HP Service Manager

for the Windows® and Unix® operating systems

Software Version: 7.00

Installation Guide

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Contents

1 Planning for an HP Service Manager Implementation

This chapter describes the ways in which you can implement HP Service Manager 7.00 in your organization.

Topics in this section include:

Types of Installation Environments

You can install Service Manager in several types of environments:

- Production environment
- Non-production environments
  - Development environment
  - Test environment
  - Reporting environment

Production Environment

Installing Service Manager in a production environment allows you to deploy your customizations and provide services to your intended user base. Most production environments run 24 hours a day and 7 days a week, support many simultaneous users, and process large numbers of transactions and requests. In a production environment, you typically install the various components of Service Manager on dedicated servers to maximize system performance.

Non-Production Environments

The following sections describe some of the common non-production purposes for which you can install Service Manager.

Development Environment

Installing Service Manager in a development environment allows you to evaluate application features and customize your installation prior to deployment in a production environment. In a development environment, you typically install all Service Manager components on one test system with a limited number of users and data.

Test Environment

A test environment is an installation that mirrors your production environment where you can test performance, upgrades, and backup and restore procedures. In a test environment, you typically install Service Manager in the same configuration as your production environment.

Reporting Environment

A reporting environment is an installation that mirrors the data from your production environment that you can use to generate and view reports. In a reporting environment, you typically install Service Manager to synchronize data with your production environment but limit the number of users that access the system.

Components of a Production Environment

A production environment consists of the following components:

Table 1 Components of a production environment

Tier	Requirement	Components
Client tier	Mandatory	web clients (optional) Windows clients
Server tier	Mandatory	Service Manager server
Database tier	Mandatory	RDBMS on separate server (required)
Web tier	Optional	Web application server on separate server Web server on separate server Service Manager `webtier-7.00.war` file deployed
Supporting servers	Optional	Help Server
Additional connections and integrations	Optional	HP products Web services

Client Tier

The client tier consists of two components:

- web client (optional)
- Windows client

The web client allows users to connect to the Service Manager server via a web browser. You must install the web tier to support web clients. You do not need to install or download any additional software on the user's desktop.

The Windows client allows users to connect to the Service Manager server via a dedicated client. You must install the Windows client separately on each system that you want to connect to Service Manager.

See the *What's New in Service Manager 7.00* online help for a list of differences between the web and Windows clients.

Server Tier

The server tier consists of the Service Manager server. The Service Manager server runs the Service Manager applications and manages the connections between the client and web tiers to the database tier.

See the *What's New in HP Service Manager 7.00* online help for a list of changes to the Service Manager server. See the *HP Service Manager 7.00 Upgrade Guide* before upgrading your server.

Database Tier

The database tier consists of one or more supported RDBMS servers. Your Service Manager application data must reside on an external RDBMS server.

For more information, see Database Preparation on page 21.

Web Tier

The web tier is an optional feature that consists of the following components:

- Web application servers
- Web servers
- Service Manager `webtier-7.00.war` file

The web application servers are third-party server software where you deploy the `webtier-7.00.war` file to support connections from Service Manager web clients.

The web servers are third-party server software that provide the HTTP or HTTPS content to Service Manager web clients. Some web application servers also include built-in or bundled web servers.

The Service Manager `webtier-7.00.war` file is a web archive that you must deploy to a compatible web server to support connections from Service Manager web clients.

See the Service Manager Compatibility Matrix for a list of acceptable web application servers and web servers. The HP Support matrices require that you register as an HP Passport user and sign in.

To register for an HP Passport ID, go to:
http://h20229.www2.hp.com/passport-registration.html.

If you already have an HP Passport account, go to:
http://support.openview.hp.com/sc/support_matrices.jsp.

Help Server

The Help Server is a preconfigured web server that provides HTML Help to Service Manager clients and as a stand-alone web page. See Help Server Installation on page 91 for more information on this optional feature.

Additional Integrations

The following HP products are integrated with the HP Service Manager server:

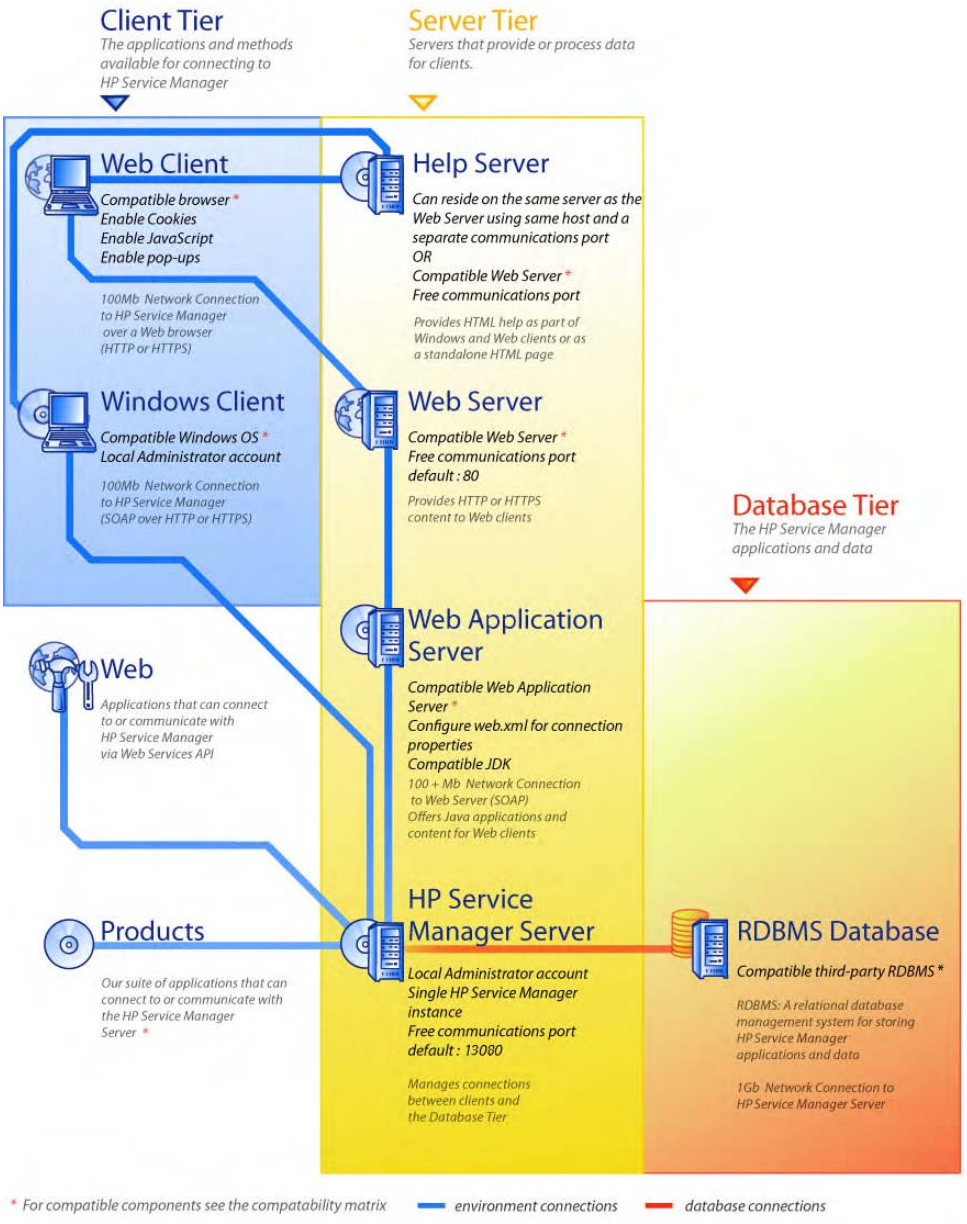
- HP AssetCenter (via Connect-It)
- HP DecisionCenter (via Connect-It)
- HP UCMDB (via Connect-It)
- HP Business Availability Center (via Connect-It)
- HP Configuration Management (via Connect-It)
- HP Operations Manager for Windows (via SCAuto)
- HP Operations Manager for Unix (via SCAuto)
- HP Network Node Manager (via SCAuto)

See the Service Manager Compatibility Matrix for a complete and up-to-date list of HP integrations. The HP Support matrices require that you register as an HP Passport user and sign in.

To register for an HP Passport ID, go to:
http://h20229.www2.hp.com/passport-registration.html.

If you already have an HP Passport account, go to:
http://support.openview.hp.com/sc/support_matrices.jsp.

These components are logically connected as depicted in the following diagram:



Implementation Checklist

The Service Manager 7.00 release offers a wide variety of significant new features. There are various configuration and deployment options that you should consider from the start to maximize the benefits of the product, ease its integration into your environment, and provide a foundation for future support and updates. The checklist below provides of considerations and recommended steps that you can incorporate into your implementation and upgrade plans.

Follow these steps to implement Service Manager:

1. Determine the hardware required for your Service Manager production environment.

   For an estimate of the server hardware required, see the *Basic Server Sizing Worksheet* for instructions. This worksheet is available for download from the Customer Support web site's Knowledge Base.

2. Are you upgrading from ServiceCenter?

   Yes. See the *HP Service Manager 7.00 Upgrade Guide* for instructions.

   Are you migrating from Service Desk to Service Manager 7.00?

   Yes. See the *HP Service Manager 7.00 Migration Guide* for instructions.

3. Configure a connection to your RDBMS.

   See Database Preparation on page 21 for instructions.

4. Install Service Manager server in a development environment.

   See Server Installation on page 33 for instructions.

5. Determine the clients (Windows and/or web) that will connect to Service Manager.

   See the *Choosing Clients Worksheet* for instructions. This worksheet is available for download from the Customer Support web site's Knowledge Base.

6. Do you need to install Windows clients?

   Yes. Review the Windows client installation requirements. See Client Installation on page 63 for instructions.

7 Do you need to support web clients?

Yes. Install the Service Manager web tier in a development environment. See Web Tier Installation on page 73 for instructions.

8 Do you want to provide online help?

Yes. Install the Help Server. See Help Server Installation on page 91 for instructions.

No. Go to step 9.

9 Do you want to make customizations to your Windows clients such as changing the splash screen, adding custom images, adding company branding, adding default settings and connections, and configuring connections to a Help Server?

Yes. Install the Client Configuration Utility. See Client Configuration Utility Installation on page 99 for instructions.

No. Install Windows clients in your development environment, and then go to step 12.

10 Customize a Windows client with the Client Configuration Utility.

See Client Configuration Utility Installation on page 99 for instructions.

11 Deploy the customized Windows client to your development environment.

12 Tailor the Service Manager applications to your environment.

a Add or update the operator records in your development environment with new capability words.

See the Service Manager online help for instructions on adding new operators and a list of new capability words.

b Optimize the Service Manager interface in your development environment. For example, you can add public favorites and dashboards, tailor forms for viewing in the web tier, and tailor forms for accessible-assisted users.

See the Service Manager online help for instructions on adding new favorites and dashboards, tailoring forms for the web tier, and addressing the needs of accessible-assisted users.

c Configure the Service Manager server to accept connections and integrations from external data sources and applications such as Change Calendar, Connect-It, Decision Center, and Web Services.

See the Service Manager online help for instructions on enabling integrations to other applications.

See the Service Manager Compatibility Matrix for a list of applications that can connect to and share data with Service Manager. The HP Support matrices require that you register as an HP Passport user and sign in.

To register for an HP Passport ID, go to:
http://h20229.www2.hp.com/passport-registration.html.

If you already have an HP Passport account, go to:
http://support.openview.hp.com/sc/support_matrices.jsp.

13 Test your development environment.

Review your client and server customizations, client connections, and overall system performance. Correct any problems and retest the development environment.

14 Convert or push your development environment to your production environment.

To convert the development environment connect the Service Manager server to your production environment network and deploy necessary clients to the production environment.

To push the development environment to your production environment, create an unload file of your application and operator customizations and load the file into your production environment system. See the Service Manager online help for instructions.

2 Database Preparation

This chapter explains database configuration requirements that must be met prior to installing the HP Service Manager database into your Relational Database Management Systems (RDBMS).

This chapter should be reviewed by system and database administrators preparing to install the HP Service Manager server.

Topics in this section include:

General Space Requirements

If you are establishing a new Service Manager system, allocate at least 1 GB of data space for a test system. The amount of space necessary for a production system varies depending on the amount of data you need to store and your specific implementation.

- Place all Service Manager data in a dedicated table space within a single-instance of your RDBMS. This table space must contain Service Manager data only. Multiple instances consume more system resources than a single-instance solution.

Server connections

Every Service Manager thread, foreground or background, requires a connection to your RDBMS server. Service Manager background processors require 17 connections to run. When you configure your database, make sure that you allocate enough connections for all of your users. For additional information, refer to your RDBMS vendor documentation.

Login ID

Create a login ID and password for Service Manager to use to connect to your RDBMS server. The login must have CREATE/ALTER/DROP TABLE authority for the target database. When you log in to Service Manager, it creates a table in the default table space defined for that login ID.

- CREATE/ALTER/DROP TABLE authority is only required during installation and creation of new Service Manager tables, and only if you allow Service Manager to issue the DDL to create tables and indexes.

Setting up time zones for RDBMS reporting

If you plan to report on Service Manager data using RDBMS tools, set the `sqltz` parameter in `sm.ini` file before conversion.

For information about using the **`sqltz`** parameter, see the System Parameters topic in the Service Manager Help.

If you use different time zone settings after conversion, the dates contained in reports made by your RDBMS utility may be inaccurate.

Enabling connectivity

Service Manager connects to the database through either an ODBC connection (SQL Server) or through an RDBMS client (Oracle and DB2 Universal).

To set up the connection between the Service Manager application server and your RDBMS, you will need the following information:

- Name of the database.
- Login and password required to connect to the database server. This is the login and password created in Login ID on page 22.

The Service Manager initialization file is called `sm.ini`. It must be present in the Service Manager server `RUN` directory. You can set the Service Manager server parameters in the `sm.ini` file.

After you create the connection using either ODBC or the utilities for your RDBMS client, you can run the configuration utility, which verifies the connection and load the system to the RDBMS.

IBM DB2 Universal Database Preparation

This section outlines the tuning and optimization recommendations when using Service Manager with IBM DB2 Universal Database 8.x for Microsoft Windows and Unix. These recommendations are intended only as a guide and should not be implemented on a production system without extensive testing.

The following recommendations assume the use of SMS table spaces and the implementation of conventional database tuning and performance measures. Actual results may vary on a system-by-system basis based on the tuning expertise available and hardware and software selections.

Complete the following procedures prior to the initial load of your database:

Task 1: Allocate data space large enough to hold your data. See General Space Requirements on page 22.

Task 2: Allocate enough additional server connections for all your users. See Server connections on page 22.

Task 3: Create a login ID and password for Service Manager to use when it connects to your RDBMS server. See Login ID on page 22.

Task 4: If you plan to report on Service Manager data using RDBMS tools, set up time zones. See Setting up time zones for RDBMS reporting on page 23.

A fully qualified DB2 administrator should assist with this preparation.

Page Size

The default page size in DB2 is 4096 bytes (4 KB) Service Manager requires 32768 byte (32 KB) pages. Be sure to create a 32 KB page size buffer pool, table space, and system temporary table space. Using this page size reduces the disk space and the resources needed to perform joins.

Enable the Database for Multipage File Allocation

Enabling multipage file allocation causes DB2 to allocate new data pages in a table space one multipage extent at a time rather than one page at a time, which reduces overhead of large insert operations.

Enable multipage file allocation on SMS table spaces only.

Follow these steps to enable multipage file allocation:

1. As the instance owner, disconnect all applications from the database.
2. Run the following command:

   ```
   db2empfa <dbname>
   ```

Catalog the Database

Follow these steps to catalog the database:

1. Install the DB2 client on your Service Manager server.
2. Catalog the database you want to connect to by using the DB2 client utilities.
3. Use the name you defined when you performed the catalog operation as the database name for the configuration tool.

Code Page Considerations

Create your Oracle or DB2 database with a UTF-8 code page for use with Service Manager. All data passed from Service Manager to the RDBMS client is encoded in UTF-8, therefore using a UTF-8-based RDBMS will reduce overhead for converting data and prevent loss of special characters.

Microsoft SQL Server Preparation

This section provides details on the implementation of the Microsoft SQL Server 2000 and 2005. It builds from the premise that Service Manager and Microsoft SQL server have already been installed. If the SQL server has not yet been installed, specify the desired case sensitivity for sort order during the creation of the database.

Complete the following procedures prior to the initial load of your database:

Task 1: Allocate enough additional server connections for all your users. See Server connections on page 22.

Task 2: Create a login ID and password for Service Manager to use when it connects to your RDBMS server. See Login ID on page 22.

Task 3: If you plan to report on Service Manager data using RDBMS tools, set up time zones. See Setting up time zones for RDBMS reporting on page 23.

Task 4: Tune server data for conversion.

A fully qualified Microsoft SQL server administrator should assist with this preparation.

Limiting the Transaction Log Size for Microsoft SQL Server

During initial system load, Service Manager places a high insert transaction load on your SQL server. To prevent the transaction log from growing too large, set the Truncate Log On Checkpoint option for the target database on your SQL server.

Microsoft SQL Server Connectivity

General connectivity rules:

- The database name entered in the configuration tool must correspond to an ODBC system data source.
- Configure the ODBC data source as a System DSN. Set it up to use:
  - SQL server authentication
  - ANSI quoted identifiers
  - ANSI nulls, paddings, and warnings

Case Sensitivity

Service Manager only supports case sensitivity with Microsoft SQL Server 2000 and 2005 databases. Set the database to the desired configuration when you created it. Service Manager will automatically detect the settings and perform correctly.

If you are loading data from a case-sensitive system there is the potential for some records to be dropped because they will cause a duplicate key error on loading. This is the expected and proper behavior. For example, the sample system contains both the falcon and FALCON operator records. When loading into a case-insensitive server, only the FALCON record loads. The load tries to insert falcon after FALCON, and it is rejected.

Code Page Considerations

SQL Server does not support a UTF-8 code page. Choose a code page that supports most of your required characters.

If you choose a Western European code page, no Eastern European or Asian characters can be stored.

To use HP Service Manager in case insensitive mode, you must select a case insensitive code page on the SQL Server before installing HP Service Manager.

Oracle Server Preparation

Complete the following procedures prior to the initial load of your database:

Task 1: Allocate data space large enough to hold your data. See General Space Requirements on page 22.

Task 2: Allocate enough additional server connections for all your users. See Server connections on page 22.

Task 3: Create a login ID and password for Service Manager to use when it connects to your RDBMS server. See Login ID on page 22.

Task 4: If you plan to report on Service Manager data using RDBMS tools, set up time zones. See Setting up time zones for RDBMS reporting on page 23.

Task 5: Make sure that your tables are set up properly. See Setting Up Oracle Tablespaces and Users on page 28.

Task 6: Define a table space.

Task 7: Set the RDBMS environmental variables.

A fully qualified Oracle administrator should assist with this preparation.

Setting Up Oracle Tablespaces and Users

Most tables on an Oracle server hold less than 50 KB of data. Service Manager sets the initial storage space size when creating the SQL tables.

When manually creating a new Oracle instance for Service Manager:

- Create the database with a block size of 8 KB or a multiple thereof.
- Create a separate table space for the Service Manager data, and make this the default table space for the Service Manager user.
- Set the TEMPORARY table space for the Service Manager user to an appropriate temporary table space.

Set the Oracle Environment Variable

Follow these steps to set your Oracle environment variable:

1. Find the path where your shared libraries are located.
2. Set the environment variable as shown in the following examples. In these examples, the path is set in the environment variable ORACLELIB.

   C shell: **`setenv LD_LIBRARY_PATH $LD_LIBRARY_PATH: $ORACLELIB`**

   Korn shell: **`export LD_LIBRARY_PATH = $LD_LIBRARY_PATH: $ORACLELIB`**

Set the sqldb Parameter

The sqldb parameter in the `sm.ini` file specifies the name of the Oracle database connection. The connection name is defined in the tnsnames.ora file.

- On Unix platforms, the tnsnames.ora file is located in $ORACLE_HOME/network/admin or can be specified using the TNS_ADMIN environment variable.
- On Windows platforms, the tnsnames.ora file is located in the Oracle Home [`%ORACLE_HOME%/network/admin`] directory.

Set Up Oracle Connectivity

Follow these steps to set up connectivity to your Oracle database:

1. Install the Oracle client on your Service Manager server.
2. Configure a connection to the Oracle server in the tnsnames.ora file.
3. In the configuration tool, name the database by using the name you provided in the tnsnames.ora file.

Code Page Considerations

Create your Oracle or DB2 database with a UTF-8 code page for use with Service Manager. All data passed from Service Manager to the RDBMS client is encoded in UTF-8, therefore using a UTF-8-based RDBMS will reduce overhead for converting data and prevent loss of special characters.

Installing the Sample Database

A copy of SQL Express is included on the installation DVD for demonstration purposes only. You will need an enterprise-level RDBMS for use in your development, test, and production systems.

Follow these steps to install the sample database:

1. Log in to the Windows server as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.

   If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

   a. Navigate to the DVD directory.

   b. Open `clickme.htm`.
3. Click **Install SQLServer2005 for use with HP Service Manager for testing purposes only.**

   The SQLServer folder opens.
4. Double-click **SetupSQLServer.bat.**
5. When prompted, press any key to exit the installation.

The sample database is now installed and has the following properties.

Instance Name:	**SM700_DEMO**
Security Mode:	**SQL**
SA password:	**SM7DEMO**
Database Name:	**SM7DEMO**
Collation:	**Latin1_General_BIN**

The out-of-box `sm.cfg` and `sm.ini` files are set up to work with this database. To connect a different database server, edit the configuration and initialization files for that server.

3 Server Installation

You can install HP Service Manager on a Windows or Unix server. This section contains information about installation requirements and how to install the server. For information about starting and stopping servers, see the HP Service Manager to the Service Manager online help.

Topics in this section include:

Refer to the *HP Service Manager Upgrade Guide* for instructions on how to upgrade the server.

For instructions on how to install the Knowledge Management search engine, see Search Engine Installation on page 111.

Before you can install the Service Manager server on AIX HP-UX and Solaris systems, you must install JVM 1.5. Refer to the Java documentation for instructions on how to install JVM.

Installing the Server on Windows

For complete information about current platform requirements and compatibility, go to the Customer Support web site at **http://www.hp.com/managementsoftware/support**.

Installation Requirements

- Compatible Windows operating system (See the Service Manager Compatibility Matrix. *)
- The most current Windows updates for your operating system
- 1 GB RAM minimum recommended
  - For production purposes, RAM is based on the expected user load.
- Local administrator account to install on the Windows server

You cannot run the Service Manager service if you install the system from a root account unless you give ownership and permissions to the Service Manager administrative user. Create a user ID that will own Service Manager.

* The HP Support matrices require that you register as an HP Passport user and sign in.

To register for an HP Passport ID, go to:
http://h20229.www2.hp.com/passport-registration.html.

If you already have an HP Passport account, go to:
http://support.openview.hp.com/sc/support_matrices.jsp.

System Requirements

Make sure that your system meets the following requirements before installing Service Manager.

Table 1 Windows system requirements for server installation

Requirement	Resources needed
Disk space	400 MB for server installation
TCP/IP service name	During the Service Manager server configuration, the system prompts you for a valid TCP/IP port. The port number you choose for Service Manager must be greater than 1024.

Server Resources

The Service Manager server uses the following resources.

Table 2 Service Manager server system resources

Resource	Definition
Processes	A process starts for each sm command line in the `sm.cfg` file. By default each process is limited to 50 threads. Each user configuration or background process uses one thread. • If the background processes are started by using the sm system start command in the `sm.cfg` file, the will all be thread owned by this sm process. • If the background processes are launched for a user session inside Service Manager, they will be threads under the same Thread Controller process that owns the user session thread. To allow more than 50 concurrent user sessions, refer to the server scaling topics in the online help.
Shared Memory	A server uses approximately 48 MB of base shared memory per system plus 3 MB for each 30 users. The `shared_memory` parameter in the `sm.ini` file specifies the amount of shared memory that Service Manager allocates.

Service Manager Server Setup

Follow these steps to install the Service Manager server:

1. Log in to the Windows server as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.

   If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

   a. Navigate to the DVD directory.

   b. Open `clickme.htm`.
3. Click **Install HP Service Manager Server for Windows**.

   The Service Manager Server setup wizard opens.
4. Click **Next** to read and accept the licensing agreement.
5. Select the **I accept the terms in the License Agreement** option.

   The **Next** button becomes active.
6. Do one of the following:

   - Click **Next** to accept the default installation folder.

     The default installation folder is:
     `C:\Program Files\HP\Service Manager 7.00\Server\`

     Do not install the server over existing versions of ServiceCenter or Service Manager. You must install into a new folder.

   - Click **Browse** to choose a different installation location.

     You must install the Service Manager server in a folder containing only ASCII characters in the folder name. The server cannot start if installed in a folder with non-ASCII characters in the folder name.

     See the *HP Service Manager 7.00 Upgrade Guide* for more information about upgrading the server from previous versions.
7. Click **Next** to prepare the installation process.

   The summary information page opens.

8 Click **Install** to begin copying the installation files.

You can stop the installation by clicking **Cancel**.

The Completing the Service Manager Server Setup wizard page opens when the installation is complete.

The Autopass installation box opens and installs autopass automatically. Do not click Finish until the autopass installation is complete.

9 To automatically configure the server, select the **Configure Server** option.

You can also configure the Service Manager server by editing the `sm.ini` configuration file. See Server Configuration on page 60.

10 Click **Finish** to exit the Setup wizard.

The server installation is complete.

If you selected the **Configure Server** option, the Configuring HP Service Manager Server wizard opens. Complete the steps in Server Configuration on page 60.

11 After the configuration steps are complete, close the browser window, or click the next item you want to install.

Uninstalling the Windows Server

You can uninstall the server in one of two ways:

- Uninstall the server from Add/Remove Programs. See Uninstalling from Add/Remove Programs on page 38.
- Uninstall the server from the Service Manager installation DVD. See Uninstalling from the Installation DVD on page 38.

The server uninstall process intentionally preserves all database files and server configuration settings. You must manually remove these files if you are completely uninstalling Service Manager from your system. HP recommends that you delete the entire server installation folder if you do not want to preserve any existing server data.

Uninstalling from Add/Remove Programs

Follow these steps to uninstall the server from Add/Remove Programs:

1. Stop the Service Manager service.

   For information about stopping the server, refer to the HP Service Manager online help.

2. From the Windows main menu, click **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**.

   The Add/Remove Programs dialog box opens.

3. Scroll to the Service Manager server program and click **Remove**.

   A message prompts you to verify removing the program.

4. Click **Yes**.

   The process takes several minutes. Additional messages indicate the progress of the uninstall.

   When you complete the uninstall, you return to the Add/Remove Programs dialog box.

5. Click **Close**.

Uninstalling from the Installation DVD

Follow these steps to uninstall the server from the installation DVD:

1. Stop the Service Manager service.

   For information about stopping the server, refer to the HP Service Manager online help.

2. Insert the Service Manager installation DVD into the appropriate drive of the server.

   If you are installing on a system that has auto-run enabled, the DVD browser starts automatically.

If auto-run is disabled, you can manually start the DVD browser by using one of the following methods:

- Use Windows Explorer to navigate to the DVD directory. Double-click `autorun.exe`.
- Start the Service Manager installation from the Windows command prompt. Type the following:

  ```
  D:\>autorun
  ```

  where D identifies the DVD drive. Substitute your DVD drive identifier.

3 Click **Install Server**.

The Service Manager installation wizard opens.

4 Click **Next**.

The Remove the Program window opens.

5 Click **Remove**.

The process takes several minutes. Additional messages indicate the progress of the uninstall. After the operation is complete, the InstallShield Wizard Completed page opens.

6 Click **Finish**.

7 Click **Exit Install** to close the DVD browser.

Installing the Server on Unix

For complete information about current platform requirements and compatibility, go to the Customer Support web site at **http://www.hp.com/managementsoftware/support**.

System Requirements

Make sure that your system meets the following requirements before installing Service Manager.

Table 3 Unix system requirements for the server installation

Requirement	Resources needed
Disk space	400 MB for server installation
Java	Service Manager requires Java version 1.5 to be installed on the system. Either the JDK or JRE can be used and Service Manager will search for it at install time. Users running Linux on Intel x86 platforms do not need to install Java; Service Manager includes Java for that platform.
TCP/IP service name	During the Service Manager server configuration, the system prompts you for a valid TCP/IP port. The port number you choose for Service Manager must be greater than 1024.
User and group ID	Before installing Service Manager, create a new Unix user name and group ID exclusively for administrators who install, run, and maintain Service Manager. Service Manager uses the `setuid` feature of the Unix operating system to maintain the security of the file system and Unix resources. Create a user name that is different from the names of Service Manager executables. For example, sm is inappropriate. Use the new administrative user name to install Service Manager.

You cannot run the Service Manager service if you install the system from a root account unless you give ownership and permissions to the Service Manager administrative user. Create a user ID that will own Service Manager.

Server Resources

The Service Manager server uses the following resources.

Table 4 Service Manager server system resources

Resource	Definition
Processes	A process starts for each sm command line in the `sm.cfg` file. By default each process is limited to 50 threads. Each user configuration or background process uses one thread. • If the background processes are started by using the sm system start command in the `sm.cfg` file, the will all be thread owned by this sm process. • If the background processes are launched for a user session inside Service Manager, they will be threads under the same Thread Controller process that owns the user session thread. To allow more than 50 concurrent user sessions, refer to the server scaling topics in the online help.
Semaphores	Service Manager uses 16 semaphores, regardless of the number of users logged on to the system.
Shared Memory	A server uses approximately 48 MB of base shared memory per system plus 3 MB for each 30 users. The `shared_memory` parameter in the `sm.ini` file specifies the amount of shared memory that Service Manager allocates.

Other Information

Review the following information before you install Service Manager.

Table 5 Additional Unix requirements

Topic	Description
ANSI Terminal	The installation scripts assume that you are running on an ANSI terminal. If the scripts run on a non-ANSI terminal (such as the hpterm), the results may be undesirable.
Root Access	These installation procedures may require root access for system kernel modifications or for initially mounting the Service Manager DVD, but not for installing the software.

Preliminary Steps

The following convention identifies variables that may change depending on your particular installation:

```
<variable>
```

As you go through the installation steps and see a variable in brackets, remember that you can assign a different value to the variable. Do not type the brackets (< >) as part of the command.

Prior to installation, determine where to install Service Manager.

The installation script creates the directory, but the user running the script must have sufficient permissions to create the new directory.

Your library path and path variables need to include the appropriate RDBMS client directories. You need to add the RDBMS client directories and `<sc>/RUN` to the library path before you can start Service Manager with the `smstart` command. You can add these directories as part of the shell login or part of a profile script.

You can provide the necessary library path by modifying the following environment variables.

Table 6 Environmental variables

OS	Environmental variable to set
AIX	LIBPATH
HP-UX	SHLIB_PATH
Linux and Solaris	LD_LIBRARY_PATH

Refer to your operating system documentation for more information on how to set environment variables.

Add the Service Manager RUN directory to beginning of the existing value string. If a statement does not exist, create a new statement that points to the Service Manager RUN directory.

For example: On Linux, using the bash shell, the following commands added to the `~/.profile` file set the library path properly:

```
set LD_LIBRARY_PATH=.:<sm>/RUN:$LD_LIBRARY_PATH
export LD_LIBRARY_PATH
```

In this example, replace `<sm>` with the base directory of the Service Manager installation.

Installing the Server

Follow these steps to install the Service Manager server:

1. Before installing the server, install AutoPass by following the instructions in Installing AutoPass on page 51.
2. Mount the DVD, and change directories to the mount location.
3. Run the executable script that matches your system, for example: `./setupsolaris -console` for Solaris systems or `./setupaix -console` for AIX systems.
4. At the installation script prompt, you must Accept in order to proceed.
5. At the installation script prompt, type the installation directory address where you want to install Service Manager.

   Do not install the server over existing versions of ServiceCenter or Service Manager. You must install into a new folder.

   The system validates any directory name that you specify. If you specify an invalid directory, the installation generates an error message.

   Do not use the "~" symbol when entering the path. InstallShield treats this as a regular character, and will create a directory with the name '~'.

6. The system takes several minutes to read the contents of the DVD, uncompress the files, and complete the server installation in the specified directory.
7. Click **Finish** to exit the Wizard.

8 To automatically configure the server, run the configure script, which is found in your `<Install path>/`directory to update the `sm.cfg` file. Go to Server Configuration on page 60 for instructions.

You can also configure the Service Manager server by editing the `sm.ini` configuration file. See Server Configuration on page 60.

Uninstalling the Service Manager Server

Follow these steps to uninstall the Service Manager server:

1 Stop the Service Manager server.

2 Delete all the Service Manager server directories and subdirectories.

Kernel Resource Requirements

Service Manager server requires both shared memory and semaphores to run. On most Unix systems, you can configure these resources through kernel configuration parameters.

The kernal configuration supports the use of Unix IPC (inter-process communication) functions by Service Manager. Each new connection spawns a new **sm** process. All these processes then use IPC to talk to each other and to manage shared resources.

The following kernel resource requirements are the minimum values required for running a Service Manager server. Add these values to the current or default settings to run Service Manager concurrently with other programs or products on your system.

For all platforms, shared memory maximum units are expressed in megabytes (MB). For example, the `shmmax` value for an HP-UX server with 30 users is 11534336 bytes (11 MB).

AIX Server

You do not need to adjust your kernel configuration on AIX systems because they are self-adjusting.

HP-UX server

Shared Memory

Table 7 Shared Memory requirements

Kernel setting	Recommended	Calculation
shmem	1 byte	
shmmax	51 MB	48 MB for each Service Manager system + 3 MB per 30 users
shmmni	1 byte	per Service Manager system

Processes

Table 8 Processes requirements

Kernel setting	Calculation
maxuprc	5 + 1 per background scheduler + 1 per Service Manager user
nproc	5 + 1 per background scheduler + 1 per Service Manager user

IPC Parameters

Use the SAM utility to configure kernel IPC parameters on HP-UX.

You need to be a root user or have `superuser` capabilities before you start the SAM utility.

Before you start SAM, define the `DISPLAY` environment variable. For example, if the name of your host (or X terminal) is eagle, type the following command at your shell prompt.

- If you use the Bourne or Korn shell:

```
DISPLAY=eagle:0 #
export DISPLAY
```

- If you use the C Shell:

```
setenv DISPLAY eagle:0
```

Follow these steps to configure kernel IPC parameters:

1. Start SAM.
2. Select the Kernel Configuration option from the main menu.
3. Select the Configurable Parameters option.
4. Modify the kernel parameters as specified in IPC Parameters on page 46.

When you finish modifying the necessary parameters, the SAM utility guides you through the steps to restart the system. Restarting is necessary to activate the changes.

Maxdsiz Parameter

The HP-UX **maxdsiz** parameter sets the maximum data segment size for each process. This data segment can consist of virtual memory (swap space) and real memory. The system attempts to meet your requirements with real memory. It uses swap space to make up the difference until it reaches the **maxdsiz** limit.

Each Service Manager user requires approximately 1 MB of physical memory (resident set size on Unix). You must set the server platform memory size to support the maximum number of users that log in to Service Manager concurrently. For example, if you have 100 Service Manager users, set the **maxdsiz** parameter to 100 MB or more.

You do not need to increase the value of the **maxdsiz** parameter above the number of users on the system unless you have processes that use large amounts of static data storage space. Do not set the **maxdsiz** value to the maximum size of 944 MB because private memory-mapped files and shared-library data also occupy space in the dynamic storage region.

The following values are acceptable.

Table 9 Maxdir settings

Maxdsiz setting	Value
Default	0x4000000 (64 MB)
Maximum	0x3B03100 (944 MB)
Minimum	0x400000 (4 MB)

The system returns an error to the calling process if the **maxdsiz** value is too low for the number of users and running processes. A setting that is too low may cause the process to terminate.

You can change the **maxdsiz** parameter by using the SAM utility process described in IPC Parameters on page 46.

Linux Server

The default shared memory limit (both SHMMAX and SHMALL) is 32 MB, but it can be changed in the `proc` file system without restarting the system. For example, to specify 128 MB:

```
# echo 134217728 >/proc/sys/kernel/shmall
# echo 134217728 >/proc/sys/kernel/shmmax
```

You can use **sysctl.conf** to control these parameters. Add the following lines to the/**etc/sysctl.conf** file:

```
kernel.shmall = 134217728
kernel.shmmax = 134217728W
```

This file is usually processed at startup, but **sysctl.conf** can be called later.

The Linux security feature, **exec-shield-randomize**, must be turned off when you start up the Service Manager server. The out-of-box `smstart` script sends you an error message and does not start the server if **exec-shield-randomize** is

on. However, if you use your own script instead of `smstart`, be aware that the server can start if **exec-shield-randomize** is turned on, but it will terminate later.

The/**proc/sys/kernel/exec-shield-randomize** file controls whether Exec-Shield randomizes VM mapping. You can turn off **exec-shield-randomize** by using any of the following options:

- Use the following command:

  ```
  echo 0 >/proc/sys/kernel/exec-shield-randomize
  ```

  The default value for/**proc/sys/kernel/exec-shield-randomize** is 1.

- Include the following line in the/**etc/sysctl.conf** file:

  ```
  kernel.exec-shield-randomize=0
  ```

- Include the following line in the/**etc/grub.conf** file:

  ```
  exec-shield=0
  ```

Solaris Server

Shared Memory

Table 10 Solaris shared memory requirements

Kernel setting	Recommended	Calculation
forceload:sys/shmsys		
shmsys:shminfo _shmmax	51 MB	48 MB for each Service Manager system plus 3 MB for each 30 users
shmsys:shminfo _shmmni	1 byte	for each Service Manager system

Processes

Table 11 Solaris processes requirements

Kernel setting	Calculation
maxuprc:	5 + 1 per background scheduler + 1 per Service Manager user
max_nprocs:	maxuprc

Number of File Handles

The default upper limit for file descriptors is 256. You must increase this value to at least 512.

Follow these steps to increase the upper limit:

1 Log in to the Solaris server.

2 Run **ulimit -a**:

```
bash-3.00$ ulimit -a
core file size        (blocks, -c) unlimited
data seg size         (kbytes, -d) unlimited
file size             (blocks, -f) unlimited
open files                    (-n) 256
pipe size          (512 bytes, -p) 10
stack size            (kbytes, -s) 8192
cpu time             (seconds, -t) unlimited
max user processes            (-u) 29995
virtual memory        (kbytes, -v) unlimited
```

To increase this value to 512, type the following command:

```
$ ulimit -n 512
```

IPC Parameters

You can control kernel parameters with the **/etc/system** file. The operating system reads the **/etc/system** file at initialization time to define the initial kernel parameters.

Follow these steps to configure kernel IPC parameters:

1. Modify the **/etc/system** file to alter any kernel parameters. By default, the IPC system is not enabled. Append the following statements to the end of the file:

```
*/etc/system sample file
* Customize kernel parameters
* These statements initialize the IPC subsystem
forceload: sys/shmsys
forceload: sys/semsys
forceload: sys/msgsys
*
* SEM
set semsys:seminfo_semmap=60
set semsys:seminfo_semmni=100
set semsys:seminfo_semmns=1000
set semsys:seminfo_semmnu=30
set semsys:seminfo_semmsl=50
set semsys:seminfo_semopm=10
set semsys:seminfo_semume=15
set semsys:seminfo_semvmx=32767
set semsys:seminfo_semaem=16384
*
* SHM
set shmsys:shminfo_shmmax=67108864
set shmsys:shminfo_shmmni=100
set shmsys:shminfo_shmmin=1
set shmsys:shminfo_shmseg=10
*
set max_nprocs=1200
```

2. Restart the system to activate the changes. Type:

```
cd/
usr/sbin/shutdown -i6 -y -g0
```

Installing AutoPass

On Windows platforms, AutoPass installs as part of the server installation. On Unix platforms, you must install it manually before you can run Service Manager.

Preparation

You need to install the appropriate operating system patches before you can install AutoPass.

HP-UX 11.0

- PHSS_26945 1.0 HP aC++ -AA runtime libraries (aCC A.03.37)
- PHCO_27731 1.0 libc cumulative patch

HP-UX 11.11

- PHSS_22898 1.0 HP aC++ -AA runtime libraries (aCC A.03.30)
- PHCO_24400 1.0 libc cumulative patch

Solaris

32-Bit Shared library patch for C++

- Sun OS 5.7: Patch-ID# 106327-22
- Sun OS 5.8: Patch-ID# 108434-14
- Sun OS 5.9: Patch-ID# 111711-09

Installation

AutoPass installers for each operating system are included on the installation DVD. The AutoPass files are stored on the Service Manager DVD in the `Server/Unix/autopass` directory.

Install the appropriate file from this location onto your system by using the normal software installation mechanism provided by your operating system.

Follow these steps to install AutoPass:

1 Run the following command as "root".

HP-UX

```
swinstall -s <full-path-to-depot-filename>
```

Be sure to use the appropriate `.depot` file for your version. IPF32 indicates Itanium, other HP-UX files are for PA-RISC.

Solaris

```
pkgadd -d <full-path-to-pkg-filename>
```

Be sure to use the appropriate `.pkg` file for your version.

Linux

```
rpm -Uhv <full-path-rpm-filename>
```

Be sure to use the appropriate `.rpm` file for your version.

AIX

```
installp -a -d <full-path-to-bff-filename> HPOvLIC
```

Be sure to use the appropriate `.bff` file for your version.

If you plan to turn on a 60-day temporary evaluation license on Unix, you must make LicFile.txt writable before running the **`sm -instantOn`** command. The default location for this file is: /var/opt/OV/HPOvLIC/LicFile.txt For more information, see Obtaining Product Licenses on page 54.

Uninstalling AutoPass

AutoPass is not automatically uninstalled when Service Manager is removed.

If you remove AutoPass, Service Manager and other applications that use AutoPass will no longer function.

Run the following commands as "root" to remove Autopass:

Solaris

```
pkgrm HPOvLic
```

HP-UX

```
swremove HPOVLIC
```

Linux

```
rpm -e HPOvLic
```

AIX

```
installp -u HPOvLIC
```

Obtaining Product Licenses

A license key password is required to use Service Manager. Licensing is managed with AutoPass. When the Service Manager software is installed and used for the first time, a 60-day trial license is granted (Instant-On). Within this 60-day period, you must obtain a perpetual license key password or a trial evaluation extension to continue using the product.

On Windows platforms, AutoPass installs as part of the server installation. For a Unix platform, AutoPass must be installed manually. The instructions for installing AutoPass on Unix are provided in Installing AutoPass on page 51.

After installing the server you can install a evaluation license by running the command "**`sm -instantOn`**", which installs an evaluation license valid for 60 days.

To run instantOn on Unix platforms, you must make `LicFile.txt` writable. For more information, see Saving Your License Key/Password File to Your System on page 58.

During the last ten days of the evaluation period, every user who wants to log in will see a license expiration warning message. The system administrator of the product must go to the webware site (**www.webware.hp.com**) and download the perpetual license to use the product.

If you have not purchased all modules and you would like to consider adding some to review during the Instant-On process, please contact your HP account manager.

To request perpetual license passwords, you need the following items:

- Entitlement Certificate, which contains the HP product number and order number.
- IP address of the server.
- Your company or organization information.

The best way to obtain product licenses is through the website: **www.webware.hp.com**. You can also contact the HP Password Center via fax, email, or phone. This information is available on the Password Request Form and the License Entitlement Certificate. In order to obtain product licenses, you need the License Entitlement Certificate.

License Entitlement Certificate

HP Order Number:
Product Number:
Product Name:
Quantity Ordered:

Your OpenView product may be currently running under an initial 60-day *Instant On*. This *Instant On* expires 60 days from the date of installation, and after this your product may be automatically disabled. To ensure uninterrupted availability of this product, please obtain and install your permanent password before the 60-day *Instant On* period has expired.

Password Retrieval
Check your product's documentation for specific instructions on password installation. Many products include the **Autopass** feature which simplifies password redemption by providing direct password retrieval and installation.

If this feature is not available, or if the system does not have direct internet access, permanent passwords can also be redeemed on-line at **http://www.webware.hp.com,** or by contacting the HP Password Center, using the contact information provided below.

Your permanent password will limit the number of users to the quantity of licenses that you purchased.

Hewlett-Packard Password Center

To obtain your password on-line, 24 hours a day, 7 days a week:

http://www.webware.hp.com

North/South America		Europe/Africa		Asia/Pacific	
Fax:	+1 801.431.3654	Fax:	+31 (55) 543.4645	Fax:	Outside Japan: +81 (3) 3227.5238 Within Japan: +81 (03) 3227.5238
Phone: (US & Canada)	+1 801.431.1597 +1 800.326.0411	Phone:	+31 (55) 543.4642	Phone:	Outside Japan: +81 (3) 3227.5672 Within Japan: +81 (03) 3227.5264
E-mail:	americas_password@cnd.hp.com	E-mail:	europe_password@cnd.hp.com	E-mail:	asia_password@cnd.hp.com
Monday - Friday: 8:00 AM - 8:00 PM EST		Monday - Friday: 9:00 AM - 6:00 PM CET		Monday - Friday: 9:00 AM - 5:00 PM Japan Local Time	

Your right to use the Software, as well as important restrictions on the use, transfer, and copying of the Software, are set forth in the Software Licensing Terms ("Agreement"), which is included with this certificate. You must review and agree to the Agreement prior to using the Software.

Retain this Certificate as your proof of License to Use.

Using the Web Site

Follow these steps to obtain your product licenses:

1. Go to **www.webware.hp.com**.
   This links you to the web site - HP Password delivery service.
2. Select **Generate password(s)** on the Webware licensing menu.
3. Type your order number in the **Order number** text box. You order number is found on the License Entitlement Certificate - Password Request Form (HP Order Number).
4. Click **Next**.
5. Select the product you are requesting a password for on the Product selection form by clicking the check box for the product.
6. Click **Next**.
7. Select the product(s) for which you want to request password(s).
8. Click **Next**.
9. For each product you selected, type the number of Licenses To Use (LTUs) - limited by number of LTUs available for the order:
   - Server host name
   - IP address for the system where the software is installed
10. Click **Next**.
11. Provide all required information on the Member sign-in form.
12. Click **Sign-In**.
13. Provide all required information on the Address information form.
14. Click **Next**.
15. The Receive Permanent Password Certificate form displays a copy of your Permanent Password Certificate. It also offers additional delivery options for your certificate.

You should also receive an email containing your password certificate(s) and license key/password file attachment(s) similar to the following example.

HEWLETT PACKARD

Permanent Password Certificate

Do Not Discard - Retain for Reference

Issue Date:	5/24/2007	Send To:	Jack j. Smith
Confirmation Number:	5227953		Smith Enterprises
Session ID:	1626517		12 smith drive
HP Order number:	TESTLAB		
Product Number:	J8888X		
Product Name:	HP TEST product for Lab Development Use		San Diego, CA 92100
Product Version:	1.0		U.S.A.
License Type:	Node Locked	Fax:	

Server IP Address:	15.4.45.33	Expiration Date:	Not Applicable

Number of licenses encoded in these passwords: 1

The password(s) shown below are intended for reference purposes only. Files containing the password string(s) are automatically sent by e-mail to the requestor.

If the password file is not readily available, the license key(s) shown below may be entered manually. Because many e-mail applications insert extra carriage returns into long license key strings, license passwords may be broken up by carriage returns into multiple lines. To address this possibility, the marker string of <end> is appended to the end of every password. This provides a way to clearly identify individual passwords. The <end> markers are not part of the password string, and must be removed and replaced by a single carriage return. Passwords must each be formatted as a single line, and must not contain any embedded carriage returns.

9CRA FRVX H9PQ CHU3 V2A4 HWWR Y9JL KMPL B89H MZVU GX9V 2C89 VEMU MA8S
UNYW EX9B SE83 HVLJ EFV6 DS42 P6CJ 2KKC QER9 LBWK AARX CL4R M8NX 32C2
JSDG C9AA N4ZF BGWB VKD9 9VAB 8QMQ 3HVB 58GY VFM3 "TESTLAB" <end>

To eliminate chances of error, it is highly recommended that license/password(s) are installed directly from a license key/password file, rather than attempting to manually transcribe and edit them from the license/password certificate. Each license key/password file can be copied to the appropriate target system and then directly imported and installed by the application. No editing of the license key/password file is required.

Saving Your License Key/Password File to Your System

As part of the process of obtaining a permanent AutoPass license, a `.dat` file or several `.dat` files were sent to the email address you provided. These files contain the licensing data required to use the appropriate Service Manager modules. After you receive these files, you must move them to the Service Manager server.

Windows

Follow these steps to save your license key/password file to your system:

1. Rename the `.dat` file to a `.txt` file so that you can open it with a text editor.

   Example: from `J8888X1624204.dat` to `J8888X1624204.txt`

2. Create a file, `LicFile.txt`, to store the license data in. The default location for this file is:

   ```
   C:\Program Files\Common Files\Hewlett-Packard\HPOvLIC
   \data
   ```

   You need to create this file only once. If you request any additional licenses, you should append those licenses to the end of this file.

3. Copy the license data from the license file and paste it in the `LicFile.txt` you created.

Unix

This procedure must be performed by a user with root access.

Follow these steps to save your license key/password file to your system:

1. Rename the `.dat` file to a `.txt` file so that you can open it with a text editor.

   Example: from `J8888X1624204.dat` to `J8888X1624204.txt`

2. Create a file, `LicFile.txt`, to store the license data in. The default location for this file is:

   `/var/opt/OV/HPOvLIC/LicFile.txt`

   > You need to create this file only once. If you request any additional licenses, you should append those licenses to the end of this file.

   Copy the license data from the license file and paste it in the `LicFile.txt` you created.

3. Save the file `LicFile.txt`.

If you plan to turn on a 60-day temporary evaluation license on Unix, you must make `LicFile.txt` writable before running the **`sm -instantOn`** command. For more information, see Obtaining Product Licenses on page 54.

Server Configuration

You can customize your Windows and Unix server installation by modifying the HP Service Manager initialization file (`sm.ini`).

A complete list of the parameters stored in the `sm.ini` file is available in the Service Manager Help.

You can configure the startup parameters that the Windows service uses to start Service Manager by editing the configuration file (`sm.cfg`). Use a text editor to open and modify those files.

Using the Configuration Tool

The configuration tool starts automatically during your Windows server installation, if you selected the **Configure Server** option

Follow these steps to configure the server:

1 Run the Configure Server tool. The

2 Specify the listener ports.

Table 12 Listener Port Parameters

Parameter	Default	Description
HTTP Port (system)	13080	The communication port number to which you want Service Manager to listen to client connection requests.
Enable HTTPS Port		Select this option to enable an HTTPS port.
HTTPS Port		The communication port number to which you want Service Manager to listen to secure client connection requests.

3 Specify the database type and connection information.

Table 13 Database type and connection information

Parameter	Description
Database Type	The database you want to use to store your data.
SQL Database Name	• SQL server: the ODBC DSN name • Oracle: the entry in tnsnames.ora • DB2: the dbname
SQL User	The user that Service Manager should connect to your Database with.
SQL Password	The password for the user that Service Manager should use to connect to your database with.

You must change the Service Manager service name if you are installing multiple instances of Service Manager server on the same machine. You must provide each Service Manager server instance with a unique service name.

4 Verify the connection to confirm that Service Manager can connect to the database.

5 Upload the demo data, if desired.

Uploading the demo data also uploads the out-of-box 7.00 applications. You will want to install these if you are not upgrading from ServiceCenter.

You must start the server before users can access Service Manager. For information about starting the server, refer to the HP Service Manager online help.

Setting Up the Server for Languages Other than English

You can change the default from English by editing the Service Manager initialization file in a text editor.

The `-language` parameter sets the default code page to be used when exporting or importing data to or from external data sources.

Follow these steps to change the default language:

1. Using a text editor, open the Service Manager initialization file from the Service Manager RUN directory.
2. Look for the `language:` parameter, and replace the ISO-code for English with a new language code.
3. Save the changes and close the file.

For a list of supported languages, refer to the Compatibility Matrix on the Customer Support web site. The HP Support matrices require that you register as an HP Passport user and sign in.

To register for an HP Passport ID, go to:
http://h20229.www2.hp.com/passport-registration.html.

If you already have an HP Passport account, go to:
http://support.openview.hp.com/sc/support_matrices.jsp.

4 Client Installation

You can only install an HP Service Manager Windows client on a Windows workstation. You can support clients running on other operating systems by installing the Service Manager web tier. This section contains information about installation requirements and how to install the Windows client.

Topics in this section include:

Installing the Service Manager Windows Client

You must have local administrator privileges to install the Service Manager client.

The Windows client requires that the workspace and configuration folders are writable. The client workspace and configuration information is stored, by default, in the following directory:
`C:\Documents and Settings\user_name\Service Manager`.

Upgrading the Windows Client

You cannot upgrade previous Service Manager clients to the Service Manager 7.00 Windows client. You must install the Service Manager 7.00 Windows client in a new folder. HP recommends that you remove previous Service Manager clients, but it is not required.

Make a backup of any customized Help files you have created for your Service Manager clients. The installer for the Service Manager 7.00 Windows client overwrites any customized help from prior clients.

Installation Requirements

Table 1 Windows client installation requirements

Requirement	Minimum	Recommended
OS	Windows 2000	Windows 2000 or XP
CPU	Pentium III 650Mhz	Pentium IV or Celeron 2.4 Ghz
RAM	256 MB	384 MB
HD	150 MB Help Server installed	150 MB with Help Server installed 300 MB with documentation installed
Resolution	800 x 600 (16 colors)	1280 x 1024 (256 colors)
Network	100 Megabit	100+ Megabit
Login account	Local administrator account	Local administrator account

Service Manager Client Setup

The Service Manager Windows client setup displays in the same language as the operating system.

Follow these steps to install the Service Manager Windows client:

1. Log in to the Windows server as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.

   If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

   a. Navigate to the DVD directory.

   b. Open `clickme.htm`.
3. Click **Install Windows Client**.
4. The Service Manager Client Setup wizard opens.
5. Click **Next** to read and accept the licensing agreement.

6 Select the **I accept the terms in the License Agreement** option.

The **Next** button becomes active.

The Select Installation Folder page opens.

7 Do one of the following:

a Click **Next** to accept the default installation folder.

The default installation folder is:
`C:\Program Files\HP\Service Manager 7.00\Client`

b Click **Browse** to choose a different installation location.

8 Click **Next** to select the client features you would like to install.

9 Click **Next** to prepare the installation process.

The Summary page opens.

10 Click **Install** to begin copying the installation files.

You can stop the installation by clicking **Cancel**.

The Completing the Service Manager Client Setup wizard dialog box opens when the installation is complete.

11 Click **Finish** to exit the Setup wizard.

The client installation is complete.

12 Close the browser window, or click the next item you want to install.

Defining a New Client Connection

The first time you access the client, the Connections window opens letting you define a connection to a Service Manager host server. You can add and save multiple connection settings from the Connections window.

You must set your connection to an active server process. By default, these are are follows.

- A client listener on ports 13080 (http) and 13443 (https/SSL) for HTTP clients, including Windows, web, and SOAP-API.
- A special listener on port 12690 for SCAuto

If your server setup does not use the default settings, you must set the client to connect to the server.

Follow these steps to define a new client connection:

1 From the Windows main menu, click **Start** > **Programs** > **Service Manager Client** > **Service Manager Client**.

The Connections window opens.

2 Click **New**.

The Connections window displays a new node in the Connections pane.

3 Type or select the connection parameters.

Table 2 Windows client connection parameters

Parameter	Default option	Description
Name	New_configuration	The name of this configuration.
User name	User name of the Windows user currently logged on.	The name that you use to log in to the server.
Password	blank	The password that you use to log in to the server.
Remember my password	False	An option for the system store your password.
Automatically login	False	An option to log in automatically when you start the Service Manager client.
Server host name	localhost	The name of the server that hosts the Service Manager service.
Server port number	13080	The port number that your computer uses to connect with the server.
Language	blank	The language to use for this session (can differ from the language set on the computer).
Connection identified by a color	blank	An option to change the background color of your connection.

4 Click **Advanced** to set other connection options.

The advanced features are optional.

Table 3 Windows client advanced connection parameters

Parameter	Description
Compress SOAP messages	An option that compresses SOAP messages using GNU zip (gzip) encoding. This can reduce the amount of data transmittal to and from the server.
Use SSL Encryption	An option that uses a Secure Socket Layer (SSL) encryption tool to protect your data when transmitting it over the network.
Trace SOAP traffic	An option that logs SOAP messages for debugging.

You must define a valid CA certificates file to enable SSL encryption. A sample CA certificate file called cacerts is included with the client installation. The default location of the cacerts file for a windows installation is:
`C:\Program Files\HP\Service Manager 7.00\Client\plugins\com.hp.ov.sm.client.common_7.00`

5 Click **OK** to add advanced features.

6 Click **Apply** to add the connection.

7 To add additional connections, repeat step 2 through step 6.

For additional information about configuring the Windows client, see the Service Manager Help.

Connecting to a Service Manager server

You can connect to multiple servers from one Service Manager client. Each connection opens in its own window.

Follow these steps to connect to a Service Manager server:

1. From the Windows main menu, click **Start** > **Programs** > **Service Manager Client** > **Service Manager Client**.

   The Connections window opens.

2. Do one of the following:

   - Double-click a connection.
   - Click a connection and then click **Connect**.

Installing a Shared Service Manager Client

You can install the Service Manager client on a network share and have multiple users run from the shared client installation. In a shared client configuration, you can configure each user to have their own local settings or force users to use common settings. The Service Manager server tracks each client connection separately regardless of its source.

Follow these steps to install a shared instance of the Service Manager client:

1. Install the Service Manager client on a network server.

   For more information, see Installing the Service Manager Windows Client on page 64.

2. Create a Windows network share to the folder where you installed the Service Manager client, and grant users access to the network share. For example:

   ```
   \\my_server\Service Manager Client
   ```

   For more information, refer to the Windows online help.

3. Log in to the computer system of each user who will use the shared client.

4. Map the network share to a drive letter on the local system. For example:

Table 4 Example Windows network drive mapping

Drive letter	Mapped to
`F:`	`\\my_server\Service Manager Client`

5. Create a Windows shortcut to the `ServiceManager.exe` file in the network share. For example:

   ```
   F:\ServiceManager.exe
   ```

   By default, all users share common client settings. If you want each user to have their own local client settings, continue to the next step.

6. Modify the target properties of the Windows shortcut to add the following information after the executable name.

   ```
   -data %USERPROFILE%\Service Manager\
   ```

The `-data` parameter allows you to specify a path where you want to store client settings. The example path above places a Service Manager `f`older in the `Document and Settings` folder of the currently logged in user.

If your path name includes spaces, you must enclose the path in double quotation marks. For example:

```
F:\ServiceManager.exe -data "%USERPROFILE%\HP
Service Manager\workspace"
```

Uninstalling the Service Manager Client or its Components

You can uninstall the Service Manager client using Windows Add/Remove Programs.

Follow these steps to uninstall the Service Manager client or components:

1. From the Windows main menu, click **Start** > **Settings** > **Control Panel** > **Add/Remove Programs**.

   The Add/Remove Programs window opens.

2. Scroll to Service Manager Client and click **Remove**.

   A message prompts you to verify removing the program.

3. Click **Yes**.

   The uninstall process takes several minutes. Additional messages indicate the progress of the uninstall.

   When you complete the uninstall, you return to the Add/Remove Programs dialog box.

4. Click **Close**.

The client uninstall process intentionally preserves your client configuration settings. You must manually remove these files if you are completely uninstalling Service Manager from your system HP recommends you delete the entire client installation folder and the local writable workspace and configuration folder if you do not want to preserve any existing client settings.

5 Web Tier Installation

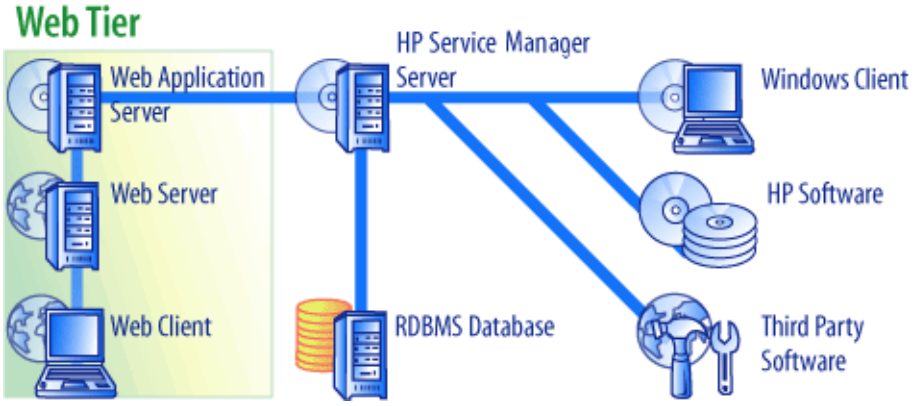
The web tier installation allows clients to use a web interface to access the HP Service Manager server.

Topics in this section include:

Web Tier Architecture

The Service Manager web tier uses both a web server and a web application server to allow access Service Manager forms through a web browser. The web server handles incoming HTTP requests while the web application server runs the Java and JSP necessary for connecting to Service Manager.

Some web application servers such as Tomcat and WebSphere include built in web servers.



You install the web tier on Windows or Unix platforms by deploying the `webtier-7.00.war` file to your web application server. Some web application servers also require you install the Sun J2SE Java Development Kit (JDK).

Browser Requirements for the Web Client

In order for users to access the web client through a browser, the following settings and options must be enabled:

- Enable Cookies
- Enable Java
- Enable JavaScript
- Enable pop-ups. You can add the Service Manager server URL to the pop-up exception list.

To display the workflow graphical view, install one of the following Java components:

Table 1 Web client browser requirements

Operating System	Java component to install
Windows XP	One of the following: • Microsoft Java Virtual Machine (JVM) plug-in • Sun Java Runtime Environment (JRE)
All other operating systems	Sun Java Runtime Environment (JRE)

Installing the Web Tier

To install the Service Manager web tier you must complete the following tasks:

Task 1: Install Apache.

See Installing Apache 2.0.X on page 77.

Task 2: Deploy the Service Manager web tier to your web application server.

See Deploying the Service Manager Web Tier on page 79.

Task 3: Install endorsed JAR files if needed by your web application server.

See Installing Endorsed JAR Files on page 80.

Task 4: Set your web application server memory settings for your production environment.

See Setting the Web Application Server Heap Size on page 81.

Task 5: Set global web client preferences in the web.xml file

See Setting Web Client Preferences from the web.xml Configuration File on page 82.

Installing Apache 2.0.X

Follow these steps to install Apache 2.0.X:

1. Locate the `httpd.conf` file in the following directory:
   `C:\Program Files\Apache Group\Apache2\Conf\httpd.conf`
2. At end of the `httpd.conf` file, add the following two lines:

   ```
   ### Tomcat 5.0 Connector ####
   include
   "C:\Program Files\Apache Group\Apache2\conf\mod_jk.conf"
   ```

3. Call Support to get the `SAM-M0V-PJ12.zip` (in zipped format). The zip will contain the following files:

   `workers.properties` (size 6 KB unzipped)
   `mod_jk.conf` (size 4 KB unzipped)
   `mod_jk.dll` (size 136 KB unzipped)

4. Copy `workers.properties` and `mod_jk.conf` to the following location.

   `C:\Program Files\Apache Group\Apache2\Conf`

5. Edit the `workers.properties` file to ensure that these parameters exist.

   - **`[uri:/sc/servlet/*]`**
     `info=Prefix mapping`
   - **`[uri:/sc/*.jsp]`**
     `info=Extension mapping`
   - **`[uri:/sc/*.do]`**
     `info=Extension mapping`
   - **`[uri:/sc/attachments/*]`**
     `info=Extension mapping`
   - **`[uri:/sc/cwc/nav.menu]`**
     `info=Extension mapping`

6 The `mod_jk.conf` file may require editing to accommodate different paths. For reference, the content of the file is as follows:

```
Alias/sc "C:/Program Files/Apache Software Foundation/
Tomcat 5.0/webapps/sc"

<Directory "C:/Program Files/Apache Software Foundation/
Tomcat 5.0/webapps/sc">
   allowOverride None
   Options None
   Order allow,deny
   Allow from all
</Directory>
#
# The following line prohibits users from directly
# accessing WEB-INF
#
<Location "/sc/WEB-INF/">
   AllowOverride None
   deny from all
</Location>
#
# Use Directory too. On Windows, Location doesn't work
# unless case matches
#
<Directory "C:/Program Files/Apache Software Foundation/
Tomcat 5.0/webapps/sc/WEB-INF/">
   AllowOverride None
   deny from all
</Directory>
#
# The following line prohibits users from directly
# accessing META-INF
#
<Location "/sc/META-INF/">
   AllowOverride None
   deny from all
</Location>
#
# Use Directory too. On Windows, Location doesn't work
# unless case matches
#
```

```
<Directory "C:/Program Files/Apache Software Foundation/
Tomcat 5.0/webapps/sc/META-INF/">
   AllowOverride None
   deny from all
</Directory>
```

7 Copy the `mod_jk.dll` file into the following directory:

`C:\Program Files\Apache Group\Apache2\modules` directory.

Deploying the Service Manager Web Tier

The Service Manager web tier contains a J2EE-compliant web application that runs on your web application server. Each web application server has its own method of deploying web applications. See your web application server documentation for specific instructions on deploying a web application.

The following table provides a summary of deployment methods required.

Table 2 Web tier deployment methods

Web application server	Deployment method
Apache Tomcat	Copy the `webtier-7.00.war` file to the `webapps` folder and start the web application server.
BEA WebLogic	Open the administration console and install the web application from the `webtier-7.00.war` file.
IBM WebSphere	Open the administration console and install the web application from the `webtier-7.00.war` file.

For example, use the following steps to deploy the `webtier-7.00.war` file on Tomcat.

1 Log in to the server as a user with local administrator privileges.

2 Stop the Tomcat Web application server.

3 Insert the Service Manager installation DVD into the appropriate drive of the server.

If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

a Navigate to the DVD directory.

b Open `clickme.htm`.

4 Click **Download Service Manager Web Tier**. The File Download prompt opens.

5 Click **Save**. The Save As dialog box opens.

6 Save the file to your Tomcat webapps directory. For example, `C:\Program Files\Apache Software Foundation\Tomcat 5.0\webapps)`

7 Start the Tomcat server.

Tomcat automatically opens the `webtier-7.00.war` file and creates the sc folders and files you need.

If the sc directory was not created when the Tomcat server started, check the log files and contact support with the information found therein.

Installing Endorsed JAR Files

Depending on the web application server you use, you may need to install several endorsed JAR files to allow the Service Manager web tier to function properly. These files enable certain features such as SOAP over HTTP and Fast Infoset encoding.

This table lists the requirements for endorsed JAR files by each supported web application server.

Table 3 Web application servers that require endorsed JAR files

Web application server	Install endorsed JAR files?	Place in
Apache Tomcat	Yes	$TOMCAT_HOME/common/endorsed
IBM WebSphere	Yes	$WAS_HOME/java/jre/lib/endorsed
BEA WebLogic	No	n/a

The required JAR files include:

- dom-jwsdp-1.6.jar
- jai_imageio-1.0.jar
- jaxp-api-jwsdp-1.6.jar
- sax-jwsdp-1.6.jar
- xalan-jwsdp-1.6.jar
- xercesImpl-jwsdp-1.6.jar

Follow these steps to install the endorsed JAR files:

1 Copy all JAR files from the following folder of the Service Manager installation DVD:

```
Redistributables\Java\Endorsed
```

2 Add the files to the `endorsed` folder of your web application server.

If you do not already have an `endorsed` folder for your web application server, you must create one to install the endorsed JAR files.

Be sure to replace any files currently in the `endorsed` folder with the files from the Service Manager installation DVD.

Setting the Web Application Server Heap Size

The web application server heap size directly determines how many connections each web application server can handle. Most application servers require a heap size of at least 256 MB for optimal performance. If you experience poor performance from your web client connections, try increasing the web application server heap size. See your web application server documentation for instructions on setting the heap size.

Configuring the Web Server to Work with Service Manager

IIS

Edit the workers.properties.minimal (IIS 5) or workers2.properties (IIS 6.2) file to include the following 5 parameters:

```
[uri:/sm/servlet/*]
info=Prefix mapping

[uri:/sm/*.jsp]
info=Extension mapping

[uri:/sm/*.do]
info=Extension mapping

[uri:/sm/attachments/*]
info=Extension mapping

[uri:/sm/cwc/nav.menu]
info=Extension mapping
```

Setting Web Client Preferences from the web.xml Configuration File

You can define global web client preferences from the `web.xml` file on the web tier server. The settings you define in this file determine the client preferences for all web clients. See the Service Manager online help for a complete list and more detailed explanation of each parameter

Follow these steps to set client preferences from the `web.xml` file:

1. Open the `webtier-7.00.war` file in an archive management program.

   You can download these files from the Service Manager installation DVD.

2. Extract the `web.xml` file from the archive to your local system.

   Extract this file into its default path of `WEB-INF\` so that you can preserve the path information when you archive it again.

3. Open the `web.xml` file in a text editor.
4. Add or edit the preferences in the file.

At a minimum, you must set the **serverHost** and **serverPort** parameters.

```
<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE web-app PUBLIC "-//Sun Microsystems,
Inc.//DTD Web Application 2.2//EN" "http://
java.sun.com/j2ee/dtds/web-app_2_2.dtd">

<web-app>

<display-name>Service Manager</display-name>

<description>Service Manager</description>

...
<init-param>

<param-name>serverHost</param-name>

<param-value>localhost</param-value>

</init-param>

<init-param>
```

Set the host

Set the port

For a list of the most commonly set web parameters, see Commonly Set Web Parameters on page 84.

5 Save the file.

6 Add the updated `web.xml` file back into the `webtier-7.00.war` archive.

The `web.xml` file must include the `WEB-INF\` path.

Web clients will now use the client preferences you defined in the `web.xml` file when you deploy the `webtier-7.00.war` to the web tier.

Web Tier Log Files

The Service Manager web tier writes logs files to the default log file and location used by your web application server. see your web application server documentation for the name and location of the log file.

Commonly Set Web Parameters

Table 4 Commonly set web tier parameters

Parameter	Default value	Description
cacerts	WEB-INF	This parameter lists the path to the CA certificates required for SSL support.
compress_soap	false	This parameter specifies if you want to use data compression between web clients and the Service Manager web tier.
helpServerHost	localhost	This parameter specifies the name of the Service Manager Help Server.
helpServerPort	80	This parameter specifies the communications port number to which the Service Manager Help Server listens.
refreshMessages	false	This parameter determines whether the browser checks for new messages from the application server.
refresh MessagesInterval	15000	This parameter determines how often (in milliseconds) the browser checks for new messages from the application server.
serverHost	localhost	This parameter specifies the name of the Service Manager host server.
serverPort	13080	This parameter specifies the communications port number to which the Service Manager server listens.
ssl	false	This parameter enables the web client to encrypt communications using the server's demonstration certificate.
viewactivenotes	false	This parameter determines whether you see a pop-up message when the server sends a message.

Accessing Service Manager from the Web Client

Use the following URLs to access the Service Manager from the web tier.

- The address for the standard web client is:

  http://<server>:<port>/sm/index.do

  The address for employee self-service web client is:

  http://<server>:<port>/sm/ess.do

  The address for the accessible web client is:

  http://<server>:<port>/sm/accessible.do

  This address turns off record list mode and the classic menu, which do not conform to accessibility requirements.

  The address for the accessible employee self-service web client is:

  http://<server>:<port>/sm/accessible_ess.do

  For *<server>*, type the name of the web server running the web tier. For *<port>*, type the communications port number used to connect to the web tier.

You do not need to specify the communications port in the web tier URL if you use the default web server port (port 80). see your web server documentation for instructions on setting the communications port.

Web Client Computer Telephony Integration (CTI)

The web client can support connections from Computer Telephony Intergration (CTI) applications. The Web client CTI implementation uses the ServiceCenter Event Services application to open or update records.

Follow these steps to set up and use CTI:

1 Set up your web browser.

See Setting Web Client Preferences from the web.xml Configuration File on page 82.

2 Install a JRE.

See Installing the JRE on page 87.

3 Install the CTI applet.

See Installing the CTI Applet on page 87.

4 Connect to the web client to recieve calls.

See Taking a Call with the Telephony Web Client on page 89.

Setting the Web Browser Requirements

Enable the following settings and options to use CTI with a web client:

- Cookies
- Java
- JavaScript
- Pop-ups. (Add the ServiceCenter server URL to the pop-up exception list.)

Installing the JRE

You must install a Java Runtime Environment (JRE) on each web client system to run the CTI applet. See your Web browser documentation to determine a compatible JRE version.

Table 5 Browser JRE requirements for CTI support

Operating System	Java component to install
Windows XP	One of the following: • Microsoft Java Virtual Machine (JVM) plug-in • Sun's Java Runtime Environment (JRE)
Other operating systems	Sun Java Runtime Environment (JRE)

For example, you can follow these steps to install the Sun J2SE JRE, which you can use with Internet Explorer or Mozilla:

1 Go to Sun java web site: **http://java.sun.com/j2se/1.4.2/download.html**.

2 Click the **Download J2SE JRE** link.

3 Accept the license agreement.

4 Navigate to your operating system (for example, Windows), and download the latest JRE for your operating system.

Installing the CTI Applet

You must perform a one-time installation of the CTI applet on each web client system so the web client can accept Service Manager system events from a CTI application.

Follow these steps to install the CTI applet:

1 Log in to the web client system with a local administrator account.

The applet installation requires a local administrator account.

2 Close all other Service Manager clients and web browser windows.

3 Open a web browser and navigate to the telephony web tier URL:

http://<server>:<port>/sc/index.do?telephonyuser=1

For *<server>,* type the name of the web server running the web tier. For *<port>, type* the communications port number used to connect to the web tier.

4 If the web client system has a properly installed JRE, then the web browser prompts the user to install the CTI applet:

5 Click the appropriate action on your browser to accept the applet (for example, **Run** or **OK**).

6 Close and restart the web browser.

Using the Telephony Web Client

The telephony web client requires a CTI application and the Event Services application within Service Manager.

Accessing CTI from the Web Client

You can use the following URLs to access the telephony portions of the web client.

The telephony applet does not apply to the self-service portions of Service Manager.

- The address for the standard telephony web client is:

  http://<server>:<port>/sm/index.do?telephonyuser=1

- The address for the accessible telephony web client is:

  http://<server>:<port>/sm/accessible.do?telephonyuser=1

  This address turns off record list mode and the classic menu, which do not conform to accessibility requirements.

For *<server>,* type the name of the web server running the web tier. For *<port>*, type the communications port number used to connect to the web tier.

You do not need to specify the communications port in the web tier URL if you use the default web server port (port 80). see your web server documentation for instructions on setting the communications port.

Taking a Call with the Telephony Web Client

When an event comes from a CTI application, the telephony web client prompts users to save their current work.

Save your current work and then click **Yes** to receive the incoming call (or other event).

6 Help Server Installation

You must install the HP Service Manager Help Server on a Windows system. This section contains information about installation requirements and how to install the Help Server. For information about starting and stopping the Help Server, refer to the Service Manager online help.

Topics in this section include:

Overview of the Service Manager Help Server

The Service Manager Help Server provides a centralized location to access and store all online help files. The Service Manager Help Server includes an integrated web server that allows end users to access documentation from either the Windows or web clients as well as directly from a web browser.

Upgrading the Help Server

You cannot upgrade previous Help Servers to the Service Manager 7.00 Help Server. You must install the Service Manager 7.00 Help Server in a new folder or on a different system than your previous Help Server. HP recommends that you remove previous Help Servers, but it is not required.

Make a backup of any customized Help files you have created for your Help Servers. The installer for the Service Manager 7.00 Help Server overwrites any customized help from prior Help Servers.

Installation Considerations

Installing the Service Manager Help Server enables you to:

- Provide your users with an easily updatable help source.
- Deploy tailored versions of Service Manager documentation. You can edit the online help stored on the Help Server and deploy it with the integrated web server. All clients that connect to the Help Server automatically see the customized online help files.

Known Issues

The Service Manager Help Server has the following known issues:

- The Help Server can only deploy documentation in the existing plug-ins. You must add or edit topics in the existing plug-ins.

To test the Help Server from the server machine, use a direct browser connection to:

http://<helpserverhost>:<helpserverport>/help/

For <*helpserverport*>, type the name or IP address of the Help Server you want to connect to.

For <*helpserverport*>, type the communications port used to connect to the Help Server. You may omit the port number if you use the default port 80 HTML port.

Installing the Help Server on Windows

After installing the Help Server, you can customize the server settings in the Help Server Configuration Wizard.

Installation Requirements

- Windows 2000 or Windows 2003
- The most current Windows updates on your operating system
- 240 MB disk space
- 256 MB RAM minimum recommended
  - For testing purposes, 128 MB RAM is sufficient
  - For production purposes, RAM is based on the expected user load
- A free communications port to listen for HTTP connections requests. The default communications port is 8083.
- One of the following Java components:

Table 1 Help server installation requirements

Operating system	Java component to install
Windows XP	One of the following: • Microsoft Java Virtual Machine (JVM) plug-in • Sun Java Runtime Environment (JRE)
All other OS	Sun Java Runtime Environment (JRE)

Service Manager Help Server Setup

Follow these steps to install the Service Manager Help Server:

1. Log in to the Windows server as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.

If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

a. Navigate to the DVD directory.

b. Open `clickme.htm`.

3. Click **Install Help Server**.

   The Service Manager Help Server Setup wizard opens.

4. Click **Next** to read and accept the licensing agreement.

5. Select the **I accept the terms in the License Agreement** option.

   The Next button becomes active.

6. Click **Next** to continue.

   The Select Installation Folder page opens.

7. Type or select the path where you want to install the Help Server.

8. Click **Next** to continue.

   The Ready to Install page opens.

9. Click **Install**.

   The wizard installs the Help Server on the system.

10. Click **Finish**.

    The Configure HP Help Server wizard opens.

11. Click **Next** to continue.

    The Service Manager Help Server Configuration page opens.

12 Do one of the following:

a Click **Skip** to use the default configuration settings.

b Update the following parameters as needed.

Table 2 Help server configuration parameters

Parameter	Default value	Description
Server port	8083	This parameter specifies the communications port to which you want the Help Server to listen for HTTP requests.
Windows Service Name	Service Manager Help Server	This parameter specifies the name of the Windows service you want the Help Server to use.

13 Click **Next** to continue.

The Service Manager Help Server Configuration page opens.

14 Select the **Install Windows Service** option.

15 Click **Finish**.

The wizard configures the Help Server and installs the Windows service.

Accessing the Help Server

You can access the Help Server from the following interfaces:

- Windows client
- Web client
- Web browser

Accessing the Help Server from the Windows Client

To have Windows clients display online help from the Help Server, you must configure the Windows client preferences and define the Help Server host name and communications port.

This setting is saved with your client preferences and is captured by the Client Configuration utility so that you can easily deploy it to your Windows client users.

Follow these steps to configure a Windows client to display online help from the Help Server:

1. Log in to the Windows client.
2. Click **Window** > **Preferences**.

   The Preferences window opens.
3. Click the **Help** node to expand it.
4. Click **Help Server**.
5. Type the following information:
   a. Host name or IP address of the Help Server
   b. Communication port of the Help Server
6. Click **OK**.

   The Windows client now displays the online help from the Help Server when the user clicks the **Help** icon or select **Help** > **Help Contents**.

Accessing the Help Server from the Web Client

By default, web clients do not display online help. To have web clients display online help from the Help Server, you must configure the web client `web.xml` file and define the Help Server host name and communications port.

Follow these steps to configure a web client to display online help from the Help Server:

1. Log in to the server where you installed the web tier.
2. Open the `web.xml` file from the `sm/WEB-INF` folder of your application server installation.
3. Type the following information:
   a. **`sm.helpserverhost`** - Host name or IP address of the Help Server
   b. **`sm.helpserverport`** - Communication port of the Help Server
4. Save the `web.xml` file.

   The web client displays the online help from the Help Server.

Accessing the Help Server from a Browser

You can view the online help from a Help Server by typing the following URL into a compatible web browser:

http://<helpserverhost>:<helpserverport>/help/

For <*helpserverport*>, type the name or IP address of the Help Server you want to connect to.

For <*helpserverport*>, type the communications port used to connect to the Help Server. You may omit the port number if you use the default port 80 HTML port.

7 Client Configuration Utility Installation

You can install the Service Manager Client Configuration Utility on a Windows system. This section contains information about installation requirements and how to install the Client Configuration Utility.

Topics in this section include:

Overview of the Service Manager Client Configuration Utility

The Service Manager Client Configuration Utility is an optional tailoring component that enables you to customize a Windows installation for deploying to end users. You can use the Client Configuration Utility to customize the Windows client before deploying it to the rest of your organization.

The Client Configuration Utility cannot push customizations changes to previously installed Windows clients. To change existing installations of the Windows client, you uninstall the existing client and reinstall using the customized files you create.

The Client Configuration Utility only picks up changes made directly from the Windows client interface or within the utility itself. The Client Configuration Utility cannot pick up changes made directly to Windows client initialization files.

The Service Manager Client Configuration Utility changes the following Windows client settings:

- The splash screen image that Service Manager displays when users open the Windows client
- The name of provider listed for Service Manager — for example, Hewlett-Packard Development Company, L.P.
- The name of the Service Manager application - for example, Service Manager
- The location of application images and icons
- The location of the Help Server where Windows clients can access documentation
- The changes that an administrator saves within the Windows client interface prior to running the Client Configuration Utility, including:
  - Default login options
  - Which Connection dialog box configuration options to display
  - The default connection configuration settings
  - Help server configuration options

Installation Considerations

You may want to use the Service Manager Client Configuration Utility for the following reasons:

- To deploy tailored versions of Windows clients. You can use the Client Configuration Utility to preconfigure Windows clients to use custom settings and images.
- To reduce the number of tailoring steps. When you use the Client Configuration Utility you are not required to tailor each Windows client individually.

Known Issues

The Service Manager Client Configuration Utility has the following known issues:

- You must customize images before you run the Client Configuration Utility. The Client Configuration Utility enables you to change the location of images but not to edit them directly.
- If you deploy a repackaged Windows client that has a predefined connection over SSL, then the Windows clients may display the connection error message “No trusted certificate found” if users install the customized client in a different path than the original client install. You can restore the client connection by providing the correct path to the CA certificate file in the client Preferences dialog box.

Installing the Client Configuration Utility on Windows

You install the Client Configuration Utility by running the installation executable on the installation DVD. After installation, you can customize the Windows client settings by using the Client Configuration Utility.

Installation Requirements

- Windows 2000, Windows XP Professional or Windows Vista
- The most current Windows updates on your operating system
- 70 MB disk space
- 256 MB RAM minimum recommended
  - For testing purposes, 128 MB RAM is sufficient
  - For production purposes, add RAM to match the expected user load
- Access to a Service Manager Windows client installation

Service Manager Client Configuration Utility Setup

Follow these steps to install the Service Manager Client Configuration Utility:

1. Log in to the Windows system as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.

   If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

   a. Navigate to the DVD directory.

   b. Open `clickme.htm`.
3. Click **Install Client Configuration Utility**.

   The Service Manager Client Configuration Utility Setup wizard opens.
4. Click **Next** to read and accept the licensing agreement.

5 Select the **I accept the terms in the License Agreement** option.

The Next button becomes active.

6 Click **Next** to continue.

The Select Installation Folder page opens.

7 Type or select the path where you want to install the Client Configuration Utility.

8 Click **Next** to continue.

The Ready to Install page opens.

9 Click **Install**.

The wizard installs the Client Configuration Utility on the system.

10 Click **Finish**.

Customizing Images Used by the Windows Client

You can customize the images that Windows clients use by providing alternate versions of the images from a local folder or web server virtual directory

Image Editing Guidelines and Considerations

The following guidelines and considerations apply to customized images:

- All custom images must retain their original file name.
- All custom images must retain their original relative path from the `icons/obj16` folder.
- You only need to save customized images in the `branded/obj16` folder. If the Service Manager client does find updated images in the `branded/obj16` folder it uses the default images in the `icons/obj16` folder.
- Providing custom images from a web server allows you to automatically update images without having to reinstall the Windows client.

Providing Custom Images from a Local Folder

You can use the following steps to provide custom images with the repackaged client. This image customization method increases the amount of hard disk space required to install the Service Manager Windows client as the custom images are installed in addition to the default images.

Follow these steps to customize images from a local folder:

1. Copy the images from the Service Manager client into a temporary folder.

   The Service Manager client images are located in the following folder:
   `C:\Program Files\HP\Service Manager 7.00\Client\plugins\com.hp.ov.sm.client.eclipse.user_7.00\src\resources\icons\obj16`

2. Edit the images you want to customize in the temporary folder.

   See Image Editing Guidelines and Considerations on page 104.

3. Delete any images that you do not customize from the temporary folder.
4. Run the Client Configuration Utility and select the local images option.

The Client Configuration Utility creates the following new folder in the Service Manager client installation:
`C:\Program Files\HP\Service Manager 7.00\Client\plugins\com.hp.ov.sm.client.eclipse.user_7.00\src\resources\icons\branded\obj16`

5 Copy your custom images to the `branded\obj16` folder.

You can copy the your custom images to the local folder while the Client Configuration Utility is open.

6 Repackage the client as a zip file or another distribution format of your choice.

Providing Custom Images from a Web Server Virtual Directory

You can use the following steps to provide custom images from a central web server. This image customization method does not increase the amount of hard disk required to install the Service Manager Windows client. In addition, any changes you make to images on a web server are automatically applied to Windows clients.

Follow these steps to customize images from web server virtual directory:

1 Create a virtual directory on your web server to store the custom images.

2 Copy the images from the Service Manager client into a temporary folder.

The Service Manager client images are located in the following folder:
`C:\Program Files\HP\Service Manager 7.00\Client\plugins\com.hp.ov.sm.client.eclipse.user_7.00\src\resources\icons\obj16`

3 Edit the images you want to customize in the temporary folder.

See Image Editing Guidelines and Considerations on page 104.

4 Delete any images that you do not customize from the temporary folder.

5 Copy your custom images to the virtual directory on your web server.

6 Run the Client Configuration Utility and select the web server virtual directory option.

The Client Configuration Utility configures the Service Manager client to point to the URL of your web server virtual directory.

Customizing the Windows Client

In order to use the Client Configuration Utility, you must have previously installed a Windows client.

Follow these steps to create a custom Windows client:

1. Click **Start** > **Programs** > **Service Manager Client Configuration Utility** > **Service Manager Client Configuration Utility**.

   The Client Configuration Utility opens.

2. Click **Next** to continue.

   The Specify Service Manager Directory page opens.

3. Type or select the path to an existing installation of the Service Manager Windows client.

4. Click **Next** to continue.

   The Change Startup Splash Image page opens.

5. Do one of the following:

   - Click **Skip** to use the default splash image.
   - Type or select the path to the splash screen image you want to use.

   The default splash screen image is named splash.gif and is located in the following folder:
   `C:\Program Files\HP\Service Manager 7.00\Client\plugins\com.hp.ov.sm.client.eclipse.user_7.00\src\resources\icons\obj16`

   Use the following guidelines to edit the splash screen image:

   - The image must retain its original file name
   - The image must be in the Windows bitmap (gif) file format
   - The image should be approximately 500 wide by 600 pixels high. The Client Configuration Utility crops larger images to this size.

6. Click **Next** to continue.

   The Replace Provider and Application Strings page opens.

7 Do one of the following:

- Click **Skip** to use the default application text strings.
- Type the text strings you want to use for the following items:

Table 1 Provider and application settings

Field	Type this information
Provider	Type the company name you want to display in the Windows client interface. The default name is Hewlett-Packard Development Company, L.P.
Application	Type the application name you want to display in the Windows client interface. The default name is Service Manager.

8 Click **Next** to continue.

The Customize Where Service Manager Application Images are Located page opens.

9 Do one of the following:

- Use the default application images.
  - **No customization**: Select this option to use the default images.
  - Click **Skip**.
- Select the path to your customized Windows client images.
  - **Locally**: The Client Configuration Utility creates a folder named `\branded\obj16` where you can place customized images to override the default Windows client images.
  - **Remotely**: Type the URL where the Windows client can access customized images.

See Customizing Images Used by the Windows Client on page 104 for more information.

10 Click **Next** to continue.

The Customize Default Login Options page opens.

11 Do one of the following:

- Click **Skip** if you do not want to create a default connection.
- Select whether to display the following options on Connections dialog box of your customized client.

Table 2 Connection dialog configuration options

Field	Description
Show the "Remember my password" option.	Enabled by default. When disabled, the client's Connections dialog box will not display the "Remember my password" check box option.
Show the server parameters.	Enabled by default. When disabled, the client's Connections dialog box will not display the "Use Login/ Password" and "Use Trusted Sign-on" radio buttons, or the "Server host name" and "Server port number". Also, the New and Delete buttons will be disabled.
Show the "Advanced" options page.	Enabled by default. When disabled, the client's Connections dialog box will not display the "Advanced" notebook tab. Additionally, the "Trace SOAP Traffic" feature will not be available.

- Type the following information about the default connection you want to create.

Table 3 Default connection dialog configuration options

Field	Description
Hostname	Type the network name or IP address of the Service Manager server to which you want the Windows client to connect.
Port Number	Type the communications port on which the Service Manager server listens to client connection requests. The default communications port is 13080.

Table 3 Default connection dialog configuration options (cont'd)

Field	Description
Compress Messages	Select true to enable message compression between the Windows client and the Service Manager server. Select false to have messages remain uncompressed.
Use SSL Connection	Select true to enable an SSL connection between the Windows client and the Service Manager server. Select false to use a standard connection.
CA Certificate Path	Type or select the local path to the CA certificate used by your SSL connection. Leave this entry blank if you are not using an SSL connection.

You can find a sample CA certificate file `cacerts` in the following path:
`C:\Program Files\HP\Service Manager 7.00\Client\plugins\com.hp.commons_7.00\`

- Click **Next** to continue.

The Use and Configure Help Server page opens.

12 Do one of the following:

- Click **Skip** if you do not want to provide online help from a Help Server.
- Select the **Use Central Help Server** option to establish a connection to a Help Server. Type the following Help Server information.

Table 4 Help server configuration options

Field	Description
Help Server Host	Type the network name of the Service Manager Help Server to which you want the Windows client to connect.
Help Server Port	Type the communications port on which the Service Manager Help Server listens to client connection requests. The default communications port is 80.

The Help Server host and port must be identical to the settings you configured with the Help Server configuration wizard. See Help Server Installation on page 91 for more information.

- Click **Next** to continue.

The Client Configuration Utility page opens.

13 Click **Exit**.

The client has now been configured and may be zipped or otherwise packaged for distribution.

8 Search Engine Installation

You can install the HP Service Manager Search Engine on a Windows or Unix server. This section contains information about installation requirements as well as how to install the and configure the Search Engine.

The Knowledge Management applications are installed with the regular server installation, however the Search Engine must be installed separately.

Topics in this section include:

Installing the Service Manager Search Engine

There are two ways of installing the Service Manager Search Engine. You can install the Search Engine by using an installation wizard, or by using a text-based installer. After installing the Search Engine, you can configure the Search Engine settings.

The Linux installer includes JVM, but for other operating systems, you install JVM in order to run the Search Engine installer.

Installation Requirements

- 512 MB RAM
- 4-6 GB disk space
- 800 MHz or higher processor
- 400 MB of space designated for/`tmp` (Unix) and `\TEMP` (Windows)

Kernel Resource Requirements for HP-UX

To run Knowledge Management on HP-UX, configure the following kernel parameters:

Table 1 Knowledge Management kernel resource requirements for HP-UX

Value	Setting
maxdsiz	1.9 GB (0x7B033000)
maxfiles	2048 KB
maxfiles_lim	2048 KB
maxssiz	160 MB (0xA000000)
max_thread_proc	1024
maxswapchunks	8192
maxtsiz	1 GB (0x40000000)

Table 1 Knowledge Management kernel resource requirements for HP-UX (cont'd)

Value	Setting
maxuprc	512
maxusers	128
nkthread	1024
nproc	517

Installing the Search Engine by Using the Installation Wizard

Follow these steps to install the Service Manager Search Engine by using the installation wizard:

1. Insert the Search Engine installation DVD into the appropriate drive of the server.
2. Start the Service Manager Search Engine installation wizard.
3. If you are installing on a Windows system that has auto-run enabled, the wizard starts automatically. If auto-run is disabled, you can manually start the wizard by using one of the following methods.

   On Windows systems

   - From the GUI, navigate to the DVD directory.

     Double-click `setupwin32.exe`.

     – From the command prompt:

     – Type the following:

     – D:\>setupjwin32

     where D identifies the DVD drive. Substitute your DVD drive identifier.

On Unix systems

For HP-UX, be sure that you have set the kernel configuration parameters described in Kernel Resource Requirements for HP-UX on page 112.

- From the GUI:
  - Mount the DVD and navigate to the DVD directory.
  - Double-click the executable script that matches your Unix system, for example, `setupsolaris` for Solaris systems or `setupaix` for AIX systems.
- From the command prompt:
  - Mount the DVD, and change directories to the mount location.
  - Run the executable script that matches your Unix system, for example: `./setupsolaris` for Solaris systems or `./setupaix` for AIX systems

The Service Manager Search Engine Setup wizard opens.

4 Click **Next** to read and accept the licensing agreement.

5 Select the **I accept the terms in the License Agreement** option.

The **Next** button becomes active.

6 Click **Next** to provide the following installation parameters.

Table 2 Search engine installation parameters

Parameter	Value
Hostname	Server host name If the Search Engine will be on a separate machine on a separate domain, use the fully qualified domain, for example, my.machine.mydomain.com.
Masterport	The default is 9950.
Docserver Port (9920-9949)	The default is 9948.
Indexer Port (9960-9979)	The default is 9967.

Record these settings, you will need them to configure Service Manager to communicate with the Search Engine.

7 Click **Next** to provide the installation directory.

The default installation directory for Windows is:
`C:\Program Files\HP\Service Manager 7.00\Search Engine`

If necessary, click **Browse** to choose a different location.

8 Click **Next** to review the installation summary information.

9 Click **Install** to begin copying the installation files.
To stop the installation click **Cancel**.

The InstallShield Wizard opens a dialog box when the installation is complete.

10 If you are on a Unix system, run `InstallConfiguration.sh`, which is found in your `<Search Engine install path>/`directory.

11 Click **Finish** to exit the Wizard.

Installing the Search Engine by Using the Text-Based Installer

Follow these steps to install the Service Manager Search Engine using the text-based installer:

1. Insert the Search Engine installation DVD into the appropriate drive of the server.
2. Run the installer.
3. On Windows systems

   Open the command prompt and type the following:

   ```
   D:\>setupwin32 -console
   ```

   where D identifies the DVD drive. Substitute your DVD drive identifier.

   On Unix systems

   a. Mount the DVD and change directories to the mount location.

   b. Run the executable script that matches your Unix system, for example: **`./setupsolaris -console`** for Solaris systems or **`./setupaix -console`** for AIX systems.
4. At the installation script prompt, type `yes` to agree to the license agreement.
5. At the installation script prompt, type the installation directory address where you want to install Service Manager.

   The system validates any directory name that you specify. If you specify an invalid directory, the installation generates an error message.

   The system takes several minutes to read the contents of the DVD, uncompress the files, and create a logs directory.
6. At the installation script prompt, type a host name, then press **Enter**.

   If the Search Engine will be on a separate domain, use the fully qualified domain, for example, mymachine.mydomain.com.
7. At the installation script prompt, type a Masterport number, then press **Enter**. The default is 9950.

8 At the installation script prompt, type a Docserver Port number (9920-9949), then press **Enter**. The default is 9948.

9 At the installation script prompt, type an Indexer Port number (9960-9979), then press **Enter**. The default is 9967.

Record these settings, you will need them to configure Service Manager to communicate with the Search Engine.

10 The server installation completes.

11 If you are on a Unix system, run `InstallConfiguration.sh`, which is found in your `<Search Engine install path>/`directory.

Starting and Stopping the Search Engine

On Windows Systems

The installer creates a service named **KMSearch.** Use it to start and stop the Search Engine. This service starts automatically after installation.

On Unix Systems

Add the following to the `sm.ini` file:

For HP-UX

```
plugin0:libkmplugin.sl
```

For all other versions of Unix

```
plugin0:libkmplugin.so
```

There are two executable scripts in your installation folder.

Table 3 Search engine start scripts for Unix systems

Name	Purpose
k2adminstart.sh	Starts the search engine and index service
k2adminstop.sh	Stops the search engine and index service

Run the `k2adminstart.sh` executable script file to start the index service for your Search Engine.

Configuring the Search Engine

Before you can use the Search Engine, you must set up connectivity, and then index the Search Engine.

Connecting to the Search Engine

Follow these steps to connect to the Search Engine:

1. Log in with a user with the KM ADMIN profile.
2. Open **Services > Knowledge Management > Administration > Environment**.
3. To **Assign the Default Knowledge View Group to all operators**, select the check box.
4. Specify the **Host Name of Search Server.** This must be identical to the host name you indicated when installing the server.
5. You can confirm that you have the correct information by looking in the configuration file at `C:\Program Files\HP\Service Manager 7.00\Search Engine\KMSearch.cfg`.
6. Click **Verify Server** to verify connectivity to the Search Engine.
7. Specify the **Mapped drive for Style files.** The path is default is `C:\Program Files\HP\Service Manager 7.00\Search Engine\data\stylesets`.
8. Click **Verify Path** to verify that your path and map settings are correct.
9. Make sure that both the Search Engine and Service Manager server have read and write privileges in the stylesets folder.

   If the Search Engine is installed on a separate machine, you will need to share the stylesets folder from the Search Engine to the Service Manager server. Use the share name and path for this setting so that the style files path in the environment form is set to the stylesets folder.

10. Specify the **Search Engine administration port number.** This must be identical to the port number you indicated when installing the server. If you did not change the default port number, use the default given in the field.

11 Specify the **Search Engine indexer port number.** This must be identical to the port number you indicated when installing the server. If you did not change the default port number, use the default given in the field.

12 Specify the **Search Engine search port number.** This must be identical to the port number you indicated when installing the server. If you did not change the default port number, use the default given in the field.

13 Specify the **Max number of Documents returned from a search.**

14 Specify the **Default expiration period.** The time limit specified here will be over-ridden if the user specifies expiration when they were creating a document by using the Contribute New Document function.

15 Specify the **Style text for search results.** Use this style sheet to control the appearance of the information the search returns. This is similar to an HTML css stylesheet.

16 Log out of Service Manager, and log back in again.

Indexing Data with the Search Engine

Certain actions require a full reindex. These actions include the following:

- Initial setup (no indexes exist)
- Changing any value on the Type Information tab or the Field Definitions tab

You may also want to do a full reindex if:

- There are a large number of changes or new documents
- Search performance is becoming sluggish

As updates are applied to the index, they are added in as incremental index files. If you have a knowledge base that has had many changes applied, these incremental index files can slow the Search Engine down since it must perform your query on each one. A full reindex builds a new clean index that performs better, similar to defragmenting a hard-drive. Doing a full reindex on a large knowledge base can have a significant impact on system resources because it removes all changes for the knowledge base from the change cache.

You can only reindex or get status for your knowledge base if the Search Engine has been properly configured on the environment page. A message box will notify you if the Search Engine cannot be found.

Follow these steps to index data with the Search Engine:

1. Log in with a user with the KM ADMIN profile.
2. Open **Services > Knowledge Management > Administration > Manage KnowledgeBases**.
3. Click **Search** to bring up a list of knowledge bases.
4. For each knowledge base, check that the information is correct, and click **Full Reindex**. Refer to the field help for descriptions of each field.
5. If the index does not exist, it will be created. If it does exist, it will be deleted and recreated. The **Docs** field will not be blank after an index has been created.

After the Indexes have been created, users will be able to access the indexed documents the next time they log in.

A Legacy Integrations

Using legacy integrations with the Service Manager server requires you to set up a read-only legacy ServiceCenter listener. A legacy integration is any integration that depends on SCCL32 or the ServiceCenter ODBC driver. These include Connect-It, Get-It, and Crystal Reports.

This appendix provides information on how to set up a legacy listener and connect to Service Manager, as well as how to set up the ServiceCenter ODBC driver.

Topics in this appendix include:

Overview

You will need to complete the following tasks in order to connect to Service Manager using SCCL32 or the legacy ServiceCenter ODBC driver.

While the server runs on both Windows or Unix platforms. The ODBC driver runs only on Windows.

Task 1: Editing the sc.ini File on page 125

Task 2: Installing the Windows Service on page 126

Task 3: Starting a Legacy Listener on page 127 (Windows servers only)

Task 4: Installing the ODBC Driver on page 128

Task 5: Configuring the ODBC Driver on page 129

Editing the sc.ini File

The out-of-box server `sc.ini` file is configured to connect to the Demo Database. To connect to another RDBMS, edit the parameters in `sc.ini`. Windows users also need to add the ntservice parameter to the `sc.ini` file. This parameter provides the name used to identify the Windows service.

Follow these steps to edit the `sc.ini` file:

1. Log in to the Service Manager server with an administrator account.
2. Open a command prompt and navigate to **<Service Manager 7.00 installation path>\Server\LegacyIntegration\RUN**.
3. Open the file `sc.ini` with a text editor.
4. To connect to your Service Manager RDBMS, add the database connectivity settings. These match the settings you used in Database Preparation on page 21.
5. Windows users only: Add the following parameter on its own line.
   ntservice:<Service Manager Legacy Readonly Service Name>
6. Save the file and exit.

Unix users proceed to Starting a Legacy Listener on page 127.

Windows users continue with the next section, Installing the Windows Service.

Installing the Windows Service

You can create a separate Windows service to use with the legacy ODBC driver. You can manually install a ServiceCenter Windows service on any machine where you have already installed Service Manager server.

Follow these steps to install the Windows service:

1. Log in to the Windows server as a user with local administrator privileges.
2. Open a command prompt and navigate to **<Service Manager 7.00 installation path>\Server\LegacyIntegration\RUN**.
3. Type **scservic -install**.

This command creates a Windows service with the name specified by the ntservice parameter in the `sc.ini` file.

Uninstalling the Windows Service

You can manually remove the Windows service on any machine where you have already installed Service Manager server.

Follow these steps to uninstall the Windows service:

1. Log in to the Service Manager server with an administrator account.
2. Open a command prompt and navigate to **<Service Manager 7.00 installation path>\Server\LegacyIntegration\RUN**.
3. Type **scservic -uninstall**.

This command removes the Windows service with the name specified by the ntservice parameter in the `sc.ini` file.

Starting a Legacy Listener

You can start a read-only ServiceCenter listener in the background. Since this is not an instance of Service Manager it will not show up in your System Status window.

Unix

Follow these steps to start a listener for your legacy integration on Unix servers.

1. Navigate to `C:\Program Files\HP\Service Manager 7.00\Server\LegacyIntegration\RUN`
2. Run the scstart script.

Windows

Follow these steps to start a listener for your legacy integration on Windows servers.

1. In Windows, open `Start > Control Panel > Administrative Tools > Services`.
2. Select the service you installed in Installing the Windows Service on page 126, and click **Start**.

If you prefer, you can start the listener as an application instead of a service by running the following command at the Windows command prompt, from the `<installation path> \Service Manager 7.00\Server\LegacyIntegration\RUN` directory.

`scenter -listener:<port number> -RPCReadOnly`

Installing the ODBC Driver

Follow these steps to install the legacy ServiceCenter ODBC driver.

1. Log in to the Windows server as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.
3. If you are installing on a system that has auto-run enabled, the DVD browser starts automatically.
4. If auto-run is disabled, follow these steps to start the DVD browser manually.
5. Navigate to the DVD directory.
6. Open `clickme.htm`.
7. Click **Install ODBC Driver.**

   The ServiceCenter ODBC Driver InstallShield Wizard opens.
8. Click **Next** to read and accept the licensing agreement.
9. Select the **I accept the terms in the License Agreement** option.

   The Next button becomes active.
10. Click **Next** to select your installation folder.

    The default installation location is:

    C:\Program Files\Peregrine Systems\ServiceCenter 6.2\ODBC Driver

    If necessary, click **Browse** to choose a different location.
11. Click **Next** to prepare the installation process.
12. Click **Install** to begin copying the installation files.

    You can stop the installation by clicking **Cancel**.

    A dialog box opens when the installation is complete.
13. Click **Finish** to exit.

Configuring the ODBC Driver

The default installation sets up the ODBC DSN to connect to the default legacy listener, and assumes it is on the local host. To connect to your legacy listener, you will need to edit these settings.

Follow these steps to configure the legacy ODBC driver to connect to the legacy read-only listener:

1. From the Windows Start menu, click **Control Panel > Administrative Tools > Data Source (ODBC)**.
2. Open the System DSN tab.
3. Select `sc_report_odbc` and click **Configure**.
4. Configure the ODBC driver by using the following parameters.

Table 4 ODBC parameters

Field	Value
Data Source Name	sc_report_odbc
Server	The host where the legacy ServiceCenter listener is running. The out-of-box default is localhost.
Port	The port the legacy server is set to use. The out-of-box default is 12690.

5. Verify that the ODBC driver can connect.

   To test the connection, use any ODBC query tool. For example, in Excel, open: **`Data > Get External Data > New Database Query`**. Choose the ServiceCenter ODBC driver as your data source. If it connects, you will see the HP Service Manager tables.

Crystal Reports

The Service Manager installation DVD comes with out-of-box reports that you can run using Crystal Reports. Using those reports requires the ServiceCenter ODBC driver. This driver is installed when you run the Service Manager ODBC driver installer.

Follow these steps to download the reports.

1. Log in to the Windows server as a user with local administrator privileges.
2. Insert the Service Manager installation DVD into the appropriate drive of the server.

   If you are installing on a system that has auto-run enabled, the DVD browser starts automatically. If auto-run is disabled, follow these steps to start the DVD browser manually.

   a. Navigate to the DVD directory.

   b. Open `clickme.htm`.
3. Select the Downloads tab.
4. Click **Download Reports for HP Service Manager**.

   A folder containing the available reports opens.
5. Copy the desired reports to your local directory.

Refer to your Crystal Report documentation for information on how to run the reports.

Index

D

E

F

G

H

N

O

P

R

S

T

U

V

W