HP OpenView Service Desk 4.0

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 4.0. 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 4.0 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, "Accounts Administration," on page 29 explains how to create and maintain accounts and roles.

- Chapter 2, "Implementing Languages from the Localization Pack," on page 65 describes how to install a localization pack.

- Chapter 3, "Business Logic," on page 81 provides guidance on using database and UI rules.

- Chapter 4, "Opening Forms from the Command Line," on page 111 explains how to use the command line interface to pass data from third party software to Service Desk.

- Chapter 5, "Configuring Service Pages," on page 123 details the processes required to configure Service Desk Service Pages.

- Chapter 6, "Multiple Servers," on page 143 describes how to use Service Desk in a multiple server environment.

- Chapter 7, "Multiple Sessions," on page 147 explains how multiple clients sessions can be set up on a single client PC.

- Chapter 8, "Server Configuration Settings," on page 155 discusses configuration for ITP, HTTP, and SMPT for Self-Service Pages and servers.

- Chapter 9, "Reporting," on page 167 provides explanations of the reporting facilities provided by Service Desk.

- Chapter 10, "Using E-mail with Service Desk," on page 193 describes how to set up Service Desk for inbound and outbound e-mail messaging.

- Chapter 11, "System Maintenance," on page 221 suggests procedures for backing up your Service Desk system.

- Chapter 12, "Database Sizing," on page 223 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 CD-ROM.

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	August 2001	Service Desk 4.0

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 4.0. 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. See the section "We Welcome Your Comments!" in this preface for the URLs.

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

- 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 4.0 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 4.0 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 4.0.

  The Supported Platforms List is available as a PDF file on the HP OpenView Service Desk 4.0 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 4.0 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 4.0 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 4.0 CD-ROM. The file name is `Data_Exchange.pdf`.

- The *HP OpenView Service Desk: VantagePoint Operation Integration Administrator's Guide* explains the integration between Service Desk and VantagePoint 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 VantagePoint Operation Integration Administrator's Guide is available as a PDF file on the HP OpenView Service Desk 4.0 CD-ROM. The file name is `VPO_Integration_AG.pdf`.

- The *HP OpenView Service Desk: Migration Guide* provides a detailed

overview of the migration from ITSM 5.7 to Service Desk 4.0, 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 4.0 CD-ROM. The file name is `Migration_Guide.pdf`.

- The *HP OpenView Service Desk: API Programmer's Guide* contains information that will help you create customized integrations with Service Desk. This guide depicts the API structure, and explains some of the basic functions with examples for using the Application Programming Interface (API) provided with Service Desk. The API extends the HP OpenView Service Desk environment by providing independent programmatic access to data-centered functionality in the Service Desk application server environment.

  The API Guide is available as a PDF file on the HP OpenView Service Desk 4.0 CD-ROM. The file name is `API_pg.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 4.0 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 4.0 CD-ROM. The file name is `Data_Dictionary.htm`.

- The *HP OpenView Service Desk 4.0 Computer Based Training* (CBT) CD-ROM is intended to assist you in learning about the functionality of HP OpenView Service Desk 4.0 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 4.0 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 4.0
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`**.
`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

Requirements

This section lists the minimum hardware requirements for each of the components of Service Desk 4.0. For software requirements, please refer to the *HP OpenView Service Desk: Supported Platforms List*. You can find this document on the HP OpenView Service Desk 4.0 CD-ROM, under the file name `\Doc\Supported_Platforms_List.htm`.

Service Desk Client

- Processor: Intel® Pentium® 166 MHz (200 MHz or higher recommended)
- Memory: 64 MB RAM (128 MB or higher recommended)
- Disk space: 55 MB
- Display: 800 x 600 resolution, 256 colors (1024 x 768 resolution, high color or higher recommended)
- Network connection: TCP/IP, 28.8 K (56 K or higher recommended)

Service Desk Application Server

- Processor: Intel Pentium 350 MHz (700 MHz or higher recommended)
- Memory: 256 MB RAM
- Disk space: 80 MB
- Network connection: TCP/IP, 10 Mb/s

Service Desk Database Server

- Network connection: TCP/IP, 10 Mb/s

Service Desk Service Pages Client

- Processor: Intel Pentium 90 MHz (166 MHz or higher recommended)
- Memory: 32 MB RAM
- Display: 800 x 600 resolution, 256-colors (1024 x 768 resolution, high color or higher recommended)
- Network connection: TCP/IP, 28.8 K (56 K or higher recommended)

Service Desk Service Pages Web Server

- Memory: 128 MB RAM (256 MB or higher recommended)
- Disk space: 2 MB
- Network connection: TCP/IP, 10 Mb/s

Service Desk Event Communicator

Service Desk Agent • Disk space: 200 KB on Windows® platforms or 20 MB on UNIX® platforms

- Network connection: TCP/IP, 28.8 K

Service Desk Service Event • Disk space: 2 MB on Windows platforms or 200 KB on UNIX platforms

- Network connection: TCP/IP, 28.8 K

1　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 user accounts; a database user, an application administrator, and at least one end user. This set-up, is of course, variable. For instance, if you are using an Oracle database you may be using two database accounts (a database user and a repository user) whereas a SQL Server database only uses one. If you are only using the client software installed with the application server you will not have any user accounts as you will be using the system administrator's account, whereas large organizations may be using multiple application servers, as well as a large number of end users. However, the increased number of accounts will always retain the same end user account, administrator account, database user account relationship.

When you install the Service Desk application server, you will also have to define a new, or specify an existing, database administrator account. However, once the database is setup and the application server is installed, Service Desk will not use this account 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. 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 AppServer - 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 AppServer - 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 4.0 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 user's Windows profile by the connections wizard. 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 61). However, each time a user (that does not have to log in) 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.

  A client account can be used in either two-tier or three-tier mode. Three-tier mode is when the client connects to the database via the application server. The vast majority of user accounts ought to connect in three-tier mode. Two-tier mode is when a client connects to the database directly, bypassing the application server. Two-tier mode will usually only be used for technical reasons, for instance when debugging. When two-tier mode is used UI rules are not triggered, as the application server is missing.

  There are two more variations of the 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 4.0 Installation Guide*.

Three types of licenses are supported with Service Desk 4.0:

- 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 124.

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 `SD Account`.

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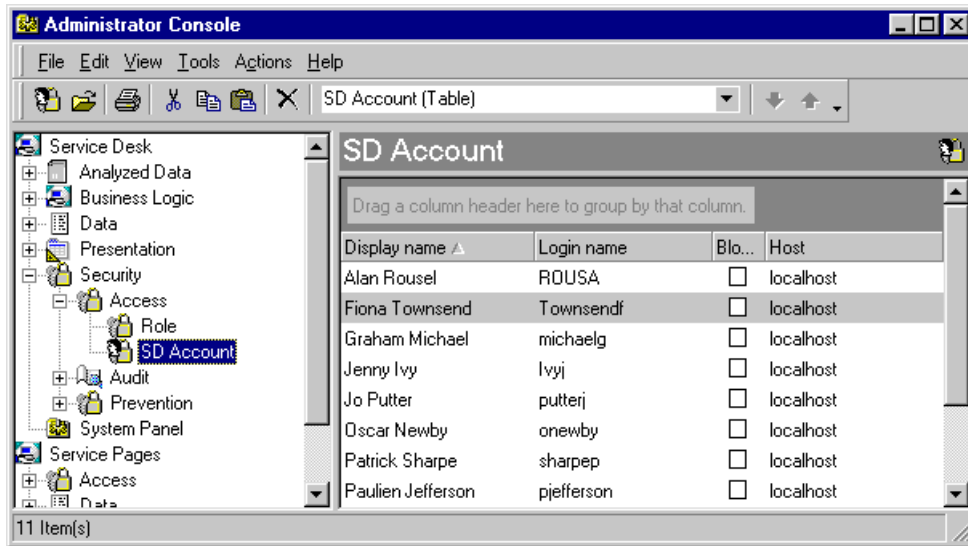
5. **Right-click in the** Account **view and choose** New SD Account **from the popup menu. The Account dialog box is displayed:**

Figure 1-2 **Account dialog box**
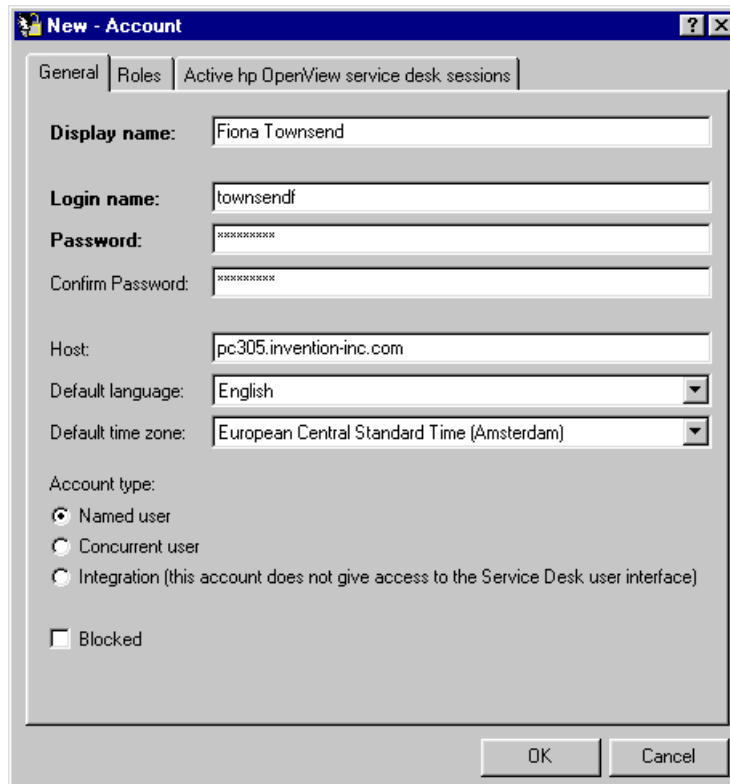
6. Type the name to be displayed when referring to this account. This is the name that will normally be displayed, for instance, in the Active Service Desk sessions tab page.

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 62. 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` checkbox 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** `SD 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** `SD 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` checkbox 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** `SD 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 1-3   Account - Remove linked items dialog box
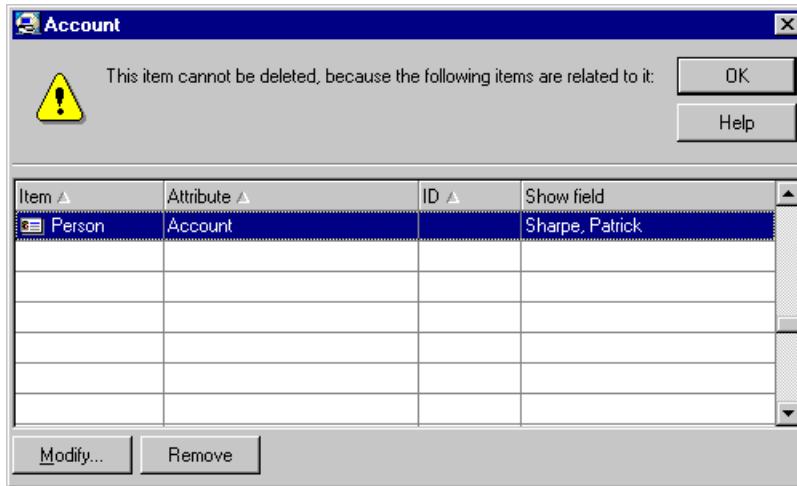
7. You can select each item individually and click `Modify` or `Remove`. Modify will enable you to access the linked record and edit it in such a way to break the link between the record and the account. For instance, in the Person record you can remove the account name from the `Account` field. This will ensure the connection between the person record and the SD 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** `SD 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 32.**

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

Figure 1-4   **Account - Adding a role to an account**
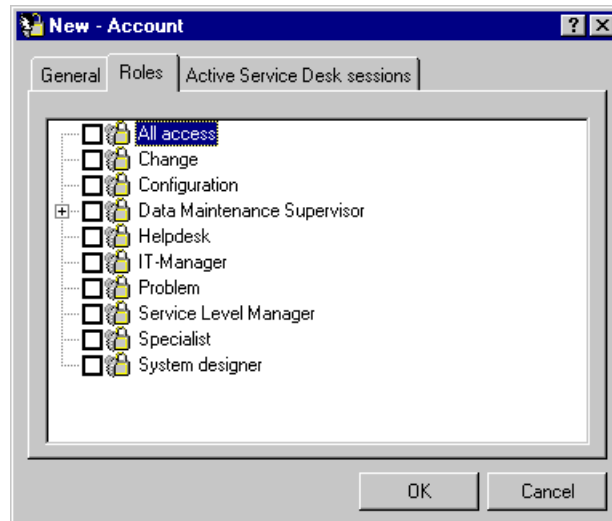
Roles

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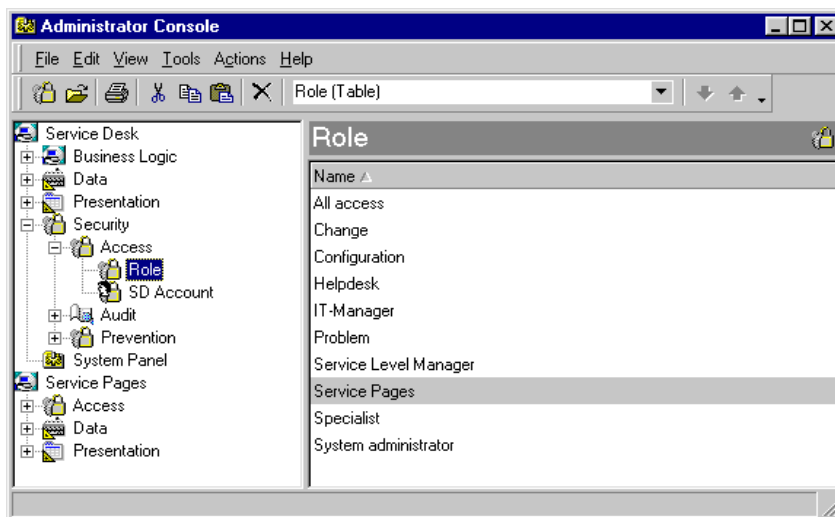
5. Right-click in the `Role` view and choose `New Role` from the popup menu. The Role dialog box is displayed:

Figure 1-6   **Role dialog box**
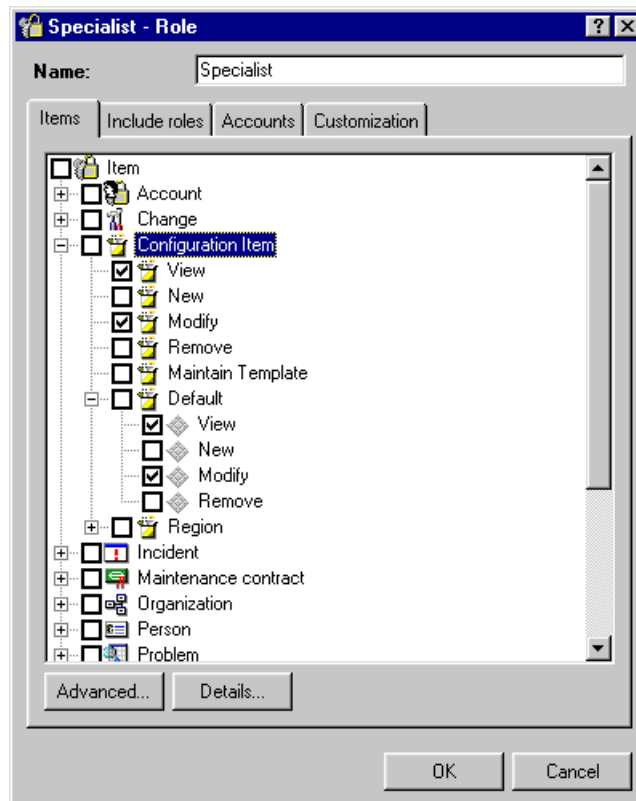
6. Enter a name for the new Role, this is the name that will be displayed in the Role view of the Administrator Console.

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 51.

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 1-7   **Roles - Item Access dialog box**
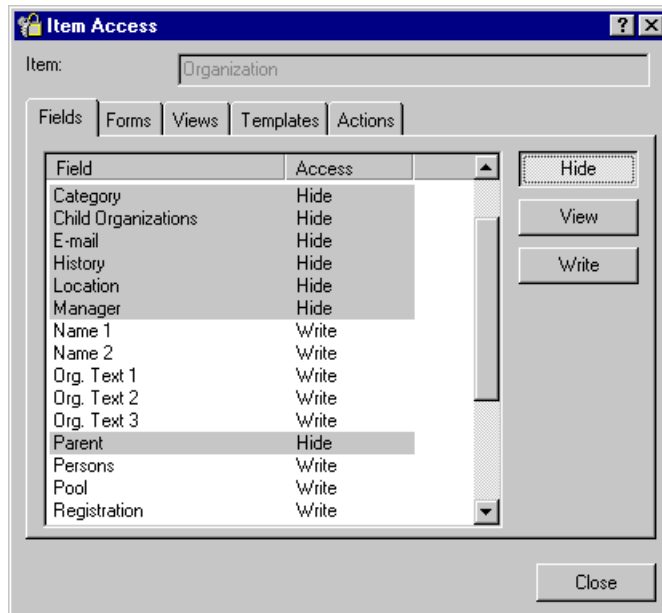
4. Select the forms, views, templates, or actions tabs and do the following: The default is that there are no forms, views, templates, or actions assigned to the item, these can be added to the item by either creating new or adding existing ones. To create new forms, views, templates, or actions click 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 1-8   **Roles - Forms, Views, Templates, and Actions dialog box**
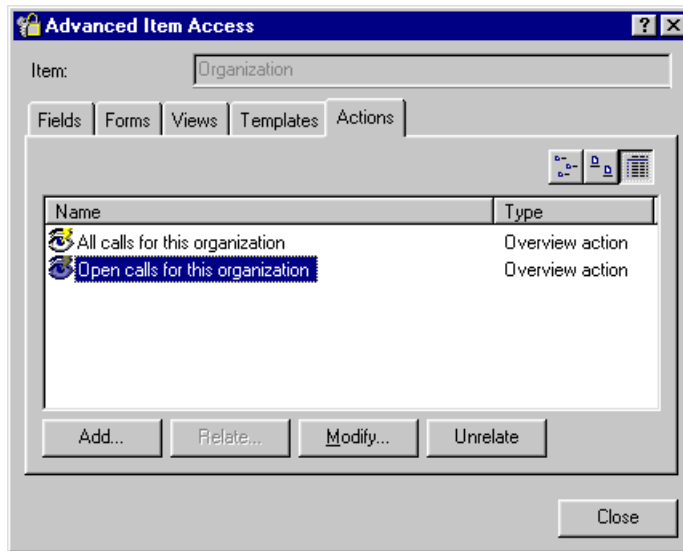
5. Once forms, views, templates, or actions have been added they can be modified or removed by clicking on the Modify or Unrelate buttons.

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 1-9   **Detail Item Access dialog box**
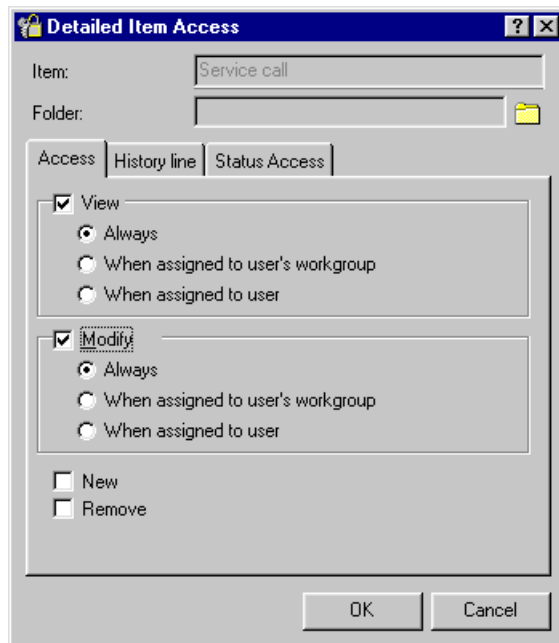
To define assignment access rights to item history lines:

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 1-10   **Detailed Item Access - History Lines dialog box**
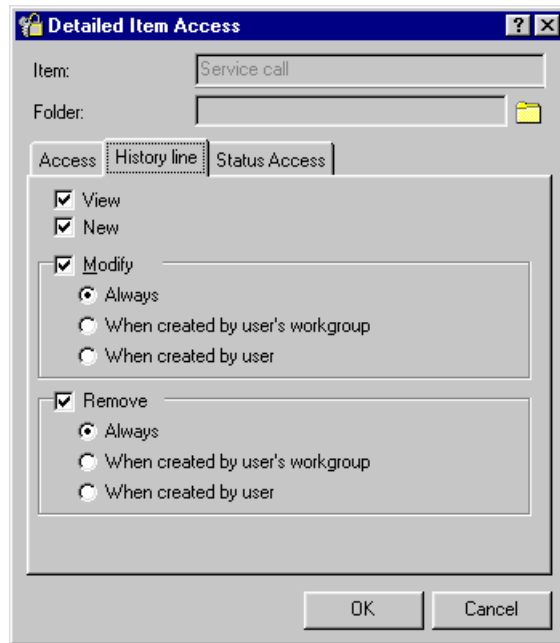
Including Roles within Roles

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 1-11   **Role - include role**
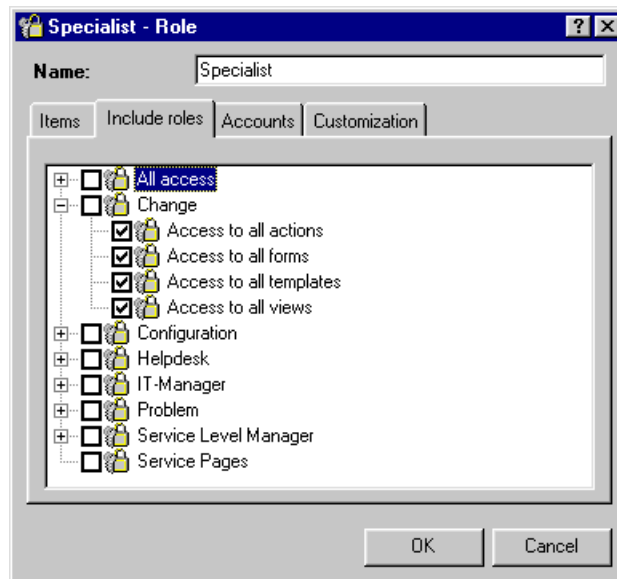
Linking Roles and Accounts

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 1-12   Role - Link accounts
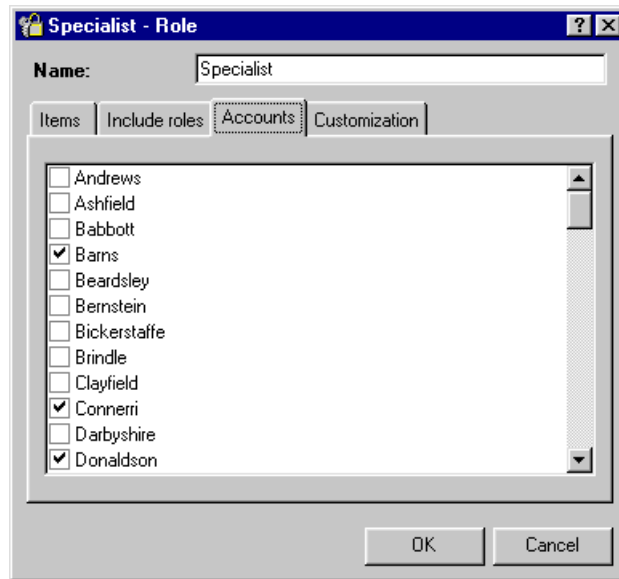
Customization Rights for a Role

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 1-13   Administrator Console dialog box
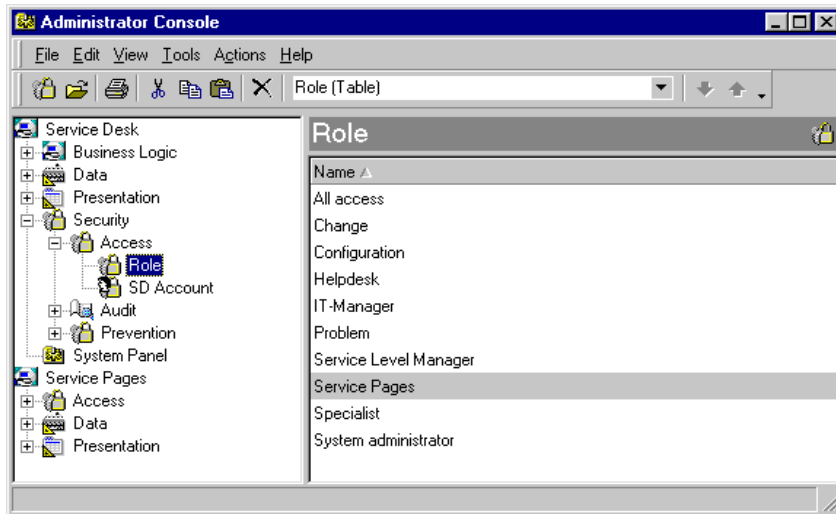
5. Right-click the Role you want to edit and select `Open` from the pop-up menu. The Role dialog box will be displayed:

Figure 1-14   Customization - Role dialog box
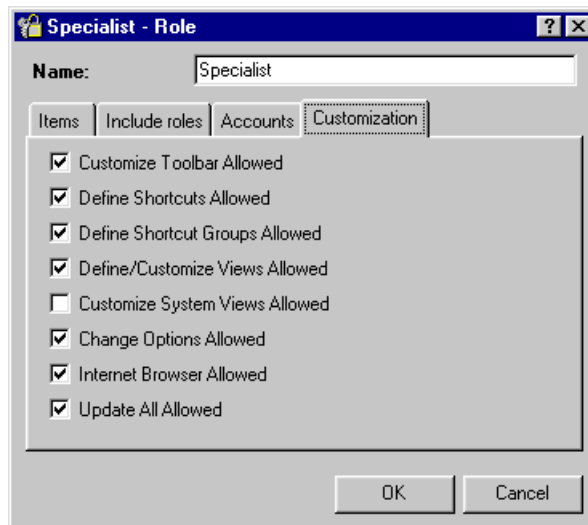
6. Check the boxes of those features you want to allow on the role, the default is all boxes but `Customize System Views Allowed`

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 1-15   Administrator Console Folder view
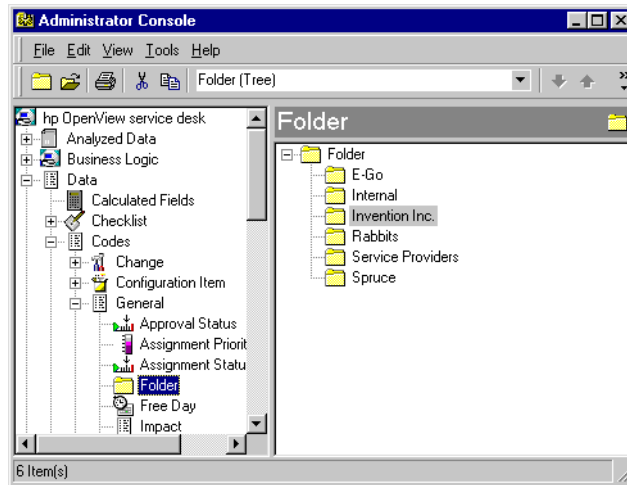
5. Right-click on the root level in the Folder view (you can create sub folders by right clicking on existing folders). Select New Folder from the pop-up menu, and enter a folder name in the New - Folder dialog box. Click Ok.

Figure 1-16   New - Folder dialog box
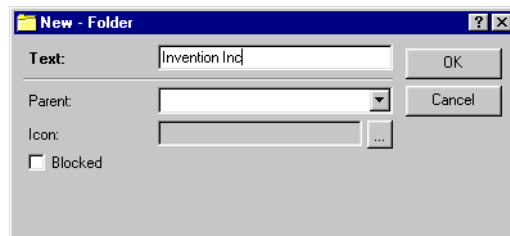
Enabling Folder Entitlements

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 1-17   Enable Folder Entitlements
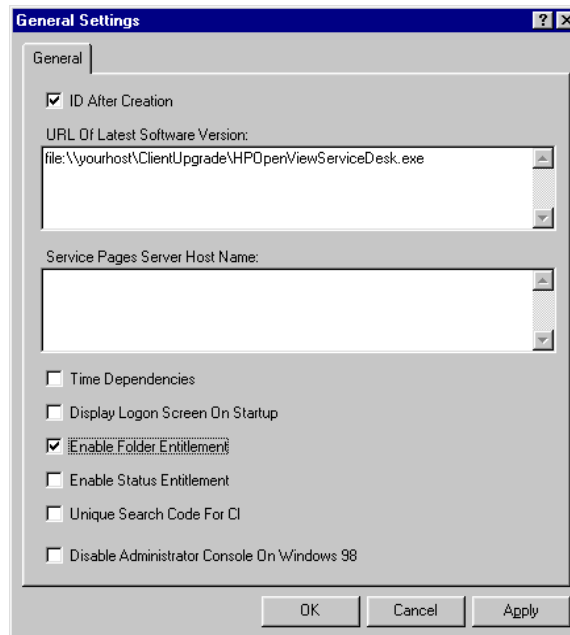
Setting Folder Entitlements

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 1-18   Role dialog box
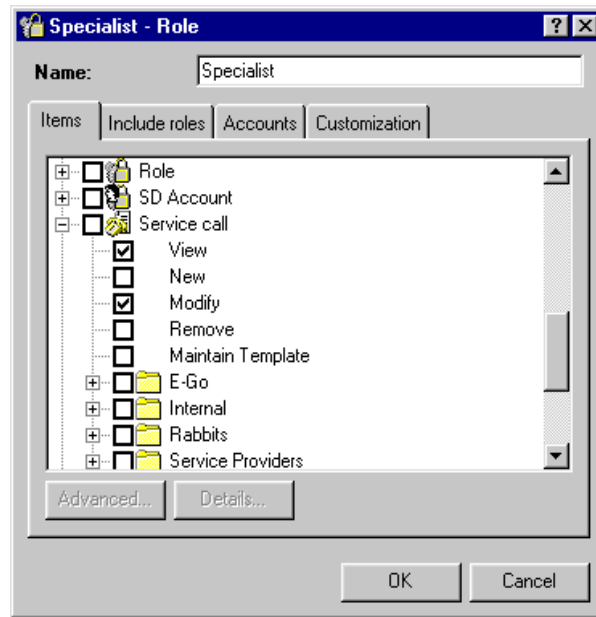
5. Expand the `Item` you want the entitlement to apply to, by clicking on the plus sign.

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 1-19   Entitlements - Folder Access dialog box
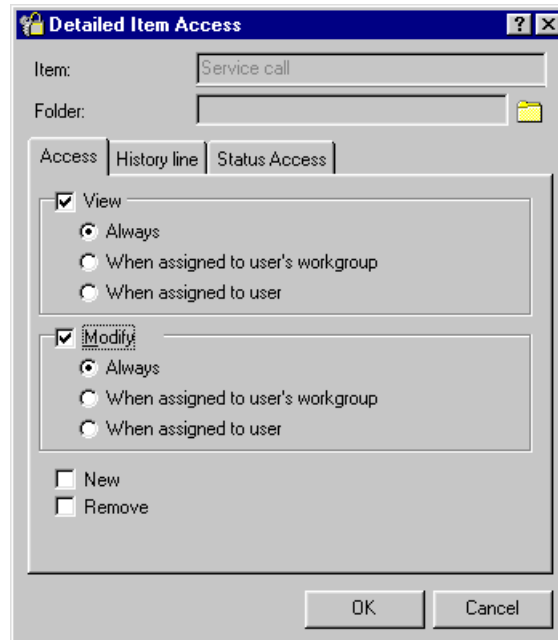
7. Select the check boxes for the entitlement capabilities you want to allow. Any access rights cascaded down from the higher level are unavailable.

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

Figure 1-20   **Entitlements - History line dialog box**
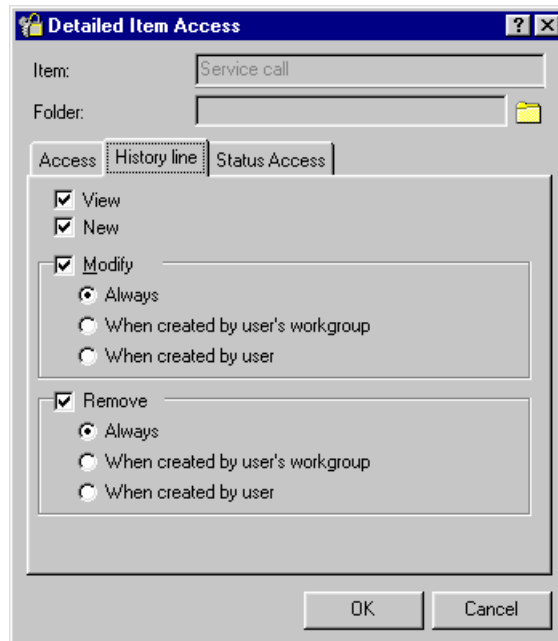
Status Entitlements

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 1-21   **Enable Status Entitlements**
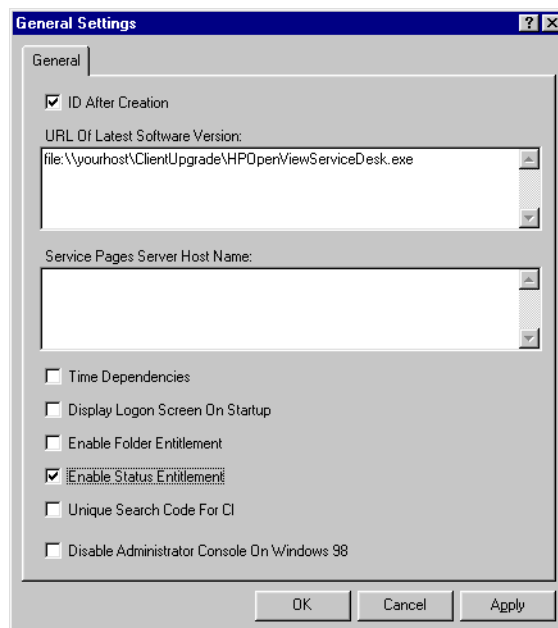
Setting Status Entitlements

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 1-22   Role dialog box
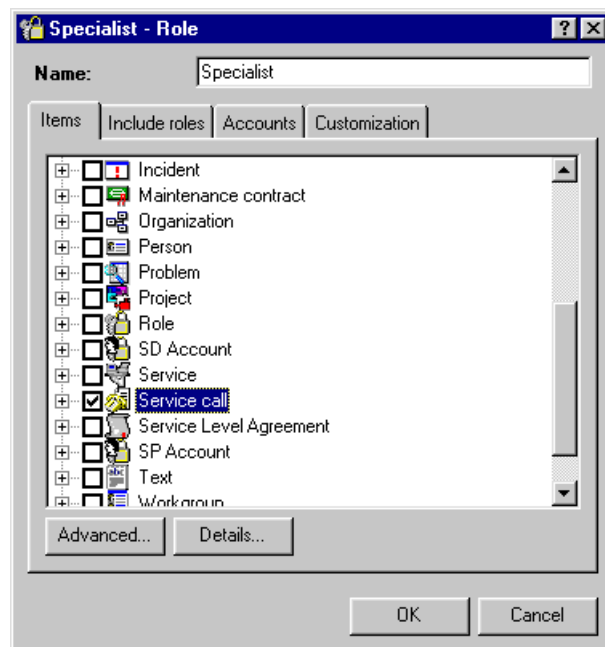
5. Select the Item you want the status entitlements to apply to, and click the Detail button. The Detailed Item Access dialog box is displayed:

Figure 1-23   **Entitlements - Status Access tab page**
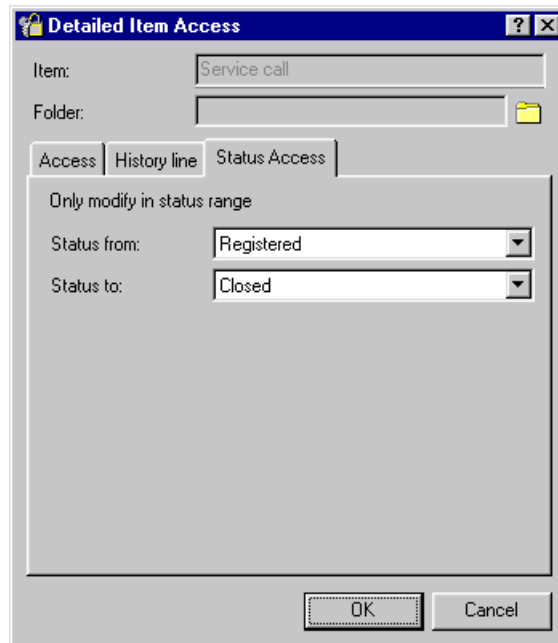
6. Click the Status Access tab. Select a status from the drop-down list for each of the Status from and Status to fields to define a range. To limit the entitlement to a specific status select the same status for each field. Click OK.

NOTE   When Roles are combined (see "Including Roles within Roles" on page 46) 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 of 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` checkbox.

Figure 1-24   General Settings dialog box
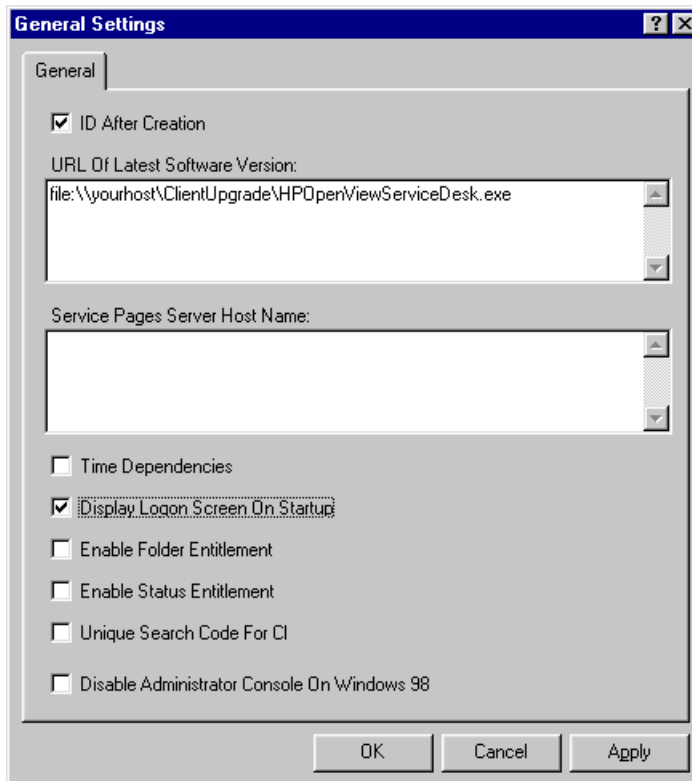
Setting the Password Limitations

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 1-25   Password Settings dialog box
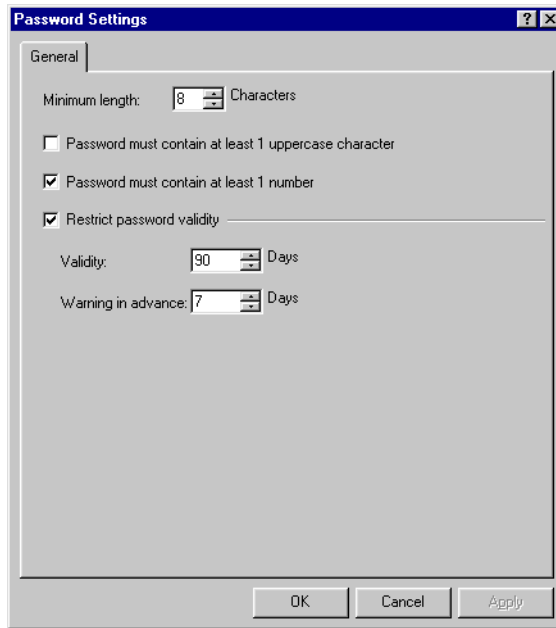
2 Implementing Languages from the Localization Pack

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, including the online help, for the following languages:

- French
- German
- Japanese
- Korean
- Simplified Chinese
- Spanish

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 68.

- 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 77.

- 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 78.

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 2-1 **The Regional Settings dialog box**
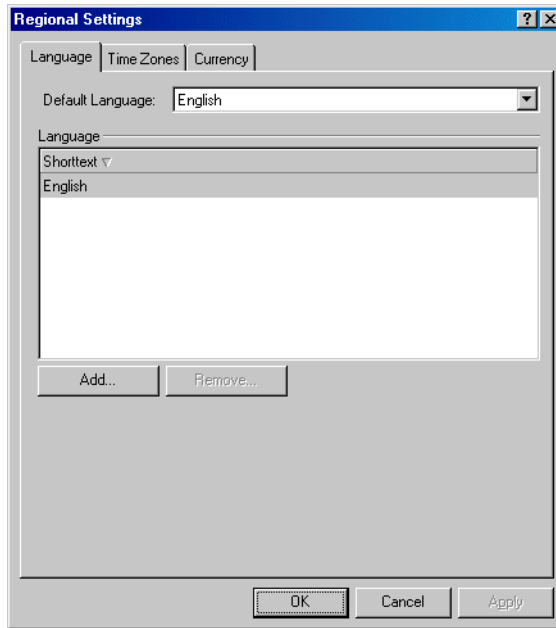
3. In the Regional Settings dialog box, select English in the `Default Language` box.

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 2-1 **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 2-1   **Languages Available in the Localization Pack**

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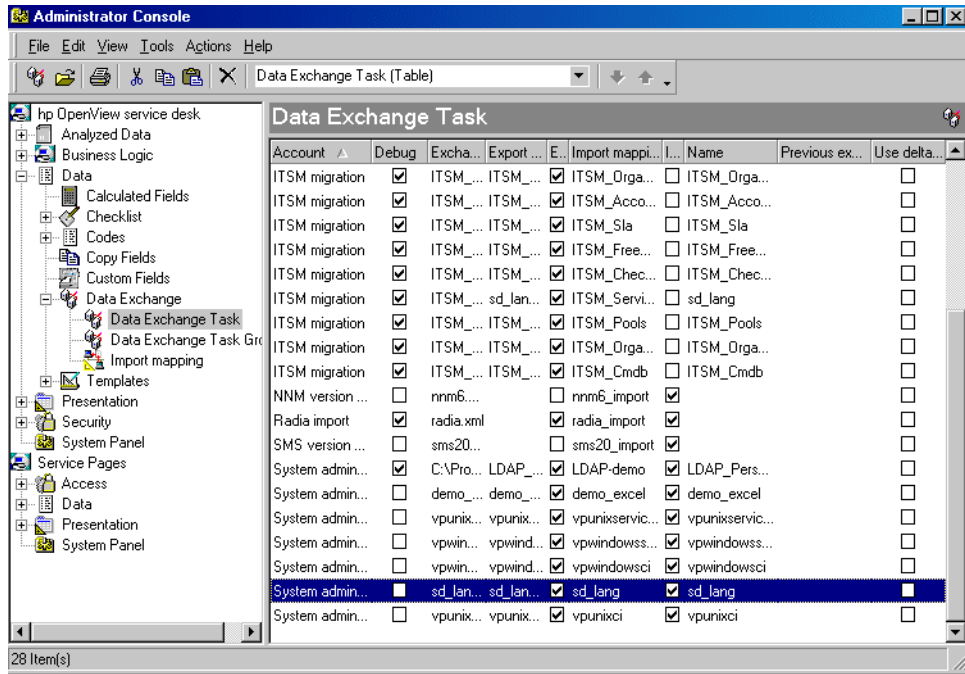
3. The Data Exchange Task - Sd_lang dialog box appears:

Figure 2-3   Data Exchange Task dialog box
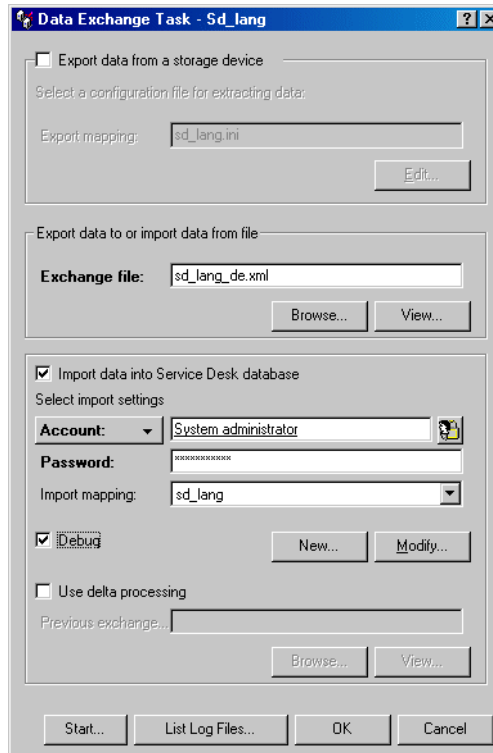
Fill in the Data Exchange Task - Sd_lang dialog box as follows:

- 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 4.0\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.

- Click Start.

4. 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

`4.0\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 4.0\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 68.

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 4.0\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 77). 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 VantagePoint for Windows (VPW) integration and VPW is installed on a different machine than Service Desk, the translated `sd_event_`*languagecode*`.msgs` file or files must also be placed on the VPW 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.

3 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 3-1   **Rule Manager Concept**
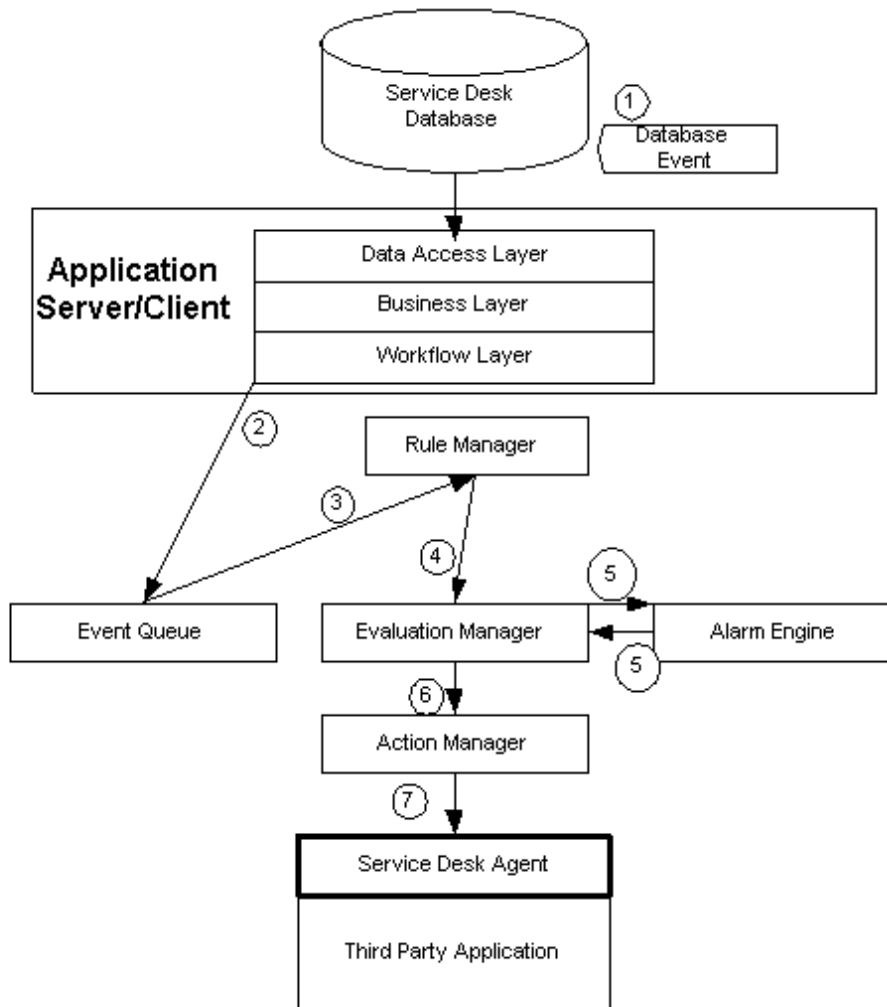
1. An event occurs in Service Desk.

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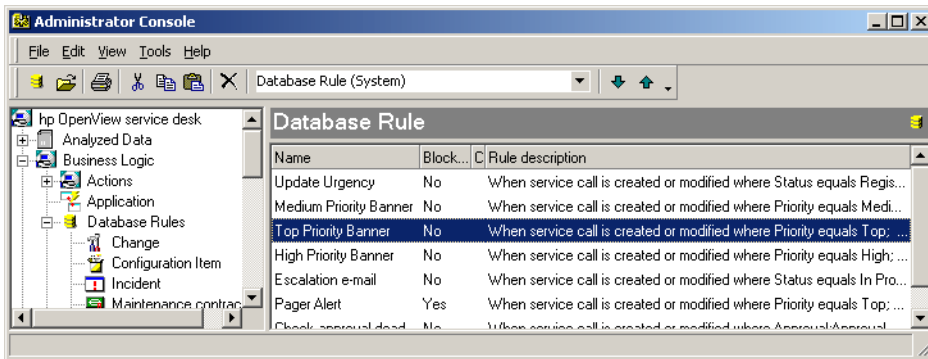
3. Right-click in the Database rule window and select New Database
    rule from the menu that appears.

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".
    Click Next to continue:

Figure 3-3   When to Apply the Rule
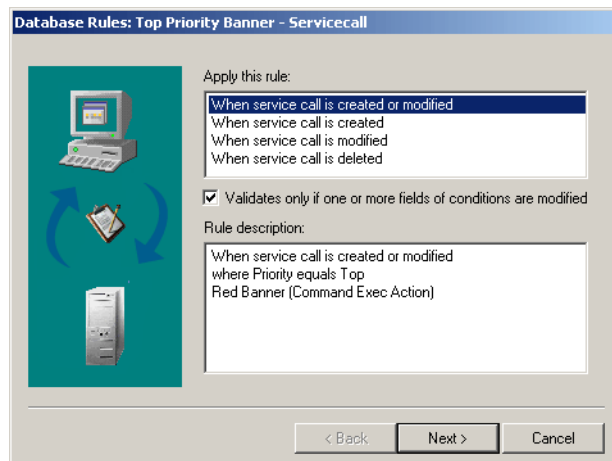
Selecting the "Validates only if one or more fields of

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.

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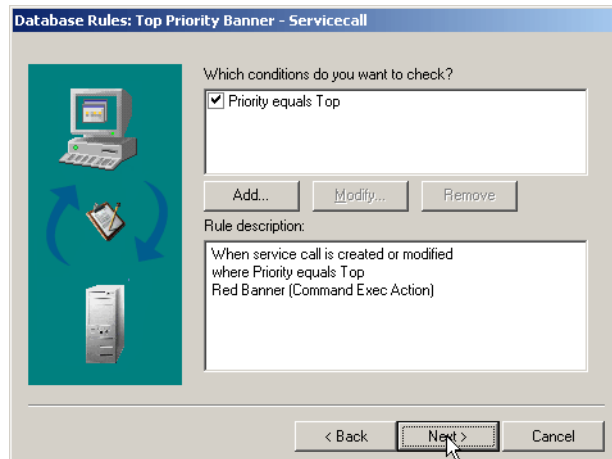
3. Use the Field button in the Condition dialog box to enter the fields
   for this item you want the rule applied to:

Figure 3-5   Configure Conditions for the Rule
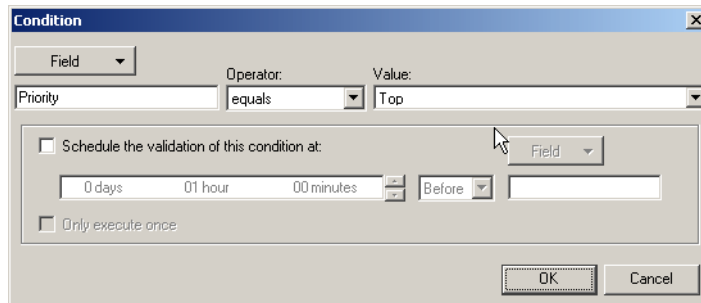
4. Enter an `Operator` using the drop-down arrow.

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.

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\""

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:

Figure 3-6   **Add Actions to the Rule**
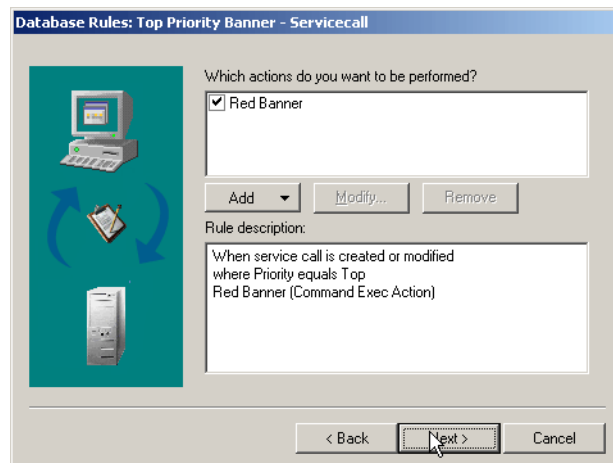
2. Enter an identifying Name for the action:

Figure 3-7   **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 3-8   **Add Name and Category to a Database Rule**
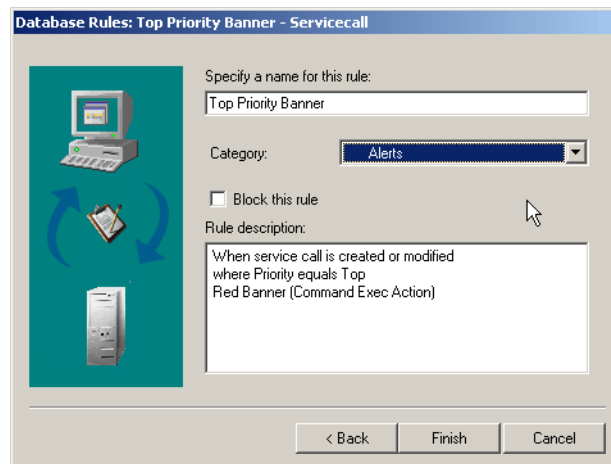
You can use the drop-down button to select from a list of available categories, or you can create your own categories.

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 3-9   Viewing and Moving Rules
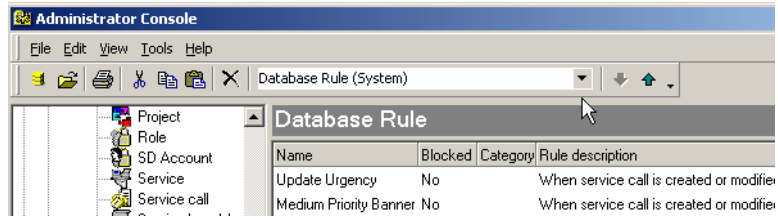
NOTE   The order a rule is listed in the `Database Rule (System)` view will determine the order they will be executed in when more than one rule is triggered by the same event. The order of items in the Category view does not affect the order they are executed in.

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 82. 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 3-10   Select a Service Desk Item
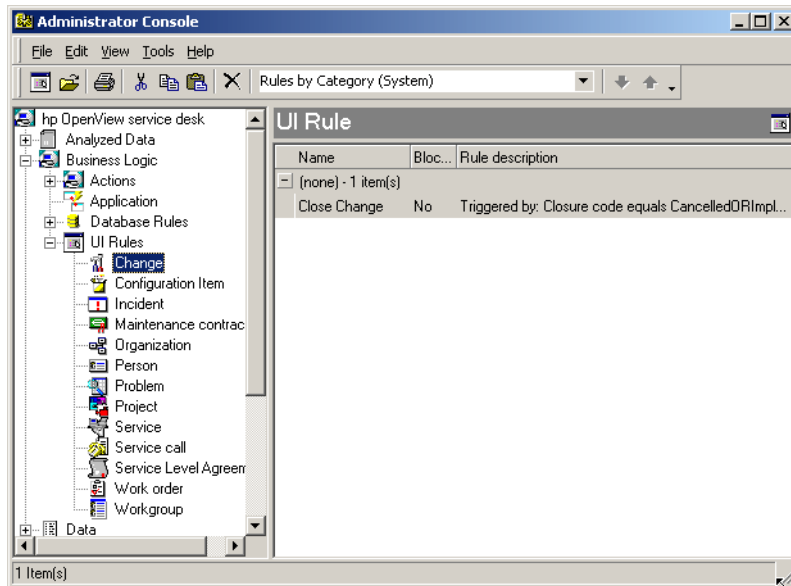
3. use an existing rule or right-click in the UI Rule window and select New UI Rule from the menu that appears.

Step 2. Specify the conditions for the rule.

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

Figure 3-11   Add Preconditions for a UI Rule
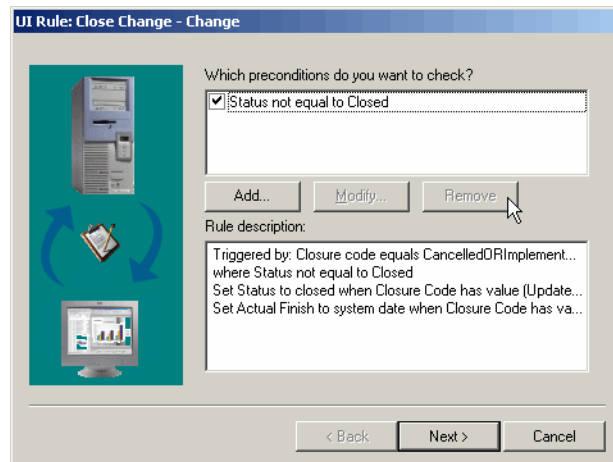
2. Enter the preconditions, defining under which conditions you want the rule to be evaluated. You must enter at least one field.

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 3-12   Add Preconditions for the Rule
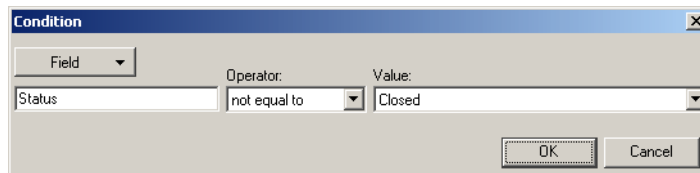
NOTE   Multi word parameters (parameters containing spaces) can be used if
                    they are enclosed within quotation marks. For example: sd_event
                    information="multiword information". However, if you need the quotes to
                    be passed on to another application the quotes must be preceded by a
                    back slash as an escape character. The above example becomes: sd_event
                    "information=\"multiword information\""

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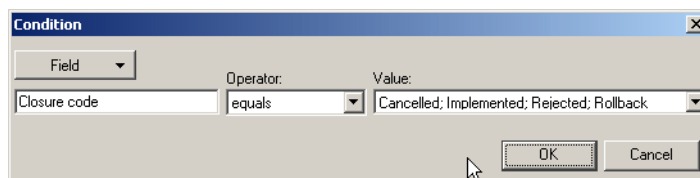
              Step 3. Add actions to the rule.

                    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 99.
                       For this example the Update Data action is used to create two
                       actions for this rule:

Figure 3-14   Add Actions to the Rule
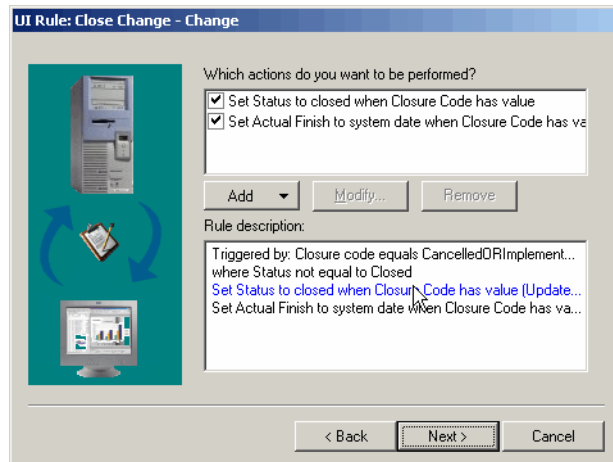
2. Enter an identifying Name for the action:

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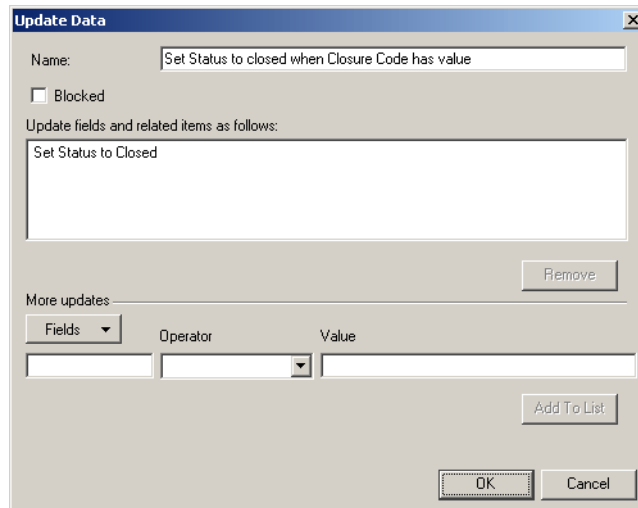
3. Clear the Blocked check box to turn on this action.

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.

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 3-16   Add the Name and Category
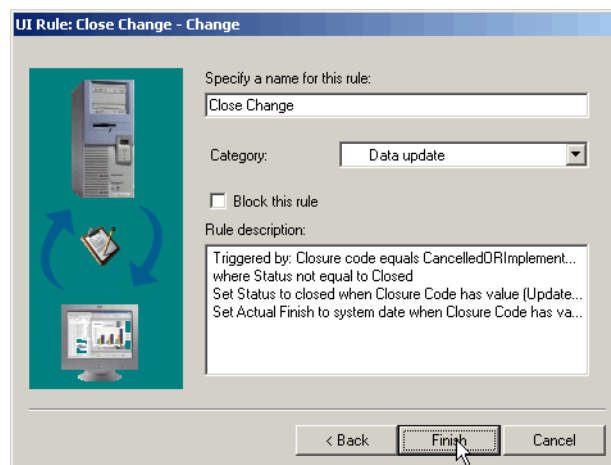
2. Enter a Category to group this rule with similar UI rules.

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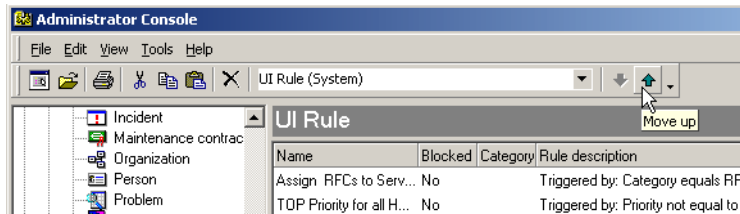
3. **Clear the** `Block this rule` **check box to turn the rule on.**

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 was entered by the specialist and 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 3-18   **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 3-19   **Send E-mail Message Action**
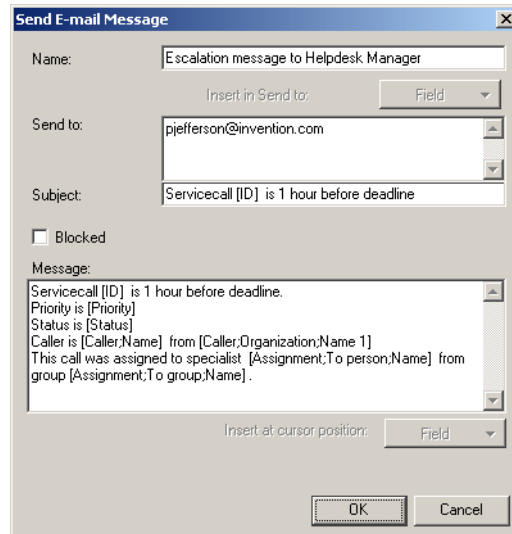
3. Enter the `Subject`. Use the `Field` button to insert the service call number or other information taken from the Service Desk item.

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   The SMTP server must be configured properly, refer to "Using E-mail with Service Desk" on page 193 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. To fill in the dialog box:

1. Enter a `Name` for the action:

Figure 3-20   **Update Data Action**

2. Use the `Field` button to select the fields you want updated, then select an `Operator` using the list button, and then select a `Value` to be applied to the field using the list button.

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

4. 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:

Figure 3-21   Update Data and Related Item Fields

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

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.
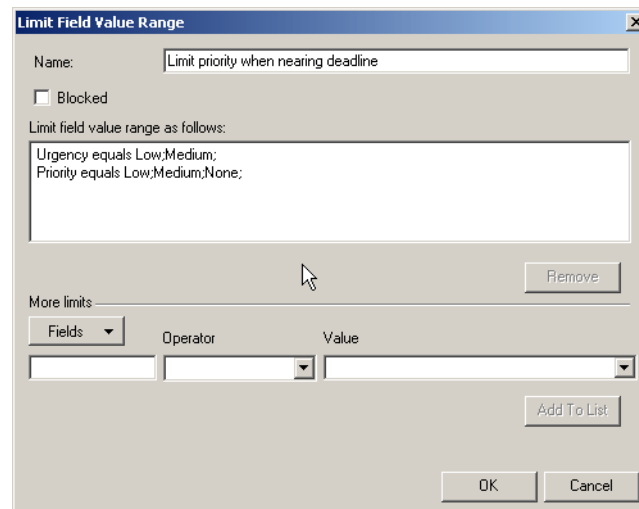
Creating Limit Field Value Range Actions

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 3-22   **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. You can repeat this process

to limit more fields.

Creating Smart Actions

Smart actions are used to 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 3-23   **Smart Action - Activating Knowledge base**
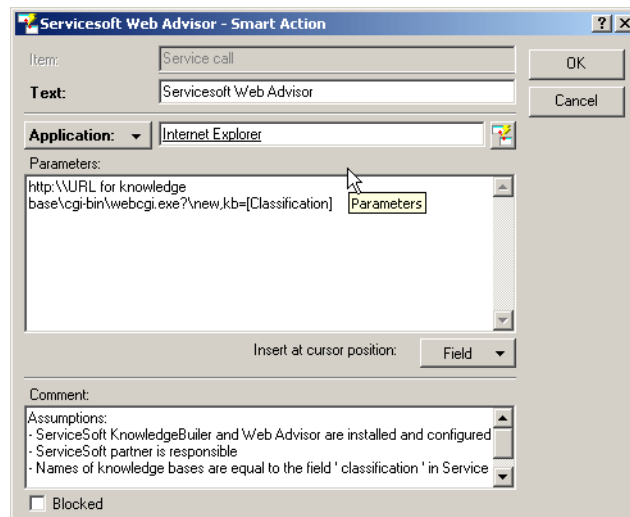
Creating Overview Actions

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 3-24   Overview Action dialog box
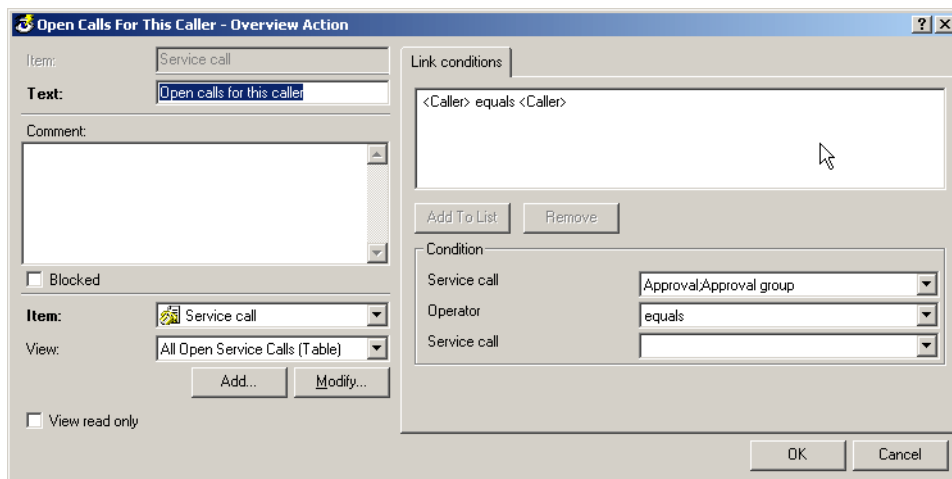
Creating System Actions

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.

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*.

4 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 SDDataForm.exe 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.exe <Form name> <Display
option> <Search criteria>
```

For example:

```
SDDataForm.exe "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 SDDataForm.exe is located in the Service Desk \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 SDDataForm.exe. This executable is located in the Service Desk \client\Bin or \server\Bin folder.

SDDataForm.exe 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 SDDataForm.exe. For example:

With a prompt in the correct folder:

```
C:\Program Files\Hewlett Packard\OpenView\Service Desk
4.0\Server\Bin\> SDDataForm.exe .....
```

Without a prompt in the correct folder:

```
C:\>Program Files\Hewlett Packard\OpenView\Service Desk
4.0\Server\Bin\SDDataForm.exe .....
```

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 178 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 4-1   **CLI Search Results dialog box**
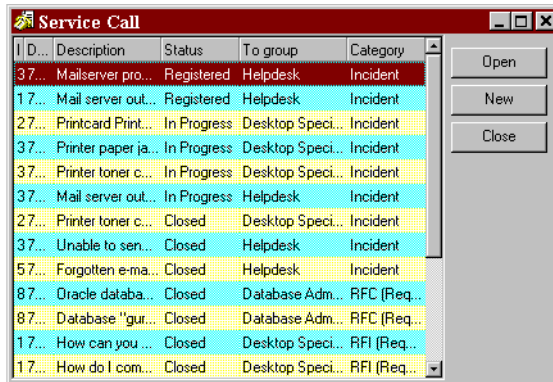
Search Criteria

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 178 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.

5 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 5-1   Administrator console dialog box
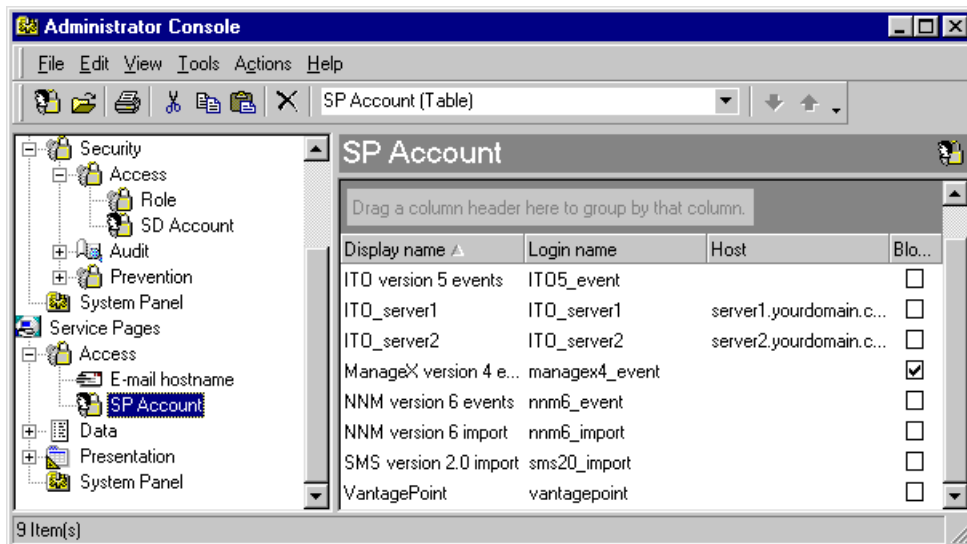
Defining Service Pages Views and Templates

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. Click :

Figure 5-2   **New View dialog box**
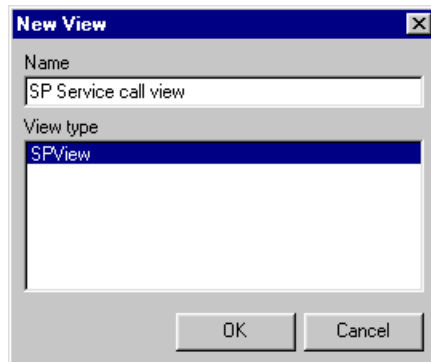
4. The `View Summary` dialog box is displayed. Click the `Filter` button to specify the conditions for the view. The Filter dialog box is displayed:

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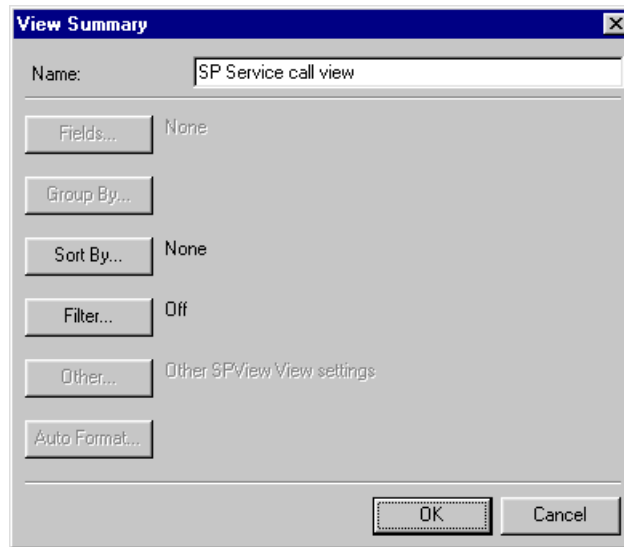
5. In the Filter dialog box, you can click the `More Choices` tab and select `Where I am: The Caller` check box in the list that is displayed. This will ensure that the end users will only be able to view their own Service Calls. Click `OK`:

Figure 5-4 **View Filter dialog box**
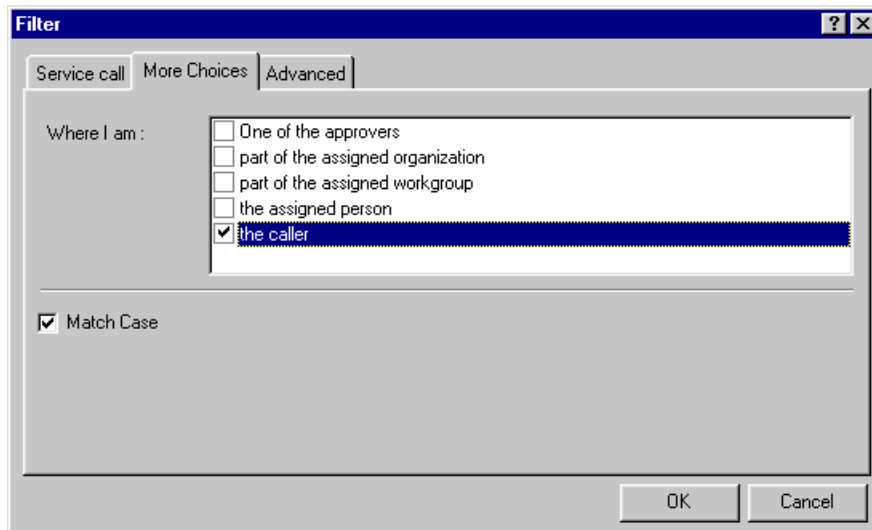
6. The View Summary dialog box will now show that the `Filter` is on. Click `OK`. The new view is now displayed in the list of available views.

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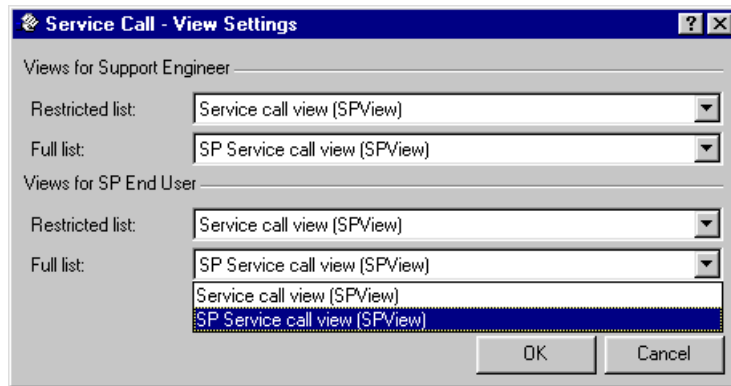
Existing Templates can be used for Service Pages accounts. For information on creating new templates see the *Service Desk Online Help*.

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 5-6   Template Settings dialog box
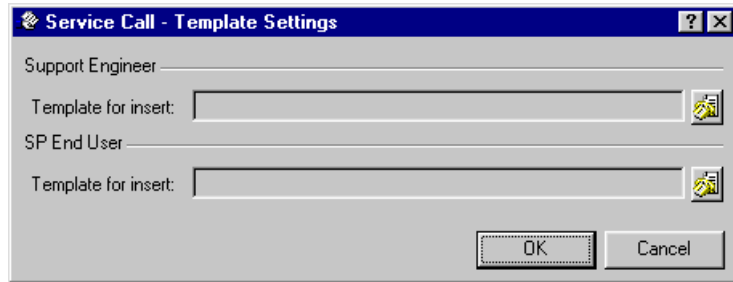
4. The `Choose Template` dialog box is displayed. Highlight the template you want. The check box in the right hand view indicates the currently selected default, there is no need to change this. Click `OK`.

Figure 5-7   Choose Template dialog box
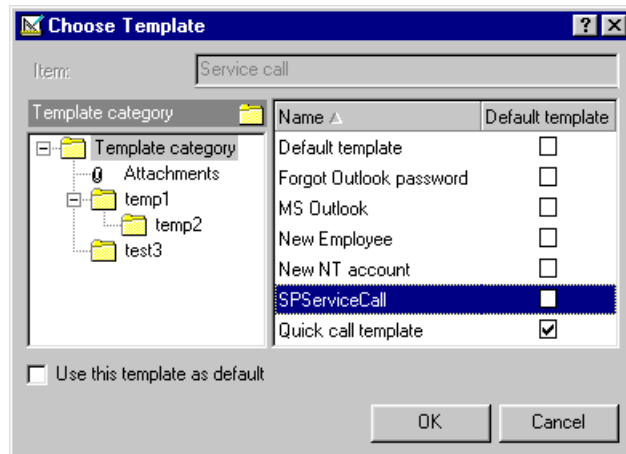
Defining Service Pages Role Settings

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 5-8   General Settings dialog box
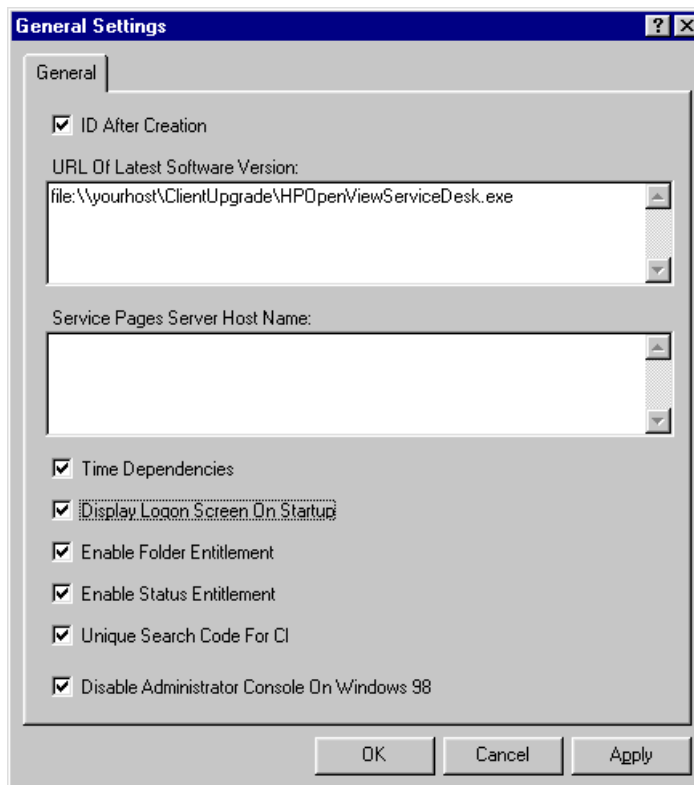
2. **In the Administrator Console select the** Access **node and then** Role. **Double-click the Service Pages role in the right-hand pane, the** Service Pages - Role **dialog box is displayed:**

Figure 5-9   Service Pages - Role dialog box
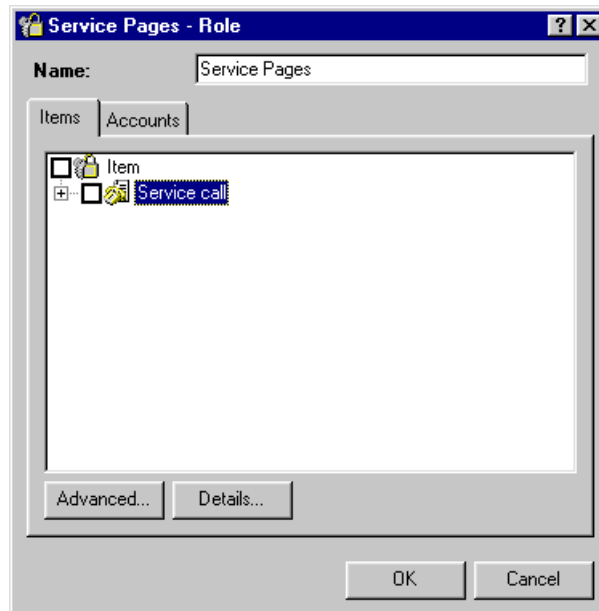
3. **Highlight the** Service Call **item and click** Advanced. **The** Item
   Access **dialog box is displayed. If the views or templates you selected**
   above are not displayed on the Views **or** Templates **tab pages, click**
   the Relate **button and select them from the popup list. Click** OK **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 5-10   SP Role - Item Access dialog box
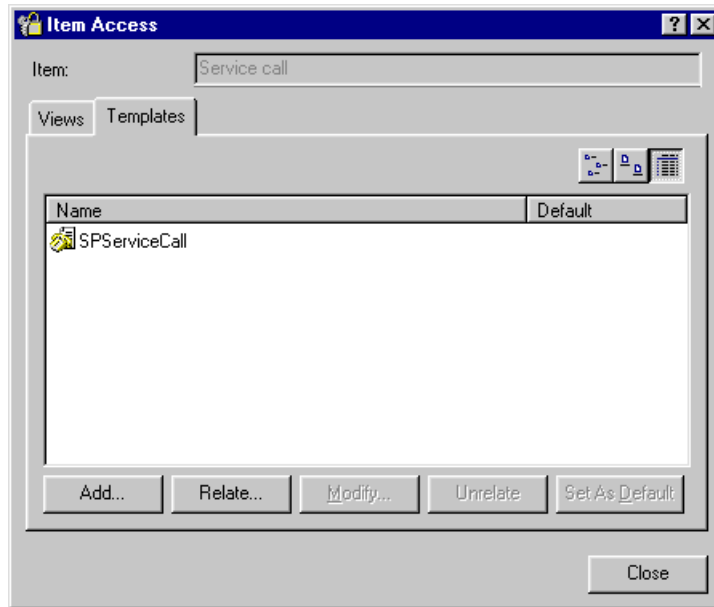
4. In the Service Pages - Role dialog box, allow the Role View, New, and
    Modify rights for Service Calls by expanding the Service Call
    item and checking the relevant sub-items check boxes:

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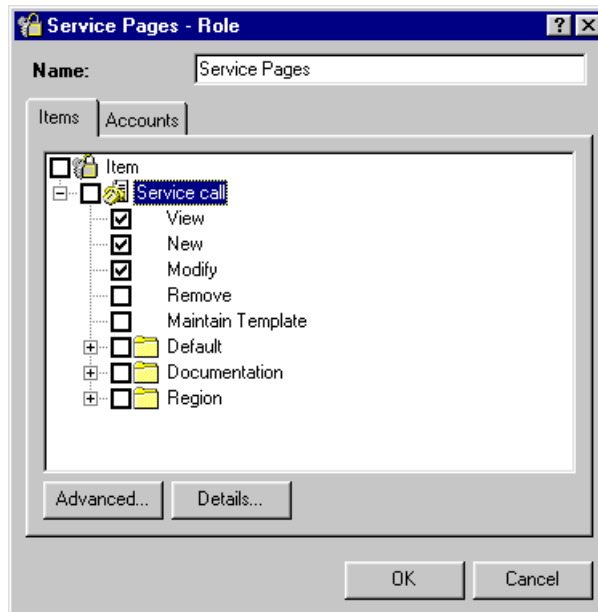
5. **Highlight** Service Call **and click** Details. **The Detailed Item Access dialog box is displayed. The** Access **tab reflects the checked items on Role dialog box. Select the** History line **tab and select the** View **and** New **checkboxes to enable the users to see and add new History lines.**

Figure 5-12   Service Pages History Line dialog box
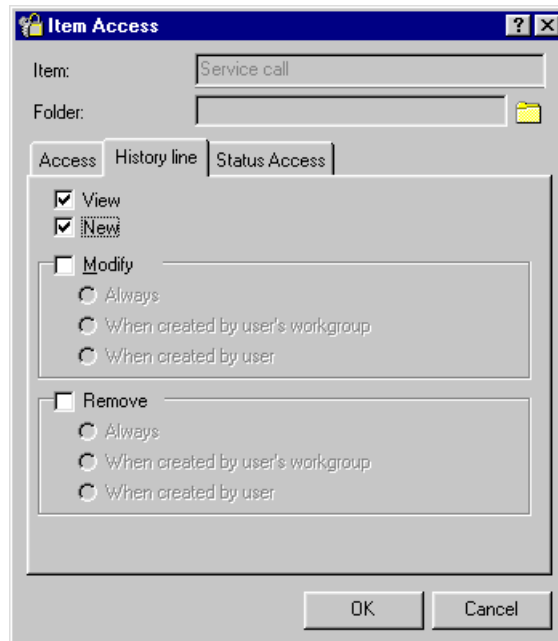
6. Click the Status Access tab, and select the same status from the
   drop-down lists for both the Status from and Status to fields.
   This will restrict the end users Modify rights to only editing Service
   Calls that they have created and that are still in the selected status.
   The status you 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 5-13   **Service Pages Status Access dialog box**
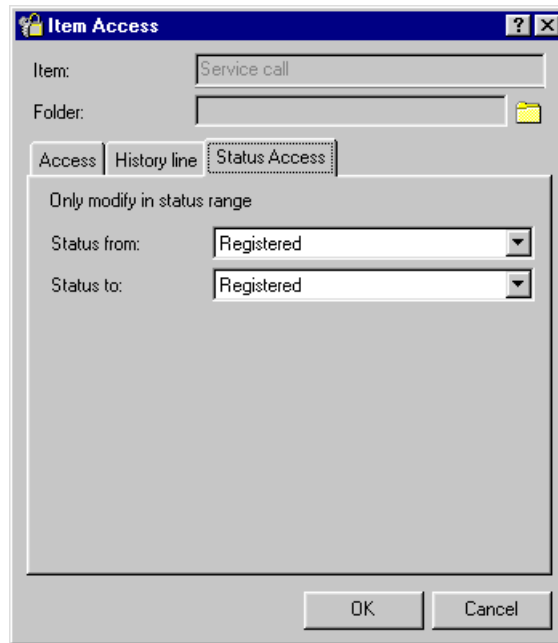
Create a Service Pages User Account

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 5-14   Account dialog box
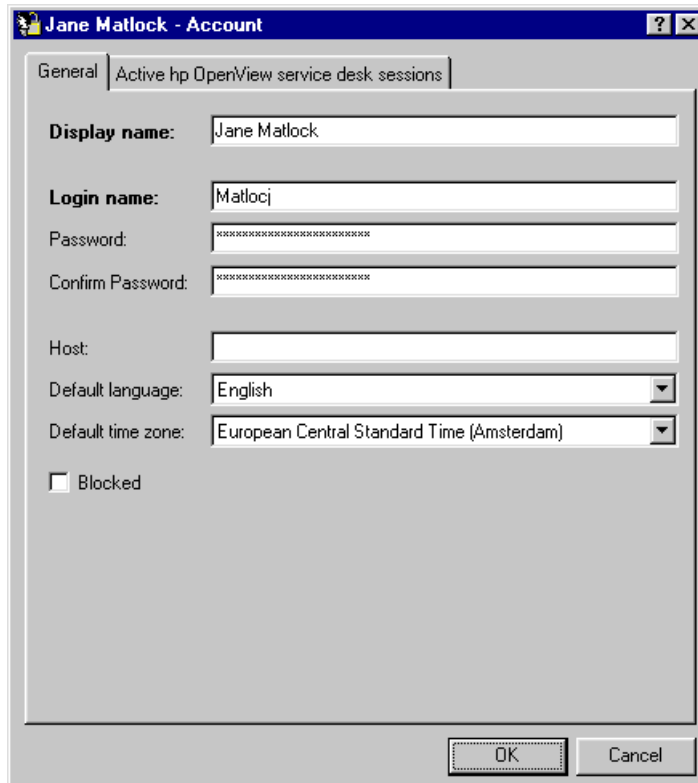
3. Type the name to be displayed when referring to this account. This is the name that will normally be displayed, for instance, in the Active Service Desk sessions tab page.

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 5-15 **Password Settings dialog box**
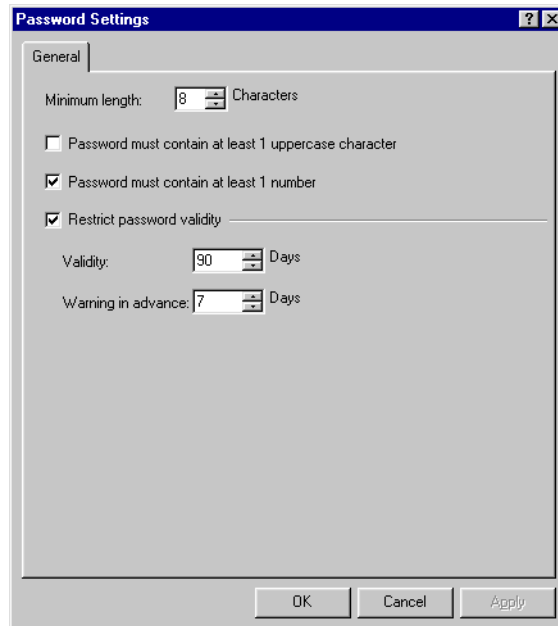
Setting the E-mail Host Name

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 5-16   Administrator's Console - E-mail Hostname view
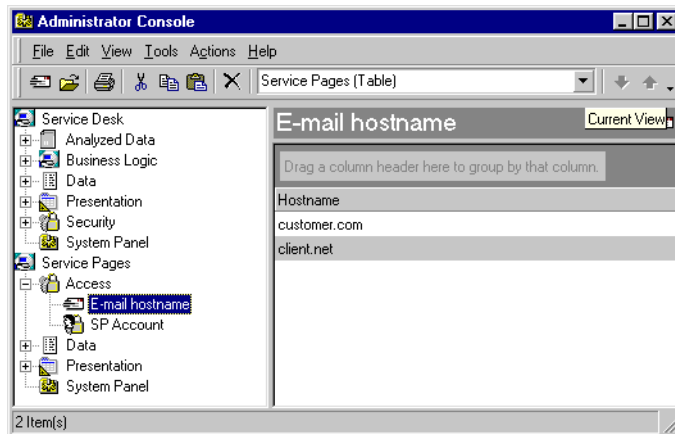
2. Right-click in the view pane, and choose `New E-mail Hostname` from the pop up menu. Enter the new host name in the `Hostname` field and click `OK`. You can block a hostname from being used by selecting the `Blocked` check box. This will block users from that e-mail domain from creating Service Pages 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 5-17   New E-mail Hostname dialog box
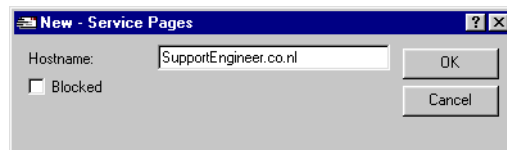
Setting up Service Pages Accounts for Support Engineers

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 and enter the server name in the Service Pages Server Host Name field. Click OK:

Figure 5-18   General Settings dialog box
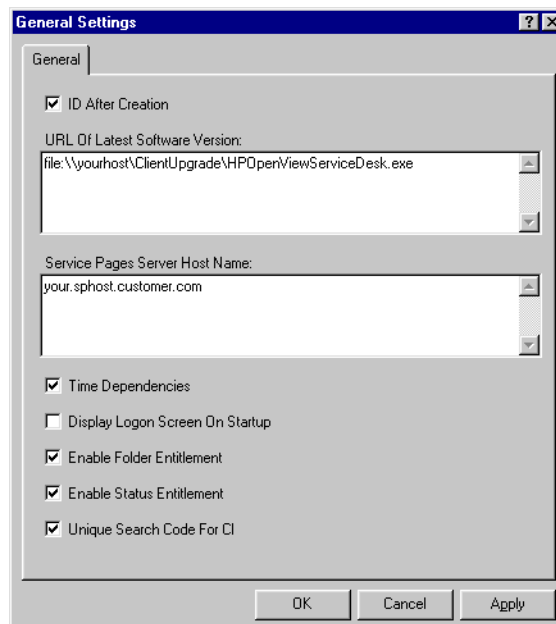
Configuring the Service Pages Interface

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 4.0\Sp\SSP_Files`.

To configure the logo:

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

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

6   Multiple Servers

Running multiple servers will give a more robust and balanced environment. If an application server fails or the network to the server is broken, clients connected to that server will 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 will check with the database and see 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 will be routed to another server.

When the Service Desk Application Server software is installed the `itp.joinMultipleServers` parameter in the file `sd.conf` is set to *true*. If, after installation, the multiple servers are not communicating with each other check this setting for each server.

Service Desk application servers will only recognize others where `itp.joinMultipleServers` is set to the default of *true*. If multiple servers have been installed, this parameter should not be changed to False 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 set `itp.joinMultipleServers` for that server to False.

NOTE   The only time you must use `itp.joinMultipleServers=false` is when you are using a stand-alone application server with a firewall that uses port-mapping.

Before Installing Multiple Servers

If you are using an Oracle database, all machines where the Service Desk application server will be installed must have an Oracle NET8 client installed and be rebooted before the Service Desk server installation. The machine where the Oracle database is installed does not need the NET8 client. A SQL Server database does not need additional software.

For details of the Service Desk application Server installation see "*Application Server Installation and Database Configuration*" in Chapter

3 of the *HP OpenView Service Desk: Installation Guide*.

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 will take 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 you 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.

Multiple Application Server Services

Normally multiple servers are installed on different machines, however, if you have a machine with multiple processors you can run up to eight servers on the same machine. If you are intending to run multiple servers on one multi-processor machine, you need only to install the server software once. You can then start up multiple instances of the same software installation. You can create up to seven extra services by running the batch files `ReInstallService1.bat` to `ReInstallService7.bat` in the folder *Service Desk root*`\Server\Bin\MultipleProcessors`.

NOTE   When multiple Service Desk services are created, only the itp services are multiplied, the smtp and http services will only run on the first service started up. Each new service created via a batch file will use the next available port down from the currently defined one. If the first port number is not available it will continue searching downwards until it finds the first unused one

7 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
   3.0\Client\clientAS1"
   ```

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

Figure 7-1   **Shortcut Wizard Command Line dialog box**
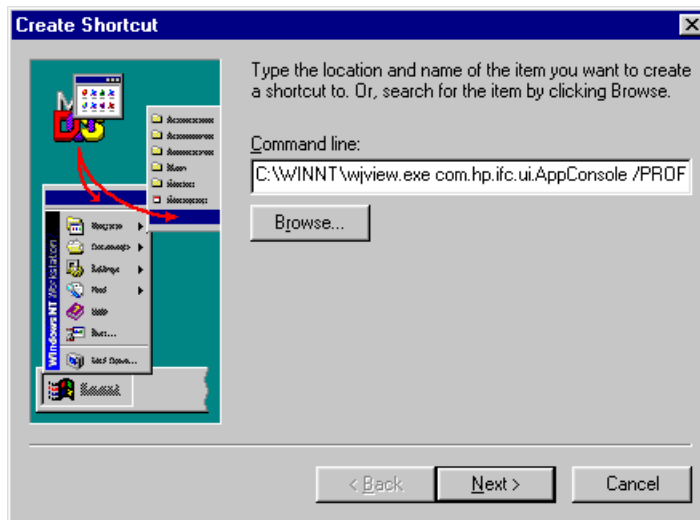
NOTE   The path parameters depend on where wjview.exe and the Service Desk
                    folder are located on the machine. On Windows 2000 wjview.exe
                    should be found in the System32 folder and on Windows 98 in the
                    Windows folder.

---

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

Figure 7-2   **Shortcut Wizard Shortcut Name**
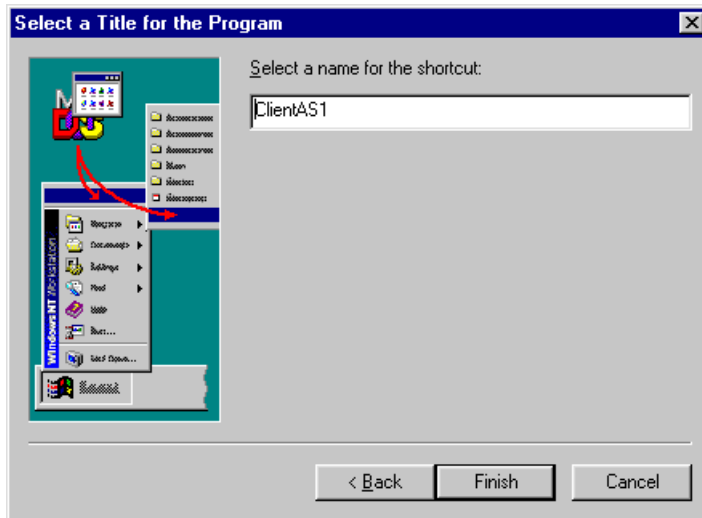
Once you have created the shortcut, the instance of the client software that is started by it still has to be connected to an application server and database. This must be repeated for each client shortcut you create:

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 7-3   **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 7-4   Connection Wizard Account Name dialog box

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

Figure 7-5   Connection Wizard Friendly Name dialog box
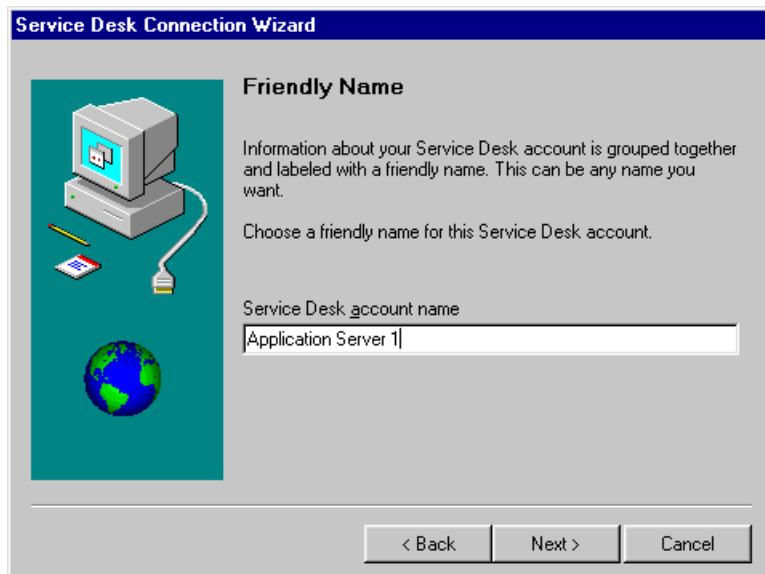
4. Click `Next` and then `Finish`. The Client shortcut will now connect to the application server with the specified account name.

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 3.0\Client\clientAS1"
```

Logically you should name this shortcut to relate it to the Client shortcut, particularly if you are going to have a number 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).

8 Server Configuration Settings

This chapter discusses server configuration settings, and issues related to the configuration file sd.conf.

Setting up Timeout, Multiple Servers, and HTTP Service

If you have system administrator rights, you can alter the settings for multiple servers by changing the configuration file sd.conf. The steps for setting up the server and the options for adjusting the configuration file are listed below.

NOTE   All parameters are case-sensitive.

1. Open the configuration file sd.conf by choosing Program Files from the Start menu, and then hp OpenView Service Desk 4.0. In the Service Desk sub-menu select Tools and then Edit Server Configuration File on the final sub-menu. This opens the main Service Desk application server configuration file in a text editor. The file contains the configuration parameters for the application server. The location of sd.conf is the \\Service Desk 4.0\Server folder.

2. Find the section session.timeout. This is the user's session timeout in minutes on the server. A session is created on the server when a user starts the client console. If the user keeps the console inactive for more than the session timeout - by default set to 120 minutes - the session will be removed. Consequently, the user must log on again to create a new session. Please note that the user will not receive any online notifications when the user's session has been removed from the server. You can change the session timeout according to your organization's needs, although we do recommend the default.

3. Find the section ITP Service. ITP is an ITSMO proprietary transport protocol in a binary format. The ITP Service is used by all Service Desk clients, agents, and the Service Pages module. Adjust the following lines to fit your organization's needs:

   • itp.joinMultipleServers:

     This specifies if the application server should join other application servers to serve Service Desk clients. By default, the value is *true*, which means more than one application server is being used to serve all clients. Set to *false* only if you use a

stand-alone application server with a firewall that uses port-mapping.

Running multiple servers will provide a more robust environment: for instance, if an application server fails, all clients connected to that server will automatically reconnect to another application server. For more information, see Chapter 6, "Multiple Servers," on page 143.

Multiple Servers are also used for load balancing: When a client connects to the server that is defined in the client's connection settings, the server will check with the database and see what the current load balance and weighting is on all the servers. If the defined server has a disproportionate number of connected clients the new client session will be routed to another server.

- `itp.port:`

  This specifies the IP port to which the ITP service should listen. Default is 30999. If you choose another value, then all clients must specify the given IP port when they try to connect to the application server.

  If multiple application servers are used, make sure all the application servers are running the ITP service on the same IP port .

- `itp.weight:`

  The weight parameter expresses how well-equipped application servers are. The parameter must be an integer value. The higher the value, the more clients the application server will take. By default, the parameter is set to "1". Accept, or set to a higher value.

- `itp.acceptConsoleClients:`

  true is the default value; this means the application server will be used to serve clients that use the client console. Set to *false* if you want to use the application server for non client tasks, for example, as a dedicated server for Web clients, or integrations such as VPO, NNM, ManageX, etc.

- `itp.accept/itp.deny:`

  With the accept and deny parameters you can exclude or include

specific IP addresses and complete IP sub-networks from
accessing the services offered by ITP. If you do not specify
anything, ITP will accept connections from any IP address. The
asterisk is used to denote any number between 0 and 255.

4. The application server can run an HTTP post service. This service can
be used to receive events from third-party products such as NNM,
ITO, and ManageX.
Find the section `HTTP Post Service`.

   • The line `http=true` means you want to use HTTP service. Set to
   `http=false` if you do not want to use HTTP service.

   • `http.port`: The IP port the HTTP post service listens to, by
   default 30980.

   • Using the accept and deny parameters, you can exclude or include
   specific IP addresses and complete IP sub-networks from
   accessing the services offered by the HTTP post service. When you
   do not specify anything, ITP will accept connections from any IP
   address. The asterisk is used to denote any number between 0 and
   255.

If you have the Web server for the Service Pages running on a machine
that has, for instance, the IP address 12.34.56.78, then remove the
comment tags (#) from the two lines below. This ensures that only that
Web server has access to the HTTP post service offered by this
application server.
`#http.accept=12.34.56.78`
`#http.deny=*.*.*.*`

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 `sd.conf` file. 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 4.0`.

2. In the Service Desk submenu, select `Accounts`. The hp OpenView service desk Server Accounts dialog box is displayed.

3. Select the Service Desk account being used by the client and click the `Properties` button. 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 `sd.conf` file on the application server. 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 `sd.conf` file on the application server.

The client listens by default on ports 40999-41019 for incoming requests from the application server. The port number can be changed by selecting `Options` from the `Tools` menu in the client interface and editing the `Static port allocation` field on the Advanced tab page.

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 can not 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.

Server Settings and Issues

The following settings and issues from the file `sd.conf` are described in the sections below:

- server.root
- session.timeout
- threadpool.size
- ITP Service
- itp.port
- itp.joinMultipleServers
- itp. weight
- itp.acceptConsoleClients
- HTTP Post Service
- SMTP Service for inbound e-mail
- log.filename

server.root

This is the top of the directory tree where the server's configuration, error and log files are being kept: `C:/Program Files/Hewlett-Packard/OpenView/ServiceDesk/`. This path is only used on non-Windows systems.

For Windows systems, the path is set in the registry under: `HKEY_LOCAL_MACHINE\SOFWARE\Hewlett-Packard\OpenView\Service Desk\4.0` where key "`ProductPath`" is used.

session.timeout

session.timeout is the user's session timeout on the server in minutes. When a user starts the client console, a session is created on the server. If the user keeps the client console inactive for more than the given amount of minutes, the session on the server will timeout and will be removed. This make more resources on the server available.

After the session is removed from the server, the user must log on again. This happens automatically when the user starts working with the application again. The user will not notice that the session was terminated apart for the amount of time that is needed to reconnect to the server and log on again.

NOTE   When the session is removed from the server, the user will not receive any online notifications of newly assigned items.

Default for *session.timeout* is 120.

threadpool.size

Threadpool.size specifies how many threads run on the server to handle calls from clients. This is a fixed number. The default is 10, and this should be right under most circumstances. If a server is very fast, and has a lot of memory, a higher number can be considered. Or, if the server cpu is never very busy, even when a lot of clients connect, a higher number may also be appropriate. This number does not specify how many clients are allowed to connect, the number of clients may be much greater than the threadpool size.

Threadpool.size has consequences for the connection pool settings: the minimum or maximum number for the connection pool should not be higher than the threadpool size. If it is it is not a problem, however it is useless, as there will never be more connections used than there are threads.

The connection pool specifies the number of connections that the server keeps open to the database. The minimum number is kept open all the time, the maximum number is the maximum size of the pool. Any connections that exceed the minimum amount are closed if they are not used for 10 minutes.

You can set the connection pool in the hp OpenView service desk Accounts dialog box. Select the Database tab, open a database account, and go to the Connections tab. On the connections tab click the Advanced button. This will enable you to set the connection pool.

The default *threadpool.size* is set to 10, the minimum is 5.

ITP Service

ITP is an IT Service Manager proprietary transport protocol built on top of TCP/IP. It is comparable to HTTP, but ITP is in binary format and more efficient. The ITP service is used by all Service Desk clients, Service Desk agents and the Service Desk Service Pages (SP) module.

itp.port

The *itp.port* is the IP port that the ITP service should listen to. Default value is 30999.

If the IP port specified is not the default, then all clients must specify the given IP port when they connect to the application server, for example: mymachine.mydomain.com:12345.

If you use multiple application servers, make sure all application servers run on the same IP port to run the ITP Service.

itp.joinMultipleServers

itp.joinMultipleServers specifies whether an application server must join other application servers to serve Service Desk clients. This itp service is set to "true" as the default when Service Desk is installed, generally, it will not need to be changed.

itp.joinMultipleServers can be set to:

- "false", if only one application server and a firewall that uses port-mapping are being used

- "true", if more than one application server is being used to serve all clients.

TIP   Running multiple servers will give a more robust and scalable environment. If an application server goes fails or the network to the server is slowed down by excessive traffic, all clients connected to that server will automatically reconnect to the other application servers.

itp.weight

The weight parameter *itp.weight* expresses which servers are better resourced than others. The weight parameter must be an integer value. The higher the value, the more clients the application server will take. As a default, *itp.weight* is set to 1.

Example 8-1   **Server Weighting**

Server A has weight 10 and server B has weight 2. The first 5 clients will connect to server A, the next to server B, the next 5 to server A, the next to server B and so on.

itp.acceptConsoleClients

The parameter *itp.acceptConsoleClients*, when set to:

- *true*, indicates that this application server will be used to serve clients that use the client interface (rather than Service Pages). This is the default.

- *false*, indicates that clients using the client interface will not be accepted to connect to this application server.

This parameter is used for load-balancing purposes, where the application server could be used solely to support web clients, or to support all functions related to integration with other products such as NNM, ITO, ManageX, etc.

accept and *deny*

With the accept and deny parameters, you can explicitly exclude and/or include specific IP addresses and/or complete IP subnetworks from accessing the services offered by ITP. If you do not specify anything, ITP will accept connections from any IP address.

Example 8-2   **IP Address Wildcard**

The star symbol denotes any number between 0 and 255:

itp.accept=127.0.0.1
itp.accept=12.34.*.*
itp.deny=123.45.67.88
itp.deny=123.45.67.89
itp.deny=123.45.67.90
itp.deny=123.98.76.*

HTTP Post Service

The application server can run an HTTP Post Service. This service makes it possible to receive events from third party products such as

NNM, ITO, ManageX, etc.

HTTP can be set to:

- *false* if the application server does not need to offer the HTTP Post Service.

- *true* if the application server should offer the HTTP Post Service.

The default setting for *http* is: *http=true*

http.port

The parameter *http.port* defines the IP port the HTTP Post Service should listen to.

The default setting for http.port is: *http.port*=**30980**

accept and deny

With the accept and deny parameters you can exclude and/or include specific IP addresses and/or complete IP subnetworks from any IP address. The star symbol is used to denote any number between 0 and 255. If this parameter is not specified, that is, the following two lines remain commented in sd.conf, all IP addresses will be accepted.

http.accept=**12.34.56.78** (accept the specified IP address)
http.deny=***.*.*.*** (deny all unspecified IP addresses)

NOTE   If you have a Web server serving the Service Pages running on a machine that has for example IP address 12.34.56.78, then set the accept to this IP address and use *.*.*.* to deny all other IP addresses. This ensures that only that web server accesses the HTTP Post Service offered by this application server.

SMTP Service for Inbound E-mail

The application server can run an SMTP service, which can be used to receive e-mail messages that will be converted to service calls in Service Desk. The SMTP service conforms to the Internet RFC 821 and RFCs 2045 to 2049.

The parameter *smtp* can be set to:

- *false* if the application server does not need to offer the SMTP service.

- *true* if the application server must offer the SMTP service, this is the default.

smtp.debug

The parameter *smtp.debug* can be set to:

- *true* when for all e-mail messages debug information must be written to the log file.

- *false* when for all e-mail messages debug information must not be written to the log file.

The default setting for *smtp.debug* is: *smtp.debug*=**true**

smtp.port

The parameter *smtp.port* defines the IP port the SMTP Service must listen to. The default setting for smtp.port is: *smtp.port*=**25**

With the accept and deny parameters you can exclude and/or include specific IP addresses and/or complete IP subnetworks from accessing the services offered by the SMTP service. When you do not specify anything, the SMTP service will accept connections from any IP address. The star symbol is used to denote any number between 0 and 255.

smtp.accept=***.*.*.***
smtp.accept=**12.34.56.78**
smtp.deny=**12.34.56.***

log.filename

The parameter log.filename specifies the location of the application server log file. If you do not specify this option, the log file will be called "*serverlog.txt*" and it will be placed in the root directory where Service Desk is installed.

log.filename=c:\temp\logserver.txt

---

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 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 repporting 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
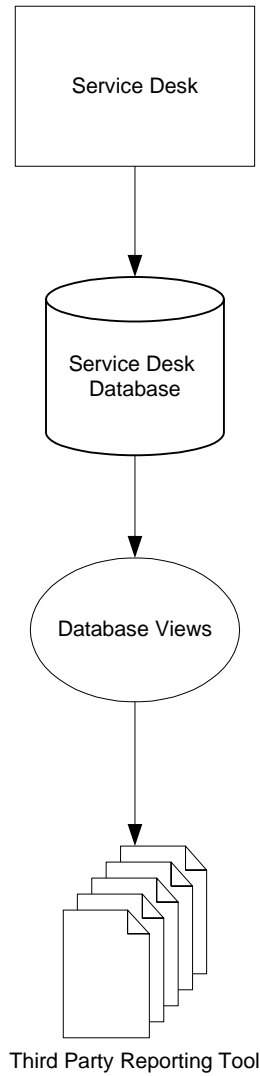
Performance Considerations

Service Desk 4.0 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. 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**
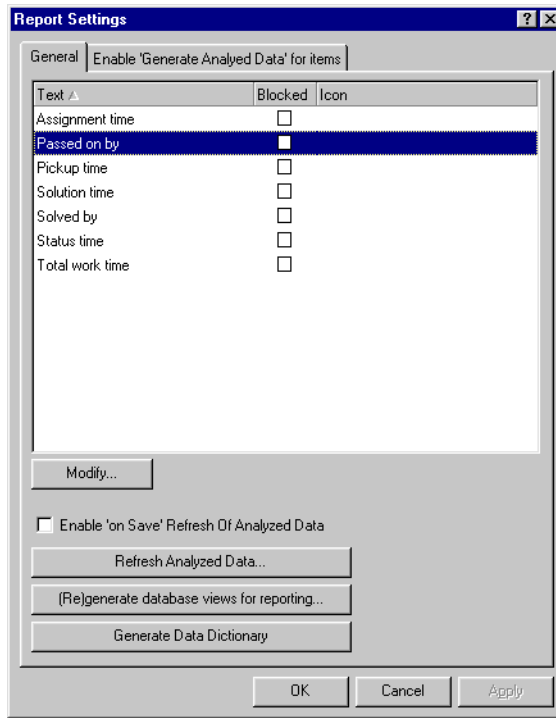
4. **Click** (Re)generate database views for reporting.

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**
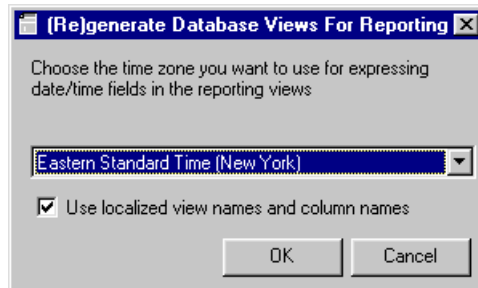
6. **Click** OK. **A Warning dialog box is displayed:**

Figure 9-4   **Warning Dialog Box**
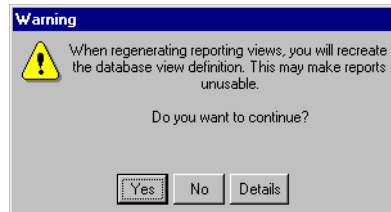
7. In the `Warning` dialog box, click `Yes` to continue generating database views.

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
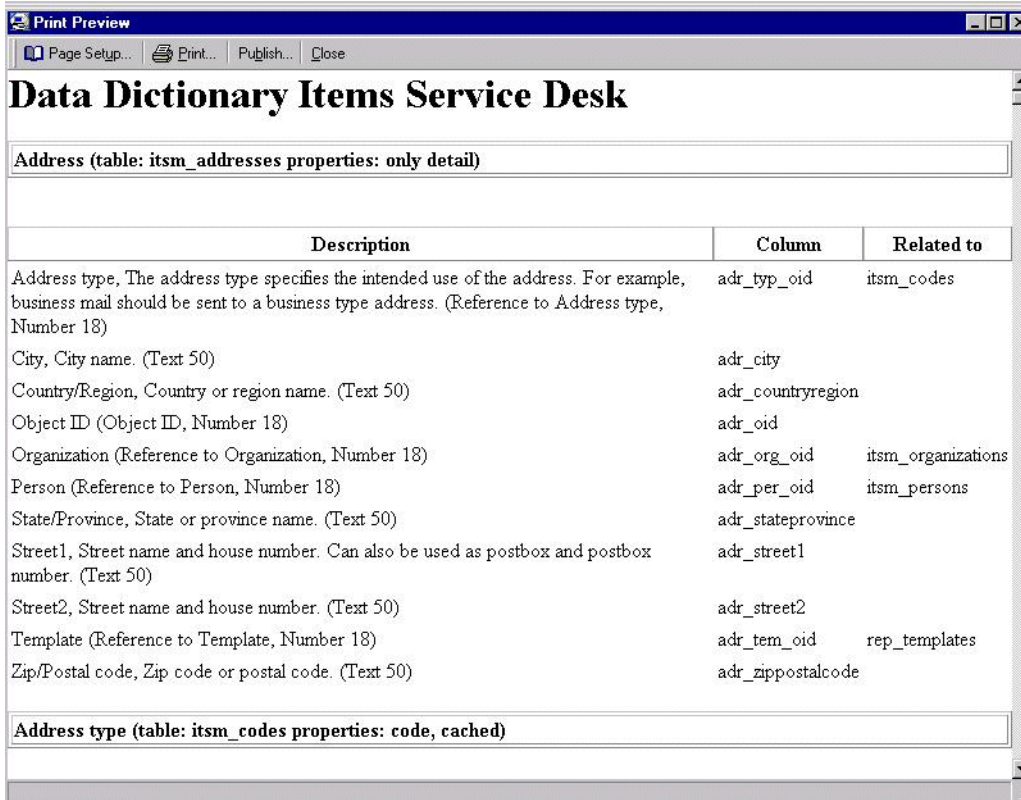
5. You can choose to print or publish the Data Dictionary.

   • 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 by 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
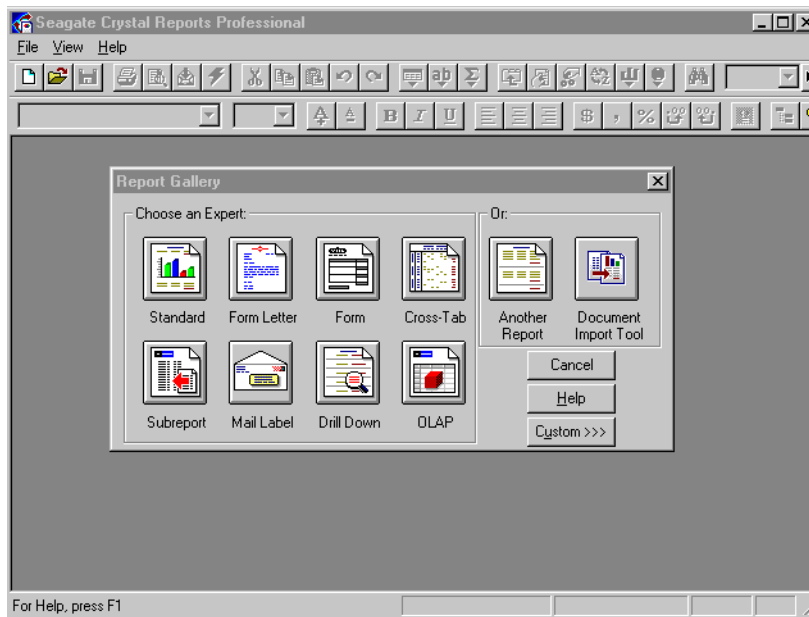
2. Select any report. For our example, we will choose `Standard`. The form `Report Expert` will appear.

3. Click `SQL/ODBC`. The `Log On Server` dialog box appears:

Figure 9-8   **Crystal Reports Log On Server Dialog Box**
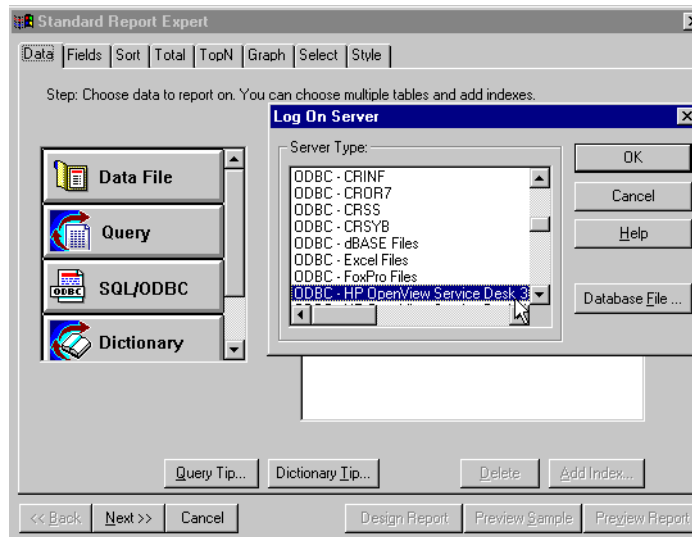
4. You must log on to the database where your Service Desk views were created. In our example, we are using HP OpenView Service Desk 4.0 and we select `ODBC HP OpenView Service Desk 4.0`. The `Choose SQL Table` dialog box appears.

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
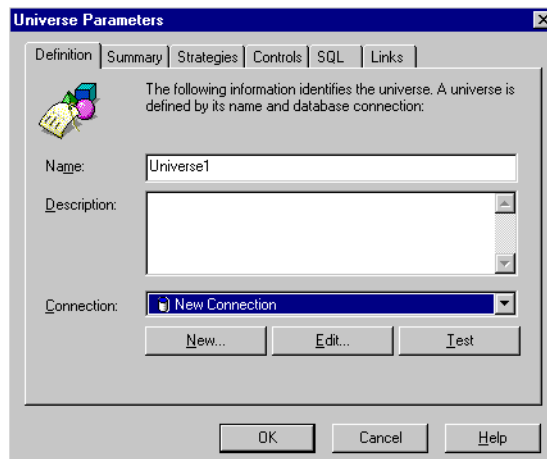
3. Enter a name for your universe in the Name field.

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
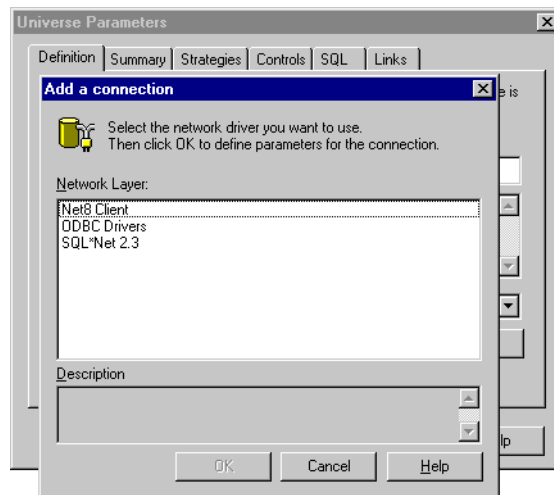
6. Select the network driver for your Service Desk database. For our example, we will select ODBC Drivers. Click OK.

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
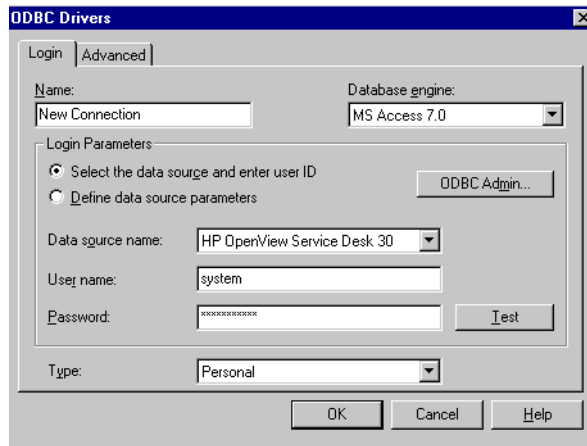
9. Select HP OpenView Service Desk 4.0 from the Data Source
    Name drop-down list.

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 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**
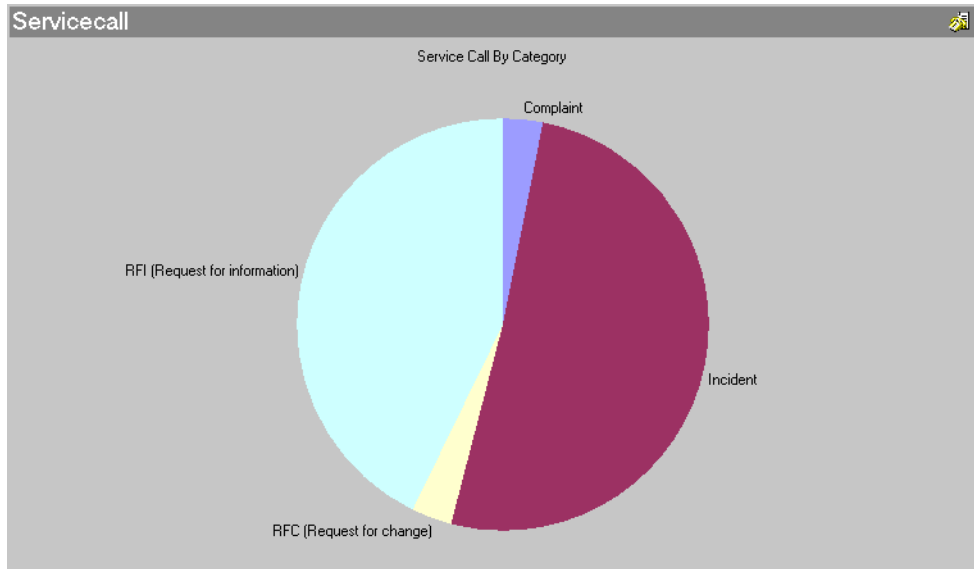
Creating Chart Views

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, or drive, 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 101.

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 SMTP entry to TRUE in the `sd.conf` file (Mandatory).

- 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 SMTP server to TRUE in the `sd.conf file`. 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**
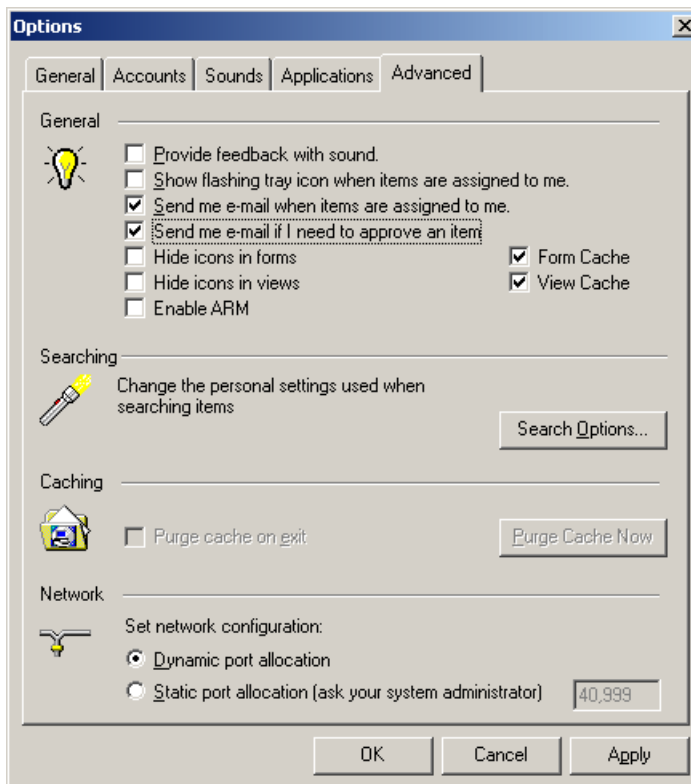
Entering E-mail Addresses

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 211 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**
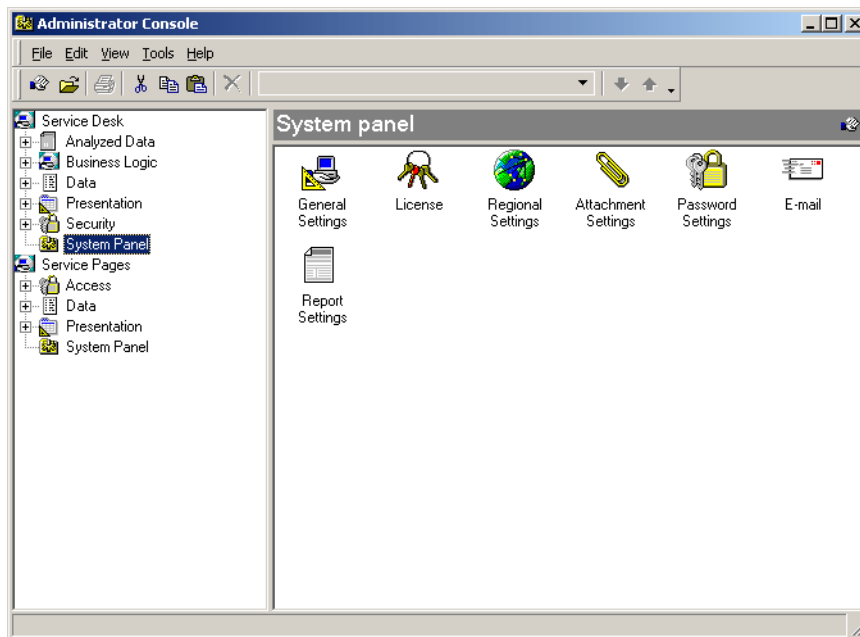
The E-mail Properties dialog box will open. The first tabbed page is the General tab for entering information about your e-mail server:

Figure 10-3   **General tab**
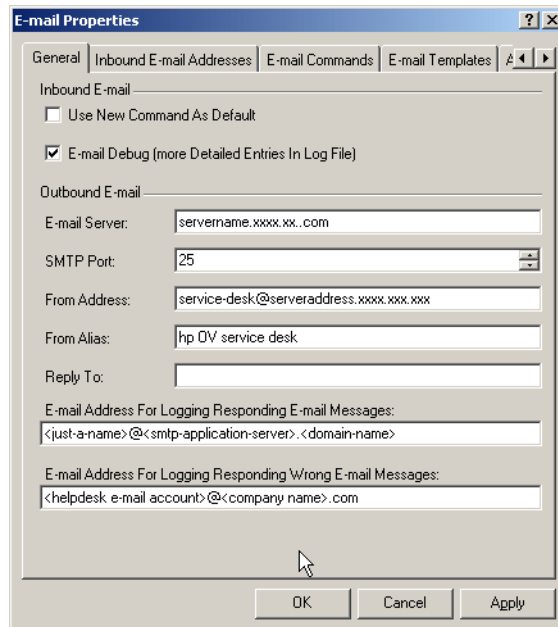
Complete the General tab page as follows:

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 SMTP to `TRUE` in the `sd.conf` file if you have not already done so.

5. In the `From Address` field, enter the e-mail address you want people to see when they get e-mail from Service Desk. If you do not want this to appear create a `From Alias`.

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. 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.

9. 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.

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**
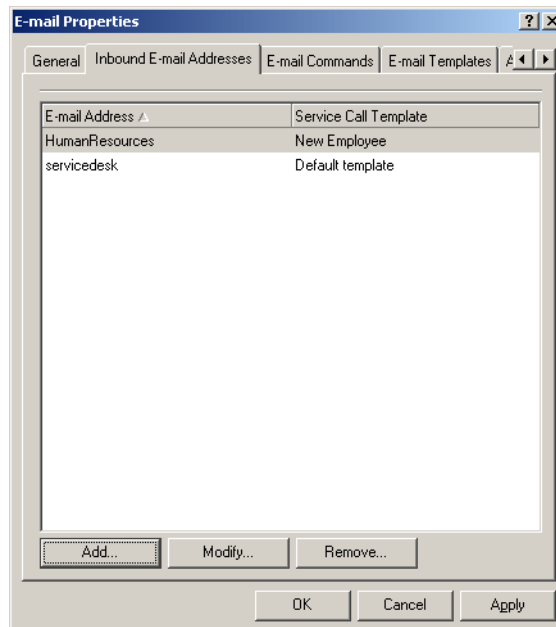
To add Inbound e-mail addresses and service call templates:

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**
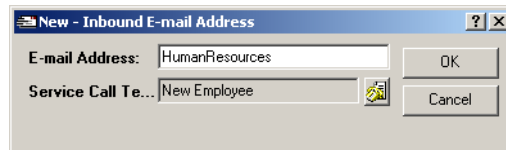
2. Click the Quick Find icon next to the Service Call Template field to locate the template you want to use when the new service call command is received at this address.

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**
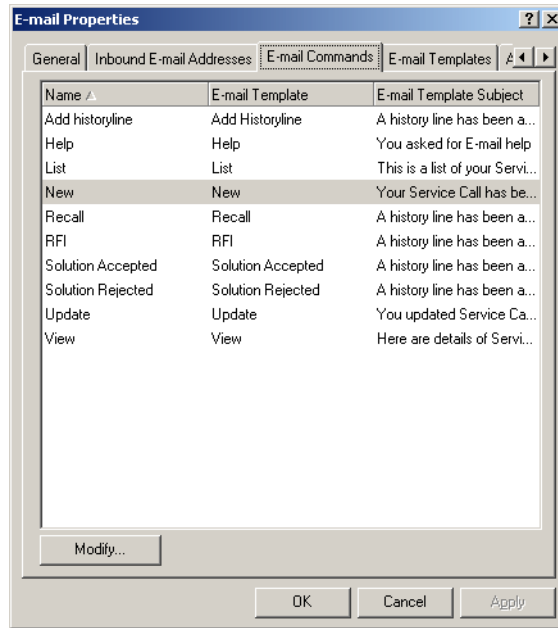
To edit an inbound e-mail command:

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
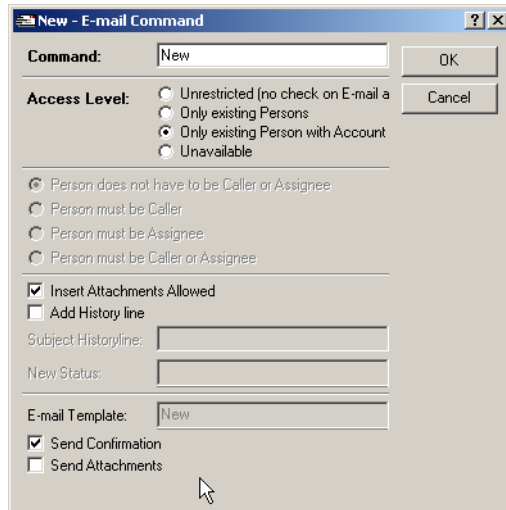
2. In the Command field enter the command you want users to send to
   Service Desk. The Name field cannot be changed. For example, the
   New command could be called **Service** and inbound e-mail users
   would enter **Service** instead of New in the subject field of their
   e-mail message to create 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 10-1   **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 10-1   **Overview of Inbound E-mail Commands**

| 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 10-1   **Overview of Inbound E-mail Commands**

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**
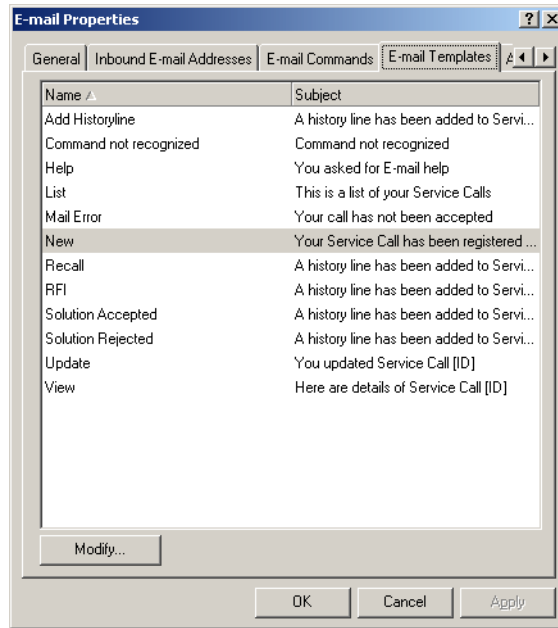

To modify the templates that Service Desk uses for sending e-mail to customers:

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**
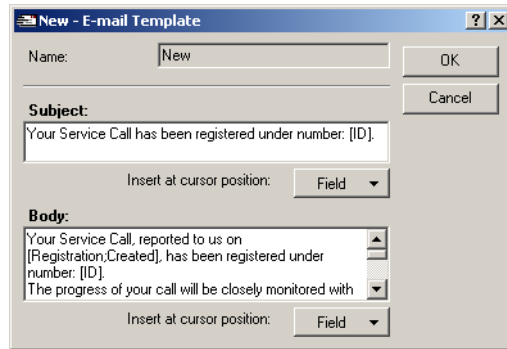
3. Edit the `Body` text in the same manner by typing text that you want to remain constant and using the `Field` button to enter parameters for information that will vary. Click `OK` when finished to save your changes.

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 214 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
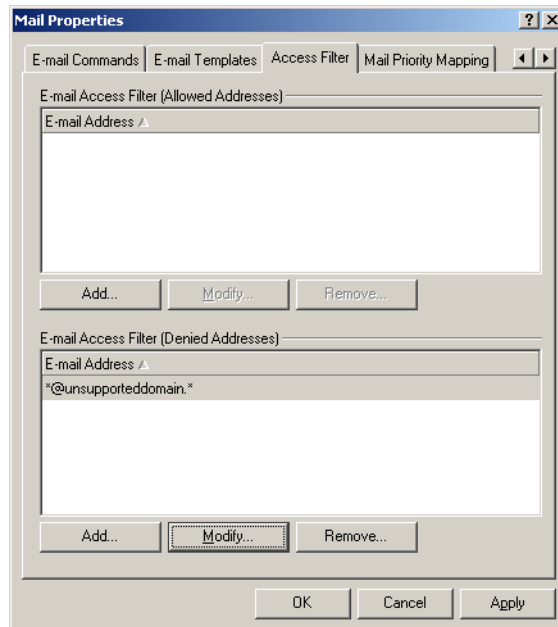
To set the access filter:

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**
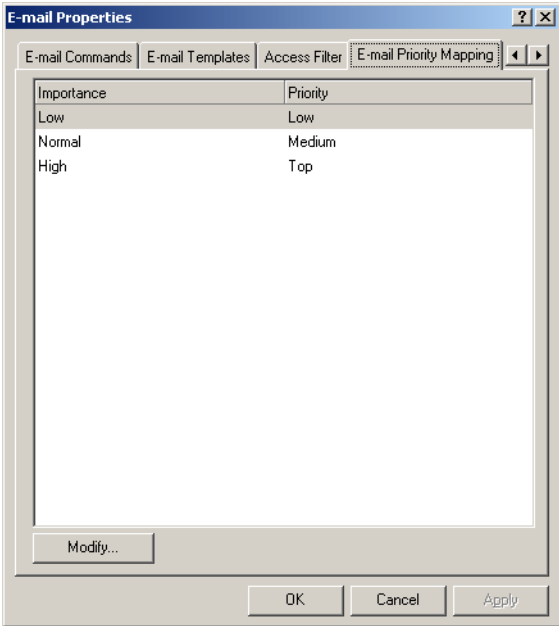
Using Inbound E-mail

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.

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
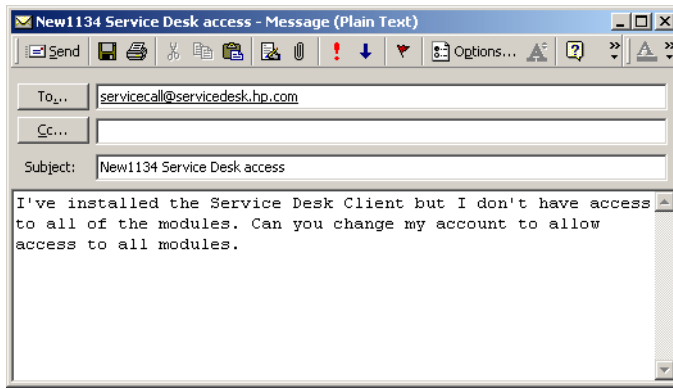
2. Use the e-mail account that you want Service Desk to use as the caller. Service Desk determines the caller for the service call by first trying to match the e-mail address in the From field with an e-mail address of a Person item in the Service Desk database. If the person cannot be found in the database, 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

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**
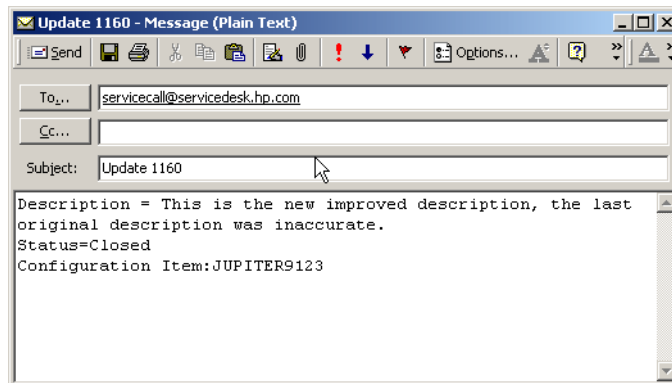
Using the `Add History Line<id>` Command

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.

E-mail Error Handling

When a command cannot be processed correctly, a Command not recognized message or a Mail Error message is 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 (See "Entering General Settings for E-mail Messaging" on page 200).

The following table lists the possible reasons why a command could not be processed correctly:

Table 10-2   **E-mail Errors**

Cause	Applicable Command	Warning/ Error	Comment
Caller could not be determined for new service call creation	New	Warning	Service call is not created.
No authorization for updating a service call	Update<ID> RE:RFI<ID> Recall<ID> RE:Solution<ID>	Warning	Service call is not changed
Command not recognized	Not applicable	Error	No action
No authorization for viewing service call data	Update<ID> View<ID>	Warning	No action

The error messages, sent via e-mail, can be modified from the e-mail templates tab. See "E-mail Templates" on page 209 for more information.

11 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.

12 Database Sizing

This document contains information to assist you in calculating the amount of database storage space needed to run Service Desk 4.0. 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 4.0 running on Oracle 8. Oracle version 8.0.5 was used in calculating the requirements.

An Excel spreadsheet is supplied on the Service Desk 4.0 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 12-1　　　　**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 12-2　　　　**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.)
Attachments	300 (Not actual attachments, but administrative data.)

Table 12-3   **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 12-4   **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 12-5   **Change Management Data**

Entity	KB needed for 1000 objects
Changes	8000

Table 12-6   **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.)
Incidents	7500
Projects	7500

Table 12-7   **Problem Management Data**

Entity	KB needed for 1000 objects
Problems	7500

Table 12-8   **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 12-9   **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 12-10   **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	

Table 12-10   **Service Desk Database Computations**

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 4.0 running on SQL Server 7.0.

An Excel spreadsheet is supplied on the Service Desk 4.0 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 12-11   **Additional Storage Space**

Entity	KB needed per number of objects
Language	1400 per language

Table 12-11   **Additional Storage Space**

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 12-12   **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 12-13   **Personnel and Organizational Data**

Entity	KB needed for 1000 objects
Workgroups	4200

Table 12-13   **Personnel and Organizational Data**

Entity	KB needed for 1000 objects
Organizations	5300
Persons	5700 (Assuming on average a person is a member of a single workgroup.)

Table 12-14   **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 12-15   **Change Management Data**

Entity	KB needed for 1000 objects
Changes	9300

Table 12-16   **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 12-17   **Problem Management Data**

Entity	KB needed for 1000 objects
Problems	8700

Table 12-18　　　**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 12-19　　　**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 12-20　　　**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	
Attachments	per 1000	x 360 KB	
Organizations	per 1000	x 5300 KB	
Persons	per 1000	x 5700 KB	
Workgroups	per 1000	x 4200 KB	

Table 12-20   **Service Desk Database Computations**

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.

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