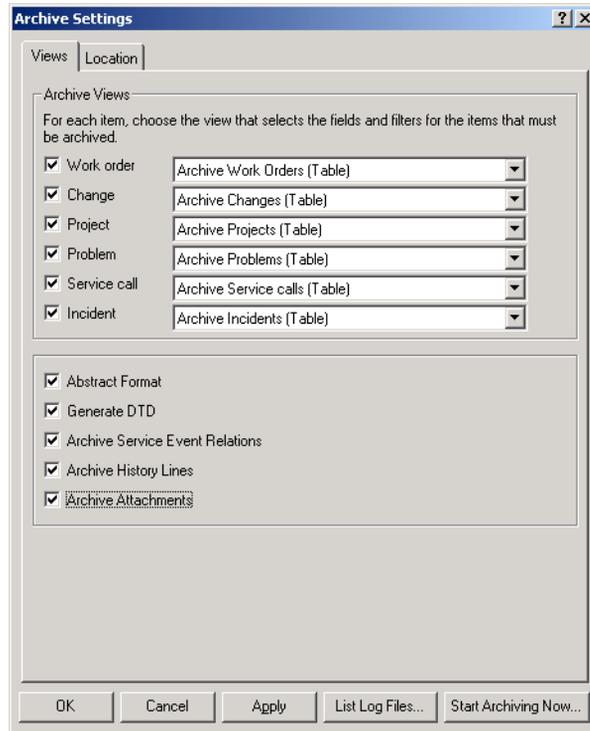
The filters you apply to each view determine the records that are archived. The fields you include in the view determine the simple attributes that are archived with each record. You can also choose to archive attachments and certain entity sets (that is, attributes that hold their values in lists), including history lines and service event relations.

You can choose between the default (Service Desk-specific) XML structure and an abstract XML structure. If you intend to transform archive files from XML format to another format such as HTML, programmers may prefer to use the abstract format as a basis. See "Structure of Archived Information" on page 250 for a comparison of the two structures.

You can choose to generate a document type definition (DTD) file for each archive file. The DTD file can be used to simplify the transformation process from XML to another format such as HTML.

Archive file name and location settings are specified and displayed on the Location tab of the Archive Settings dialog box:

Figure 11-2   **Archive Settings Dialog Box: Location Tab**
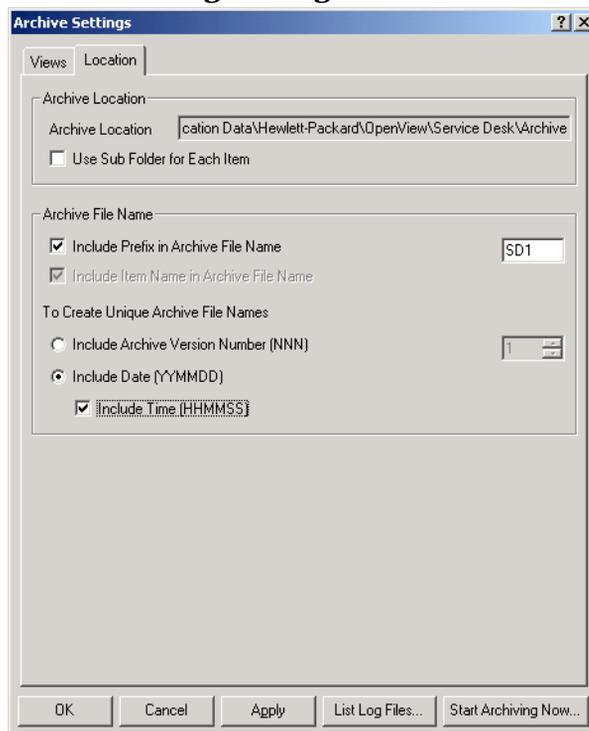
By default, information is archived to a location on the Service Desk client in the Archive folder below the data folder, as specified in the client account settings. This location is displayed in the read-only Archive Location field. You can specify an alternative location by supplying command-line overrides. (See "Initiating the Archiving Process" on page 254.)

Other options on the Location tab of the Archive Settings dialog box control the organization and naming of archive files:

- Select the Use Sub Folder for Each Item check box if you want the archive files for each item type to be stored in separate sub-folders below the archive directory. Alternatively, clear the Use Sub Folder for Each Item check box if you want all archive files to be stored together in the archive directory.

- You can specify a prefix of up to three characters to help identify the archive files.

- To ensure that archive file names are unique, you can include an index number as a suffix to the archive file name. The number is incremented each time an archive process is performed. Alternatively, you can include the archiving date as a suffix to the archive file name. You can include the archiving time as well as the date. Including the time is useful if archiving is performed more than once on the same day.

Before initiating the archiving process, you should also decide on the time zone to be used for archiving dates and times. (See "Time Zone for Archived Dates and Times" on page 263.)

Initiating the Archiving Process

After specifying the archive settings, you can start archiving immediately by clicking the Start Archiving Now button in the Archive Settings dialog box. Alternatively, you can initiate archiving from the command line, which enables you to schedule archiving and to override certain archive settings, as described below.

If you schedule archiving, Service Desk uses the account settings of the default user as specified in the user settings on the Service Desk server (if archiving on the Service Desk server) or in the user settings on the Service Desk client (if archiving on the Service Desk client).

- The Client Account Settings program on the Service Desk server can be launched by executing one of the following files from the command line, depending on the platform the Service Desk server is installed on:

Table 11-1   **Running the Client Account Settings Program on the Server**

Platform	Executable Program
Microsoft Windows	<install>\bin\sd_useraccounts.bat
HP-UX and Solaris	<install>/bin/sd_useraccounts

- The Client Accounts program installed on the Service Desk client can be launched from the Start menu: point to Programs, then point to hp OpenView Service Desk 4.5, then point to Client, then click client accounts.

To schedule archiving on the Service Desk client:

- Use the documented procedure supplied with the external scheduler.

  When prompted to specify the name of the executable program to run, specify the `sd_archive.bat` file located in the bin directory below the client installation folder.

To schedule archiving on the Service Desk server:

- Use the documented procedure supplied with the external scheduler.

  When prompted to specify the name of the executable program to run, specify one of the files shown in the following table, depending on the platform the Service Desk server is installed on:

Table 11-2   Archiving from the Command Line

Platform	Executable Program
Microsoft Windows	`<install>\bin\sd_archive.bat`
HP-UX and Solaris	`<install>/bin/sd_archive`

In the above table, `<install>` is the installation directory for the Service Desk server.

By initiating archiving from the command line, you can override the archive settings shown in the following table:

Table 11-3   Overriding Archive Settings on the Command Line

Options (an option starts with "-" or "/")	Explanation
usr=<username>	Account name
pwd=<password>	Account password
srv=<server>[:port]	Server name (and optional port)
loc=<location>	Archive location
abs=<yes|no>	Use abstract XML format
dtd=<yes|no>	Generate document type definition
rel=<yes|no>	Archive service event relations
his=<yes|no>	Archive history lines

Table 11-3   **Overriding Archive Settings on the Command Line (Continued)**

Options (an option starts with "-" or "/")	Explanation
att=<yes | no>	Archive attachments
del=<yes | no>	Delete records ('yes') or suppress deletion ('no') after they have been copied to the archive

NOTE   The command line options are not encrypted. If security is an issue, specifying user account details on the command line is not recommended.

You may need to enclose certain command line options (both the parameter and its argument) in quotation marks, such as when the location path contains a directory name with spaces. For example, when archiving to the location "/home/archive files", the following syntax is recommended:

```
sd_archive -usr=admin -pwd=abcdefg -srv=sdserver1
"-loc=/home/archive files"
```

To override the user account on the command line, you need to specify the account name, password, and server name (and optionally, the port number, if different from the default port), as in the following example:

```
sd_archive -usr=admin -pwd=abcdefg -srv=sdserver1:30998
-loc=/home/archive
```

If you supply a user account override on the command line, Service Desk applies the default time zone for the specified user. Ensure that the default time zone for the specified user is set to the required value.

During the archiving process, all records of a particular item type are copied to the archive location before deletion begins. Items are archived in the order in which they are listed in the Archive Settings dialog box (see Figure 11-1 on page 252). That is, work orders are archived first (if selected for archiving), followed by change requests, and so on down to incidents. If an error occurs during copying (for example, the disk becomes full), the copying process terminates, and no records are deleted.

By this time, Service Desk may already have created archive files for some item types. You can use the archive log file (see "Checking the Log File" on page 257) to identify records that were copied but not deleted.

Checking the Log File

After each archiving process is completed, Service Desk records the outcome in a log file, which is created in the archiving folder and named `<date>_<time>.log`, where date and time identify the moment the archiving process started. The log file can be viewed using any plain text editor.

The log file includes the following information:

- Date and time the archiving process was started and finished.

- For each item type:

— Archive filter settings.

   — Number of items copied and removed.

- For each individual item, the result of copying and the result of removing.

If errors are reported, the reason for failure is shown. For example, if deletion failed due to an item having a relation that cannot be deleted, the log identifies the related item that caused the error.

Viewing Archived Information

Archive files store information in XML format. To view an archive file, use any external XML browser.

Object Identifiers (OIDs)

Archive files use object identifiers (OIDs) to refer to items. The OID identifies items uniquely. OIDs are also used in the context of attachments, which are archived using the same sub-directory structure as on the attachment server. (The structure includes the item type and object ID.)

The use of object identifiers facilitates the development of automated search routines. Alternative methods of uniquely identifying items rely on combinations of properties, such as the item type combined with the functional identifier.

Archiving Attachments

When an item with attachments is archived, the attachments are deleted from the attachment server. However, if you choose to archive attachments when you specify archiving criteria, Service Desk handles the attachments as follows:

*   Each attachment is copied to the archive folder using the same sub-directory structure as on the attachment server. (The structure includes the item type and object ID.)

*   The archive file includes a reference to the object ID of each attachment file.

*   The archive file includes a reference to the subdirectory structure pointing to the attachment.

For example, consider a service call with an attachment file named `details.txt`. If the target folder specified in the attachment settings is `/home/attach`, and the service call has object ID `281478288048260`, the attachment server stores the attachment with a numeric file name (such as `281478288048226`) in the file `/home/attach/Servicecall/281478288048260/281478288048226`. When the service call is archived, the attachment is copied to the following file in the archive folder:

`Attachments/Servicecall/281478288048260/details.txt`

Establishing an Archiving Strategy

Before you specify archiving criteria and initiate archiving, it is advisable to plan an archiving strategy that is appropriate for your implementation of Service Desk. This section discusses some of the factors you may need to consider.

Archiving Performance

When archiving large amounts of data, it is advisable to schedule the archiving process to be performed during quiet periods, such as overnight. During a 60-hour period over a weekend, it should be possible to archive 175,000 records.

Quantity of Information

Consider the rate at which records are created in Service Desk. Allow for variations due to cyclical or seasonal factors. In general, the more rapidly information is created, the more frequently it will need to be archived. The amount of disk space consumed by archive files also depends on how many attributes you choose to archive, and on the quantity of information that tends to be entered in fields.

TIP   Use a test database to experiment with different archiving criteria until you have gained a better idea of how much disk space your archive files will consume. Identify the most important attributes, and the ones responsible for consuming the most disk space. Try to differentiate between attributes that must be archived, and attributes that are expendable. The `-del=no` command line argument is useful when experimenting with different archiving criteria, because by suppressing the deletion of archived records, you do not need to create new records each time. See Table 11-3 on page 255 for a list of command line arguments.

If storage capacity is limited, consider compressing archives. This can reduce disk space consumption by 80% or more.

Archiving Frequency

The more frequently you archive information, the smaller each archive file will be, but the number of individual archive files will accumulate more rapidly. This may cause difficulty when searching through archived information.

Dependent Processes

Ensure that information is only archived when it is no longer required by other processes. Processes that require information to be retained longer than others include the following:

- Service level management

  Service level agreements may be active for several years, and each evaluation period may span six months or more. Only service calls and incidents that have remained closed and unchanged for a period no shorter than the evaluation period should be archived. Consider the timing of evaluation and archiving processes: arrange to start archiving after SLA evaluation is completed.

- Analyzed data

  Analyzed data may be required for problem solving and process optimization. The archiving process removes analyzed data related to archived items, as well as the history lines on which the analyzed data is based. If you use analyzed data, it should be consolidated in reports or in reporting databases before the items are archived.

Company Policy and Legal Requirements

Ensure that your archiving policy is compatible with company policy. Consider official regulations and procedures governing the retention and deletion of information. There may be different policies for keeping items available for operational use in the database, for immediate reference, for indirect use, and for deletion.

Archiving Order

The Archive Settings dialog box lists item types in the order in which they are archived. To minimize the possibility that a record cannot be deleted because of a dependency (see "Records With Relations" on page 261), it is advisable to avoid excluding items higher up the list when

including items lower down the list. For example, if you archive problems, it is advisable also to include change requests and work orders in the archiving process.

For each type of item, Service Desk archives records according to their ID: highest ID first, lowest ID last. This minimizes the possibility that a record cannot be deleted because of a dependency (for example, a subcontract service call has a higher ID than the originating service call).

Records With Relations

When you specify archiving criteria for each type of item to be archived, avoid setting up a strategy that archives certain records but retains related records. Items hold useful information not only in their text fields, but also in their relations to other items. It is advisable to aim for an archiving strategy that archives all inter-related records in the same operation. This ensures that all references to related records are retained.

Items related to work orders

Consider the case of a change request related to a work order:

- If you archive the change request but not the work order, the change request will be copied but not deleted. Service Desk will attempt to archive the change request the next time the archiving process runs, but the archiving process cannot delete the change request until the related work order is deleted or archived. This can result in an item being archived to more than one archive file.

- If you archive the work order but not the change request, the work order will be copied and deleted successfully, and will contain a reference to the change request. The change request will remain in the Service Desk database, but all knowledge of its relation to the archived work order will be lost.

- If you archive the work order and the change request, both the work order and the change request will be copied and deleted successfully. The work order will contain a reference to the change request, but the change request will not contain a record to the work order. This is because by the time the change request is archived, the work order has already been copied and deleted (see "Archiving Order" on page 260).

Service calls and related subcontract service calls

Consider the case of a service call related to a subcontract service call:

- If you archive the originating service call but not the subcontract service call, the originating service call will be copied but not deleted. Service Desk will attempt to archive the originating service call the next time the archiving process runs, but the archiving process cannot delete the originating service call until the related subcontract service call is deleted or archived. This can result in an item being archived to more than one archive file.

- If you archive the subcontract service call but not the originating service call, the subcontract service call will be copied and deleted successfully, and will contain a reference to the originating service call. The originating service call will remain in the Service Desk database, but all knowledge of its relation to the archived subcontract service call will be lost.

- If you archive the subcontract service call and the originating service call, both service calls will be copied and deleted successfully. The subcontract service call will contain a reference to the originating service call, but the originating service call will not contain a reference to the subcontract service call. This is because by the time the originating service call is archived, the subcontract service call has already been copied and deleted (see "Archiving Order" on page 260).

Items with service event relations

Consider the case of a change request that has a solved-by service event relation to a problem record:

- If you archive either one record without the other, the record identified to be archived will be copied and deleted successfully, and the archived record will contain a reference to the service event relation if you select this option. However, the record that is not archived will lose its relation to the archived record.

- If you archive the change request and the problem, both records will be copied and deleted successfully. The change request will contain a reference to the problem if you select this option. However, the problem will not contain a reference to the change request. This is

because by the time the problem is archived, the change request has already been copied and deleted (see "Archiving Order" on page 260).

Time Zone for Archived Dates and Times

To ensure that dates and times are always archived with respect to the same time zone, your archiving strategy needs to take into consideration the way Service Desk chooses the time zone, which depends on the way archiving is initiated:

*   If archiving is initiated from the Archive Settings dialog box, Service Desk uses the time zone currently displayed in the toolbar, which is the same as the user's default time zone.

*   If archiving is initiated from the command line, Service Desk uses the default time zone of the default user. If a user account is specified as a command-line override, Service Desk uses the default time zone of the specified user.

Consistency

If required, you can change archiving settings, such as when new custom fields are introduced. However, to maximize the consistency of archived information, it is advisable to avoid changing the archiving settings as much as possible.

12 Administrator Console Export Settings

This chapter describes the actions of exporting and importing configuration information.

Overview

In the Administrator Console an entry is available: hp OpenView service desk/Data/ACES. ACES is an acronym for Administrator Console Export Settings and is used to allow the exchange of settings between instances of the same Service Desk version using the XML file export/import.

ACES comprises five items: ACES Views, Groups, Export and Import wizards and Settings. Access to the ACES settings dialog box is via the icon in the Administrator Console/System Panel. The following icons are used.

Table 12-1   **Icons**

Icon	Definition	Location
	ACES Settings	Administrator Console item (System panel)
	ACES Views	Data/ACES
	ACES Groups	Data/ACES

ACES Settings

The Aces settings dialog box is where the administrator can define the default locations where the export and import XML files and their associated log files are to be stored when using either the export or import wizards.

This dialog box is accessed via the Administrator console system panel.

Figure 12-1   **Aces settings dialog box**
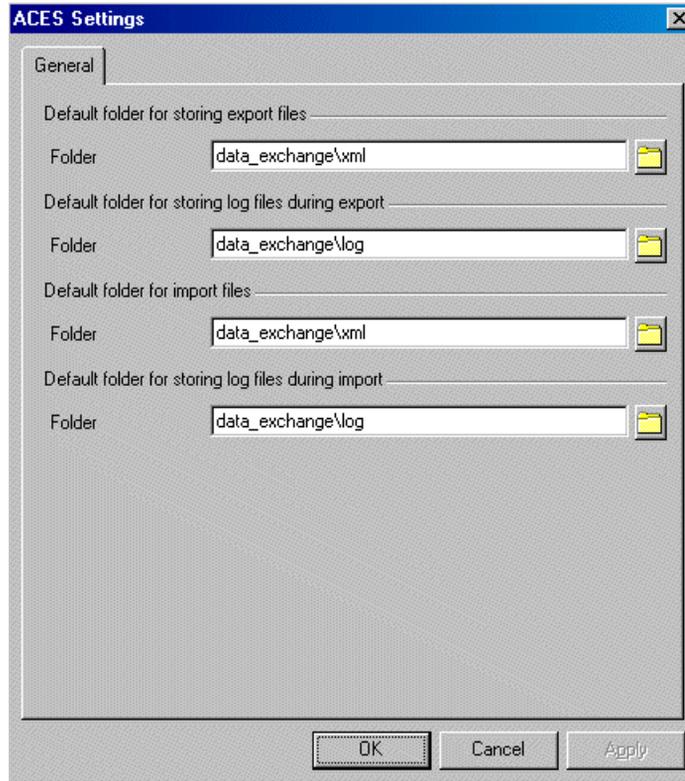
ACES Views

ACES Views are used to capture (part of the) Administrator Console information. ACES Views can be inserted into a collective called an ACES Group.

Certain conditions within views have to be manipulated by the import filter in order for the importation to be successful. These conditions and the solutions are detailed in Table 12-3, "General import situations," on page 277 and Table 12-4, "Specific import situations," on page 278.

CAUTION   It is not advisable to complete any other administrator tasks during the export or import process.

To export specific Administrator Console items a view must first be created that selects these items. A view is based on a particular setting (for example; templates, forms or codes.)

New Aces Views are created using the right mouse button (right-click) in the Aces View pane and selecting `New Aces View from the shortcut menu`, then completing the form that appears.

Figure 12-2   **New View form - ACES View**
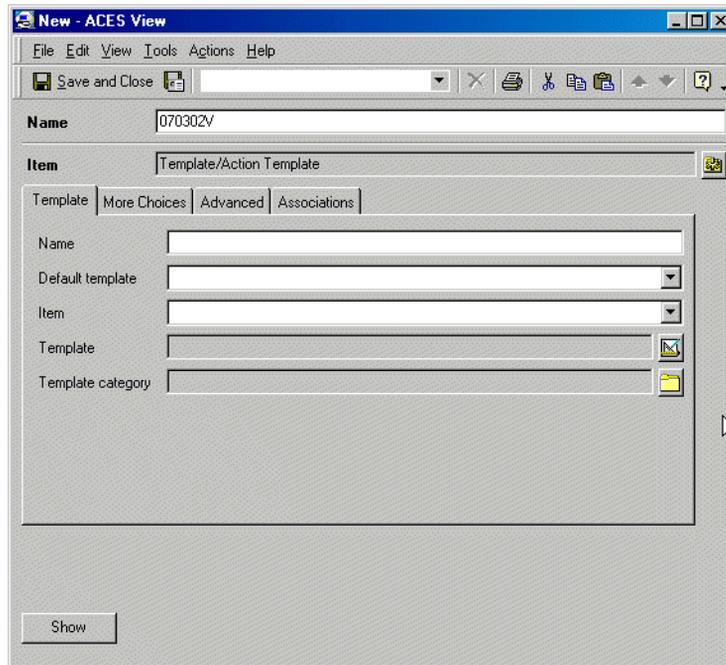
The selection of tab pages appear after the `Name` and the `Item` (via the button to the right of the Item box) have been completed.

More details on how to create an export view can be found in the online help.

Exporting associated relations

If there are items within an export view that have associated relations an Associations tab appears in the filter panel.

Figure 12-3   **Selecting associations**
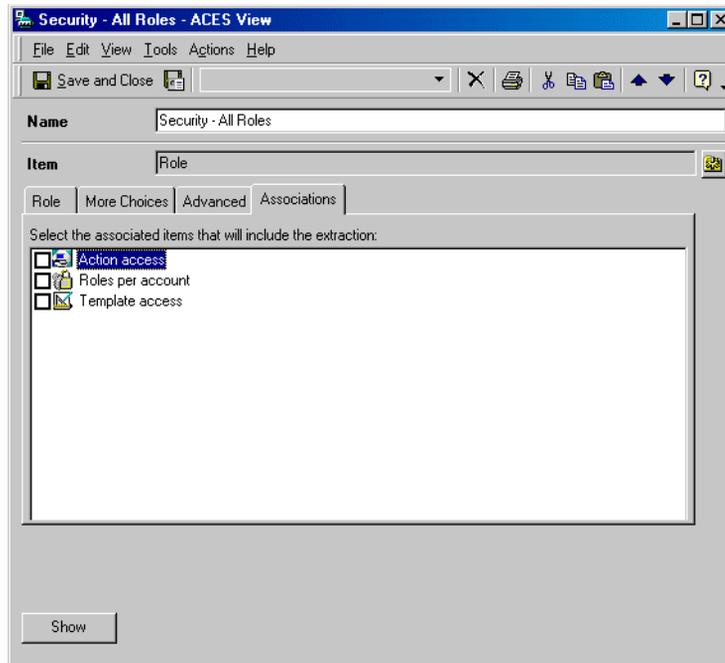
In order to export associated relations, these have to be selected
manually within ACES views. See "Importing associated relations" on
page 283.

ACES Group

ACES Groups is the collective for sets of related views. For example, an
ACES Group called 'Change suite' could contain the export views
'Change forms', 'Change templates' and all 'Change codes'. ACES groups
are the selection criteria for the next stage, the ACES export wizard.

The purpose of grouping the export views in this way is to allow the
export process to be structured to allow the reuse of the definitions.

NOTE   It is possible to make a view of a group to enable the exportation of the
ACES views in an XML file format.

A particular ACES view can be part of several ACES Groups.

New Aces Groups are created using the right mouse button (right-click) in the Aces Groups pane and selecting New Aces Group from the shortcut menu, then completing the form that appears.

Figure 12-4   **New Aces Group Form**

NOTE   The ordering of the ACES Views within an Aces Group is important for the export-import process. Items that have been referred to by other items should be imported first to avoid errors and loss of information.

ACES Group elements can be re-ordered (manually or automatically), related or unrelated using the appropriate buttons at the bottom of the ACES group form.

If the ACES group cannot detect any specific ordering requirements or the order is already optimal the Auto Arrange button will be grayed out.

NOTE   It is not possible to delete the default forms.

ACES Export-Import Wizards

Two wizards are available in the Administrator Console to act as interfaces to fine-tune the export and import process of Service Desk configurations.

NOTE   When file names are defined during the export or import of XML files and the creation of log files; if they are to be located in the default settings as defined in the ACES Settings then only the filename will be shown, maximum 80 characters. If another folder is to be used as the location then the full path information is displayed and has a limit of 255 characters.

The wizards are accessed from the File menu in the Administrator Console:

Figure 12-5   Starting a wizard
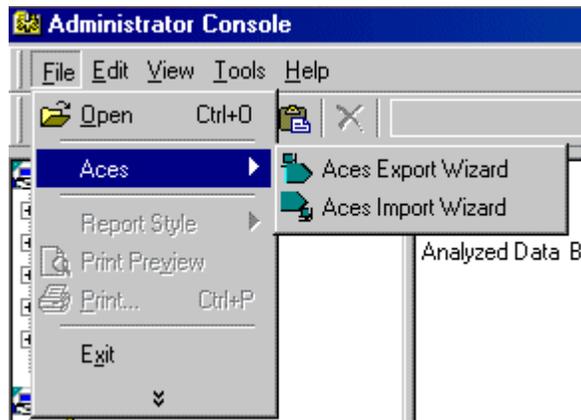
Using the ACES Export Wizard

Introduction

The ACES Export wizard enables the service desk administrator to select a number of ACES groups and convert the data into files using a structured XML format.

NOTE   If you want to export items associated relations with any of the selected views these must have been manually selected. See "Exporting associated relations" on page 268.

Procedure

NOTE   The XML file(s) created during this procedure must not be edited.

1. On the `Tools` menu, click `System` to open the Administrator console.
2. In the Administrator console click `File`, then `Aces` and select `Aces Export Wizard`.
3. On the first page of the Export Wizard click `Next`.

NOTE   If `Cancel` is selected during the export process the entire wizard is cancelled. The XML file that has been created in this process must be deleted manually.

Figure 12-6   Export wizard

4. Select the ACES Groups required for export.

Figure 12-7   Export file selection screen
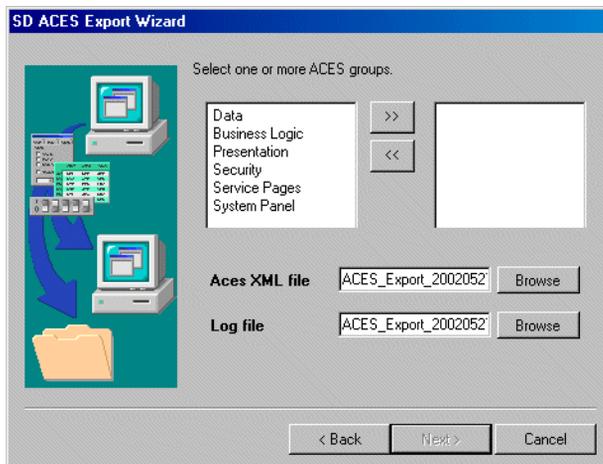
a. Move the required ACES Groups to the right-hand window using the arrow button, any files that are not required for export must be moved to, or remain in, the left-hand window.

      b.   Confirm or specify the name of the log file and the XML file to be generated and their locations. Ensure that the relevant extension is on the file name (.log or .xml) to prevent problems when opening or using the files. The browse button can be used to define the locations.

NOTE   The predefined file names are given a unique date stamp that takes the form, prior to the relevant extension, of YYYYMMDD_HHMMSS.

      c.   Click Next.

5. Click Start export. The state of the export is indicated in the progress bar. During the export process you will be shown information regarding the status of the export. During the export process the Next and Back buttons are disabled. At the end of the export process you are automatically sent to the next page of the wizard. The elements on this screen are used to display the following information:

Table 12-2   **Element definitions**

Element	Definition
Groups: Total	Total number of groups to be exported
Groups: Exporting	Group currently being exported
Groups: Completed	Number of groups that have currently been exported
Views in Group: Total	Total number of views to be exported
Views in Group: Exporting	View currently being exported
Views in Group: Completed	Number of views that have currently been exported
Progress	Progress bar for the view currently being exported

Table 12-2   **Element definitions (Continued)**

Element	Definition
Status	There are three statuses that can be displayed: 1) Querying; when information is being retrieved for extraction; 2) Extracting; 3) Ready; when the current view is ready.

Figure 12-8   **Export wizard progress screen**
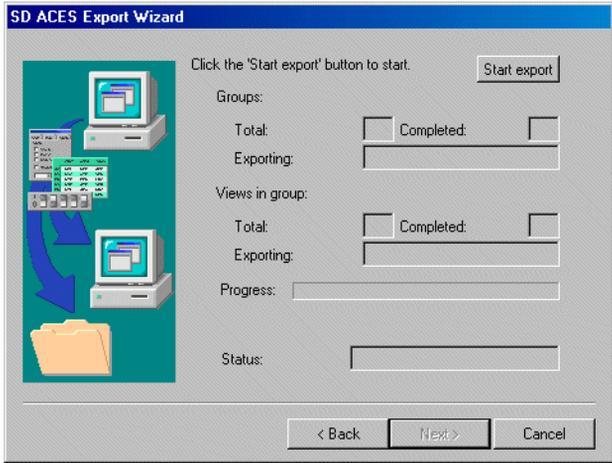
6. Select whether you wish to view the Export log by pressing `View log File`, view a different log file by selecting `Browse` and then `View Log File` or select the option Close the Wizard or Restart the Wizard and then `Finish`.

Figure 12-9   Export wizard completed
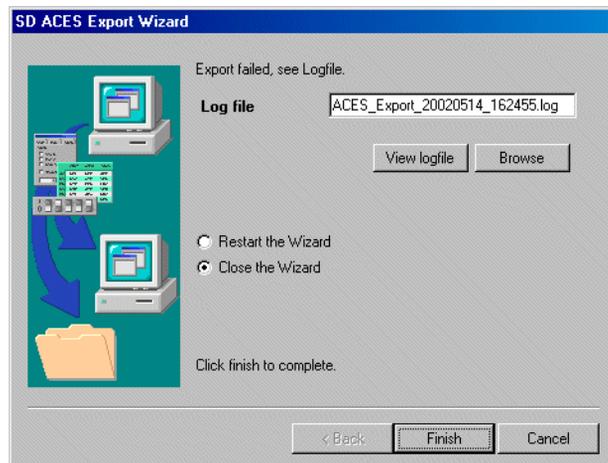
Using the ACES Import Wizard

Introduction

The ACES Import wizard allows the service desk administrator to select the valid XML file containing the administrator settings in order to import them into the current service desk instance.

NOTE
The service desk version indicated in the XML file must match that of the system into which it is being imported.

During the import several problems or situations may arise and it should be clear how the Wizard deals with them. Table 12-3, "General import situations," on page 277 and Table 12-4, "Specific import situations," on page 278.

Table 12-3   **General import situations**

Problem/Situation	Solution/Rule
Item already exists in database (same OID)	If the user has indicated that existing items mustn't be updated then don't import item; otherwise overwrite item.
Item with same search code or name exists in database (different OID).	Don't import item if search code or name must be unique, otherwise import. Handled by WF layer.
Item references unknown item.	General rule: import without reference.
Item that's classified as default is imported while another default item already exists in database	New item will become the default. The existing default item won't be the default any longer.

Table 12-4   **Specific import situations**

Setting	Problem/Situation	Solution/Rule
Checklist	Referenced item (Service or Classification) doesn't exist.	Import without the reference.
Codes	Ordered code has a specific ordering.	Always assign the ordered code the highest ordering.
	Hierarchical code has a parent.	- Start any import with parent codes first. - If the parent code can't be found place code in root.
Custom fields	Code doesn't exist.	Import without reference.
Overview actions	Referenced view doesn't exist	Don't import action
Required fields	Code doesn't exist.	Import without reference.
UI rules	Referenced code or other Entity item or action doesn't exist.	Import without reference.
Database rules	Referenced code or other Entity item doesn't exist.	Import without reference.
Smart actions	Application doesn't exist	Don't import action (reason: application is required field).
Templates	Referenced item used as default doesn't exist.	Import template with reference (unknown reference is handled by the system).

Table 12-4   **Specific import situations (Continued)**

Setting	Problem/Situation	Solution/Rule
Views	Referenced item in Filter doesn't exist.	Import view without specific condition.
Forms	Referenced custom field is not an activated custom field	Import form with the custom field reference (field won't show up runtime)

Procedure

1. On the Tools menu, click System to open the Administrator console.

2. In the Administrator console select File, then Aces and select Aces Import Wizard.

3. On the first page of the ACES Import Wizard click Next.

Figure 12-10   **Import wizard**
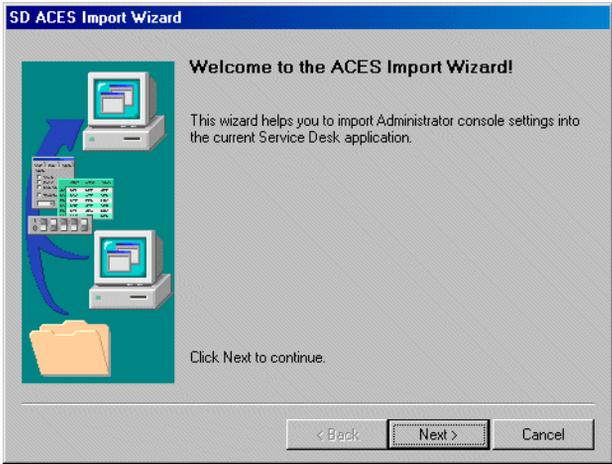
4. Select the XML file(s) required

Figure 12-11   Import file selection
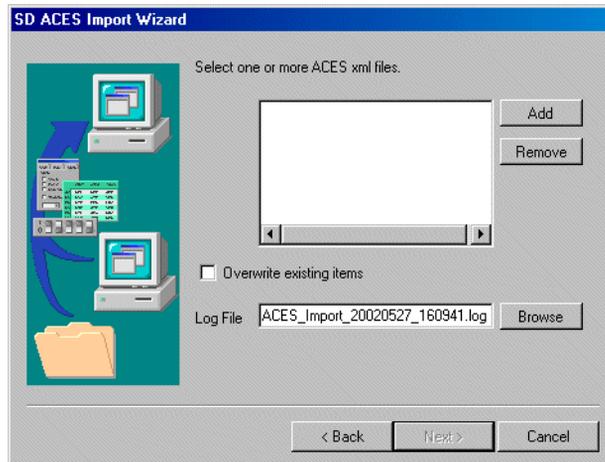
a. Click Add.

b. Browse to the directory required and select the necessary XML files.

c. Confirm or specify the name of the log file, and its location by means of the browse button.

d. Check or uncheck the Overwrite existing items button as required.

If the Overwrite button is left unchecked no existing data will be overwritten. If the Overwrite option is checked this can result in loss of existing data.

NOTE   If you are re-importing an Aces setting that has been previously deleted ensure that the overwrite option is checked. This is because the OID of the item remains in the database after the item has been deleted.

e. Click Next.

5. Click Start import. The status of the import is indicated in the progress bar. During the import process you will be shown information regarding the status of the import. The import process the Next and Back buttons are disabled. At the end of the import

process you are automatically sent to the next page of the wizard. It is possible to cancel the import process using the Cancel button. This will stop further files being imported but will not remove or roll back to previous versions of any files that have been overwritten.

NOTE   There is no procedure to remove new (or overwritten) files.

Figure 12-12   Import progress screen
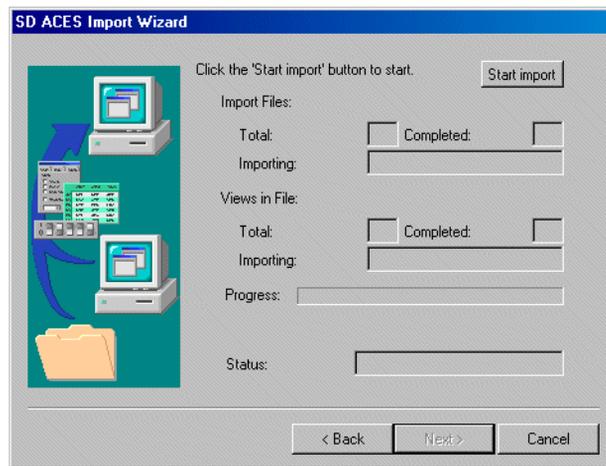
6. Select whether you wish to view the Import log by pressing View Log File, view a different log file by selecting browse and then View Log File or select the option Close the Wizard or Restart the Wizard and then Finish. The definitions of the elements on the progress screen are similar to those given in Table 12-2 on page 274 with the exception that where the definition states export for this screen it is import.

Figure 12-13   Import completed
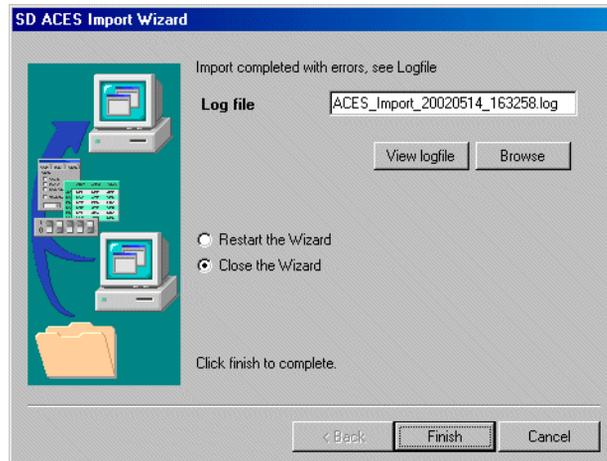
NOTE   When the import has been completed the newly imported settings will
                     not be visible until the F5 button (Refresh) is pressed.

Importing associated relations

For items that have associated relations there are various conditions that can be set in ACES views and the Import wizard to achieve the required results.

It is not possible to automatically determine which associated relations are required for export so this has to be set manually, See "Exporting associated relations" on page 268.

The following table shows scenarios if you require to import the Accounts but not the Roles:

Table 12-5 **Importing accounts but not roles**

Role associations	Overwrite check box	Result
Checked	Checked	Accounts that exist will be overwritten and previously non-existing accounts will be added. Relations to existing roles will be created but relations to any roles that do not exist will generate errors.
Unchecked	Checked	Accounts that exist will be overwritten and previously non-existing accounts will be added. No relations to roles will be created.
Checked	Unchecked	Accounts that exist will be generate errors and previously non-existing accounts will be added. Relations to existing roles will be created but relations to any roles that do not exist will generate errors

Table 12-5   **Importing accounts but not roles (Continued)**

Role associations	Overwrite check box	Result
Unchecked	Unchecked	Accounts that exist will generate an error and previously non-existing accounts will be added. No relations to roles will be created.

If you want to import the accounts and the roles the item that is inserted last will have the associations, for example:

- Accounts (associations to Roles unchecked) then Roles (associations to Accounts checked)

- Roles (associations to Accounts unchecked) then Accounts (associations to Roles checked).

If the only items exported are only present on the source Service Desk and have never been previously imported on the destination Service Desk the items will be unique and no errors will be created.

All referenced items should also be imported to eliminate errors relating to missing or unknown references.

If the Overwrite button is left unchecked no existing data will be overwritten.

13 System Maintenance

This chapter discusses issues related to Service Desk and its relationship to your chosen database.

System Backup

The data that should be saved or restored resides in the database that the user selects. The choices are limited to Oracle and SQL Server. Any backup that includes the database files, for example the .dbf files for Oracle, rollback segments etc. or an export of the data itself, is sufficient. Please refer to your database documentation for information.

No specific configuration files, other than user preferences on the client machines, must be saved individually. As specific files can be replaced, renamed or moved from release to release, there is a danger that this information may not be relayed to the system administrator. Therefore, it is better not to save files individually.

The system administrator, using the backup tools of his choice, can backup the system in the following ways:

- Application server:
  A full NT backup including the registry suffices. There are no specific configuration files that must be saved individually.

- Web server (for Service Pages):
  Depends upon the platform and directory structure. An NT backup can be performed as with the application server. You can also reinstall and copy any customized .html files to the desired directory.

- Database server:
  A backup of the database files is sufficient. The database administrator should be able to identify these files. Some administrators find it easier to reinstall the system and database software from scratch and then import the data. Please refer to your database documentation for information.

Backing Up and Restoring A Test Database

As you may want to create a test environment to help you to plan your implementation of Service Desk 4.5, the Database Configuration Wizard contains a 'hidden' feature to help you maintain your test database. This feature is only visible if the wizard is started from the command line.

For information about the Database configuration Wizard see the *HP OpenView Service Desk: Installation Guide, Chapter 4 Configuring the Database.*

NOTE   The Backup and Restore functions described here can use large amounts of memory, depending on the size of the database you are backing up and restoring. To improve performance with large databases, and avoid possible java.lang.OutOfMemory errors you can edit the start script of the wizard and add the parameters –Xms128m -Xmx256m to the java program. For example: -Xms128m -Xmx256 -jar lib/database.jar.

To use the Maintain Database option in the Database Configuration Wizard on Windows:

1. Open a Command Prompt window and navigate to the \server\bin folder of your Service Desk 4.5 tree.

2. Use the command sd_dbconfwizard.bat -internal. The Database Configuration Wizard starts.

3. Click next in the Welcome screen.

To use the Maintain Database option in the Database Configuration Wizard on UNIX:

1. Run /opt/OV/sd/server/bin/sd_dbconfwizard.sh -internal. The Database Configuration Wizard starts.

2. Click next in the Welcome screen.

To backup a test database

1. When you start the wizard the Welcome screen is displayed, Click Next. The Choose the action you want to perform **dialog box is displayed:**

Figure 13-1   Choose the action dialog box
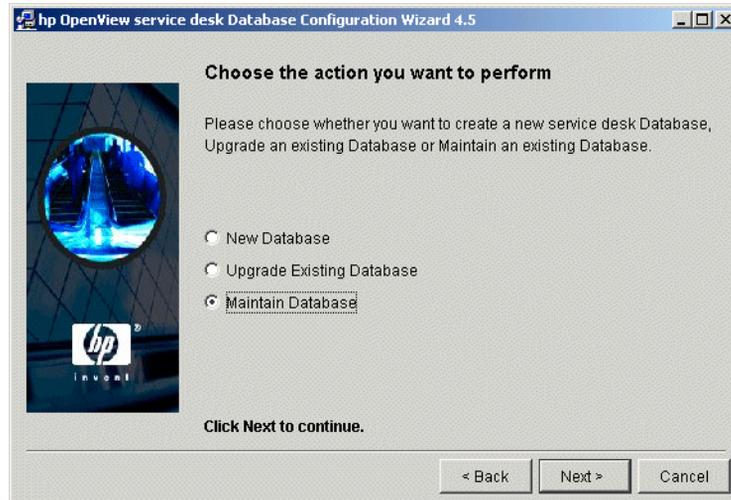
2. In the Choose the action you want to perform dialog box select Maintain Database. The Choose the maintenance task you want to perform **dialog box is displayed:**

Figure 13-2   **Choose the maintenance task dialog box**
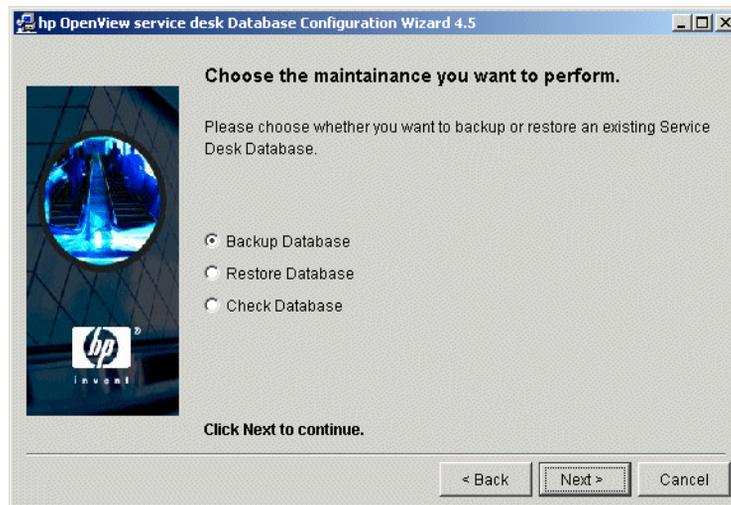
3. In the `Choose the maintenance task you want to perform` dialog box select `Backup Database`. This option reads the database and stores it four files, a Repo User file, a datastore file, and two sizing files for each of the other two files. Click `Next`, the `Prepare for object creation` dialog box is shown:

NOTE   If the database you are backing up is an Oracle database with only one user, or a SQL Server database the backup program will still create two backup files but the datastore file will be empty.

Figure 13-3   Prepare for object creation dialog box
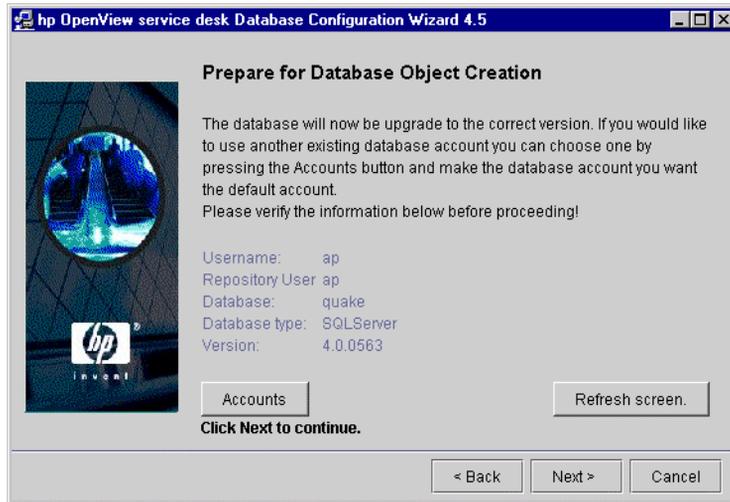
4. Use the Prepare for object creation dialog box to make sure the correct database user is being backed up, if the correct database is not displayed use the Accounts button and the Server Settings Editor is displayed (see the *HP OpenView Service Desk 4.5: Installation Guide, Chapter 5 - Configuring the Server*) use this to select the right database. When you return to this screen after selecting the database, the details will not show until you press Refresh. When the correct database details are displayed, click Next.

5. A dialog box is displayed for you to give the file a name and location. If you use an existing file name it will be overwritten without prompting you to confirm the overwrite. Press Save. Another dialog box will be displayed for you to enter the filename for the Repository file. The sizing files are named automatically as s_<filename>, when the backup files are saved. Press Save to continue.

6. The backup process is initiated.

7. The Database configuration finished dialog box is displayed, and a log file of the backup process is shown. Click Finish:

Figure 13-4   **Database configuration finished dialog box**
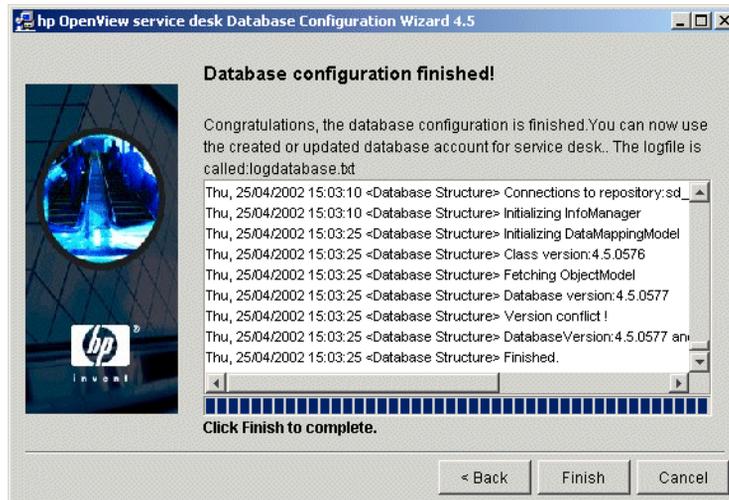
## To restore a backed up test database

1. When you start the wizard the Welcome screen is displayed, Click
   Next. The Choose the action you want to perform dialog box is
   displayed:

Figure 13-5   Choose the action dialog box
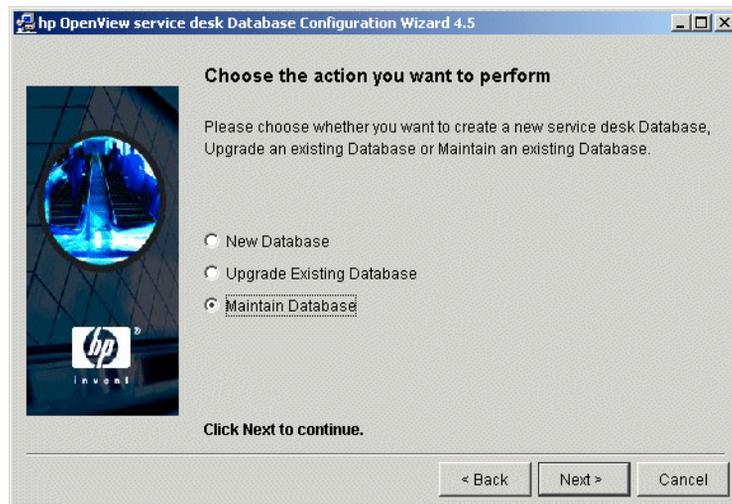
2. In the **Choose the action you want to perform dialog box select**
   Maintain Database. **The** Choose the maintenance task you
   want to perform **dialog box is displayed:**

**Figure 13-6   Choose the maintenance task dialog box**
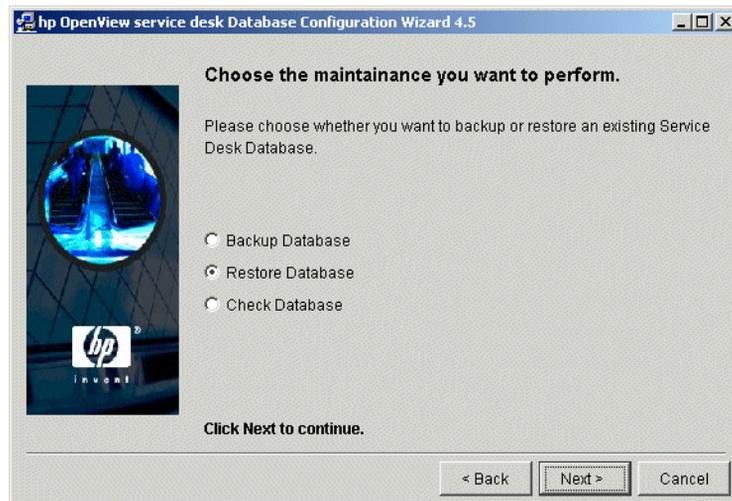
3. In the Choose the maintenance task you want to perform
   dialog box select Restore Database. **The** Choose what you want
   to load **dialog box is displayed:**

Figure 13-7   Choose what you want to load dialog box
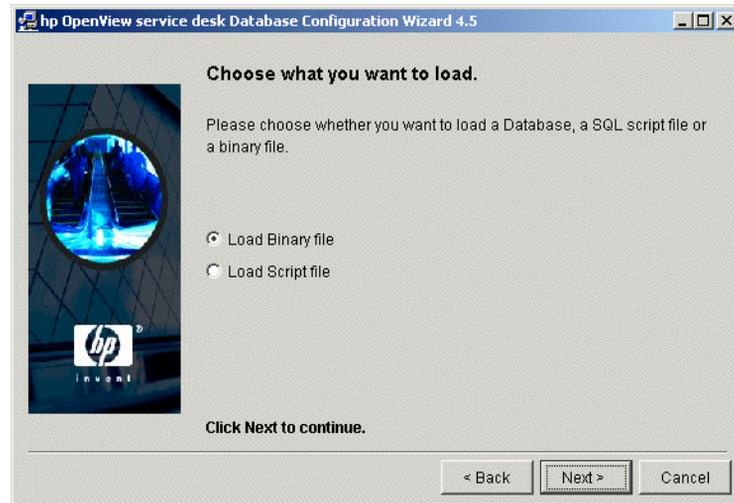
4. In the `Choose what you want to load` **dialog box select** `Load Binary`. **A dialog box will be displayed, navigate to the backup files, select them and click** `Open` **to return to the database configuration wizard.**

5. **The process of restoring the database then follows normal database configuration as described from Step 3 onwards in the** *HP OpenView Service Desk 4.5: Installation Guide, Chapter 4 - Configuring the Database.*

To check the integrity of a database

1. **When you start the wizard the Welcome screen is displayed, Click** `Next`. **The** `Choose the action you want to perform` **dialog box is displayed:**

Figure 13-8   Choose the action dialog box
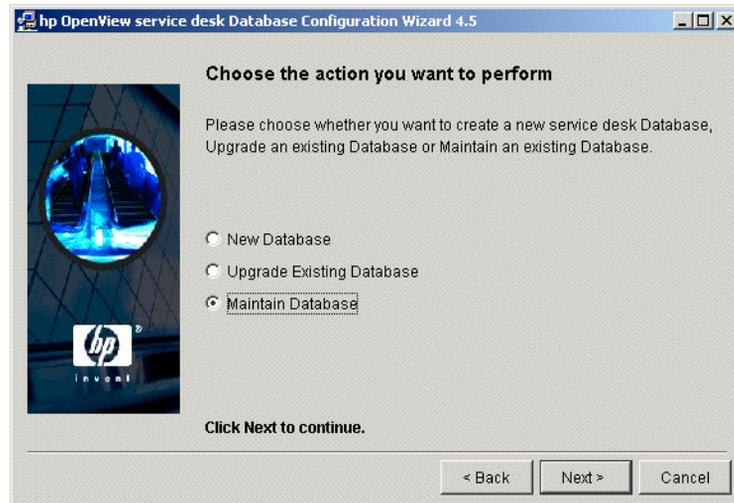
2. In the **Choose the action you want to perform dialog box select**
   `Maintain Database`. **The** `Choose the maintenance task you`
   `want to perform` **dialog box is displayed:**

Figure 13-9   Choose the maintenance task dialog box
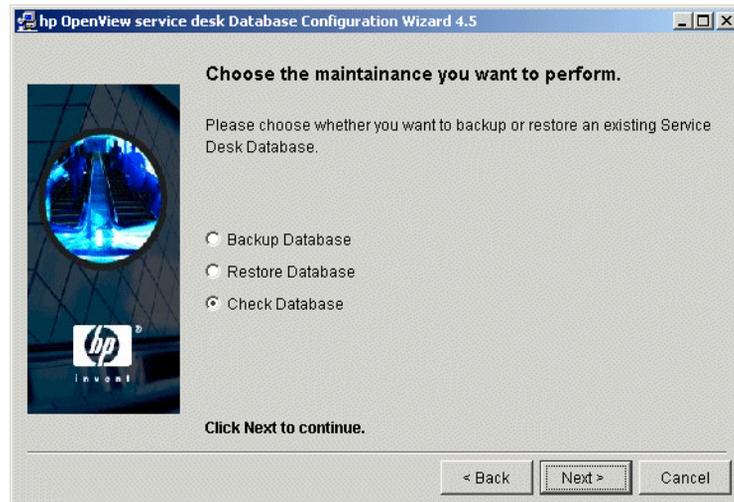
3. In the `Choose the maintenance task you want to perform`
   dialog box select `Check Database`. **The Check database structure**
   progress dialog box is displayed. Ensure the database details are

correct, if the are not use the `Accounts` button and the Server Settings Editor is displayed (see the *HP OpenView Service Desk 4.5: Installation Guide, Chapter 5 - Configuring the Server*) use this to select the right database. When you return to this screen after selecting the database, the details will not show until you press `Refresh`. When the correct database details are displayed, click `Verify Database Structure` to initiate the checking process:

Figure 13-10   Check database structure progress dialog box
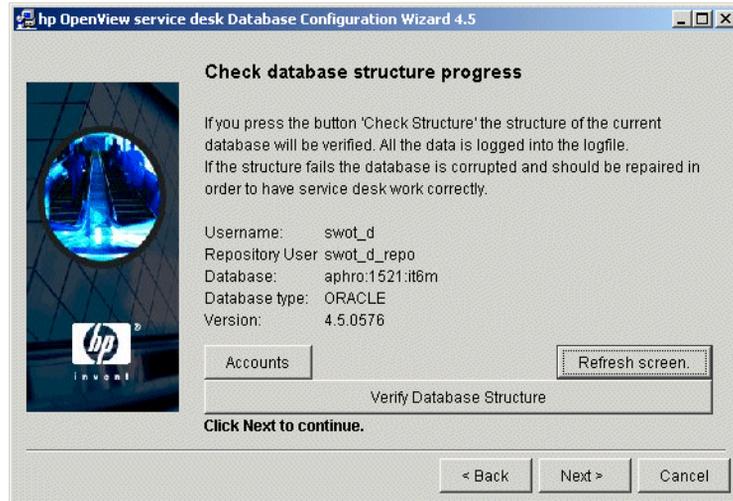
4. The `Database configuration finished` dialog box is displayed. If there are errors in the database a pop up dialog box is also displayed informing you the database is broken, click `OK`. Click `Finish` to close the wizard:

Figure 13-11   Database configuration finished dialog box
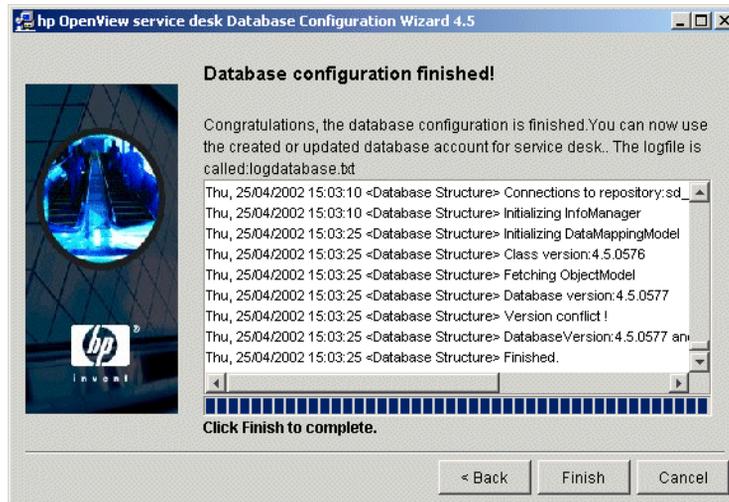
14 Database Sizing

This document contains information to assist you in calculating the amount of database storage space needed to run Service Desk 4.5. Information is provided for both Oracle 8 and SQL Server 7.

Oracle Database

This section contains information on the sizing of a database for HP OpenView Service Desk 4.5 running on Oracle 8. Oracle version 8.0.5 was used in calculating the requirements.

An Excel spreadsheet is supplied on the Service Desk 4.5 Windows CD to enable you to calculate the database sizes easily. The calculations on the spreadsheet correspond to the figures shown below. Instructions for using the speadsheets are provided within the Excel file. The Oracle database spreadsheet can be found at the location \\doc\database sizing\sd oracle8 sizing.xls.

Database sizes will be given for two separate Oracle accounts. One account facilitates the storage of the Service Desk repository, the data that describes the application. The second account is used for the data related to the processes managed by Service Desk, like the helpdesk process.

For both accounts an estimate will be given of the storage space that will always be needed, and the additional space needed when adding large amounts of managed data.

Note that the estimates given in this document are deliberately on the safe side; your actual data may take up less space. A more accurate estimate can be obtained by comparing the data characteristics at an actual site with the assumptions listed for the calculation, and adjusting the estimates accordingly.

Repository Database Account

The initial contents of the repository uses approximately 8 MB of disk space. Upon installation, the repository contains about 150 views, about 120 forms, and about 100 templates.

Most of the repository's tables are static after installation. Only for a limited number of entities is the addition of a larger amount of data likely to occur. The following table gives an estimate of the amount of additional storage space needed for objects added to each entity.

Table 14-1   **Additional Storage Space**

Entity	KB needed per number of objects
Language	1200 per language
Account	300 per 1000 accounts
View	1000 per 100 views
Form	400 per 100 forms
Template	200 per 100 templates

Service Desk Database Account

Service Desk contains a number of entities that are static after installation, such as code values and support hours, that take about 640 KB of disk space. For every language added, an additional 128 KB must be reserved.

The operation of Service Desk is centered around a limited number of entities. For each of these entities, the volume processed is specific for the Service Desk implementation. The tables in this section present material for a rough estimate of the amount of storage space for every 1000 objects of a given entity.

Table 14-2   **Basic Operational Data**

Entity	KB needed for 1000 objects
Addresses	160
Locations	160
Telephones	80 (Telephone numbers include numbers for fax machines, cellular phones, pagers, etc.)

Table 14-2   **Basic Operational Data (Continued)**

Entity	KB needed for 1000 objects
Attachments	300 (Not actual attachments, but administrative data.)

Table 14-3   **Personnel and Organizational Data**

Entity	KB needed for 1000 objects
Workgroups	3500
Organizations	4000
Persons	4300 (Assuming on average a person is a member of a single workgroup.)

Table 14-4   **Configuration Management Data**

Entity	KB needed for 1000 objects
Configuration items	6000 (Assuming on average a configuration item has one parent-child relation and one other relation with another configuration item, and one user is linked to each configuration item.)
Maintenance Contracts	4000

Table 14-5   **Change Management Data**

Entity	KB needed for 1000 objects
Changes	8000

Table 14-6   **Helpdesk Management Data**

Entity	KB needed for 1000 objects
Service Calls	10500 (Assuming on average a service call is related to one incident, change or problem.)

Table 14-6   **Helpdesk Management Data (Continued)**

Entity	KB needed for 1000 objects
Incidents	7500
Projects	7500

Table 14-7   **Problem Management Data**

Entity	KB needed for 1000 objects
Problems	7500

Table 14-8   **Work Order Management Data**

Entity	KB needed for 1000 objects
Work orders	7800 (Assuming on average a work order is related to a single configuration item.)

Computations

A rough estimate of the database storage needed can be obtained by filling in figures in the table below, or in the Excel spreadsheet:

Table 14-9   **Repository Database Computations**

Installed Contents	>	>	8000 KB
Language	each	x 1200 KB	
Account	per 1000	x 300 KB	
View	per 100	x 1000 KB	
Form	per 100	x 400 KB	
Template	per 100	x 200 KB	
Total:	>	>	

Table 14-10   **Service Desk Database Computations**

Static data	>	>	640 KB
Language	each	x 128 KB	
Addresses	per 1000	x 160 KB	
Locations	per 1000	x 160 KB	
Telephones	per 1000	x 80 KB	
Attachments	per 1000	x 300 KB	
Organizations	per 1000	x 4000 KB	
Persons	per 1000	x 4300 KB	
Workgroups	per 1000	x 3500 KB	
Configuration items	per 1000	x 6000 KB	
Maintenance contracts	per 1000	x 4000 KB	
Changes	per 1000	x 8000 KB	
Service calls	per 1000	x 10500 KB	
Incidents	per 1000	x 7500 KB	
Problems	per 1000	x 7500 KB	
Projects	per 1000	x 7500 KB	
Work orders	per 1000	x 7800 KB	
Total	>	>	

The following assumptions are made when estimating the amount of table space needed:

- 8-KB database blocks are used.

- Standard extent sizes of 10 KB, 50 KB, and 100 KB are used.

- Where non-mandatory fields exist in Service Desk tables, these are used up to 30 percent of their capacity.

- Custom fields and comment fields on history lines are used up to 1 percent of their capacity.

- An average of 10 history lines is entered with an entity.

- Index entries exist for all table entries.

SQL Server Database

This section contains information on the sizing of a database for HP OpenView Service Desk 4.5 running on SQL Server 7.0.

An Excel spreadsheet is supplied on the Service Desk 4.5 Windows CD to enable you to calculate the database sizes easily. The calculations on the spreadsheet correspond to the figures shown below. Instructions for using the speadsheets are provided within the Excel file. The SQL Server database spreadsheet can be found at the location `\\doc\database sizing\sd sql server sizing.xls`.

Database space needed will be presented for two separate groups of data. One group contains the Service Desk repository, the data that describes the application. The second group is the data related to the processes managed by Service Desk, like the helpdesk process.

For both groups an estimate will be given of the storage space that will always be needed, and the additional space needed when adding large amounts of managed data.

Note that the estimates given in this document are deliberately on the safe side; your data may take up less space. A more accurate estimate can be obtained by comparing the data characteristics at an actual site with the assumptions listed for the calculations, and adjusting the estimates accordingly.

Repository Database Account

The initial contents of the repository uses approximately 8 MB of disk space. Upon installation, the repository contains about 150 views, 120 forms, and 100 templates.

Most of the repository's tables are static after installation. Only a limited number of entities are likely to have data added to them. The following table gives an estimate of the amount of storage space needed for additional objects added to each of those entities.

Table 14-11   **Additional Storage Space**

Entity	KB needed per number of objects
Language	1400 per language

Table 14-11   **Additional Storage Space (Continued)**

Entity	KB needed per number of objects
Account	240 per 1000 accounts
View	800 per 100 views
Form	300 per 100 forms
Template	400 per 100 templates

Service Desk Database Account

Service Desk contains a number of entities that are essentially static after installation. These are entities like code values and support hours. These take about 560 KB of disk space. For every language added, an additional 192 KB must be reserved.

The operation of Service Desk is centered around a limited number of entities. For each of these entities, the volume processed will be specific to the Service Desk implementation. The tables in this section present material for a rough estimate of the amount of storage space for every 1000 objects of a given entity.

Table 14-12   **Basic Operational Data**

Entity	KB needed for 1000 objects
Addresses	240
Locations	200
Telephones	160 (Telephone numbers include numbers for fax machines, cellular phones, pagers, etc.)
Attachments	360 (Not actual attachments, but administrative data.)

Table 14-13 **Personnel and Organizational Data**

Entity	KB needed for 1000 objects
Workgroups	4200
Organizations	5300
Persons	5700 (Assuming on average a person is a member of a single workgroup.)

Table 14-14 **Configuration Management Data**

Entity	KB needed for 1000 objects
Configuration items	7500 (Assuming on average a configuration item has one parent-child relation and one other relation with another configuration item, and one user is linked to each configuration item.)
Maintenance contracts	3800

Table 14-15 **Change Management Data**

Entity	KB needed for 1000 objects
Changes	9300

Table 14-16 **Helpdesk Management Data**

Entity	KB needed for 1000 objects
Service Calls	12000 (Assuming on average a service call is related to one incident, change or problem.)
Incidents	8700
Projects	8500

Table 14-17   **Problem Management Data**

Entity	KB needed for 1000 objects
Problems	8700

Table 14-18   **Work Order Management Data**

Entity	KB needed for 1000 objects
Work orders	9400 (Assuming on average a work order is related to a single configuration item.)

Computations

A rough estimate of the database storage needed can be obtained using the figures outlined below, or in the Excel spreadsheet:

Table 14-19   **Repository Database Computations**

Installed Contents	>	>	8000 KB
Language	each	x 1400 KB	
Account	per 1000	x 240 KB	
View	per 100	x 800 KB	
Form	per 100	x 300 KB	
Template	per 100	x 400KB	
Total:	>	>	

Table 14-20   **Service Desk Database Computations**

Static data	>	>	560 KB
Language	each	x 192 KB	
Addresses	per 1000	x 240 KB	
Locations	per 1000	x 200 KB	
Telephones	per 1000	x 160 KB	

Table 14-20   **Service Desk Database Computations (Continued)**

Attachments	per 1000	x 360 KB	
Organizations	per 1000	x 5300 KB	
Persons	per 1000	x 5700 KB	
Workgroups	per 1000	x 4200 KB	
Configuration Items	per 1000	x 7500 KB	
Maintenance contracts	per 1000	x 3800 KB	
Changes	per 1000	x 9300 KB	
Service calls	per 1000	x 12000 KB	
Incidents	per 1000	x 8700 KB	
Projects	per 1000	x 8500 KB	
Problems	per 1000	x 8700 KB	
Work orders	per 1000	x 9400 KB	
Total	>	>	

The following assumptions are made when estimating the amount of table space needed:

- Where optional fields exist in Service Desk tables, these are used up to 30 percent of their capacity.

- Custom fields and comment fields on history lines are used up to 1 percent of their capacity.

- An average of 10 history lines is entered with an entity.

  Index entries exist for all table entries.

15 Support Tools

This chapter explains how to use the support tools supplied with Service Desk 4.5.

The Support Tools

Service Desk 4.5 provides support tools from the application server, the client, and Service Page. These support tools can be used in the event of a problem arising with Service Desk that results in a call to the Service Desk support line.

The support tools effectively compress logs files and other data into a zip file that can be used by a support engineer or sent to Service Desk Support as an attachment to an e-mail or service call for analysis.

Server Support Tool

On the server the support tool is called `sd_serversupporttool.bat` (on UNIX use the `sd_serversupporttool` shell script) and can be found in the `server\bin` folder.

When you run this tool it gathers basic system information, copies the `server_settings.xml` file, and copies the first 1000 lines of both the `logserver.txt` and `logdatabase.txt` log files. This data is compiled into a zip file called `server_support_information_<date>_<time>.zip` and placed in the `server\support` folder.

Client Support Tool

On the client the support tool is called `sd_clientsupporttool.bat` and can be found in the `client\bin` folder.

When you run this tool it gathers basic system information, copies the `user_settings.xml` file, and the first 1000 lines of the `logclient.txt` log file. This data is compiled into a zip file called `client_support_information_<date>_<time>.zip` and placed in the `client\support` folder.

Service Pages Support Tool

For service pages the support tool is called `sd_servicepagessupporttool.bat` (on UNIX use the `sd_servicepagessupporttool` shell script) and can be found in the `service pages\bin` folder.

When you run this tool it gathers all Tomcat log files, copies the various xml files in the Tomcat folder and copies the `hpovsdservicepages.log` log file. This data is compiled into a zip file called `servicepages_support_information_<date>_<time>.zip` and placed in the `service pages\support` folder.

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