HP Software Service Manager

For supported Windows® and UNIX® operating systems

Software Version: 7.0

Upgrade Guide

hp ®

i n v e n t

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This manual's title page contains the following identifying information:

- Software version number, which indicates the software version
- Document release date, which changes each time the document is updated
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Contents

1 Upgrade overview

The HP Service Manager Upgrade Utility upgrades the ServiceCenter applications from versions 5.1 or later toHP Service Manager applications. If you are running a ServiceCenter application version prior to 5.1, you should contact HP Customer Support for information about the best upgrade strategy for your version.

Topics in this section include:

- Server run-time environment (RTE) upgrade on page 13
- Application upgrade on page 14

Upgrade overview

A flowchart titled with start node "ServiceCenter system" leading through the following steps:

- Decision: "Is the SC data fully pushed to an RDBMS?" — No branches right; Yes continues down.
- Decision: "Is the SC data running on an RDBMS supported by Service Manager 7.00?" — No branches to "Push all ServiceCenter data to a supported RDBMS"; Yes continues down.
- The "No" branch from the first decision leads to "Push all ServiceCenter data to a supported RDBMS".
- Decision: "Is the SC server RTE version 6.1 or 6.2?" — No branches to "Install an interim ServiceCenter 6.2 server RTE" → "Apply server upgrade unload files"; Yes branches to "Install a Service Manager 7.00 server RTE" → "Apply server upgrade unload files".
- "Upgrade the ServiceCenter applications to Service Manager 7.00" → "Resolve application conflicts" → end node "Service Manager system".

Server run-time environment (RTE) upgrade

You can upgrade an existing ServiceCenter system to use a HP Service Manager 7.00 server run-time environment to take advantage of certain run-time environment features or to preserve application customizations from a previous version. HP Service Manager 7.00 supports the following configurations for production systems:

Table 1   Supported upgrade configurations for production systems

Starting version	Requires upgrading to RTE version	Supports application versions
SC 5.1	SC 6.2 then SM 7.00[a]	SM 7.00
SC 6.0	SC 6.2 then SM 7.00	SM 7.00
SC 6.1	SM 7.00	SM 7.00
SC 6.2	SM 7.00	SM 7.00

a. Customers coming from ServiceCenter versions 5.1 and 6.0 must first upgrade the server RTE to version 6.2 in order to fully push data to an RDBMS.

In order to upgrade your applications to version 7.00 you must first perform a server RTE upgrade. The HP Service Manager 7.00 applications depend upon features in the version 7.00 server run-time environment.

- To obtain the latest client, install the HP Service Manager 7.00 client from the installation CD-ROM by following the instructions in the HP Service Manager Installation guide.

- To obtain the latest server, install the HP Service Manager 7.00 server from the installation CD-ROM. To upgrade or use your prior ServiceCenter applications follow the instructions in Phase III: Upgrading the Server Runtime Environment on page 41 of this guide.

Application upgrade

You can upgrade your existing ServiceCenter applications to Service Manager 7.00 applications using the upgrade utility and resolving the differences between the two versions. All applications upgrades require you to first upgrade the server RTE and install a new Service Manager 7.00 client.

What are applications?

Applications are the HP Service Manager modules and their related configuration files. For example, Incident Management, Change Management, and Inventory Management are HP Service Manager applications.

Applications reside in the HP Service Manager file system in a series of tables described by the database dictionaries (dbdicts) named format, application, code, and enclapplication. Other database dictionaries, such as formatctrl, validity, and environment describe tables containing supporting data.

Because HP Service Manager enables you to modify existing database dictionaries or add new database dictionaries, the HP Service Manager upgrade utility identifies differences between your existing customized files and new files, and enables you to make decisions about your migration strategy.

Version numbers

When you do an upgrade you must be aware of three version numbers, the software release version number, the application version number, and the Upgrade Utility version number.

Application version numbers

In ServiceCenter 3 and earlier versions, application version numbers were the format Ayyrr, where yy represents the last two digits of the year of the release and rr represents the release number for that year. For example, the first application release of 1999 was A9901. Starting with ServiceCenter 4.0, applications are identified as SCx, where x is the version number. For example, ServiceCenter 4.0 applications are version SC4.

The application versions upgraded by this release include:

- ServiceCenter 5.1
- ServiceCenter 6.0
- ServiceCenter 6.1
- ServiceCenter 6.2

Upgrade Utility version numbers

Earlier versions of the Upgrade Utility matched the application version number. Beginning with SC6 applications, the utility has a version number in this format:

application_version_range vn.n Build nnnn language

For example, if the version number is SC51–SM7.00 v1.0 Build 0022 English,

- The Upgrade Utility upgrades ServiceCenter version 4 (and later releases) to Service Manager 7.00
- The Upgrade Utility version number is 1.0
- The Upgrade Utility build number for this version is 0022
- The language supported is English only

When the Upgrade Utility finishes, it displays the date, time, old application version, new application version, and Upgrade Utility version number on the upgrade screen:

```
10/10/07 23:12:46 Upgraded from SC51 to SM7.00
using SC51-SM7.00 v1.0 build 0022 E
```

How does customization affect the upgrade process?

Most customers modify their systems to meet their business needs. Because of changes to the functionality and behavior of a customized system, upgrading ServiceCenter is not an automatic process.

Protecting customized files

The ServiceCenter Upgrade Utility determines whether each ServiceCenter file is identical to the out-of-box file installed originally. If the existing file is unchanged, the Upgrade Utility replaces it with a new version. If the file on

your system is different from the out-of-box version, the Upgrade Utility keeps your version and adds a prefix (NEW6.2<name>) to the name of the new version.

Resolving differences between your files and new application files, and integrating them to preserve functionality creates a custom upgrade.

Interdependency

ServiceCenter has an inherent application interdependency. Files often rely on other files to complete tasks. If the Upgrade Utility upgrades one file and does not upgrade a dependent file, the two may not interact properly. The application upgrade process is designed to avoid that possibility.

In some cases, the interdependent files may work well when only one is upgraded. The testing process may identify interdependent files that will not work together unless you upgrade both of them.

Comparing new files to old files

The ServiceCenter Upgrade Utility uses digital signatures to determine if an application matches the original HP OpenView ServiceCenter application. Digital Signature enables an entire object to be identified.

The ServiceCenter Upgrade Utility includes the digital signatures of every object from all ServiceCenter releases after SC4. It compares the signature of each object in your file system against the entire library of HP OpenView ServiceCenter signatures from the previous releases. A matching signature indicates that the object in your system is unchanged from the original object and that the utility can upgrade it safely.

If a signature does not match the object in your system, the Upgrade Utility copies the new object to your system, but does not overwrite the existing object. You can examine both versions during the resolution process later.

Note: The Upgrade Utility does not check the data written to non-system files, such as Incident, Contact, or Request records.

Ongoing customization and upgrades

Do not modify your ServiceCenter production system during the upgrade process. Changes made to your production system after you create mirror image development and test environments are not captured by the custom upgrade. If you change your production system, you must restart the upgrade process.

2 Phase I: Planning an upgrade

Good planning allows your upgrade to run as smoothly and quickly as possible, and helps to avoid retracing your steps.

Topics in this section include:

Step 1: Meet the knowledge requirements

You should be an experienced ServiceCenter system administrator who is familiar with your installation to manage the upgrade. You should know the following:

- How the existing ServiceCenter file system operates
- How the application files function
- How to compare records
- How to use Rapid Application Development (RAD) environment
- How to program in RAD for systems with customized RAD applications

▶ If you are not familiar with RAD and administering a system with customized RAD applications, contact the RAD programmer who maintains your system modifications.

If you do not have the administrative experience necessary to manage the upgrade, you may need assistance from your local application developers and database administrators. You can also contact HP Customer Support.

Service Manager tools

The utilities you will use most during the upgrade process include:

- Database Manager
- Database Dictionary
- Display application
- Forms Designer
- System Definition
- RDBMS: You should know how the Service Manager file system interacts with the RDBMS that stores your data.

Documentation resources

You need access to the following Service Manager documentation.

- See the Service Manager 7.00 on-line Help for information about database dictionaries, Database Manager, Forms Designer, Request Management and the Display application. You can access the Help when you install a client or the Help server.

- See the *HP Service Manager Installation Guide* for client/server installation instructions. HP bundles this guide with the installation media.

- See the *HP Service Manager Release Notes* for information about Software Change Requests (SCRs), enhancements, and known issues. The release notes are part of the installation materials and also available on the Customer Support Web site.

➤ For an upgrade to earlier versions, review the documentation for that version.

HP Customer Support Web site access

The HP Customer Support Web site has operating system and compatibility information, product documentation, and release notes. If you do not have an account for this Web site, contact HP Customer Support at: **www.hp.com/go/ hpsoftwaresupport.**

License file

The license file is part of an AutoPass installation. If you do not have a valid license file, contact HP Customer Support.

Step 2: Meet the software requirements

Before starting your upgrade, meet the following Service Manager system requirements:

- Your RDBMS version, operating system, and client/server environment must meet all criteria listed in the Compatibility Matrix for the target version. See the HP Customer Support Web site to review the Compatibility Matrix.

- Your existing ServiceCenter application release level must be ServiceCenter 5.1 or later. If your production system is on a pre-ServiceCenter 5.1 release, contact HP Customer Support for the best upgrade path.

- Your existing ServiceCenter application release must be English only. To upgrade localized versions of ServiceCenter, use the localized application upgrade.

- The Service Manager server process (sm) must have read-write access to the database, or your database administrator must make all required database changes.

Shared memory

HP recommends at least 96 MB of shared memory for the upgrade to run. However, if you have a large database, you may need to allocate more shared memory to accommodate it during the upgrade process. You can increase shared memory by using the shared memory parameter in the Service Manager initialization file, `sm.ini`.

Disk space

You must have enough free disk space available to run the Upgrade Utility, build the custom upgrade, and store the upgrade files. If enough disk space is not available, the upgrade will fail.

Running the Upgrade Utility

You need space for Service Manager files and enough work space to build the upgrade.

Building a custom upgrade

The amount of customization determines the amount of space required to build the custom upgrade. You need:

- 75 MB of free space for light customization.

- 150 MB of free space for moderate customization.

- 200 MB of free space for heavy customization.

Upgrade Utility files

You must have enough free space to accommodate the Upgrade Utility files.
These files require 56 MB of free space.

Table 1   List of upgrade utility files

File	Size in KB	Contents
AppUpgVersion.txt	2.1	Contains Upgrade Utility version and build numbers to help you identify which application upgrade version you have available.
preupg.bin	765.4	Applications and data needed to make changes to the system before the upgrade.
self_service.unl	8.3	Profile, template, and user role to enable Self Service ticketing
sqlupgrade.unl	53.7	Applications and data needed to determine new fields that you must add to RDBMS databases.
transfer.bin	3,152.3	The Service Manager Upgrade Utility and all supporting objects.
upgdbdct.dta	417.6	Temporary dbdicts needed for the SQL Compare process.
upglang.unl	303.3	Applications and formats used to prepare a system for multi-language support.
upgrade.dta	42,521.6	Upgrade data for all information except dbdicts.
upgrade.inf	16,098.9	Upgrade definition file (includes a description of what to upgrade and lists acceptable old signatures).

Table 1   List of upgrade utility files

File	Size in KB	Contents
upgrade.mak	11.0	`signature` file unload (needed on the target machine).
upgrade.str	1,007.7	Required database dictionary upgrades.
upgrade.ver	1	Version stamp for this upgrade.

Backup requirements

You must keep backups of your original production environment, as well as the development and test environments. HP recommends that you back up files as you resolve differences and build the custom upgrade. If your development and testing activity is on a single system, frequent backups create checkpoints that you can go back to whenever necessary.

NFS-mounted partitions

Do not install either Service Manager or the Service Manager Upgrade Utility on an NFS-mounted remote partition. This can cause serious performance degradation. The performance of an NFS-mounted partition drops significantly if it reads data in many small pieces instead of one large chunk. Service Manager generates a lot of database read/write activity. An NFS-mounted partition is significantly slower than a local drive when running the Service Manager Upgrade Utility process.

Step 3: Create development and test environments

In addition to your production system, plan to have:

- A development system that mirrors your current production environment. Use the development system to run the Upgrade Utility and build a custom upgrade. This system should not be on the same machine as the production server.

- A test system that mirrors your current production environment. Run the custom upgrade on the test system and verify it there. This system may be on the same machine as the production server.

HP recommends that you export the custom upgrade to a test environment and run acceptance tests on this version before you move to live production. However, some users choose to run acceptance tests in their development environment. When testing is complete, you can export the custom upgrade to your production environment.

Step 4: Perform a system health check

A well-maintained production system is the easiest to upgrade. Before starting the upgrade process, perform all regular maintenance on your production system. If necessary, contact HP Customer Support for recommended actions. Suspend all customization activity on the production system.

Step 5: Develop an upgrade strategy

In standard Service Manager terminology, customization refers to changes to RAD applications; tailoring refers to changes made by using Service Manager tailoring tools, such as Forms Designer and Format Control. Configuration refers to local settings in your environment records, system information record, and so on.

The upgrade process affects different parts of the Service Manager system. Besides upgrading the standard Service Manager applications, an upgrade affects the RDBMS where Service Manager is running as well as any customized files or RAD applications. For more information, see How does customization affect the upgrade process? on page 15.

Tailored systems

A list of tailored files can help you resolve differences quickly between your existing files and new files. You can also use the SQL Compare utility to determine how files differ.

RDBMS-mapped systems

Since Service Manager data files must be mapped to an RDBMS, you must choose one of the following options before beginning the upgrade:

- Allow the Upgrade Utility to modify your RDBMS tables for you. This is highly recommended, unless you are running DB2®.

- Use SQL Compare to update the RDBMS databases before beginning the upgrade process.

The upgrade can affect certain mappings and tables. Contact your database administrator for assistance and to discuss the impact on the RDBMS.

Customized RAD applications

A list of customized RAD applications and the extent of the customization is useful. If it is not available, the RAD programmer who made the changes may be able to supply information. Or, you may need to run a comparison between the existing application and the new version.

3 Phase II: Preparing for an upgrade

Before you can develop or test a custom upgrade, you need to create a mirror image of your current ServiceCenter production environment and prepare the data for the upgrade process.

Topics in this section include:

- Step 1: Meet RDBMS conversion requirements on page 28
- Step 2: Duplicate the production environment on page 38
- Step 3: Install the Service Manager application upgrade utility on page 39

Step 1: Meet RDBMS conversion requirements

Before upgrading a ServiceCenter system to Service Manager 7.00, you must perform the following RDBMS conversion tasks.

Task 1: Verify the list of SQL system table mappings.

See Verify the list of SQL system table mappings on page 29, and then go to the next task.

Task 2: Verify all data policy records have a SQL base name value.

See Verify all data policy records have a SQL Base Name value on page 31, and then go to the next task.

Task 3: Remove sqlhints records for Change Management.

See Remove sqlhints records for Change Management on page 32, and then go to the next task.

Task 4: Is your existing ServiceCenter data version 6.2?

Yes. Go to the next task.

No. See Increase the length of operator password field on page 33, and then go to the next task.

Task 5: Do you plan on using Service Level Agreements (SLA) with Problem Management?

Yes. If your current ServiceCenter version is 6.1 or 6.2, then see Increase the length of fields for Problem Management on page 34, and then go to the next task. Otherwise go to the next task.

No. Go to the next task.

Task 6: Is your existing ServiceCenter data on a DB2 RDBMS?

Yes. See Set DB2 application control heap size configuration parameter on page 35, and then go to the next task.

No. Go to the next task.

Task 7:   Is your existing ServiceCenter data on a case insensitive RDBMS?

Yes. See Upgrading a case insensitive system on page 35, and then go to the next task.

No. Go to the next task.

Task 8:   Convert all existing ServiceCenter data to a supported RDBMS.

See Convert all existing ServiceCenter data to a supported RDBMS on page 36.

After you meet these RDBMS conversion requirements, you are ready to create the development environment you will use to upgrade to Service Manager 7.00. See Step 2: Duplicate the production environment on page 38 to continue.

Verify the list of SQL system table mappings

Before you convert your existing ServiceCenter data to an RDBMS, verify that the following tables are listed as SQL system tables.

- cascadeupd
- code
- coderevision
- displaycache
- displayoption
- displayscreen
- formatctrl
- ioaction
- ioactionrevision
- link
- linkline
- notification
- notificationrevision
- Process

- rcenv
- schedule
- scripts
- ScriptLibrary
- ScriptLibraryrevision
- slaprofile
- triggers
- upgraderesults
- wizard

If any of these tables are missing from the list of SQL system tables, add a record for the missing table in ServiceCenter.

1   Log in to the existing ServiceCenter system with a administrator account.

2   Type **db** in the client command line, and then press **ENTER**.

    The Database Manager opens.

3   In the Table field, type **sqlsystemtables** and click **Search**.

    The sqlsystemtables form opens.

4   In the Dbdict Name field, type the name of the table you want to map as a SQL system table.

5   Select the **Map as Blob?** check box.

6   Click **Add**.

7   Repeat step 4 through step 6 for each table you want to map as a SQL system table.

    Your system is now ready to convert ServiceCenter data to an RDBMS.

➤   If you have already converted any of these tables to an RDBMS, verify that they are mapped as a binary data type (BLOB or image). If they are not mapped as a binary data type, pull the tables back into P4 on your current ServiceCenter RTE, mark each table as a SQL system table, and then convert the tables back to an RDBMS again.

Verify all data policy records have a SQL Base Name value

The application upgrade process requires that each data policy record have a SQL Base Name of 13 or less characters length. If any data policy records are missing a SQL Base Name entry, add a SQL Base Name value of 13 characters or less.

The application upgrade process will fail and be unable to resume if you do not provide valid SQL Base Name values for every data policy record.

1 Log in to the existing ServiceCenter system with an administrator account.

2 Type **db** in the client command line, and then press **ENTER**.

   The Database Manager opens.

3 In the Table field, type **datadict** and click **Search**.

   A record list form opens.

4 Double-click **datadict**.

   The Data Policy form opens.

5 From the drop-down options menu, click **Expert Search**.

6 Type the following in the Query field:

   sqlbasename=NULL

7 Click **Execute Search**.

   ServiceCenter displays a list of data policy records with no value for the SQL Base Name field.

8 Add a SQL Base Name value for each data policy record that does not have an existing value.

   ▶ SQL Base Name values must be 13 characters or less.

9 From the drop-down options menu, click **Expert Search**.

10 Type the following in the Query field:

   lng(sqlbasename)>13

11 Click **Execute Search**.

ServiceCenter displays a list of data policy records with SQL Base Name values greater than 13 characters long.

12 Change the SQL Base Name value for each data policy record that has an existing value greater than 13 characters long to a value of 13 characters or less.

Remove sqlhints records for Change Management

If you are upgrading from a ServiceCenter 5.1 system, ensure that there are no sqlhints records for the **number** field of the following Change Management files:

- cm3r
- cm3t
- cm3rpage
- cm3tpage

If there are, delete them before running the upgrade.

1 Log in to the existing ServiceCenter system with an administrator account.

2 Type **db** in the client command line, and then press **ENTER**.

The Database Manager opens.

3 In the Table field, type **sqlhints**, and click **Search**.

The SQL Hints form opens.

4 Type a Change Management name in the File Name field.

5 Type **Number** in the Field Name field.

6 Click **Search**.

ServiceCenter displays a record list of SQL Hints for the file, if any exist.

7 Click **Delete** to delete the SQL hints record.

8 Repeat step 4 through step 7 for each Change Management file.

Increase the length of operator password field

The Service Manager 7.00 server automatically encrypts operator passwords the first time it accesses each operator record. The 7.00 encryption scheme requires a larger character limit for the password field.

Update the SQL hints record for the password field to accept a larger character limit.

You must update the SQL mapping before logging into the upgraded version of HP Service Manager. HP Service Manager will refuse to open the operator file if the password field is to small, which results in failure to login. There will be a message like this in the sm.log file: "!!! column PASSWORD is too short (60) to hold encrypted password, should be 136 characters."

1   Log in to the existing ServiceCenter system with an administrator account.

2   Type **db** in the client command line, and then press **ENTER**.

    The Database Manager opens.

3   In the Table field, type **sqlhints**, and click **Search**.

    The SQL Hints form opens.

4   Select your RDBMS vendor type from the Databasse Type field.

5   Type **operator** in the File Name field.

6   Type **password** in the Field Name field.

7   Type the SQL type value that matches your RDBMS vendor from the list below.

Table 1   SQL Type requirements for the password field

RDBMS type	SQL type value
db2universal	varchar(136)
oracle	varchar2(136)
sqlserver	varchar(136)

8   Click **Save**.

Increase the length of fields for Problem Management

If you purchased both Service Level Agreements (SLA) and Problem Management, you must increase the field length of several SLA fields in the sloresponse table to accommodate the long status values that Problem Management uses. You may skip this step if you do not manage Problem Management with SLA or if your current ServiceCenter version is not 6.1 or 6.2.

Create or update the SQL hints for the following sloresponse fields to accept a character limit of at least 60 characters.

- initial.state
- final.state

1 Log in to the existing ServiceCenter system with an administrator account.

2 Type **db** in the client command line, and then press **ENTER**.

   The Database Manager opens.

3 In the Table field, type **sqlhints**, and click **Search**.

   The SQL Hints form opens.

4 Select your RDBMS vendor type from the Databasse Type field.

5 Type **sloresponse** in the File Name field.

6 Type **initial.state** in the Field Name field.

7 Type the SQL type value that matches your RDBMS vendor from the list below.

Table 2   SQL Type requirements for the initial.state field

RDBMS type	SQL type value
db2universal	varchar(60)
oracle	varchar2(60)
sqlserver	varchar(60)

8 Click **Add** to create a new record or **Save** to update an existing record.

9 Type **sloresponse** in the File Name field.

10 Type **final.state** in the Field Name field.

11 Type the SQL type value that matches your RDBMS vendor from the list below.

Table 3   SQL Type requirements for the final.state field

RDBMS type	SQL type value
db2universal	varchar(60)
oracle	varchar2(60)
sqlserver	varchar(60)

12 Click **Add** to create a new record or **Save** to update an existing record.

Set DB2 application control heap size configuration parameter

If you are running on a DB2 RDBMS, increase the application control heap size configuration parameter from the default of 128 pages to 256 pages.

See your DB2 documentation for information on setting the application control heap size configuration parameter. The following link provides reference information on using the APP_CTL_HEAP_SZ configuration parameter:

http://publib.boulder.ibm.com/infocenter/db2luw/v8/index.jsp?topic=/ com.ibm.db2.udb.doc/admin/r0000102.htm

Upgrading a case insensitive system

Previous versions of ServiceCenter could run on a case insensitive database systems. If you want to upgrade an existing case insensitive system, you must set up a case insensitive Microsoft SQL Server system to host your data. At this time, Service Manager cannot support case insensitive systems on DB2 or Oracle. See the Microsoft SQL Server documentation for information about setting up a case insensitive database.

After you have set up the SQL server host database, upgrade your server runtime environment and applications normally.

Convert all existing ServiceCenter data to a supported RDBMS

HP Service Manager requires a supported RDBMS on which to store data. Before you can upgrade the server run-time environment (RTE) or applications, you must push all of your existing ServiceCenter data to an RDBMS supported by Service Manager. See your ServiceCenter documentation for instructions on converting your existing ServiceCenter data to a supported RDBMS.

In some RDBMS conversion scenarios you may need to push your data to a RDBMS version supported by your current version of ServiceCenter, and then upgrade the RDBMS to a version supported by Service Manager.

For example, ServiceCenter 5.1 does not support Microsoft SQL Server 2005, while Service Manager 7.00 does. To upgrade to the supported version of SQL Server 2005, you can install an instance of the SQL Server 2000 client on the ServiceCenter 5.1 system and use it to connect to the SQL Server 2005 database. After you have fully upgraded your ServiceCenter 5.1 data to Service Manager 7.00, you can uninstall the SQL Server 2000 client and install a SQL Server 2005 client.

See the Service Manager compatibility matrices for a listing of supported RDBMS vendors and versions. See your RDBMS vendor documentation for instructions on upgrading RDBMS versions.

Service Manager must have an administrator account on the RDBMS and files must have room for unrestricted growth. See Overview of RDBMS conversion steps on page 37 for a workflow of conversion tasks required.

Overview of RDBMS conversion steps
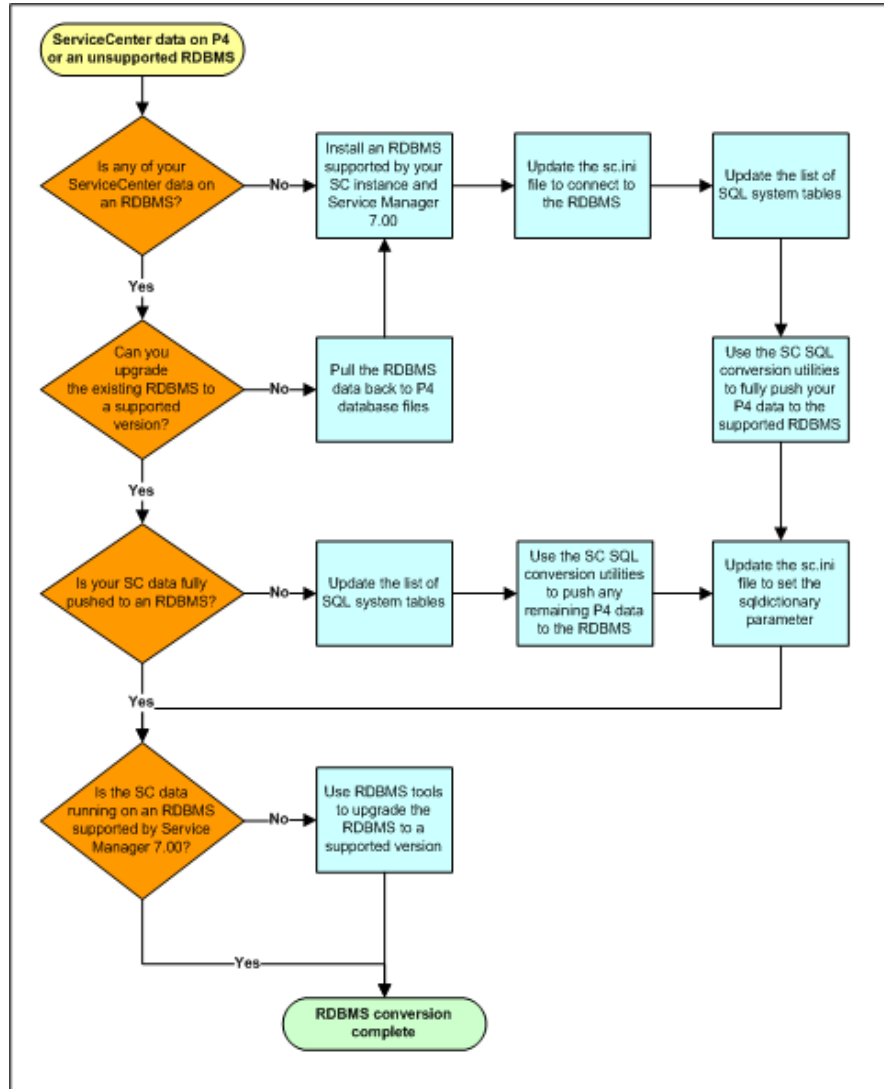
Step 2: Duplicate the production environment

To achieve the best results, develop and test the custom upgrade on a system that resembles your production environment as closely as possible.

To duplicate the production environment

1   Identify a server to use for the development and test environments.

    — Unix: You can copy the files to a new location on your production machine.

    — Microsoft Windows™: You must create the development system on a different machine from your production system.

2   Ensure that adequate memory and disk space is available and accessible. Frequent backups are necessary.

3   Ensure that your development and test systems meet all upgrade requirements. For more information, see Step 2: Meet the software requirements on page 21.

    — Upgrade your RDBMS to a version compatible with HP Service Manager 7.00. See the Service Manager 7.00 compatibility matrix.

    — Convert your RDBMS code page to Unicode. See your RDBMS vendor documentation.

4   Decide how you want to manage your RDBMS, as described in Step 5: Develop an upgrade strategy on page 25.

5   Set up the environment of your development and test machines to match your production server exactly.

    — The operating system version and service pack level should match.

6   Copy your existing ServiceCenter production system data onto your development system.

    HP recommends you use the native RDBMS back up utilities to back up your Service Manager data. Refer to your RDBMS documentation for backup instructions.

7   Install a Service Manager 7.00 run time environment on the development system. Do not load the Service Manager 7.00 demonstration data files.

8   Install a Service Manager 7.00 client on the development system.

Step 3: Install the Service Manager application upgrade utility

Follow these steps when you set up your development and test systems, and when you prepare your production system for an application upgrade.

⚠️ Do not try to run the upgrade directly from the DVD. The upgrade needs read and write access to its files.

To install the Service Manager application upgrade utility on Unix or Windows

1 Create the following new subdirectories to the primary directory in the development or test system. They should be on the same level as the RUN directory.

— Upgrade

— Backups

— CustomUpgrade

2 Ensure that the Service Manager server process (sm) has write and execute privileges for these directories.

3 Copy the Service Manager application upgrade utility files to the Upgrade directory.

4 Remove the read-only permissions from the files.

4 Phase III: Upgrading the Server Runtime Environment

You can upgrade the server run-time environment (RTE) separately from the HP Service Manager applications. If you are only upgrading your server RTE, you do not need to create and apply a custom upgrade or do conflict resolution.

Topics in this section include:

Upgrade options

The following table lists the upgrade options available with HP Service Manager 7.00.

Table 1   Server run-time environment upgrade options

Previous version of ServiceCenter	Upgrade options
6.1 and 6.2	Upgrade server RTE to 7.00 in preparation for upgrading applications to 7.00
5.1 and 6.0	Upgrade server RTE to an interim ServiceCenter 6.2 server RTE to fully push your data to an RDBMS and to convert your data to UTF-8. Then upgrade the server RTE to Service Manager 7.00 in preparation for upgrading applications to 7.00

▶ HP Service Manager does not support running previous ServiceCenter applications on the Service Manager server runtime environment.

Tasks for upgrading your server runtime environment

This section contains a list of actions required to upgrade your server runtime environment (RTE) from its current ServiceCenter version to Service Manager 7.00. See the section for your current version of ServiceCenter for a list of required upgrade steps.

- ServiceCenter 5.1 to HP Service Manager 7.00 on page 43
- ServiceCenter 6.0 to HP Service Manager 7.00 on page 46
- ServiceCenter 6.1 to HP Service Manager 7.00 on page 49
- ServiceCenter 6.2 to HP Service Manager 7.00 on page 50

ServiceCenter 5.1 to HP Service Manager 7.00

The following tasks are for upgrading ServiceCenter 5.1 systems to a Service Manager 7.00 RTE. Contact Customer Support to upgrade systems running ServiceCenter versions prior to 5.1. These tasks are valid for the following ServiceCenter starting configurations:

Table 2   ServiceCenter 5.1 starting configurations

Application version	RTE version
5.1	5.1
5.1	6.0
5.1	6.1
5.1	6.2

Task 1:   Is your existing ServiceCenter data fully pushed to an RDBMS?

Yes. Go to Task 2.

No. Go to Task 3.

Task 2:   Is the RDBMS a version supported by Service Manager 7.00?

Yes. Go to Task 4.

No. Go to Task 3.

Task 3: Push your existing ServiceCenter data to a RDBMS supported by Service Manager 7.00.

See Step 1: Meet RDBMS conversion requirements on page 28, then go to the next task.

Task 4: Is your existing ServiceCenter server runtime environment version 6.1 or 6.2?

Yes. Go to Task 15.

No. Go to Task 5.

Task 5: Install an interim ServiceCenter 6.2 server and client.

See Install an interim ServiceCenter 6.2 server and client on page 52, and then go to the next task.

Task 6: Update the connection settings to the interim ServiceCenter 6.2 server.

See Update the connection settings to the interim ServiceCenter 6.2 server on page 54, then go to the next task.

Task 7: Was your prior ServiceCenter server runtime environment version 6.0?

Yes. Go to Task 10.

No. Go to Task 8.

Task 8: Convert your existing ServiceCenter data to UTF-8.

See Convert existing ServiceCenter data to UTF-8 on page 55, then go to the next task.

Task 9: Apply the 6.x file loading utility unload.

See Apply the 6.x file loading utility unload on page 59, and then go Task 13.

Task 10: Apply the 6.x file loading utility unload.

See Apply the 6.x file loading utility unload on page 59, and then go to the next step.

Task 11: Update the info database dictionary record.

See Update the info database dictionary record on page 60, and then go to the next task.

Task 12: Apply the UTF-8 info flag unload.

See Apply the UTF-8 info flag unload on page 61, and then go to the next task.

Task 13: Apply attachment conversion unload.

See Apply the attachments conversion utility unload on page 62, and then go to Task 19.

Task 14: Apply favorites conversion unload.

See Apply the favorites conversion utility unload on page 68, and then go to the next task.

Task 15: Is your existing ServiceCenter server runtime environment version 6.2?

Yes. Go to Task 20.

No. Go to the Task 16.

Task 16: Apply the 6.x file loading utility unload.

See Apply the 6.x file loading utility unload on page 59, and then go to the next step.

Task 17: Update the info database dictionary record.

See Update the info database dictionary record on page 60, and then go to the next task.

Task 18: Apply the UTF-8 info flag unload.

See Apply the UTF-8 info flag unload on page 61, and then go to the next task.

Task 19: Apply system status utility unload.

See Apply the system status utility unload on page 73, and then go to the next task.

Task 20: Install a Service Manager 7.00 server and client.

See Install a Service Manager 7.00 server and client on page 74, and then go to the next task.

Task 21:   Update the connection settings to the Service Manager 7.00 server.

See Update the connection settings to the Service Manager server on page 76, and then go to the next task.

Task 22:   Review the list of required configuration file parameter changes.

See Required configuration file parameter changes on page 140, and then go to the next task.

Task 23:   Make a checkpoint backup of the data files to enable you to restore from this point, if necessary.

Use your RDBMS tools to back backup your data files.

Your system is now ready for the application upgrade process. See Phase IV: Running the Upgrade Utility on page 79.

ServiceCenter 6.0 to HP Service Manager 7.00

The following tasks are for upgrading ServiceCenter 6.0 systems to a Service Manager 7.00 RTE. These tasks are valid for the following ServiceCenter starting configurations:

Table 3   ServiceCenter 6.0 starting configurations

Application version	RTE version
6.0	6.0
6.0	6.1
6.0	6.2

Task 1:   Is your existing ServiceCenter data fully pushed to an RDBMS?

Yes. Go to Task 2.

No. Go to Task 3.

Task 2:   Is the RDBMS a version supported by Service Manager 7.00?

Yes. Go to Task 4.

No. Go to Task 3.

Task 3: Push your existing ServiceCenter data to a RDBMS supported by Service Manager 7.00.

See Step 1: Meet RDBMS conversion requirements on page 28, then go to the next task.

Task 4: Is your existing ServiceCenter server runtime environment version 6.1 or 6.2?

Yes. Go to Task 11.

No. Go to Task 5.

Task 5: Install an interim ServiceCenter 6.2 server run time environment and client.

See Install an interim ServiceCenter 6.2 server and client on page 52, and then go to the next task.

Task 6: Update the connection settings to the interim ServiceCenter 6.2 server.

See Update the connection settings to the interim ServiceCenter 6.2 server on page 54, then go to the next task.

Task 7: Apply the 6.x file loading utility unload.

See Apply the 6.x file loading utility unload on page 59, and then go to the next task.

Task 8: Apply UTF-8 info flag unload.

See Apply the UTF-8 info flag unload on page 61, and then go to the next task.

Task 9: Apply attachment conversion unload.

See Apply the attachments conversion utility unload on page 62, and then go to Task 14.

Task 10: Apply favorites conversion unload.

See Apply the favorites conversion utility unload on page 68, and then go to the next task.

Task 11: Is your existing ServiceCenter server runtime environment version 6.2?

Yes. Go to Task 15.

No. Go to the Task 12.

Task 12: Apply the 6.x file loading utility unload.

See Apply the 6.x file loading utility unload on page 59, and then go to the next task.

Task 13: Apply UTF-8 info flag unload.

See Apply the UTF-8 info flag unload on page 61, and then go to Task 9.

Task 14: Apply system status utility unload.

See Apply the system status utility unload on page 73, and then go to the next task.

Task 15: Install a HP Service Manager server run-time environment and client.

See Install a Service Manager 7.00 server and client on page 74, and then go to the next task.

Task 16: Update the Service Manager server connection information.

See Update the connection settings to the Service Manager server on page 76, and then go to the next task.

Task 17: Review the list of required configuration file parameter changes.

See Required configuration file parameter changes on page 140, and then go to the next task.

Task 18: Make a checkpoint backup of the data files to enable you to restore from this point, if necessary.

Use your RDBMS tools to back backup your data files.

Your system is now ready for the application upgrade process. See Phase IV: Running the Upgrade Utility on page 79.

ServiceCenter 6.1 to HP Service Manager 7.00

The following tasks are for upgrading ServiceCenter 6.1 systems to a Service Manager 7.00 RTE. These tasks are valid for the following ServiceCenter starting configurations:

Table 4   ServiceCenter 6.1 starting configurations

Application version	RTE version
6.1	6.1
6.1	6.2

Task 1:   Is your existing ServiceCenter data fully pushed to a RDBMS?

Yes. Go to Task 2.

No. Go to Task 3.

Task 2:   Is the RDBMS a version supported by Service Manager 7.00?

Yes. Go to Task 4.

No. Go to Task 3.

Task 3:   Push your existing ServiceCenter data to a RDBMS supported by Service Manager 7.00.

See Step 1: Meet RDBMS conversion requirements on page 28, then go to the next task.

Task 4:   Is your existing ServiceCenter server runtime environment version 6.2?

Yes. Go to Task 8.

No. Go to the Task 5.

Task 5:   Apply the 6.x file loading utility unload.

See Apply the 6.x file loading utility unload on page 59, and then go to the next task.

Task 6: Apply UTF-8 info flag unload.

See Apply the UTF-8 info flag unload on page 61, and then go to the next task.

Task 7: Apply system status utility unload.

See Apply the system status utility unload on page 73, and then go to the next task.

Task 8: Install a HP Service Manager server run-time environment and client.

See Install a Service Manager 7.00 server and client on page 74, and then go to the next task.

Task 9: Update the Service Manager server connection information.

See Update the connection settings to the Service Manager server on page 76, and then go to the next task.

Task 10: Review the list of required configuration file parameter changes.

See Required configuration file parameter changes on page 140, and then go to the next task.

Task 11: Make a checkpoint backup of the data files to enable you to restore from this point, if necessary.

Use your RDBMS tools to back backup your data files.

Your system is now ready for the application upgrade process. See Phase IV: Running the Upgrade Utility on page 79.

ServiceCenter 6.2 to HP Service Manager 7.00

The following tasks are for upgrading ServiceCenter 6.2 systems to a Service Manager 7.00 RTE. These tasks are valid for the following ServiceCenter starting configurations:

Table 5   ServiceCenter 6.2 starting configurations

Application version	RTE version
6.2	6.2

Task 1: Is your existing ServiceCenter data fully pushed to a RDBMS?

Yes. Go to Task 2.

No. Go to Task 3.

Task 2: Is the RDBMS a version supported by Service Manager 7.00?

Yes. Go to Task 4.

No. Go to Task 3.

Task 3: Push your existing ServiceCenter data to a RDBMS supported by Service Manager 7.00.

See Step 1: Meet RDBMS conversion requirements on page 28, then go to the next task.

Task 4: Install a HP Service Manager server run-time environment and client.

See Install a Service Manager 7.00 server and client on page 74, and then go to the next task.

Task 5: Update the Service Manager server connection information.

See Update the connection settings to the Service Manager server on page 76, and then go to the next task.

Task 6: Upgrade the Knowledge Management search engine.

See Upgrade the Knowledge Management search engine on page 77, and then go to the next task.

Task 7: Review the list of required configuration file parameter changes.

See Required configuration file parameter changes on page 140.

Task 8: Make a checkpoint backup of the data files to enable you to restore from this point, if necessary.

Use your RDBMS tools to back backup your data files.

Your system is now ready for the application upgrade process. See Phase IV: Running the Upgrade Utility on page 79.

Install an interim ServiceCenter 6.2 server and client

If your starting ServiceCenter system is version 5.1 or 6.0, you must install an interim ServiceCenter 6.2 server run-time environment to perform several tasks in preparation to upgrading to Service Manager 7.00.

To download a copy of the ServiceCenter 6.2 server, visit HP Software Support Online (SSO) web site at:

www.hp.com/go/hpsoftwaresupport

The HP Software Support Online (SSO) web site requires that you register as an HP Passport user and sign in.

To register for an HP Passport ID, go to:

h20229.www2.hp.com/passport-registration.html

Installing a ServiceCenter 6.2 server and client workflow
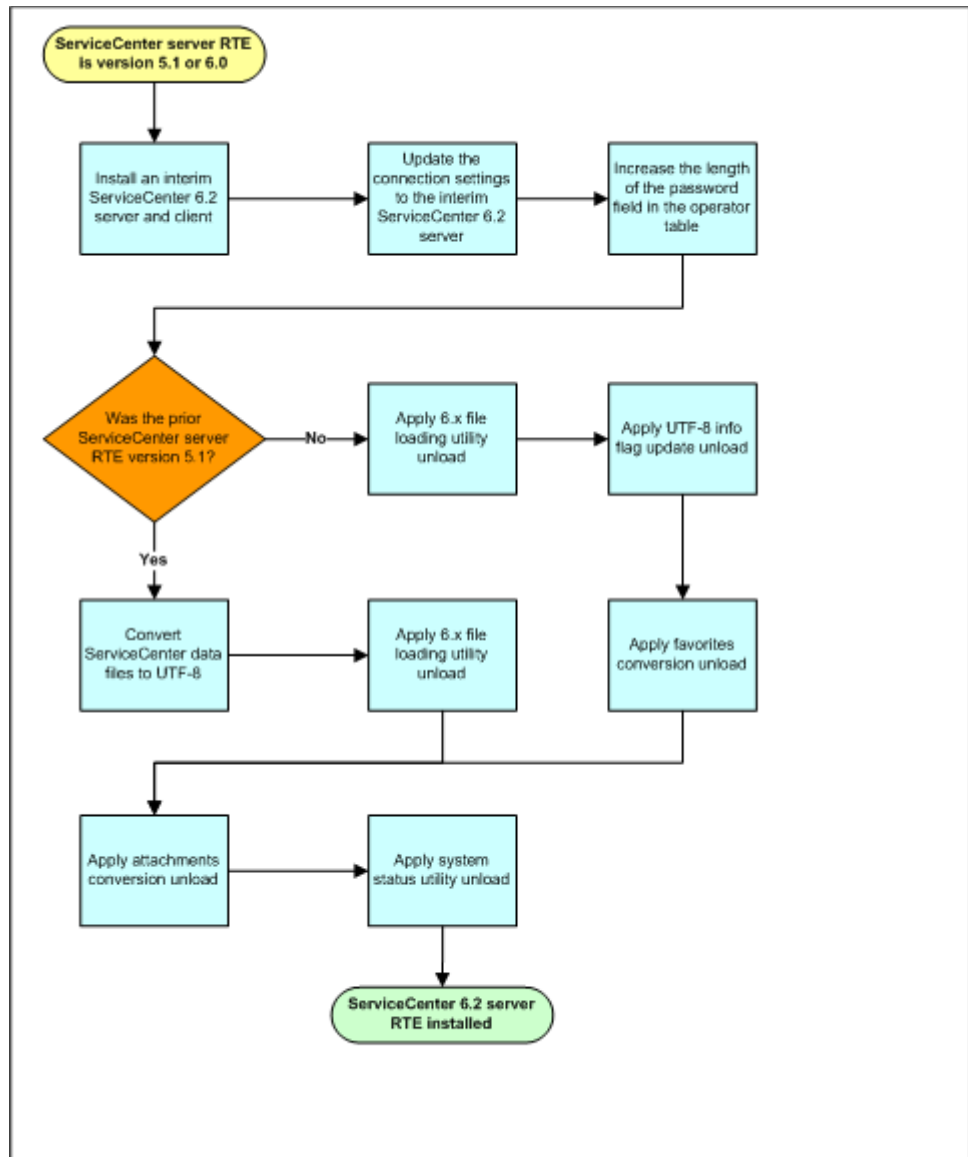
Update the connection settings to the interim ServiceCenter 6.2 server

After you have installed an interim ServiceCenter 6.2 server, open and edit the sc.ini file for the 6.2 server and add the connections parameters to the RDBMS hosting your ServiceCenter data. At a minimum, you must include the following parameters.

Table 6   Required connection parameters for the interim ServiceCenter 6.2 server

Parameter	Value required
`sqldictionary`	ID for your RDBMS vendor type
[*RDBMS ID*]	ID for your RDBMS vendor type
`sqldb`	The host name of the RDBMS to which you want the interim ServiceCenter 6.2 server to connect
`sqllogin`	*<Account name>/<password>*

To edit the sc.ini file:

1   Stop the interim ServiceCenter 6.2 server.

2   Open the `sc.ini` file in a text editor.

The default path of the sc.ini file is:

C:\Program Files\Peregrine Systems\ServiceCenter 6.2\Server\RUN

3   Add the required connection parameters.

4   Save the `sc.ini` file.

5   Restart the interim ServiceCenter 6.2 server.

Convert existing ServiceCenter data to UTF-8

If you are upgrading from a ServiceCenter 6.0.x or 6.1.x system, your data files are already converted to UTF-8. Skip ahead to Apply the UTF-8 info flag unload on page 61.

Since ServiceCenter 6.0, the server stores all application and system files in UTF-8 character encoding. If you are upgrading from a ServiceCenter 5.1 system, you must convert your existing data to UTF-8 format before you can run the ServiceCenter Upgrade Utility.

The UTF-8 conversion process only converts data mapped to binary columns in your RDBMS. The ServiceCenter data mapped to character-based columns remains in the codepage of your RDBMS. If you want to convert all your user data to UTF-8, see your RDBMS documentation for information.

Update the interim ServiceCenter 6.2 sc.ini file

The UTF-8 conversion process requires the data and dblanguage parameters. The value you must enter for the dblanguage parameter depends upon the RDBMS vendor you use.

1 Log in to system hosting the interim ServiceCenter 6.2 server with an administrator account.

2 Stop the interim ServiceCenter 6.2 server.

3 Open the `sc.ini` file in a text editor.

4 If necessary, add the **path** parameter to locate where the legacy P4 files reside after your RDBMS conversion. For example:

`path:../P4`

> ➤ The convert to UTF-8 process requires access to your legacy P4 files. If your legacy P4 files still reside in the default **/DATA** folder, then you do not need to specify a path parameter. If your legacy P4 files reside in another location, you must add the path parameter to specify this location.

5 Add the dblanguage parameter required by your RDBMS vendor.

Table 7   dblanguage parameter required by RDBMS vendor

RDBMS vendor	dblanguage parameter needed
DB2	dblanguage:utf8
Oracle	dblanguage:utf8
SQL Server	dblanguage:*<locale codepage>* For *<locale codepage>* type the code page that your SQL Server uses. For example, for Western European languages such as English, type: dblanguage:mswin1252

6 Save the `sc.ini` file.

Update the RDBMS environment settings

Your RDBMS environment settings must match the dblanguage value you set in interim ServiceCenter 6.2 server. Use the table below to determine the RDBMS environmental settings required.

Table 8   RDBMS environment settings required for UTF-8

RDBMS vendor	environment setting
DB2	run db2set DB2CODEPAGE=1208
Oracle[a]	NLS_LANG=American_america.al32utf8
SQL Server	Must match the locale of the data.

a. Oracle requires specifying the locale and region in the environment setting. Replace "American_america" with the locale and region of your RDBMS.

See your RDBMS vendor documentation for instructions on how to set the proper environment settings.

Start one or more conversion processes

You can run the UTF-8 conversion as one or more dedicated processes that use all available system resources for the conversion.You can decrease the UTF-8 conversion time by running multiple background processes.

1 Ensure that you have a backup copy of the data in case you must restore it later.

⚠ Conversion to UTF-8 is not reversible. Hewlett-Packard strongly recommends that you make a backup copy of your database files prior to UTF-8 conversion.

2 To run the conversion as a dedicated process, stop the interim ServiceCenter 6.2 server.

To run the conversion using multiple background processes, do not stop the server.

3 Open an operating system command prompt, and navigate to the RUN directory of the interim ServiceCenter 6.2 server. For example, on a default Windows installation the path is:

```
cd C:\Program Files\Peregrine Systems\ServiceCenter
6.2\Server\RUN
```

4 Type one of the following commands:

Table 9   List of UTF-8 conversion commands

Option	Command
Single process conversion	scenter -converttoutf8
Multiple process conversion	scenter -converttoutf8:*<number>*

For *<number>*, type the number of background processes you want to use for UTF-8 conversion on an RDBMS.

⚑ HP recommends two background processors for each CPU available on the system.

The time it takes to complete the UTF-8 conversion process depends on the amount of data to be converted. Check the ServiceCenter system log for a confirmation message that the conversion is complete.

After the converttoutf8 utility completes, you are ready to apply the 5.x file loading utility unload.

5 Make a checkpoint backup of the RDBMS files to enable you to restore from this point, if necessary.

Verifying UTF-8 conversion from 6.0.x servers

If you are upgrading from ServiceCenter 6.0.x and you have been using Oracle or DB2 to store ServiceCenter data, you may need to verify the UTF-8 conversion. This step is not necessary for ServiceCenter versions prior to 6.0.x or for ServiceCenter 6.0.x servers where the data resided on either SQL Server or P4 databases. Likewise, it is not necessary to verify the conversion if your Oracle or DB2 tables were already using UTF-8 codepages.

1 Open an operating system command prompt, and navigate to the ServiceCenter RUN directory. For example on a default Windows installation:

```
cd C:\Program Files\Peregrine Systems\ServiceCenter
6.2\Server\RUN
```

2 Type the following command:

```
scenter -verifyutf8
```

The ServiceCenter server scans the tables mapped to your RDBMS and repairs certain character sequences that ServiceCenter 6.0.x did not convert properly. The command creates a report of any data that it repaired or that it could not repair.

If your RDBMS uses Windows 1252 code pages, the ServiceCenter 6.2 server repairs any incorrect character sequences, provided there are no truncation errors from storing the column data in the RDBMS tables. You can avoid truncation errors by defining CHAR or VARCHAR fields with adequate field lengths.

If your RDBMS uses ISO code pages, it is likely that the verify utility cannot repair some characters. Contact HP Customer Support with a list of all UTF-8 conversion errors.

3 Make a checkpoint backup of the data files to enable you to restore from this point, if necessary.

Apply the 6.x file loading utility unload

Service Manager uses a newer version of the file loading utility that you must
load into your existing ServiceCenter 5.1, 6.0, and 6.1 applications.

1   Copy the 6.xfileload_list.unl unload file from the <*ServiceCenter
    server installation path*>**\serverUpgrade** folder of the interim
    ServiceCenter server to the **\RUN** folder.

2   Open a command prompt from the interim ServiceCenter server's
    operating system.

3   Type one of the following commands based on the operating system type of
    the interim ServiceCenter server.

Table 10   6.x file loading utility loading commands

OS type	Command
Windows	`scenter -substrclassic:1 file.load` `6.xfileload_list.unl NULL NULL winnt`
Unix	`scenter -substrclassic:1 file.load` `6.xfileload_list.unl NULL NULL unix`

The server loads the new file loading utility and supporting records.

Update the info database dictionary record

If your existing ServiceCenter system was running 5.1 applications on a 6.0 or 6.1 server RTE, you need to update the database dictionary record for the info file before applying the UTF-8 info flag unload. This correction prevents a potential data corruption issue in systems upgrading from 5.1 applications.

1   Start the interim ServiceCenter server.

2   Log into the interim ServiceCenter system with an administrator account.

3   In the ServiceCenter command line type dbdict to start the database dictionary application.

4   In the File Name field, type **info**, and click **Search**.

5   Click on the **process.start.info** structure.

> By default, this structure is the fourth entry in the database dictionary record.

6   Click **Edit**.

7   Change the name of the structure to **process.start.infos** so that it matches the Array entry.

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

9   Click **OK** to save the database dictionary record.

10 Log out of the interim ServiceCenter system, and stop the server.

Apply the UTF-8 info flag unload

Service Manager uses a new record value to indicate that you have already converted your RDBMS data files to UTF-8. If you converted your data files to UTF-8 from a ServiceCenter 6.0 or 6.1 server RTE you must load a special utility to indicate that you have already converted your RDBMS data files to UTF-8. If you are migration from any other ServiceCenter server RTE versions, skip this step and go to Apply the attachments conversion utility unload on page 62.

Customers upgrading from ServiceCenter 5.1 applications should only apply the UTF-8 info flag unload if they were running on a 6.0 or 6.1 server RTE. If your system had a 5.1 or 6.2 server RTE, skip this step.

1 Copy the utf8_info_flag.unl unload file from the <*ServiceCenter server installation path*>**serverUpgrade** folder of the interim ServiceCenter server to the **RUN** folder.

2 Open a command prompt from the interim ServiceCenter server's operating system.

3 Type one of the following commands based on the operating system type of the interim ServiceCenter server.

Table 11   6.x file loading utility loading commands

OS type	Command
Windows	`scenter file.load utf8_info_flag.unl NULL NULL winnt`
Unix	`scenter file.load utf8_info_flag.unl NULL NULL unix`

The server loads the UTF-8 information flag and supporting records.

Apply the attachments conversion utility unload

ServiceCenter 6.1 and later releases store attachments in a repository called SYSATTACHMENTS, which contains a separate record for each attachment. Earlier ServiceCenter versions stored all attachment files for a given record as a single binary unit in the SYSBLOB table. To display attachments stored in the SYSBLOB table, the ServiceCenter server had to retrieve the record, open the binary object, extract the desired attachment, and then display the attachment. The new method is simpler and faster.

To view existing attachments, you must migrate the contents of the SYSBLOB table to the SYSATTACHMENTS table. ServiceCenter has two ways of converting attachments.

- Run a background conversion process to convert all attachments over time. This is the preferred conversion method as administrators can schedule the conversion process and users can still access the system while the process is running. A system administrator can start and stop the background process as needed.

- Use on-demand conversion to convert only attachments in records that operators view or update. This secondary conversion method allows users access to all attachment records.

If your system contains OLE object formatted attachments, you have to manually convert them. See the knowledge article *Reading OLE Attachments in ServiceCenter™ Versions 6.0 and 6.1* from the Customer Support Web site for more information.

To convert your attachments to the new table:

Task 1: Load the attachment conversion utility.

See Load the attachment conversion utility on page 63.

Task 2: Review the SQL mappings for the new table.

See Review SQL mappings on page 63.

Task 3: Push the SYSATTACHMENTS table to your RDBMS.

See Push the SYSATTACHMENTS table to RDBMS on page 64.

Load the attachment conversion utility

Before you convert your attachments, load the new SYSATTACHMENTS
table onto your system.

1 Copy the sysattachments.unl unload file from the *<ServiceCenter server
   installation path>***\serverUpgrade** folder of the interim ServiceCenter
   server to the **\RUN** folder.

2 Open a command prompt from the interim ServiceCenter server's
   operating system.

3 Type one of the following commands based on the operating system type of
   the interim ServiceCenter server.

Table 12   6.x file loading utility loading commands

OS type	Command
Windows	scenter file.load sysattachments.unl NULL NULL winnt
Unix	scenter file.load sysattachments.unl NULL NULL unix

The server loads the attachment conversion utility and necessary tables.

Review SQL mappings

Verify that the SYSATTACHMENT table has the mapping properties listed
below.

▶   You must have administrative access to the RDBMS to change these settings.

- The data column of the SYSATTACHMENT table must be able to store pure binary data. This column should have a data type of either BLOB or image.

- The sqlmapping record for the data column must have a value of true for the SQL RC column.

- The filename and topic columns of the SYSATTACHMENT table should have a character data type sufficiently large enough to contain the longest attachment file name in your system, such as for example, varchar(256).

Push the SYSATTACHMENTS table to RDBMS

The attachment conversion utility creates a new P4 file called SYSATTACHMENTS on the interim ServiceCenter 6.2 server. Before you run the attachment conversion process, you must push the new table to your RDBMS. Use the SQL conversion utilities provided with the interim ServiceCenter 6.2 server to push the SYSATTACHMENTS table.

Background conversion

You can start a dedicated ServiceCenter process to run the attachment conversion utility. This background process converts attachments while the server is running. While the server accepts client connections during the conversion process, users may notice decreased system performance. If the conversion process stops, it can resume where it left off when you restart the attachment conversion utility.

The time the conversion process takes to complete depends on the amount of data to be converted and on the system performance of your RDBMS and ServiceCenter server. Conversion times generally decrease if you run the background process during non-peak hours. A general performance metric is 25,000 attachments converted in an hour of run time. A million attachments in a large system could take 40 hours of run time.

Do not add, change, or delete records from the SYSBLOB or SYSATTACHMENTS tables with anything other than the attachment conversion utility or a ServiceCenter client during the background conversion process. You can lose data if any SQL tool or customer-written application changes the SYSBLOB or SYSATTACHMENTS tables.

Set attachment segment size

The ServiceCenter server divides each attachment into segments based on the value of the attachmentsegmentsize parameter. It is important that you determine the desired attachment segment size prior to conversion because once the server converts an attachment, the only way to change the segment size is to manually edit and save every converted attachment again. If you prefer to keep attachments in as few segments as possible, then set the attachment segment size to its 2-GB maximum value. See the Service Manager 7.00 Help for information about this parameter.

1   Stop the existing or interim ServiceCenter server.

2   Open an operating system command prompt, and navigate to the ServiceCenter RUN directory. For example on a default Windows installation:

    ```
    cd C:\Program Files\Peregrine Systems\ServiceCenter
    6.2\Server\RUN
    ```

3   Open the ServiceCenter initialization file (sc.ini) in a text editor.

4   Add the **attachmentsegmentsize** parameter. For example:

    ```
    attachmentsegmentsize:2147483647
    ```

    See the Service Manager 7.00 Help for information about this parameter.

5   Save the initialization file.

6   Restart the ServiceCenter server.

Start the attachment conversion process

HP recommends that you start the attachment conversion process from an operating system command prompt so that you can include additional parameters such as logging settings.

1   Stop the existing or interim ServiceCenter server.

2   Open an operating system command prompt, and navigate to the ServiceCenter RUN directory. For example on a default Windows installation:

    ```
    cd C:\Program Files\Peregrine Systems\ServiceCenter
    6.2\Server\RUN
    ```

3   Type the following command to start the ServiceCenter server and the attachment conversion process with a dedicated log file:

```
scenter -convertsysblob -log:..\logs\convertsysblob.log
-numberoflogfiles:15 -maxlogsize:5242880
```

ServiceCenter converts attachments from the SYSBLOB table to the SYSATTACHMENTS table. During the conversion process, the server deletes records from the SYSBLOB table and adds records to the SYSATTACHMENTS table. If the background process cannot convert a record, it preserves the record in the SYSBLOB table and creates a log entry of the error.

▶ You can stop and restart the attachment conversion process as needed. If you stop the process, it resumes converting attachments from where it last stopped.

After completion, the server displays the message:

```
SYSBLOB file conversion to SYSATTACHMENTS completed
successfully.
```

Verify the attachment conversion process

You have two ways to verify and monitor the progress of the attachment conversion process:

- View the contents of the SYSBLOB and SYSATTACHMENTS tables
- Review the log file

You can use a ServiceCenter Database Manager to review the contents of the SYSBLOB and SYSATTACHMENT tables.

As the conversion progresses, the number of records in the SYSBLOB table should decrease, while the number of records in the SYSATTACHMENTS table should increase. Records in the SYSBLOB table with a segment number of zero indicate attachments still to be converted. Records in the SYSATTACHMENT table with a segment number of zero indicate attachments that have already been converted.

If you started a ServiceCenter process with a dedicated log file, you can review the log file for periodic updates. Review the log file you started to see what error messages the server produced. If your system contains any attachments

with OLE objects, the log file will indicate the table and record containing these attachments. During a normal conversion process, you should see a series of informational messages regarding attachment conversions.

▶ Some earlier versions of ServiceCenter stored empty structures in the SYSBLOB table. The background process reports these empty structures and deletes them during conversion.

If the conversion is successful, you should have no remaining records in the SYSBLOB table. You may safely delete the SYSBLOB table after conversion. If the SYSBLOB table still contains records after the conversion, then note the values of the application and topic fields for these records. You can use these values to determine the associated table and record for the attachment.

If the associated records for these attachments no longer exist, then you can safely delete the SYSBLOB record. If the associated records still exist, then you can use the following steps to reconcile them.

1   Log on to the production server hosting your previous version of ServiceCenter.

2   Search for a record containing an unconverted attachment.

    The application name identifies the related record table name and the topic identifies the unique key of the related record containing the attachment.

3   Open the attachments in the record and save them on a local hard drive.

4   Delete the existing attachments from the record.

5   Add the attachments back to their proper records on your upgraded ServiceCenter system.

    See the Service Manager 7.00 Help for information on adding attachments.

On-demand conversion

If an operator views the Attachment tab on a record containing an unconverted attachment, then the server converts all attachments in that record and saves them in the new SYSATTACHMENTS table. This on-demand conversion only occurs when using Service Manager clients or the Service Manager Web Services API.

Apply the favorites conversion utility unload

Earlier versions of ServiceCenter used inboxes to launch reusable queries. With ServiceCenter 6.0, the server also offered favorites that overlapped with the existing inbox functionality. With Service Manager 7.00, the server now stores all data used by inboxes, charts, dashboards, and favorites in the inbox table. You can access inboxes by expanding the Favorites folder, or you can continue to access them using traditional ServiceCenter navigation.

The inbox and favorites conversion process migrates the contents of the systext table to the inbox table. This migration ensures that favorites from ServiceCenter 6.0 and inboxes from all earlier releases work seamlessly in ServiceCenter 7.00.

Service Manager 7.00 and later releases store all data used by inboxes, charts, and favorites in the inbox table. Run the inbox and favorites conversion process to ensure favorites from ServiceCenter 6.0 and inboxes from all earlier releases work seamlessly in Service Manager 7.00.

The following tasks convert your existing favorites to the inbox table.

Task 1: Back existing favorites and inboxes.

See Back up existing inboxes and favorites on page 69, and then go to the next task.

Task 2: Load the favorites conversion utility.

See Load the favorites conversion utility on page 69, and then go to the next task.

Task 3: Review SQL mappings.

See Review SQL mappings on page 70, and then go to the next task.

Task 4: Update the unique key of the inbox table.

See Update the unique key of the inbox table on page 70, and then go to the next task.

Task 5: Run the favorites conversion utility.

See Run the favorites conversion utility on page 71, and then go to the next task.

Task 6:   Add additional keys to the inbox table.

See Add additional keys to the inbox table on page 71.

Back up existing inboxes and favorites

Before converting your favorites and inboxes, you should create an unload file consisting of the data in the systext and inbox tables.

See the ServiceCenter Help for information on creating unload files.

Load the favorites conversion utility

Before conversion you must load the favorites conversion utility.

1   Copy the favorites_conversion.unl unload file from the
    <*ServiceCenter server installation path*>**serverUpgrade** folder of the
    interim ServiceCenter server to the **RUN** folder.

2   Open a command prompt from the interim ServiceCenter server's
    operating system.

3   Type one of the following commands based on the operating system type of
    the interim ServiceCenter server.

Table 13   6.x file loading utility loading commands

OS type	Command
Windows	scenter file.load favorites_conversion.unl NULL NULL winnt
Unix	scenter file.load favorites_conversion.unl NULL NULL unix

The server loads the favorites conversion utility and necessary tables.

Review SQL mappings

Verify that the inbox table has the mapping properties listed below.

▶ You must have administrative access to the RDBMS to change these settings.

- The query column of the inbox table should have a character data type sufficiently large to avoid truncating long queries, such as *text*.

- The normalized_query column of the inbox table should have a character data type sufficiently large to avoid truncating long queries, such as *text*.

- The short_query column of the inbox table should have a character data type sufficiently large to avoid truncating long queries, such as *text*.

- The short_normalized_query column of the inbox table should have a character data type sufficiently large to avoid truncating long queries, such as varchar(256).

- The inbox_name column of the inbox table should have a character data type sufficiently large to avoid truncating long inbox names, such as varchar(256).

Update the unique key of the inbox table

To run properly, the favorites conversion utility requires changes to the inbox database dictionary file.

▶ You must have a database administrator make the following changes to the inbox table.

- Change the unique key to contain these fields in the following order:
  - container.id
  - inbox.name
  - inbox.type
  - operator.name

Run the favorites conversion utility

After updating the inbox database dictionary, you can run the favorites conversion utility.

1   Start the interim ServiceCenter server.

2   Using a ServiceCenter client, log on to ServiceCenter with an administrator account.

⚠   The user who runs the favorites conversion utility becomes the owner of all inboxes on the system, and as such will be able to view and edit all inboxes. If necessary, you may want to create a special administrator user to run the favorites conversion and own inboxes.

3   In the ServiceCenter command line, type the following command:

    rad

    The RAD Editor opens.

4   In the Application field, type the following:

    convert.old.favorites

5   Click **Search**.

6   Click **Test**.

7   Click **Proceed**.

    ServiceCenter converts the existing inboxes and favorites to the new table properties. When complete, the server displays the following message:

    Favorites conversion complete.

8   Check for error messages in the Windows client messages view and in the server log file.

9   Make a checkpoint backup of the data files to enable you to restore from this point, if necessary.

Add additional keys to the inbox table

After running the favorites conversion utility, you need to add additional keys to the inbox database dictionary.

1   Start the existing or interim ServiceCenter server.

2   Using a ServiceCenter client, log on to the ServiceCenter server with an administrator account.

3   In the System Navigator, expand **System Definition** > **Tables**.

4   Open the `inbox` table.

5   Double-click **Keys**.

6   Click **New** in the Keys section of the Fields and Keys tab.

7   In the General section, select **No duplicates** from the drop-down list in the Type field.

8   Click **Add** and select the following fields to be the No duplicates key:

9   Type inbox.id.

10   Click **Save**.

     ServiceCenter prompts you to regenerate the key.

11   Click OK.

     ServiceCenter regenerates the key and displays messages to indicate that the regen has completed successfully.

Apply the system status utility unload

The Service Manager 7.00 server run-time environment requires new versions of the system status and inactivity timer RAD applications to use the latest load balancer, to use one of the new servlet implementations, and to stop inactive processes running in the new implementation options.

1 Start the existing or interim ServiceCenter server.

2 Using a ServiceCenter 7.00 client, log on to ServiceCenter with an administrator account.

3 Click **Toolkit** > **Database Manager**.

4 Right-click the form and select **Import/Load**.

5 Type or select the following information.

Table 14   System status utility loading parameters

Field	Description
File Name	Type the name and path of the attachment conversion utility: *<ServiceCenter server installation path>*\serverUpgrade\sc6systemstatus.unl
File Type	Select the source operating system of the unload file.
Messages Option	Select **All Messages** to view all messages generated while loading the file.

▶ You can view the contents of an unload file before importing it by clicking **List Contents**.

6 Click **Load FG**.

The server loads the updated system status and inactivity timer applications. The server then prompts you to indicate whether you want ServiceCenter to automatically update the RDBMS or to have your database administrator perform the update.

Install a Service Manager 7.00 server and client

Hewlett-Packard recommends first deploying Service Manager 7.00 on a development environment to review new features and ensure system stability.

1 Perform a custom install of the Service Manager 7.00 server on the development system. Do not install the sample database.

  See the *HP Service Manager Installation Guide* for instructions.

2 Install a Service Manager 7.00 client on the development system or an available desktop system.

  See the *HP Service Manager Installation Guide* for instructions.

3 Put a copy of the original data files in the development system.

  See the your RDBMS documentation for restore instructions.

⚠ Do not start the Service Manager server yet.

Installing a Service Manager server and client workflow

The workflow begins at **ServiceCenter server RTE is version 6.1 or 6.2**, then proceeds to **Install a Service Manger 7.00 server and client**, then **Update the connection settings to the Service Manager 7.00 server**.

This leads to the decision **Was the prior ServiceCenter server RTE version 6.1?**

Yes: Increase the length of the password field in the operator table → Apply 6.x file loading utility unload → Apply UTF-8 info flag update unload → Apply system status utility unload → Service Manager 7.00 server RTE upgraded.

No: proceeds directly to Service Manager 7.00 server RTE upgraded.

Update the connection settings to the Service Manager server

After you have installed a interim Service Manager 7.00 server, open and edit the sm.ini file for the 7.00 server and add the connections parameters to the RDBMS hosting your ServiceCenter data. At a minimum, you must include the following parameters.

Table 15   Required connection parameters for the Service Manager 7.00 server

Parameter	Value required
`sqldictionary`	ID for your RDBMS vendor type
[*RDBMS ID*]	ID for your RDBMS vendor type
`sqldb`	The host name of the RDBMS to which you want the interim Service Manager 7.00 server to connect
`sqllogin`	*<Account name>/<password>*

To edit the sc.ini file:

1   Stop the Service Manager 7.00 server.

2   Open the sm.ini file in a text editor.

The default path of the sc.ini file is:

C:\Program Files\HP\Service Manager 7.00\Server\RUN

3   Add the required connection parameters.

4   Save the sm.ini file.

5   Restart the Service Manager 7.00 server.

Upgrade the Knowledge Management search engine

When upgrading the Knowledge Management (KM) search engine from a previous version:

- Ensure that the search engine version matches the Service Manager server version. Do not mis-match versions.

- Un-install the previous version of the KM search engine and also remove the directories included with the search engine.

- Re-index all of your knowledgebases after you install the new version of the KM search engine.

5 Phase IV: Running the Upgrade Utility

Now that you have a functional environment, you are ready to run the upgrade utility. Follow the steps in this chapter to run the out-of-box upgrade against the data in your development system and to run your custom upgrade against your test and production systems.

Topics in this section include:

Application upgrade overview
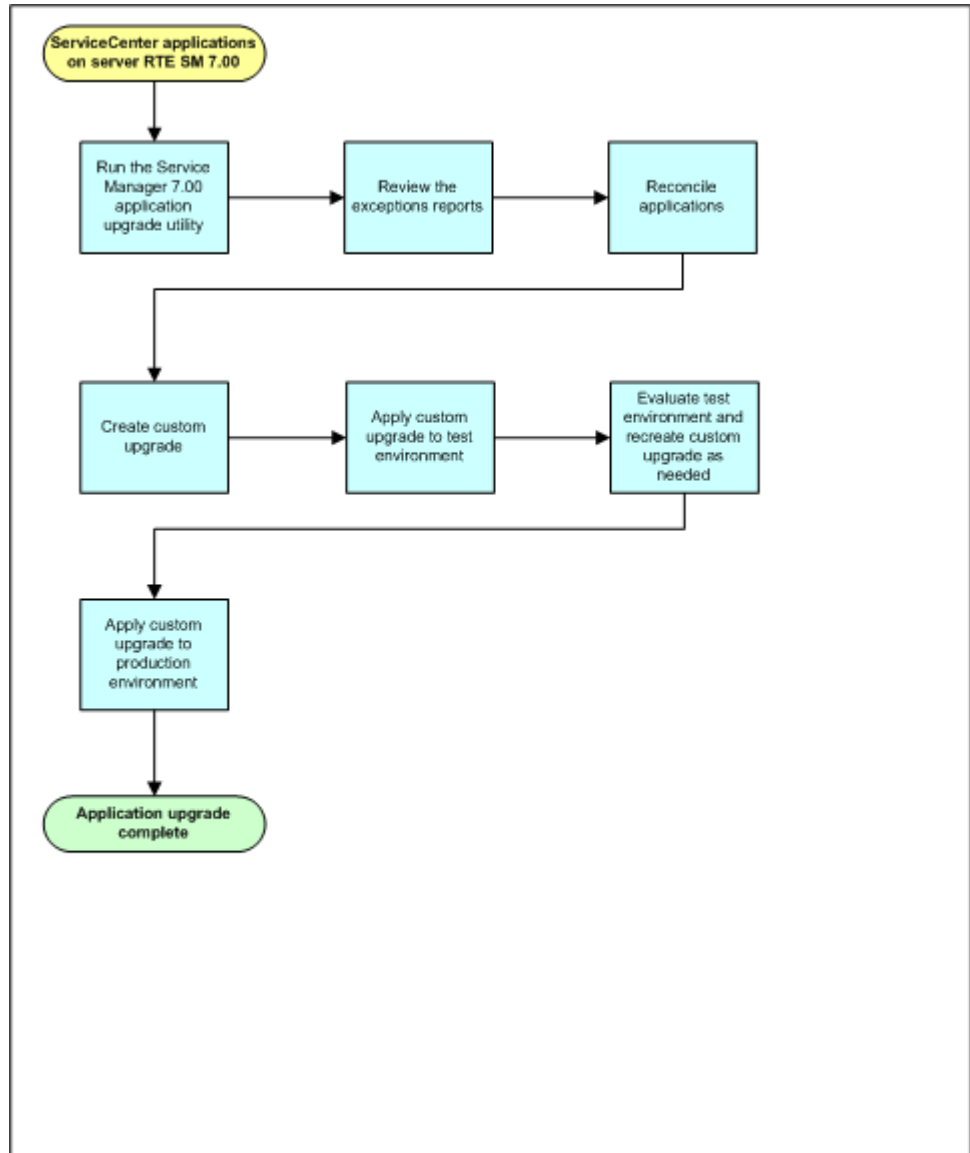
A flowchart showing the application upgrade process:

- **ServiceCenter applications on server RTE SM 7.00** →
- **Run the Service Manager 7.00 application upgrade utility** → **Review the exceptions reports** → **Reconcile applications** →
- **Create custom upgrade** → **Apply custom upgrade to test environment** → **Evaluate test environment and recreate custom upgrade as needed** →
- **Apply custom upgrade to production environment** →
- **Application upgrade complete**

The Service Manager upgrade utility upgrades the display components, the database dictionaries, and the application data. It also purges the upgrade files at the end of the process. If the upgrade process encounters any problems while upgrading the components of any of these sections, it stops automatically at the end of the affected section to alert you that it encountered problems.

Whenever the upgrade stops, you must exit the upgrade process and fix the identified problems. If the upgrade utility reports any problems with the database dictionary upgrade, resolve all issues before continuing the data phase of the upgrade. Whenever you restart Service Manager upgrade utility, it restarts where it stopped.

These are the main steps in running the upgrade utility. If you are viewing this document online, you can click each step to link to a detailed explanation of that step.

- Step 1: Prepare the Service Manager server on page 82
- Step 2: Run the SQL compare utility on page 89
- Step 3: Run the Upgrade Utility on page 94
- Step 4: Return the system to normal operation on page 101
- Step 5: Review the upgrade reports on page 102

When running an application upgrade:

- If you encounter problems that cause the upgrade process to stop unexpectedly and you cannot determine the cause, contact HP Software Customer Support. Be ready to answer these question for customer support if you call them.

  — What upgrade step was the upgrade was at when it stopped?

  — What messages showed up on the screen?

  — What messages showed up on the `sm.log` file?

  — What messages showed up on the upgrade logs?

Step 1: Prepare the Service Manager server

To run Service Manager upgrade utility without interruption, you should stop or disable any process that might interrupt the upgrade. You can then load the necessary application upgrade files on the server and start the upgrade process. The following tasks prepare your Service Manager server for an application upgrade.

Task 1:   Disable any system screen savers and power saving options.

See Disable screen savers and power saving options on page 82, and then go to the next task.

Task 2:   Disable all IR keys on the system.

See Disable IR keys on page 83, and then go to the next task.

Task 3:   Purge any existing upgrade files from the system.

See Purge existing upgrade files on page 83, and then go to the next task.

Task 4:   Identify the application upgrade files you will need.

See Identify the correct application upgrade files on page 84, and then go to the next task.

Task 5:   Load the application upgrade files.

See Load the application upgrade files on page 84.

Task 6:   Update the keys for web services.

See Update the keys for web services on page 86, and then go to the next task.

Disable screen savers and power saving options

Disable any screen savers or power saving options on your Service Manager server before running the upgrade utility to prevent them from interrupting the upgrade process. To improve performance, you should also stop or disable any unnecessary processes on the Service Manager server.

Disable IR keys

The upgrade process runs faster if you disable all IR keys on your existing ServiceCenter system. You can then enable the IR keys after the application upgrade is complete and you are ready to regenerate the index.

1   Log into the Service Manager server with an administrator account.

2   Stop the Service Manager 7.00 server.

3   Open the sm.ini file in a text editor.

4   Add the following line to the end of the file:

    ir_disable:1

5   Save the sm.ini file.

6   Start the Service Manager 7.00 server.

After the application upgrade succeeds, you can enable the IR keys again by removing the ir_disable:1 entry from the sm.ini file.

Purge existing upgrade files

You must remove upgrade files from any previous versions of ServiceCenter before running the Service Manager application upgrade.

1   Log into the Service Manager server with an administrator account.

2   Start the Service Manager 7.00 server.

3   Disable development auditing (revision tracking), if necessary.

4   Type ***aapm.upgrade.purge** on the Service Manager client command line. Press **Enter**.

5   Select **I'm done, and I want to remove the upgrade files completely**.

6   Click **OK** to purge any existing upgrade files.

7   Click **OK** again to exit the Purge Routine Completed dialog box.

Identify the correct application upgrade files

Running the upgrade the first time on your development system is different from exporting the custom upgrade files to your test or production system. The upgrade utility manages both processes, depending on the option you choose and the files that you point to.

- If you are applying the out-of-box upgrade to your development system, use the preupg.bin and transfer.bin files included with the Service Manager upgrade utility.

- If you are applying a custom upgrade to your test or production system, use the preupg.bin and transfer.bin files in your custom upgrade directory.

Load the application upgrade files

The out-of-box application upgrade files preupg.bin and transfer.bin are part of the Service Manager upgrade utility. These files contain the applications and data to run the application upgrade on your development system.

If you are performing a custom upgrade on a test or production system, use your custom upgrade files instead.

To load preupg.bin

1   Stop the Service Manager server.
2   Edit the server's sm.cfg file and insert a comment character at the beginning of each line except for one **sm -httpPort** statement.
3   Start the Service Manager 7.00 server.
4   Start the Service Manager 7.00 client.
5   Log on as a user with SysAdmin permission.
6   Type **db** in the Service Manager client command line, and press **ENTER**.
7   Click **Options > Import/load.**
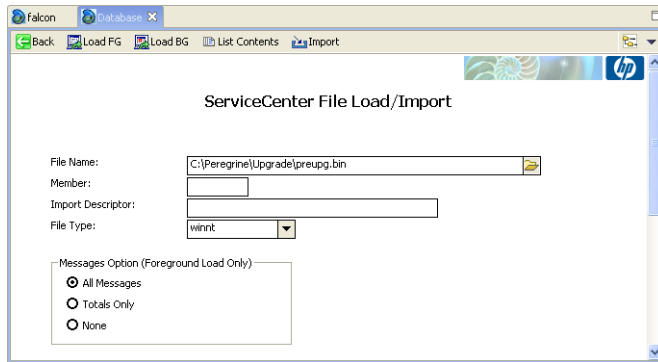
8   Type the fully qualified path to `preupg.bin`, including the file name in the File Name field. For example, if you copied the files to a temporary directory, the path might be:

```
Windows: c:\temp\upgrade\preupg.bin
Unix: /tmp/upgrade/preupg.bin
```

9   Click **Load FG**.

Depending on the speed of your system, loading this file should take from one to five minutes. When the operation is complete, Service Manager returns to the main Database Manager form and displays a confirmation message.

> ►   The server displays a SQL connection error while loading `preupg.bin`. You can safely ignore this SQL connection error. The `preupg.bin` file searches for the data source name on the system on which it was created, and when it cannot find it displays an error message. After the connection attempt times out, it will use the correct data source name defined in the system `sm.ini` file. You can add the parameter **sqlloginretry:0** to your system's `sm.ini` file to prevent it from attempting to reconnect to the missing data source name.

10   Type **load transfer** in the ServiceCenter client command line. Press **ENTER**.

11   Type the fully qualified path to `transfer.bin` including the final back slash (\) or forward slash (/), depending on your operating system. For example, if you copied the files to a temporary directory, the path might be:

```
Windows: c:\temp\upgrade\
Unix: /tmp/upgrade/
```

Do not include the file name (`transfer.bin`) in this path.
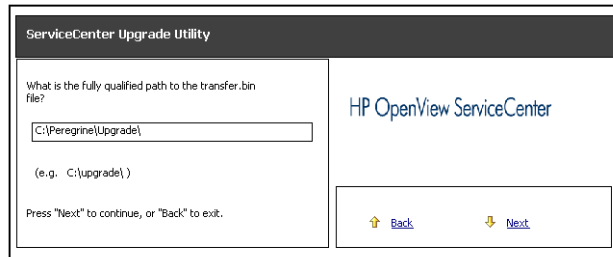
12 Click **Next**. When the process is complete, the system displays a confirmation message.

13 Stop the server.

14 Make a checkpoint backup of your data files to enable you to restore from this point, if necessary.

15 Restart the server.

Update the keys for web services

The extaccess table needs new keys to support publishing multiple web services from a single Service Manager table. The following tasks will upgrade the data and keys in the extaccess table that controls web services.

You must update these keys even if your system does not currently support web services.

If you are upgrading from ServiceCenter 5.1, you get the extaccess table and all necessary keys during the application upgrade process and do not need to perform these tasks.

Task 1: Are your current ServiceCenter applications version 6.0?

Yes. Go to Task 2.

No. Go to Task 3.

Task 2: Load the new database dictionary for the extaccess table that is part of preupg.bin.

See Load the application upgrade files on page 84, and then go to the next task.

Task 3: Update your existing web services data to make if conform to the new key constraints.

See Update your web services data conform to the new key contraints on page 87, and then go to the next task.

Task 4: Add the new web services keys to the extaccess database dictionary.

See Adding the new web services keys on page 88.

Update your web services data conform to the new key contraints

Your web services data must conform to the new constriants prior to adding the new web services keys.

1 Start the Service Manager 7.00 server.

2 Using a Service Manager 7.00 client, log on to HP Service Manager with an administrator account.

3 Type **db** in the client command line, and then press **ENTER**.

The Database Manager opens.

4 In the Table field, type **extaccess** and click **Search**.

The External Access Definition form opens.

5 Click **Search** to perform a true search.

Service Manager displays a record list of all web services access definitions and the detail form for the first record in the record list.

6 Verify that the the Object Name field has the value you want the object to have in your web services configuration.

▶ Each Object Name value should be unique and should not be blank.

7 Click **Save**.

8 Click **Next** to select the next record in the record list.

9 Repeat step 6 through step 8 for each record in the record list.

Your data now conforms to the new constraints, and you can add the new keys. See

Adding the new web services keys

After you have updated your data to conform to the new key constraints, you can use the following steps to update your web services keys.

▶ The Service Manager system must have add and drop privileges on your RDBMS in order to convert keys into alternate indexes.

1 Start the Service Manager 7.00 server.

2 Using a Service Manager 7.00 client, log on to HP Service Manager with an administrator account.

3 Click **Menu Navigation** > **Tailoring**.

4 Double-click **Database Dictionary**.

5 In the **FileName** field, type **extaccess**.

6 Click **Search**.

7 Click the **Keys** tab.

8 Click the word **Unique** from the key listing, and then click **Edit Field/Key**.

9 In the Fields array, change the existing keyed field from **name** to **object.name**.

10 Add a new keyed field **service.name**.

11 Click **OK**.

12 Click an empty row in the key listing, and then click **New Field/Key**.

13 From the Type drop-down list, select **No Duplicates**.

14 In the Fields array, add a new keyed field **object.name**.

15 Click **OK**.

16 From the editor toolbar, click **OK** to save the database dictionary record.

Service Manager connects to the RDBMS and converts the keys to alternate indexes.

⚠️ Service Manager automatically starts an index regeneration to pick up your new key changes. Do not stop the regeneration process.

Step 2: Run the SQL compare utility

Use the SQL compare utility to see a list of the fields and tables that the upgrade will change. The SQL compare utility compares your existing table and field information with the tables and fields of the Service Manager version you are upgrading to. It will report on any new fields that are to be merged into the existing tables. You can:

- Use the list of the fields produced by SQL Compare to determine whether any fields in your current system differ from those in the new version.

- Use the report to determine which new fields you must add to RDBMS mapped files, if you chose to make the changes manually during the application upgrade.

▶ The application upgrade does not make key changes. You must make any key changes manually. See Key changes on page 222 for the necessary key changes.

Running SQL Compare

These SQL Compare files install when you install the ServiceCenter Upgrade Utility:

- sqlupgrade.unl

- upgdbdct.dta

SQL Compare returns a message for database dictionary mapping that contains new fields. You can update these database dictionaries to contain the fields specified by the SQL Compare applications before you begin the application upgrade.

▶ Run SQL Compare on the development system.

To compare applications

1   Load `sqlupgrade.unl` into your development system.

2   Type **sm7upgrade** in the ServiceCenter client command line. Press **ENTER**.

3   Click **Run SQL Compare Routine**. A dialog box opens.

4   Type the fully qualified path to upgdbdct.dta including the final back slash (\) or forward slash (/), depending on your operating system. For example, if you copied the files to a temporary directory, the path might be:

```
Windows: c:\temp\upgrade\
Unix: /tmp/upgrade/
```

Do not include the file name (`upgdbdct.dta`) in this path.

SQL Compare returns this message:

```
Process Complete. Please check for any additional messages.
```

The results of the SQL Compare process are in the sqlupgrade file. This file resets each time you run SQL Compare.

To view the sqlupgrade file

1   Type **sm7upgrade** in the command line. Press **ENTER**.

2   Click **sqlupgrade Records**.

3   Click **Search**. The results display in a record list.

Each database dictionary that requires changes appears as a separate record in the sqlupgrade file. This record also lists the new fields that you must add to the database dictionary, if you are updating your RDBMS mapped system manually.

The sqlupgrade record provides the following information for each field you must add, if you are updating your RDBMS mapped system manually.

Table 1   List of sqlupgrade fields

Field	Description
Field Name	The exact field name to add to the associated P4 database dictionary.
Type	The data type of the field.
Level	The level where this field resides.
Structure	The structure and array name that you should add to this field to.
Alias of	If this is an alias field, it contains the name of the primary field that it is an alias of. Otherwise this field is blank.

Add new fields

For the new fields to perform correctly, they must exist in the database dictionary and the SQL database. If you are updating your RDBMS mapped system manually, you must add them to the database and update the existing Service Manager SQL mapping. When you update a table in sqlsystemtables, add fields only through the database dictionary. Modifying the SQL mapping damages the file structure of the table.

Determine the correct structure

In most cases, you should add the new field to the descriptor structure. However, sometimes the Structure field contains something other than the word descriptor. When this occurs, add the new field to the appropriate location.

Table 2   Action to take with non descriptor fields

In this instance	Add the field here
The field resides in another structure	If the field is not an array field, you must add the field to the structure listed in the Structure field. For example, if the Structure field reads middle, add the field to the middle structure of the dbdict.
The field is an array	If the field is an array, the field name appears twice in the new field list. The first entry has a data type of array; the second is the data type of the array, such as character or logical. Use the first entry to determine the structure where you should add the array. The Structure field in the second entry reflects both the structure for the array (unless it uses the descriptor structure) and the name of the array itself.
The field is part of an array of structures	If the Structure field lists multiple fields exclusive of an array name, you must add the field to a structured array. To determine the placement in the structured array, follow the list of field names in the Structure/Array from left to right. The first name is the array name and the second is the structure name.

> When adding fields to a structured array, add them in the same order as they appear in the sqlupgrade record.

Update field lengths

If you had previously mapped the notification, signatures, upgradepseudolog, or upgradeobjects tables to an RDBMS prior to upgrading to Service Manager 7.00, check the data types of the fields listed below before you begin the application upgrade. The default SQL mapping for these fields did not provide sufficient length for expressions. Change the data type for these columns in your RDBMS to be character-types of at least 255 characters length.

Table 3   List of fields needing a character type at least 255 characters long

Table	Field
signatures	object.name
upgradepseudolog	message
upgradeobjects	object.name
notification	str.condition

Step 3: Run the Upgrade Utility

The Upgrade Utility installs application updates automatically. At any time during this procedure, you can click Next to continue, or click Back to return to previous screens.

To run the ServiceCenter Upgrade Utility

1   Type **sm7upgrade** in the ServiceCenter client command line and press **ENTER**.

2   Click **SERVICE PACK** in the Application Upgrade menu.
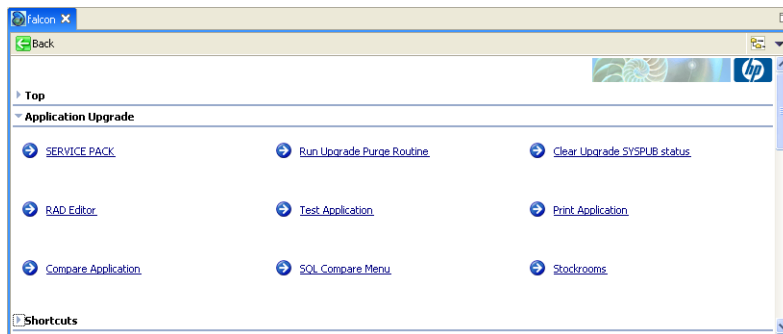
3   Click **Apply an Upgrade**.
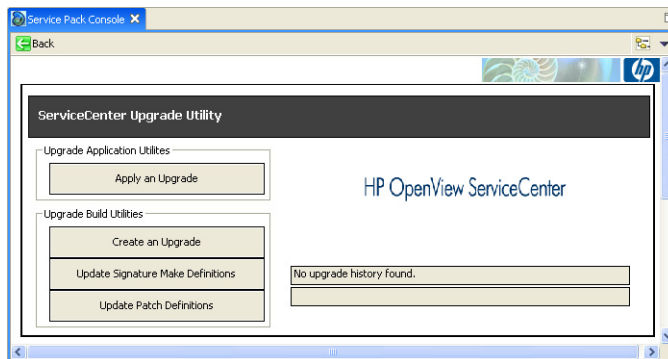
The upgrade utility guides you through questions specific to the upgrade process. You must answer them before the upgrade can begin.

4   Click **Next** to start the upgrade.

5   If this screen displays your correct version number, click **Next**.

If this screen does not display the correct version number, do not continue with the upgrade, instead contact HP Software Customer Support. This could happen because your version is older than ServiceCenter 5.1 or because your version number is corrupt and the upgrade utility does not recognize it.

6   Specify whether this is a development system. Click **Next**.

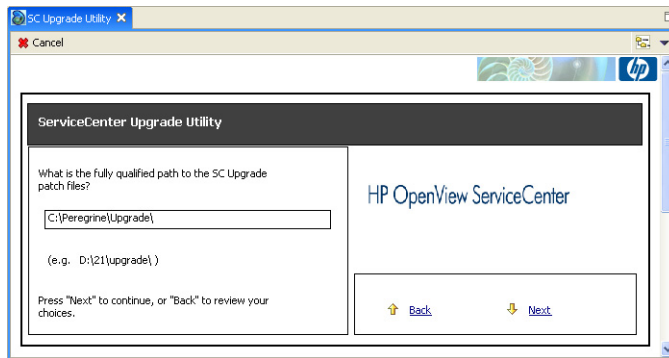— Select **Yes** to apply the out-of-box upgrade to your development system. After this upgrade to your development system, you will perform conflict resolution and create a custom upgrade.

— Select **No** to apply a the custom upgrade to your test or production system. You must have already created a custom upgrade.

7   Type the fully qualified path to the upgrade or custom upgrade directory. This path must contain a final forward slash (/) or backslash (\), depending on your operating system. Click **Next**.

8   Select how the upgrade utility should handle objects. Click **Next**.

— If you are applying the out-of-box upgrade to your development system, select **Install HP's Version of the Object Alongside Your Own**. This renames the new file whenever there is a difference between the existing file and the new file. You do not want to overwrite the existing object until you determine what the differences are. The file naming convention is NEW<release><filename>. For example, NEWSM7.00pm.main.

— If you are applying a custom upgrade to your test or production system, select **Replace your version of the object with HP's Version of the object**. This renames the old file if there is a difference between the existing file and the new file. The file naming convention is OLD<release><filename>. For example, OLDSC4pm.main. At this point, the custom upgrade should contain the correct file because you have already resolved the differences.

For a more complete explanation of these options, see

9 The Upgrade Utility always uses External logging. Click **Next**.

— Click **Yes** to also store the log files internally within Service Manager.

— Click **No** to use only external logging. External log files reside in the same directory as the upgrade files.

For more information, see

10 Select the type of incident tickets to process for the SLA upgrade. Click **Next**.

— Select **All Incidents** for complete reporting.

— Select **Open Incidents** if you have a large number of tickets and want to reduce down time.

— Select **None** if you are not using SLA or if you plan to run the SLA upgrade separately.

11 Select whether or not to generate To Do records for all existing open records in the major application modules. Click **Next**.

— Select the **Generate To Do records** check box to generate all open application records.

— Depending on the number of records in your applications, this step can take a significant amount of time. The record sizes to consider are those in the Change Management, Incident Management, Service Desk, Problem Management, and Request Management applications. If you have a large number of records, you can chose to perform this step at your convenience after completing the upgrade.

— Do not select the check box if you would like to perform this step later. To run the upgrade for To Do records later, type *aapm.upgrade.todo from the Service Manager client command line.

12 Select the Target SQL Database Type. If you are unfamiliar with the database connected to HP Service Manager, contact your database administrator.

13 Select the Disposition of Array fields. Click **Next**.

14 Type in the Other RDBMS information. Click **Next**.

15 Choose whether you want the Upgrade Utility to update the RDBMS tables automatically or you want to view and modify the alter statements manually. Click **Next**. For more information, see Modifying the DDL alter statements on page 99.

If you choose to view the alter statements, the upgrade stops at the end of the database dictionary phase, even if you specified the run-to-completion option. You will have the opportunity to modify the alter statements manually.

16 Click **Next** to confirm your selections.

17 A window opens. Click **Yes** to start the upgrade. While the upgrade runs, the Upgrade Utility displays the progress of the upgrade process by indicating which process is running, the progress of record processing, and the completion percentage for the upgrade.
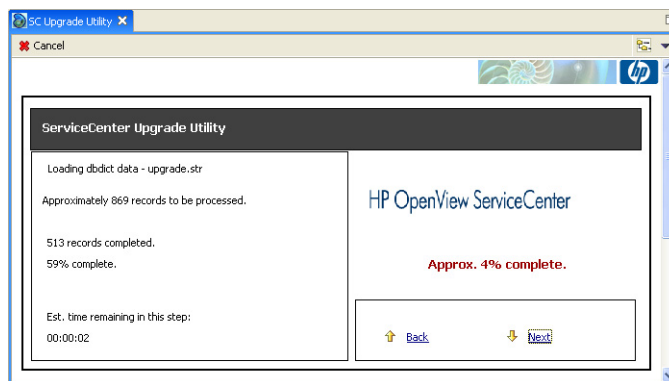
During the upgrade process, the Windows Task Manager indicates that Service Manager is not responding. This is normal and does not indicate a problem with the upgrade.

The upgrade utility may display a dialog with the following message after the database dictionary upgrade:

```
Not all dbdicts have been upgraded. Do you want to continue?
```

If this message appears, log off and stop the server. This is necessary to clear the SQL cache. This message indicates that some field types may not have been as the application expected them and could have an impact on the upgrade or regular system operation. Review the upgrade logs for details.

➤ If the upgrade process fails at any point, you can restart from that point. To continue, restart the server, log on, and start the upgrade application. The upgrade utility restarts from where it stopped.

18 When the upgrade process finishes, the Upgrade Utility displays a completion message. Click **OK** in the message dialog box.

➤ If new schedulers are displayed on the status window after the upgrade completes, do not stop the system! Let the schedulers finish the background data upgrade before stopping the system.

19 Review the logs and error messages. For more information, see Upgrade utility logs and error messages on page 99.

20 Test the system, and if it runs satisfactorily purge the upgrade files.

➤ If you have restarted the upgrade process, do not run the upgrade purge routine again.

Upgrade utility logs and error messages

The upgrade utility creates a set of log files during the upgrade process. These files reside in the same directory as the upgrade files. You can also store a log internally within Service Manager.

Table 4   List of upgrade log files

Log file	Contents
detail.log	Specific information about the upgrade, such as which files are being signed at any time.
exception.log	Information about any exceptions reported by the upgrade.
	The exception.log file may have important messages about data type mismatches that you should resolve, or database dictionaries that it cannot upgrade. If these error messages appear in the except.log file, do not continue the upgrade until you resolve the data type mismatches.
	If there are exceptions in probsummary, problem, cm3r, cm3rpage, cm3t, or cm3tpage files, do not continue the upgrade until you repair them.
upgrade.log	Information about where the upgrade is at any point. This file contains only the main steps of the upgrade.

You can access the post-upgrade reports through the Upgrade menu.

Modifying the DDL alter statements

If you select the option to review the alter statements that the upgrade utility creates, the upgrade stops for each database dictionary that requires an SQL alter statement to be applied.

When the upgrade utility displays an alter statement, you can:

• Allow the upgrade utility to apply the alter statement to the RDBMS exactly as it appears.

- Modify the alter statement manually and allow the upgrade utility to apply that statement.

- Handle the altering of the RDBMS tables manually, and skip the alter statement.

After you view each alter statement and make any changes:

- Click **Proceed** to apply the alter statement.

- Click **Skip** to proceed to the next alter statement without taking any action.

▶ If the alter statement is unsuccessful, the alter window opens. You can edit the statement and try again, or quit the upgrade process.

Step 4: Return the system to normal operation

After the upgrade, the system may exhibit abnormal behavior until you return it to its normal operating environment.

To return to a normal operating environment

1 Log out.

2 Stop the server.

3 Remove the comment from the system.start entry from the `sm.cfg` file

4 Restart the Service Manager server.

5 Log on.

6 Wait for the background processes to finish.

7 Regenerate your IR keys.

Step 5: Review the upgrade reports

The upgrade utility generates reports that provide feedback about its activities. After the upgrade finishes, you can view them to identify the files on your system that are different from the new files.

This table defines the upgrade reports.

**Table 5   List of upgrade reports**

| Report Title	Report Name	Description
Service Pack Full Upgrade Report	apm.upgrade.results.full	A list of all objects that the upgrade utility processed, even if they upgraded smoothly.
		This is a large report that typically contains more than 10,000 lines.
		The Service Manager parameter maxreportpages default value is 1000. If you do not explicitly set it to a higher number in the sm.ini file, your report terminates after printing 1000 pages.
Service Pack Job Log (Large)	apm.upgrade. job.log	A dump of the upgrade job log.
		This log is generally not necessary. Use it for debugging or informational purposes.
Service Pack Exception Report	apm.upgrade.results.exce ptions	A list of the objects that the upgrade utility could not upgrade automatically.
		It classifies those components as merged, renamed, or added. If it returns the message: "No records selected by report." then all components upgraded successfully. There are no discrepancies and no records need special attention. If the upgrade utility displays any other messages, they describe upgrade exceptions you must resolve.

View the post-upgrade reports

The post upgrade reports allow you to identify any conflicts that need to be resolved.

To run a post-upgrade report

1 Type **sm7upgrade** on the Service Manager client command line. Press **ENTER**.

2 Open the Shortcuts menu and click the report you want to run.
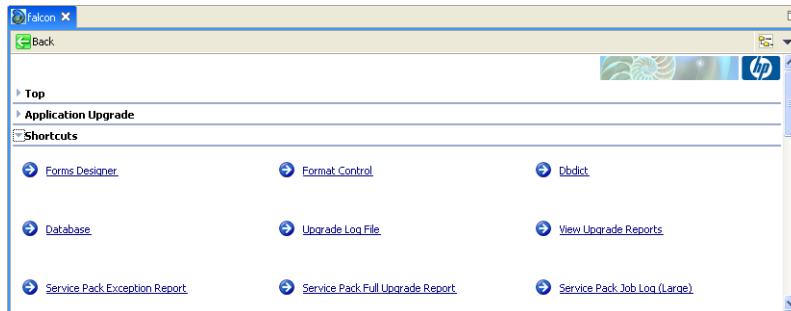
The utility displays the query form for that report.
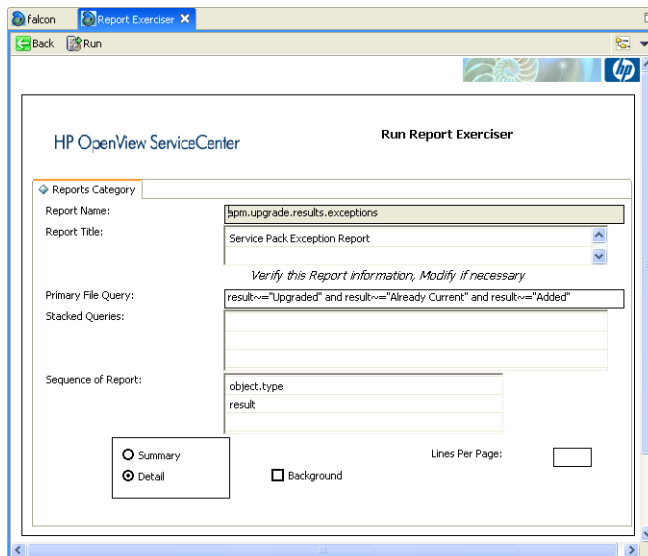
3   Choose the options for generating the report.

Table 6   List of print options

Option	Definition
Print	If you select the Print option, you can select the printer and schedule when the report prints. If you clear the Print option, Service Manager displays the report. The form only displays this option if you enable server printing.
Background	If you select the Background option, you can select the printer and schedule when the report prints. The report spools in the background, enabling you to return to the client immediately. The scheduler starts the spool process. If you clear the Background option, the report spools in the foreground. The Service Manager client is disabled until the report finishes spooling.

4   Click **Run**.

If you selected Background, The utility displays the report schedule form.

5　　Choose the options for scheduling the report.

6　　Click **Run**. The utility displays the Report Maintenance form.

7　　Click **View** on the Report Maintenance form. The utility displays the
　　spoolheader form.

8　　Click **View Report** to open the report.

Retrieve reports

You can run a report once and view it later by selecting it from the print spool.

To retrieve an existing report

1　　Type **spool** in the Service Manager command line. Press **ENTER**.

2　　When HP Service Manager displays the Spool Header record, press
　　ENTER. (Do not click Find.) Service Manager displays a record list of
　　recent reports in the print spool.

3　　Select the report to view.

6 Phase V: Resolving Conflicts

After you complete the initial application upgrade on your development system, you are ready to resolve the differences between your customized files and the new files. You may need to resolve differences in the display components, the database dictionaries, and the applications. Until you resolve these differences, your upgraded system will not work properly.

Topics in this section include:

Resolving conflicts overview

For each file identified in the exception reports, you have these choices:

- Use your custom file instead of the new file.

- Use the new file instead of your customized file.

- Make the same modifications in the new file and discard the old custom file.

When making your decision, consider that:

- It is not always desirable to overwrite existing files. For example, if you modified an application to add features for your site, you may not want to discard your modifications.

- New application files often have more functions and features that are more attractive than the existing files. Using new files makes your application more robust.

Resources

When you begin the resolution process, assemble your resources and save them as historical data for the next upgrade. You need:

- The list of customized files

- The work notes and historical unload archives

- The Exception reports

- The Display reports

You can use revision tracking to make unload archives for future use.

Be sure to make frequent checkpoint backups of the data files.

Exception report

The exception report lists difference between the new Service Manager signed object types and your existing ServiceCenter objects. For example, ServiceCenter 6 had 76 signed objects. The upgrade utility adds any new objects to your system and does not create an exception report entry. The upgrade utility identifies existing objects in your system where the digital signature has changed. The exception report creates an entry for each changed object in your system. You must decide if the change is significant, or if you can safely accept the difference without detailed investigation of the differences.

Step 1: Resolve application data differences

The Upgrade Utility upgrades any objects in your file system that are unchanged from the out-of-box version for that release. When the Upgrade Utility encounters an object that is not identical to the original out-of-box version, the upgrade installs the new version as NEW<vvvnnn>, where vvv is the release name and nnn is the name of the object, or the upgrade renames your version as OLD<vvvnnn>.

The method depends upon the choice you made when starting the upgrade process.

- If you chose **Install HP's Version of the Object Alongside Your Own**:

  When the Upgrade Utility does not recognize an object as the original out-of-box version, it leaves that object alone. The upgrade names the new version of the object NEWxxxyyy where xxx is the HP Service Manager Version you are upgrading to and yyy is the name of the object. The new object has the status "Renamed" in the upgraderesults file.

- If you chose **Replace your version of the object with HP's Version**:

  When the Upgrade Utility does not recognize an object as the original out-of-box version, it renames that object as OLDxxxyyy where xxx is the HP Service Manager version you are upgrading from and yyy is the name of the object. The upgrade installs the new version of the object. The new object has the status "Forced" in the upgraderesults file.

You must examine the old object and the new one and decide whether to:

- Retain the old version of the object in question
- Accept the new object
- Create a combined object

Most objects, including forms, Format Control records, and validity records, are relatively easy to check. For example, adding a single user-defined field to a form causes a signature mis-match. Examine the old object and the new one, side-by-side, if possible.

Application differences

Customized applications are more complicated. Application differences occur when you customize the RAD code or when you apply a patch to your existing version. The apm.upgrade.results report identifies these application differences. After you produce the report, check each application listed for recommended action. The utility assigns a status to each application. The following table lists the possible status and the recommended action.

Table 1 **List of upgrade statuses in the upgrade report**

Upgrade status	Definition	Action
Added	The Upgrade Utility added the new object to your system because you did not have an existing object.	No action required.

Table 1   List of upgrade statuses in the upgrade report (cont'd)

Upgrade status	Definition	Action
Error	The Upgrade Utility could not upgrade the object.	Resolve the error. Contact Customer Support for assistance if necessary
Forced	The Upgrade Utility renamed your object OLDSM7<object.name> and added the new object as <object.name>. The Upgrade Utility used this option because you chose to replace your version of the object with HP's version of the object. (See <Blue>Step 3: Run the Upgrade Utility on page 94.)	Select one: **Keep the old version —** No action required. **Keep the new version —** Rename the old version and give the new version the original name. **Merge new and old versions —** Add the new features to the old version. Always make your changes in the old file by manually adding the new features. If you rename the new file to the name of the old file, you will lose data because the data is linked to the logical file number, not the file name.
Renamed	The Upgrade Utility renamed the new object NEWSM7<object.name> and added it to your system. The Upgrade Utility used this option because you chose to install HP's version of the object alongside your own. (See <Blue>Step 3: Run the Upgrade Utility on page 94.)	Select one: **Keep the old version —** No action required. **Keep the new version —** Back up the old version and give the new version the original name. **Merge new and old versions —** Add the new features to the old version. Always make your changes in the old file by manually adding the new features. If you rename the new file to the name of the old file, you will lose data because the data is linked to the logical file number, not the file name.

Guidelines for resolving differences

Use these guidelines to make conflict resolution decisions.

- If your company does not have a RAD license, always select the new version.

- If your company has a RAD license, identify the differences between the old version and the new version by using the RAD Comparison Utility. Choose one of the following options:

  — Keep the existing version.

  — Keep the new version.

  — Merge the new version with the existing version.

➤ If your company has RAD license and the application has been modified for you specifically, then you should merge changes. A SCR unload can cause applications to show up on the conflict resolution exception report that no longer apply with an upgraded version of the application.

For more information, see Using the RAD comparison utility on page 251.

- If the name of the application starts with apm.upgrade, keep the existing application and delete the NEWvvvnnn version of the application. RAD applications named apm.upgrade.* are HP-reserved applications. Do not change them.

- Avoid changing macro.build.field.array. If macro.build.field.array is not identical to the new version, keep the new version.

- Never rename the applications se.view.engine, display or se.get.object when resolving conflicts.

- Changes to the **Regen Every** field prevents a global list from upgrading. If comparison to the new version of the global list shows no other changes, keep the new version.

Application dependencies

HP Service Manager applications often use the RAD language to call other applications. For example, the se.view.engine application calls a second application, se.get.object, to update change records. Consequently, the functionality of se.view.engine depends on the functionality of se.get.object.

It is possible to upgrade se.view.engine but not se.get.object. Upgrading only one application can cause parameter differences in a subordinate application and logical dependency differences.

Logical dependences

Logical dependencies usually occur when there is a new feature in a child application that the parent application requires. If you upgrade the parent application but the not the child application, the new feature is not available to the parent application. Resolving logical dependencies usually requires reverting the parent application to the previous version, or upgrading the child application to the latest version.

Parameter differences in subordinate applications

The most common dependency problem arises when the number of parameters in a subordinate application changes. For example, if an application had four parameters but now has five, the old parent application passes four parameters, but the new child application now expects five. If you upgrade the child application but not the parent, the missing parameter can cause errors.

Altered validity table entries

ServiceCenter processes validity table entries in entry sequence number order, such as 1, 2, ...n. Most users who implement multiple validity entries add sequence numbers to their entries. Typically, several validity entries exist for a given format with sequence numbers running from 1 to n. Many of the ServiceCenter default validity entries have sequence numbers of NULL.

When the Upgrade Utility updates your validity entries, it adds ServiceCenter's default validity lookup entries if it does not find an entry with the same key. For example, if your system does not have a validity entry with a sequence number of NULL, and the default validity entry has the NULL sequence number, the Upgrade Utility adds the new entry to your file system.

Although the Upgrade Utility does not remove any of your code, it adds a validity entry that it processes first. As a result, the first validity lookup you see is a default validity entry, rather than one of your modified entries.

To remove invalid validity table entries added by the Upgrade Utility

1   Type `validity` on the HP Service Manager client command line. Press **ENTER**.

2   Type the name of the file or format in question in the **Files/Formats** field.

3   Click **Search**.

4   Select a field name from the record list.

5   Look for an entry with a sequence number of NULL. Verify that the Upgrade Utility added this entry and that it is not an important part of your validity processing.

6   To remove the invalid validity record, click **Delete**.

Validity processing now starts with your lowest sequence numbered validity entry.

Step 2: Resolve database dictionary differences

When the Upgrade Utility upgrades your database dictionaries, it often finds that your database dictionary version does not match any previous ServiceCenter versions. For example, this occurs if you add or delete fields.

When the Upgrade Utility discovers these discrepancies, it merges your database dictionary with the new database dictionary. The resulting database dictionary contains all the fields in your original database dictionary, as well as all new fields.

The Upgrade Utility gives these combined database dictionaries a status of Merged. The Merged status does not indicate an error, but shows that the Upgrade Utility found differences in that database dictionary. Database dictionaries mapped to an RDBMS always have a Merged status because the mapping data within each table is unique and cannot be compared to basic Service Manager data.

Data types

When the Upgrade Utility merges database dictionaries, the data type and the field name must match for success. If the new version of a field is a different type than the type in your system, it chooses your field type. HP recommends that you modify the field to the expected field type.

Duplicate field names are problematic. For example, if you create a scalar field with a user-defined name and the Upgrade Utility attempts to add a structure field with the same name, this discrepancy appears in the `except.log` file. The Upgrade Utility cannot add the structure and its subordinate fields until you resolve the name duplication. The `except.log` file lists the names of any fields that are not added because of a duplicate field name.

Create a naming convention with a recognizable unique prefix for all user-defined fields. The Upgrade Utility action will always merge these fields successfully.

Database dictionary differences

After you produce the apm.upgrade.results report, check it for recommended action. The following table lists the possible results and the recommended action.

Table 2   List of upgrade results in the upgrade report

Upgrade result	Definition	Action
Merged	The Upgrade Utility merged the new database dictionary with your current version.	No action required.
Added	The Upgrade Utility added the new database dictionary to your system because you did not have an existing version.	No action required.
Error	The Upgrade Utility could not upgrade the database dictionary.	Resolve the error. Contact Customer Support for assistance if necessary.

Data policy differences

If you modified a data policy record, the Upgrade Utility usually cannot upgrade the associated data policy record. Keep the current version of the database dictionary because it reflects the current state. Investigate the new version of the database dictionary for any changes to data policy that you may want to move to the current database dictionary record.

Step 3: Resolve display component differences

The Service Manager Upgrade Utility upgrades the display components. It reports discrepancies if any of your components differ from the new versions. You must be familiar with the Display application and how it functions to resolve the differences.

Display application

The Display application is a Service Manager RAD application that provides access to RAD features without requiring RAD programming skills or RAD licensing.

If the Display application in your existing ServiceCenter system is not identical to the new version, rename the current version of the application to `display.old` and rename the `NEWSCxdisplay` version to `display`.

If you access this application through the RAD editor, use the equal sign (=) operator to select only the application in question, such as:
`=display or =NEWSCxdisplay`.

Display screen records

Display screens are individual records identified by a unique screen ID. The displayscreen records define the attributes of a screen and provide access to the individual records for options and events. A display screen is not the same as a form.

⚠ There are triggers attached to the displayscreen file. Changes to the records in this file affect their associated display options and events.

When making changes to these records:

- Incorporate any changes to the new version of the displayscreen file into the old version of the file.

- Incorporate any changes from the new version of the record (prefixed with `NEWSM7`) into the original displayscreen record.

Duplicate function keys

If you complete the upgrade and find that you have duplicate function keys, you most likely have added display options. Perform conflict resolution on your display options to resolve these conflicts.

Changes to the display component upgrade

Prior to ServiceCenter 6.2, the Upgrade Utility upgraded the display options and display events differently than other components, such as formats or links. In release ServiceCenter 6.2 and later, the Upgrade Utility upgrades the display components in the same manner as all other components.

The options table and the events table have a unique identifier, stored in the "id" field. The upgrade process assigns an id to every display option following the pattern: `<screen id>_<action>_<number>`, where the screen id and action are from the display option (or event), and the number is an optional field added when multiple options have the same screen id and action.

If options that have the same action as others in the same display screen have been added to your system, the upgrade process assigns <number> in the order of the options' GUI option number.

Therefore, if the added option was not the last option in terms of GUI option number, the upgrade process does not add the additional numbers in the id field in the same order as they would have for an out-of-box system. The upgrade process renames the added option and any option after it (in GUI option order), it does not upgrade them automatically.

To ensure that this type of renaming does not happen in future upgrades, when performing conflict resolution on these options, use the id of the renamed option, `NEWSM7<screen id>_<action>_<number>` and manually change the identifier of the added options. Rename all of the other options to match the id of the renamed ones.

When renaming your option, use an identifier to specify that this is a customized option, added for your installation. For an example, an id might look like: "`apm.edit.problem_do nothing_ACME1`".

This table gives an example of part of the display screen conflict resolution for apm.edit.problem.

Table 3   Example confliction resolution for the apm.edit.problem display option

Screen Id	GUI Action	Upgrade Action	Display Screen option
300	do nothing	update	Name: apm.edit.problem_do_nothing_1 Result: This item was updated correctly. User Action: No action necessary.
400	do nothing	update	Name: apm.edit.problem_do_nothing_2 Result: This item was updated correctly. User Action: No action necessary.
450 This is an option you added.	do nothing	rename	Name: apm.edit.problem_do_nothing_3 Result: This item was renamed. It is your customized option. User Action: Rename this object to give it a unique new name, such as: apm.edit.problem_do_nothing_ACME1 Name: NEWSM7apm.edit.problem_do_nothing_3 Result: This is the new SM7option. User Action: Perform conflict resolution. To perform conflict resolution, open apm.edit.problem and look at the options. Compare this option with apm.edit.problem_do_nothing_3 and NEWSM7apm.edit.problem_do_nothing_3.
500	do nothing	The upgrade ignores this option.	Result: This option does not appear in the reports. User Action: Perform conflict resolution. To perform conflict resolution, open apm.edit.problem and look at the options. Compare this option with apm.edit.problem_do_nothing_3 and NEWSM7apm.edit.problem_do_nothing_3.

Step 4: Make required application changes

The exception report contains many of the application changes you need to make to upgrade your system, but there are certain application changes you need to make to support new features or key changes. Make the changes listed in Application changes required by release on page 147 before testing and backing up your system.

Step 5: Make optional application changes as needed

HP Service Manager includes optional application changes you can make to improve your system performance, usability, or compliance with ITIL conventions. Review the changes listed in Optional application changes on page 173 to implement that changes that benefit your system.

The most system intensive of these optional changes are changes to the system key structure. HP Service Manager transforms keys to corresponding indexes on your RDBMS. During the application development process, HP OpenView ServiceCenter development may change, add, or delete database dictionary keys. The upgrade does not change any keys automatically because changing keys requires regenerating your index. The amount of time for the regen depends on how many records are in the table. You will need to change the keys manually after the upgrade is complete.

Step 6: Test the system

After you resolve all conflicts, test the upgraded system and verify that it functions properly. If there are problems that you cannot resolve, contact HP Customer Support.

Step 7: Back up the system

Make a checkpoint backup of the data files to enable you to restore from this point, if necessary. Refer the documentation for your relational database management system (RDBMS) for RDBMS backup instructions.

7 Phase VI: Performing the custom upgrade

When you begin this phase, you start with an upgraded development system that has no unresolved conflicts. You are ready to create a custom application upgrade on the development system that you can export to your test or production system.

Topics in this section include:

- Custom Upgrade process overview on page 124
- Step 1: Build the custom upgrade on page 126
- Step 2: Test the custom upgrade on page 129
- Step 3: Upgrade your production system on page 131
- Step 4: Purge upgrade files on page 132
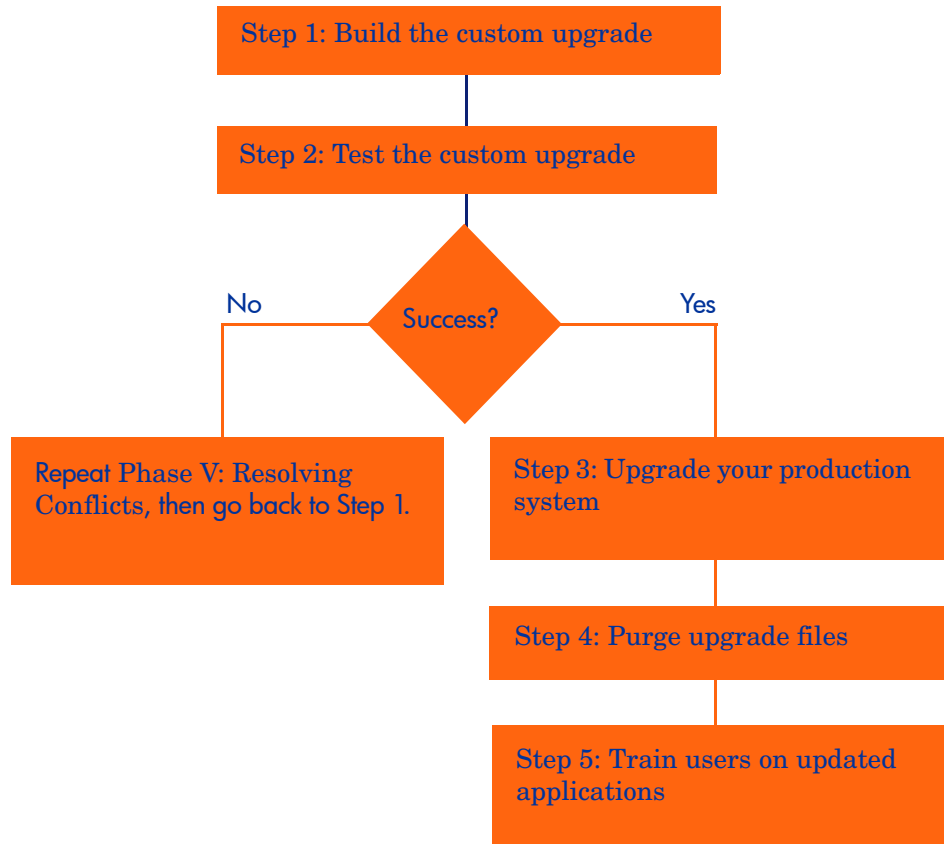- Step 5: Train users on updated applications on page 133

Custom Upgrade process overview

The custom upgrade consists of three types of files:

- New Service Manager 7.00 application files that replaced old application files
- Customized application files that you retained
- Merged files that combine prior customization with new application functionality

HP recommends that you export to a test environment and run acceptance tests on this version before you move to live production. However, you can run acceptance tests in the same development environment where you ran the upgrade and resolved differences.

Make frequent checkpoint backups of the Data directory to enable you to retrace your steps if necessary. These are the main steps in performing your custom upgrade. If you are viewing this document online, you can click each step to link to a detailed explanation of that step.

Step 1: Build the custom upgrade

Step 2: Test the custom upgrade

Success?

No

Yes

Repeat Phase V: Resolving Conflicts, then go back to Step 1.

Step 3: Upgrade your production system

Step 4: Purge upgrade files

Step 5: Train users on updated applications

Step 1: Build the custom upgrade

The Service Manager Upgrade Utility automatically exports the custom upgrade for you; however, you must specify a destination with adequate disk space.

To build the custom upgrade

1 Use the new client to log on to the development system.

2 Use the database dictionary to delete the file scirexpert, if it exists. The upgrade recreates this file automatically.

3 Verify that you have created a CustomUpgrade directory as described in Step 2: Duplicate the production environment on page 38. The Upgrade directory contains the out-of-box upgrade files. You must create the custom upgrade files in a separate directory.

   a Ensure that the CustomUpgrade directory is empty. If you build another custom upgrade, the Upgrade Utility appends to the files existing in the CustomUpgrade directory. It does not overwrite them.

   b Your User ID must have read and write access to the CustomUpgrade directory.

4 Type **sm7upgrade** on the ServiceCenter client command line.

5 Click **SERVICE PACK** in the Upgrade Utilities menu.

6 Click **Create an Upgrade**.
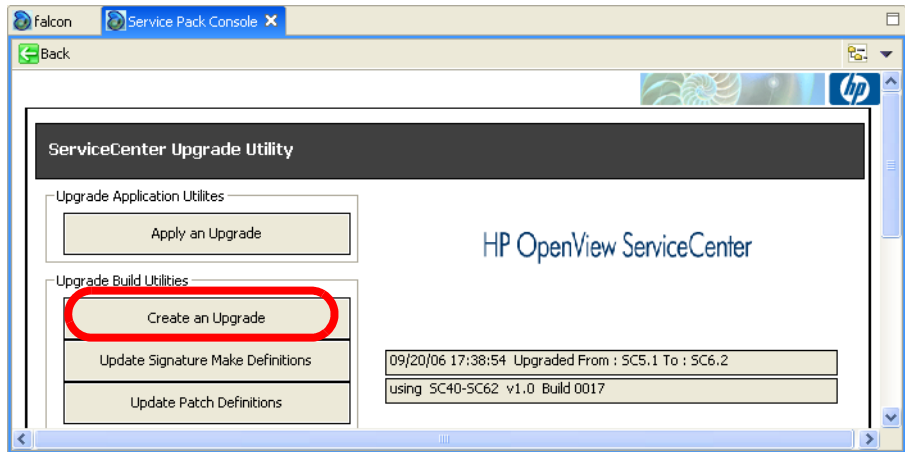
7   Click **Next**.
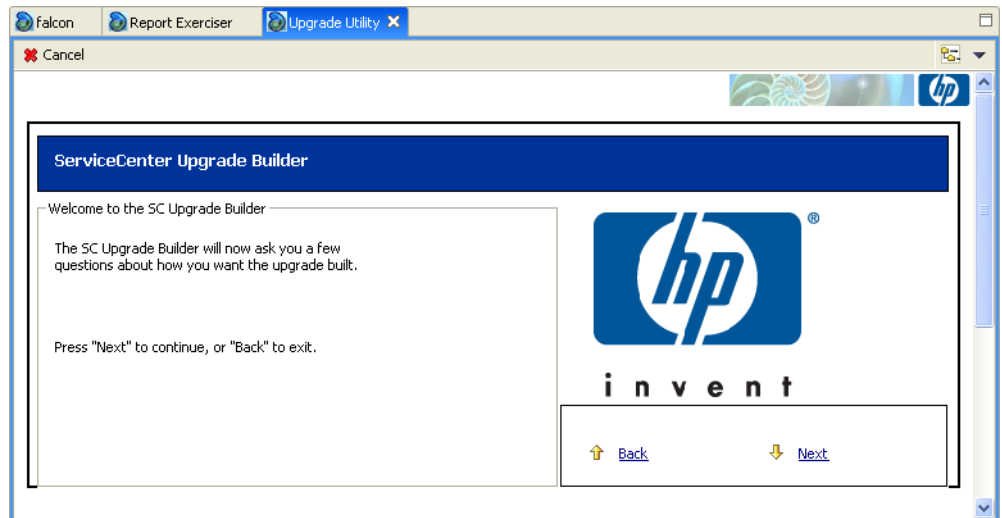
8   Type the name of the release, Service Manager 7.00. Click **Next**.

9   Type a name for the custom upgrade. Click **Next**.

10 Type the fully qualified path to the directory where the Upgrade Utility should create and export files (the empty CustomUpgrade directory). Remember this path for later use.

Note: This should be different than the upgrade directory used to upgrade the test system.

This path must contain a final forward slash (/) or back-slash (\),
depending on your operating system. Click **Next**.

11 If the Upgrade Utility displays the screen, select the supported languages.
    Click **Next**.

12 Select the SC6.2 patch file from the drop-down menu. Click **Next**.

13 Select **Complete Upgrade Build**. Click **Next.**

▶   Choose anther option only when directed by HP Customer Support.

14 Click **Yes** to activate internal logging; click **No** to skip internal logging.
    Click **Next**.

15 Click **Next** to start the Upgrade Builder.

16 A warning message appears.

```
This process will destroy any existing upgrade definitions on
file. Proceed?
```

Click **Yes**. This action destroys any upgrade definitions currently on file
and creates the custom upgrade for this system.

▶   The amount of time to create the custom upgrade varies depending
     on your system resources.

The Service Manager Upgrade Builder monitors the signature process of
the build.

The signature process is complete when the Upgrade Utility displays the
following message.

```
Finished creating transfer files for the upgrade.
```

17 Copy the upglang.unl and self_service.unl files from the Upgrade
    directory to the CustomUpgrade directory.

18 Make a checkpoint backup that includes both the data directory and the custom upgrade files.

> ▶ The `transfer.bin` created by the Upgrade Utility will be up to 50% larger than the out-of-box version. The `upgrade.dta` file may be twice as large.

Step 2: Test the custom upgrade

Before you can test your custom upgrade, configure a test environment where you can test all features, especially customized applications. Use the same process you used when configuring a development environment.

Add empty CustomUpgrade and Upgrade directories and complete the steps in Phase II: Preparing for an upgrade on page 27. You must complete these tasks:

- Verify that you have an archive backup of your production system.

- Complete the tasks to upgrade the server runtime environment. See Tasks for upgrading your server runtime environment on page 43.

- Install the Service Manager Upgrade Utility.

- Run the custom upgrade on the test system.

The test environment should be identical to your production environment in every way.

Tables not upgraded by the Upgrade Utility

The Upgrade Utility does not automatically upgrade all tables and records. The patches file lists the tables and records that are moved into the custom upgrade files. Customizations made to any other table or record will not be part of the custom upgrade.

- To see the changes that were moved into the custom upgrade, refer to the patches table.

- To preserve changes not captured by the Upgrade Utility, unload the customizations and load them into the new system separately.

Run the Upgrade Utility again

The steps to complete a custom upgrade are identical to those to complete an out-of-box upgrade with a few exceptions, such as entering the path to the custom upgrade when asked for the path to the upgrade files. Complete the steps in Phase IV: Running the Upgrade Utility on page 79. You must complete these tasks:

- Load `preupg.bin` and `transfer.bin`.
- Run the Upgrade Utility.
- Check that background schedulers are finished.
- Note the start and end time. The elapsed time indicates how long the production system will be unavailable during the production upgrade.
- Return the system to a normal operating environment.

The Upgrade Utility repeats the upgrade process, using the mirror image of the production system and custom upgrade files you created in Step 1: Build the custom upgrade on page 126. Verify that the exception reports show no conflicts. You must resolve any remaining upgrade differences.

Test the result with Service Manager

Test the upgraded system with the new Service Manager client. If the upgrade process has any problems, you may need to repeat the steps in Phase V: Resolving Conflicts on page 107 to resolve the remaining differences.

To test the custom upgrade

1 Use the instructions in the *Service Manager Installation Guide*, to install and configure the Service Manager client for the target version.

2 Use the new Service Manager client to log on.

3 Review the features described in the Service Manager 7.00 Help.

4 Use the new Service Manager client to test the upgraded system thoroughly. Test all features that your users will access. Pay particular attention to areas that were modified on your system.

5 If you plan to use the Web client, you may find subtle differences with forms that need to be corrected.

When the custom upgrade works properly and passes all tests, you can use it to upgrade your production system.

Step 3: Upgrade your production system

The final task of the upgrade process is to apply the custom upgrade that you created to your production system. This process is identical to the one you followed in upgrading your test system.

⛔ Do not apply any upgrade that has not been thoroughly tested to your production system.

When you upgrade the production system:

- The production system is not available to the users while you are applying the custom upgrade.
- Ensure the upgrade files you created are accessible to the production system (the files are located on the same server).
- If you transfer the files to your production system by FTP, set FTP to binary mode.
- You must have adequate disk space.

To upgrade the production system

1   Ensure that you still have an archive copy of the original production system and all data.

2   Stop the production system, including clients, server, and console.

3   Log on as a system administrator.

4   Prepare the system. Complete the steps in Phase II: Preparing for an upgrade on page 27. The steps for setting up the production environment are identical to those for the development and test environments, with a few exceptions. For example you don't have to duplicate the production environment. You must complete these tasks:

   a   Install the Service Manager Upgrade Utility.

   b   Make RDBMS preparations.

   c   Install the client and server for the upgrade.

    d   Complete the tasks to upgrade the server runtime environment. See Tasks for upgrading your server runtime environment on page 43.

5   Complete the steps in Phase IV: Running the Upgrade Utility on page 79. You must complete these tasks:

    a   Load preupg.bin and transfer.bin.

    b   Run the Upgrade Utility.

    c   Check that background schedulers are finished.

    d   Return the system to a normal operating environment.

The Upgrade Utility repeats the upgrade process again, using the real production system and the custom upgrade files.

6   Use the new Service Manager client to test the upgraded system again.

When you successfully upgrade the production system, your application upgrade is complete.

Step 4: Purge upgrade files

After you successfully applied the custom upgrade to your production system, you can remove all the unnecessary files created by this process from your development system by running the Purge utility. You do not have to purge the files if the custom upgrade was created on a backup of your development system that will no longer be used.

Do not purge the upgrade files if the upgrade fails. Do not purge the upgrade until you have the production system running successfully. If the upgrade fails, you can restart where it stopped. It may be necessary to rebuild a custom upgrade, but you can do so only if the upgrade files have not been purged.

To run the Purge utility

1   Type `*aapm.upgrade.purge` on the Service Manager client command line. Press **Enter**.

2   Click **I'm done, and I want to remove the upgrade files completely**.

3   Click **OK**.

Step 5: Train users on updated applications

Before implementing the upgraded system into production, train your users on any new features that they might need. To learn about the new features in Service Manager 7.00, see the Service Manager 7.00 Help. HP Education Services also offers a complete training schedule.

A Server changes required by release

This appendix contains a list of actions required to upgrade your server run-time environment (RTE) from its current version to HP Service Manager 7.00. See the section for your current version of ServiceCenter for a list of required upgrade steps.

ServiceCenter 5.1 to HP Service Manager 7.00

You must perform the following actions to upgrade your server run-time environment (RTE) from ServiceCenter 5.1 to HP Service Manager 7.00.

Table 1   Changes required to upgrade the server RTE from ServiceCenter 5.1

Feature	Change	Action required
Attachments	Attachments stored as individuals records in SYSATTACHMENTS table	Apply attachment conversion utility to move attachments to new table
Code page	UTF-8 is the system code page	Convert system data to UTF-8 code page
Data persistence	P4 database removed	Convert to a supported RDBMS
Data persistence	Sybase is no longer a supported RDBMS	Convert to a supported RDBMS
File loading	The file loading utility uses new string substitution functions	Apply 5.x file loading utility unload
Security	Operator passwords automatically encrypted	Update field length of password field in RDBMS mappings
System status	Client connections use multi-threaded Java servlet implementation	Apply system status and inactivity timer unload to display and manage new client connections

ServiceCenter 6.0 to HP Service Manager 7.00

You must perform the following actions to upgrade your server run-time environment (RTE) from ServiceCenter 6.0 to HP Service Manager 7.00.

Table 2   Changes required to upgrade the server RTE from ServiceCenter 6.0

Feature	Change	Action required
Attachments	Attachments stored as individuals records in SYSATTACHMENTS table	Apply attachment conversion utility to move attachments to new table
Code page	The server uses a new record value to indicate that system files are in UTF-8 format	Apply the UTF-8 flag unload to mark system files as already converted to UTF-8
Data persistence	P4 database removed	Convert to a supported RDBMS
File loading	The file loading utility uses new string substitution functions	Apply 5.x file loading utility unload
Security	Operator passwords automatically encrypted	Update field length of password field in RDBMS mappings
System status	Client connections use multi-threaded Java servlet implementation	Apply system status and inactivity timer unload to display and manage new client connections
Views (formerly inboxes)	The server now stores all data used by inboxes, charts, dashboards, and favorites in the inbox table	Apply the favorites conversion unload to convert and move data to the new table

ServiceCenter 6.1 to HP Service Manager 7.00

You must perform the following actions to upgrade your server run-time environment (RTE) from ServiceCenter 6.1 to HP Service Manager 7.00.

Table 3   Changes required to upgrade the server RTE from ServiceCenter 6.1

Feature	Change	Action required
Attachments	Attachments stored as individuals records in SYSATTACHMENTS table	Apply attachment conversion utility to move attachments to new table
Code page	The server uses a new record value to indicate that system files are in UTF-8 format	Apply the UTF-8 flag unload to mark system files as already converted to UTF-8
Data persistence	P4 database removed	Convert to a supported RDBMS
File loading	The file loading utility uses new string substitution functions	Apply 5.x file loading utility unload
Security	Operator passwords automatically encrypted	Update field length of password field in RDBMS mappings
System status	Client connections use multi-threaded Java servlet implementation	Apply system status and inactivity timer unload to display and manage new client connections
Views (formerly inboxes)	The server now stores all data used by inboxes, charts, dashboards, and favorites in the inbox table	Apply the favorites conversion unload to convert and move data to the new table

ServiceCenter 6.2 to HP Service Manager 7.00

You must perform the following actions to upgrade your server run-time environment (RTE) from ServiceCenter 6.2 to HP Service Manager 7.00.

Table 4   Changes required to upgrade the server RTE from ServiceCenter 6.2

Feature	Change	Action required
Data persistence	P4 database removed	Convert to a supported RDBMS

Required configuration file parameter changes

You must make several configuration file (sm.ini) parameter changes to upgrade your system. Some existing parameters have new names. See the New parameter name column for parameters that have been renamed. Other existing parameters are now obsolete and require you to use new functionality. See the Required action column for the new parameter, if any, that replaces the obsolete parameter.

Table 5   Required configuration file parameter changes

Previous parameter name	New parameter name	Required action
apiserver		This parameter is obsolete. All client listener processes now connect through dedicated HTTP and HTTPS ports.
cacertpem	truststoreFile	Move your CA certificate from a PEM file to a Java keystore and provide the path to this keystore with the truststoreFile parameter.
certpem	keystoreFile	Move your server certificate from a PREM file to a Java keystore and provide the path to this keystore with the keystoreFile parameter.
clustername		This parameter is obsolete. You can setup a failover configuration by starting a second load balancer process on a separate system.
cstrace		This parameter is obsolete.
debugdtevents		This parameter is obsolete.
debugdtrecords		This parameter is obsolete.
debugdttrace		This parameter is obsolete.
debugdtworld		This parameter is obsolete.
debuglog		This parameter is obsolete.

Table 5   Required configuration file parameter changes

Previous parameter name	New parameter name	Required action
debugrpc		This parameter is obsolete.
debugtransport		This parameter is obsolete.
dhpem	keystoreFile	This parameter is obsolete. You can set DH encyption properties when you create your Java keystore.
immediateshadow		This parameter is obsolete. Use your RDBMS utilities for reporting or data back up.
ip_address		This parameter is obsolete. Use AutoPass to specify valid IP addresses for your system.
keepalive		This parameter is obsolete.
odbccharacterarray		This parameter is obsolete.
pkpem	keystoreFile	Move your server private key from a PEM file to a Java keystore and provide the path to this keystore with the keystoreFile parameter.
pkpempass	keystorePass	Move your server private key from a PEM file to a Java keystore and provide the password to this keystore with the keystorePass parameter.
sccluster	group	This parameter has been renamed. Use the new parameter to shutdown your virtual group.
scclusterbindaddress	groupbindaddress	This parameter has been renamed. Use the new parameter to define your server group.

Table 5   Required configuration file parameter changes

Previous parameter name	New parameter name	Required action
scclustermcastaddress	groupmcastaddress	This parameter has been renamed. Use the new parameter to define your server group.
scclustername	groupname	This parameter has been renamed. Use the new parameter to define your server group.
scclusterport	groupport	This parameter has been renamed. Use the new parameter to define your server group.
scdebug		This parameter is obsolete. Contact customer support if you need to debug customized custom RAD applications from previous versions.
scemail	emailout	This parameter has been renamed. Use the new parameter to process outbound e-mail from HP Service Manager.
schost	host	This parameter has been renamed. Use the new parameter to shutdown or quiesce your system.
sctimeramount	heartbeatinterval	This parameter has been renamed. Use the new parameter to keep client connections open.
servletcontainer		This parameter is obsolete. You no longer need this parameter to start client listener processes.
soapaccepttimeout	sessiontimeout	This parameter is obsolete. Web services client connections now use the client time out limits.

Table 5   Required configuration file parameter changes

Previous parameter name	New parameter name	Required action
soapreceivetimeout	sessiontimeout	This parameter is obsolete. Web services client connections now use the client time out limits.
sqldetect		This parameter is obsolete. The Database Dictionary now automatically detects changes to RDBMS tables and columns.
sqlidentify		This parameter is obsolete.
sqllogintime		This parameter is obsolete.
sqlmodcount		This parameter is obsolete. The Database Dictionary now automatically detects changes to RDBMS tables and columns.
ssl_trustedClientspem	trustedclientsJKS	Move your list of trusted clients from a PEM file to a Java keystore and provide the path to this keystore with the trustedkeystoreJKS parameter.
timeoutlimit	sessiontimeout	This parameter has been renamed. Use the new parameter to set your client's session time out.
validateodbcfieldnames		This parameter is obsolete.

Required web tier configuration file parameter changes

You must make the following web tier configuration file (web.xml) parameter changes to run an upgraded web tier. Some existing parameters have new names. See the New parameter name column for parameters that have been renamed. Other existing parameters are now obsolete and require you to use new functionality. See the Required action column for the new parameter, if any, that replaces the obsolete parameter.

Table 6   Required web tier configuration file parameter changes

Previous parameter name	New parameter name	Required action
sc.autosubmit	autoSubmit	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.cacerts	cacerts	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.compress_soap	compress_soap	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.helpserverhost	helpServerHost	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.helpserverport	helpServerPort	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.honorUrlHost	honorUrlHost	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.honorUrlPort	honorUrlPort	This parameter has been renamed. Use the new parameter to configure your web tier.

Table 6   Required web tier configuration file parameter changes

Previous parameter name	New parameter name	Required action
sc.host	serverHost	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.hscale	hscale	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.port	serverPort	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.querysecurity	querySecurity	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.refreshmessages	refreshMessages	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.refreshmessinterval	refreshMessagesInterval	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.ssl	ssl	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.useservertabs	useservertabs	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.viewactivenotes	viewactivenotes	This parameter has been renamed. Use the new parameter to configure your web tier.

Table 6   Required web tier configuration file parameter changes

Previous parameter name	New parameter name	Required action
sc.viewclassicmenu	viewclassicmenu	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.viewpromptforsave	viewpromptforsave	This parameter has been renamed. Use the new parameter to configure your web tier.
sc.viewrecordlist	viewrecordlist	This parameter has been renamed. Use the new parameter to configure your web tier.

B Application changes required by release

This appendix contains a list of actions required to update your server applications from their current version of ServiceCenter to HP Service Manager 7.00. See the section matching your current version of ServiceCenter for a list of the required update steps.

ServiceCenter 5.1 to HP Service Manager 7.00

You must perform the following actions to update your applications from ServiceCenter 5.1 to HP Service Manager 7.00.

Table 7   Required changes to update applications from ServiceCenter 5.1

Application	Change	Action Required
Incident Management	Some form names used to start with the prefix "problem" (for Problem Management). Form names now use the prefix "IM" (for Incident Management). Your existing category records may reference form names that begin with "problem".	Change your category records to point to forms with the prefix "IM" rather than the prefix "problem".
IR Expert	IR Expert indexes now reside in the scirexpert table instead of in external ir.* files.	Regenerate the IR Expert index.
Key changes	The erddef table requires a new Nulls & Duplicates key.	Add a second key for the erddef table. Type: Nulls & Duplicates Fields in key: • distributed
Key changes	The inbox table requires a new No Duplicates key.	Add a key for the inbox table. Type: No Duplicates Fields in key: • inbox.id

Table 7   Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Key changes	The inbox table requires a new Nulls & Duplicates key.	Add a key for the inbox table. Type: Nulls & Duplicates Fields in key: • inbox.type • inbox.class • operator.name • audience.type • groups • role
Key changes	The inbox table requires updated fields for the unique key.	Update the fields in the Unique key for the inbox table. Type: Unique Fields in key: • container.id • inbox.name • inbox.type • operator.name
Key changes	The ocmgroups table requires a new Nulls & Duplicates key.	Add a key for the ocmgroups table. Type: Nulls & Duplicates Fields in key: • members
Key changes	The operator table requires a new Nulls & Duplicates key.	Add a key for the operator table. Type: Nulls & Duplicates Fields in key: • contact.name

Table 7   Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Key changes	The schedule table requires a new Nulls & Duplicates key.	Add a ninth key for the schedule table. Type: Nulls & Duplicates Fields in key: • application • object • type
Link records	The Link record form used to display information about the target.file and format name in one column. The Link record form now needs separate columns for the target file name and the target format name.	Update the Link record form to view the target file name and the target format name in separate columns.
ODBC	Service Manager requires starting a legacy ServiceCenter listener to support existing ODBC connections.	See the *HP Service Manager 7.00 Installation Guide* for information on starting and configuring a legacy ServiceCenter listener.

Table 7 Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Operators	HP Service Manager 7.00 requires that every operator have a contact record. You can still have a contact record without a corresponding operator record.	Review your existing operator records and create a contact record for every operator record that does not already have one. HP Service Manager 7.00 provides four wizards that you can use to create the missing contact or operator records. These wizards are available from the Options menu of the contacts.g and operator.g forms. • Create Operator - Creates an operator record from a contact record. • Mass Create Operators - Creates a batch of operator records from a batch of contact records • Create Contact - Creates a contact record from an operator record. • Mass Create Contacts - Creates a batch of contact records from a batch of operator records. Disable the "Synchronize contacts with operators" option in the System Information Definition before running these wizards. You can customize how the wizards map fields from the contacts and operator tables by editing the `createUsers` JavaScript in the script library.

Table 7   Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Problem Management (formerly Root Cause)	Profile records now contain settings to control access to Problems, Problem Tasks, and Known Errors.	After you update your applications the PROBLEM MANAGER profile will be the only profile with privileges to access Problem Management Tasks, Known Errors, or any new options added for Problems. Update your profile records to enable users to view and modify records within Problem Management.
Service Catalog	The ApprovalDef table supporting Service Catalog approvals has been converted to a system table. You should not change the name of this table. The upgrade utility adds this table but does not populate it with any approval definition records.	Add approval definition records to support your Service Catalog approval process.
Service Desk (formerly Service Management)	The Service Desk application uses three different fields to list contacts for new calls: • Contact for this call (callback.contact) • This call is for (contact.name) • Reported By (alternate.contact) Once you select a contact (callback.contact), the other two fields, if left blank, default to the callback.contact. There is no longer a check box for the alternate.contact field; this field is now always populated.	Specify the contact for the callback.contact, contact.name, and alternate.contact fields for each existing Service Desk ticket in your system.

Table 7   Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Service Level Management	Service Level Agreements have a new field that indicate the start date of the agreement. HP Service Manager uses the agreement start date to determine whether an SLA is valid. The start date may also be needed for accurate reporting.	The upgrade utility populates the start date field with the date January 1, 2001, for all existing SLAs. Review each SLA and provide the correct start date in the "SLA in effect from" field.
Service Level Management	Service Level Management uses configuration records for each application to determine the fields and conditions that are used during SLA processing. The upgrade populates the Response States for the Incident Management application with information from the pmstatus table. Each record in the pmstatus table has a sequence number, and this sequence determines the order of the states in the Response State Progression array field of the probsummary slamodulecontrol record (the SLA configuration record for the Incident Management application).	Review the Response State Progression field and modify or remove any states that do not apply to your implementation. Ensure that the states in this field are listed in the order that they should occur during the life cycle of an incident ticket. (For example, Closed comes after Open).
Service Level Management	Service Level Management uses application profiles to determine user rights within the module. After the upgrade, all users will have the DEFAULT profile which has limited permissions.	Review the available profiles, and edit them or add new ones as necessary. Update your SLM users to have the correct profile.

Table 7   Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Service Level Management	Service Level Management uses application profiles to determine user rights within the module. After the upgrade, no operator will have an assigned SLA profile. All operators will use the DEFAULT profile, which has limited permissions.	Update the operator records of each operator who needs access to SLA, and give them appropriate permissions.
Service Level Management	The "target" field was removed from the sla table in the out-of-box system. Upgraded systems will still have a data policy record with a validation rule for this field.	Remove the validation entry for the "target" field in the datadict record for the sla table.

Table 7   Required changes to update applications from ServiceCenter 5.1 (cont'd)

Application	Change	Action Required
Table change	The deviceparent table has been removed and replaced by the cirelationship table. The upgrade utility does not delete your pre-existing deviceparent records but rather converts each deviceparent record into a cirelationship record as follows: • Field Name in deviceparent -> Field Name in cirelationship • parent ->logical.name • logical.name ->1 in related.cis • relationship ->relationship.type • port.no ->port.no • comments ->comments • logical.name ->relationship.name • outage.dependency ->True • outage.threshold ->1 After the upgrade, your system writes new records to the cirelationship table.	After you convert data to cirelationship, check each record and make sure information converted correctly. Do not purge the deviceparent table until all of the records have been converted successfully to the new table. You can manually set fields that were not in the deviceparent, such as outage.dependency and outage.threshold. The cirelationship table is one to many. You can consolidate multiple record in deviceparent into 1 record in cirelationship table. We provide a consolidation wizard. You can launch the wizard by selecting Consolidate Relationships from the options menu when viewing a CI.
Service Level Management	Service Level Agreement records have a new required SLA Type field.	The upgrade utility populates the SLA type field with the value of "Customer" for all existing SLAs.

ServiceCenter 6.0 to HP Service Manager 7.00

You must perform the following actions to update your applications from
ServiceCenter 6.0 to HP Service Manager 7.00.

Table 8 Required changes to update applications from ServiceCenter 6.0

Application	Change	Action Required
Incident Management	Some form names used to start with the prefix "problem" (for Problem Management). Form names now use the prefix "IM" (for Incident Management). Your existing category records may reference form names that begin with "problem".	Change your category records to point to forms with the prefix "IM" rather than the prefix "problem".
Key changes	The inbox table requires a new No Duplicates key.	Add a key for the inbox table. Type: No Duplicates Fields in key: • inbox.id
Key changes	The inbox table requires a new Nulls & Duplicates key.	Add a key for the inbox table. Type: Nulls & Duplicates Fields in key: • inbox.type • inbox.class • operator.name • audience.type • groups • role

Table 8   Required changes to update applications from ServiceCenter 6.0 (cont'd)

Application	Change	Action Required
Key changes	The inbox table requires updated fields for the unique key.	Update the fields in the Unique key for the inbox table. Type: Unique Fields in key: • container.id • inbox.name • inbox.type • operator.name
Key changes	The ocmgroups table requires a new Nulls & Duplicates key.	Add a key for the ocmgroups table. Type: Nulls & Duplicates Fields in key: • members
Key changes	The operator table requires a new Nulls & Duplicates key.	Add a key for the operator table. Type: Nulls & Duplicates Fields in key: • contact.name
ODBC	Service Manager requires starting a legacy ServiceCenter listener to support existing ODBC connections.	See the *HP Service Manager 7.00 Installation Guide* for information on starting and configuring a legacy ServiceCenter listener.

Table 8   Required changes to update applications from ServiceCenter 6.0 (cont'd)

Application	Change	Action Required
Operators	HP Service Manager 7.00 requires that every operator have a contact record. You can still have a contact record without a corresponding operator record.	Review your existing operator records and create a contact record for every operator record that does not already have one. HP Service Manager 7.00 provides four wizards that you can use to create the missing contact or operator records. These wizards are available from the Options menu of the contacts.g and operator.g forms. • Create Operator - Creates an operator record from a contact record. • Mass Create Operators - Creates a batch of operator records from a batch of contact records • Create Contact - Creates a contact record from an operator record. • Mass Create Contacts - Creates a batch of contact records from a batch of operator records. Disable the "Synchronize contacts with operators" option in the System Information Definition before running these wizards. You can customize how the wizards map fields from the contacts and operator tables by editing the createUsers JavaScript in the script library.

Table 8   Required changes to update applications from ServiceCenter 6.0 (cont'd)

Application	Change	Action Required
Problem Management (formerly Root Cause)	Profile records now contain settings to control access to Problems, Problem Tasks, and Known Errors.	After you update your applications the PROBLEM MANAGER profile will be the only profile with privileges to access Problem Management Tasks, Known Errors, or any new options added for Problems. Update your profile records to enable users to view and modify records within Problem Management.
Service Catalog	The ApprovalDef table supporting Service Catalog approvals has been converted to a system table. You should not change the name of this table. The upgrade utility adds this table but does not populate it with any approval definition records.	Add approval definition records to support your Service Catalog approval process.
Service Desk (formerly Service Management)	The Service Desk application uses three different fields to list contacts for new calls: • Contact for this call (callback.contact) • This call is for (contact.name) • Reported By (alternate.contact) Once you select a contact (callback.contact), the other two fields, if left blank, default to the callback.contact. There is no longer a check box for the alternate.contact field; this field is now always populated.	Specify the contact for the callback.contact, contact.name, and alternate.contact fields for each existing Service Desk ticket in your system.

Table 8   Required changes to update applications from ServiceCenter 6.0 (cont'd)

Application	Change	Action Required
Service Level Management	Service Level Agreements have a new field that indicate the start date of the agreement. HP Service Manager uses the agreement start date to determine whether an SLA is valid. The start date may also be needed for accurate reporting.	The upgrade utility populates the start date field with the date January 1, 2001, for all existing SLAs. Review each SLA and provide the correct start date in the "SLA in effect from" field.
Service Level Management	Service Level Management uses configuration records for each application to determine the fields and conditions that are used during SLA processing. The upgrade populates the Response States for the Incident Management application with information from the pmstatus table. Each record in the pmstatus table has a sequence number, and this sequence determines the order of the states in the Response State Progression array field of the probsummary slamodulecontrol record (the SLA configuration record for the Incident Management application).	Review the Response State Progression field and modify or remove any states that do not apply to your implementation. Ensure that the states in this field are listed in the order that they should occur during the life cycle of an incident ticket. (For example, Closed comes after Open).
Service Level Management	Service Level Management uses application profiles to determine user rights within the module. After the upgrade, all users will have the DEFAULT profile which has limited permissions.	Review the available profiles, and edit them or add new ones as necessary. Update your SLM users to have the correct profile.

Table 8   Required changes to update applications from ServiceCenter 6.0 (cont'd)

Application	Change	Action Required
Service Level Management	Service Level Management uses application profiles to determine user rights within the module. After the upgrade, no operator will have an assigned SLA profile. All operators will use the DEFAULT profile, which has limited permissions.	Update the operator records of each operator who needs access to SLA, and give them appropriate permissions.
Service Level Management	The "target" field was removed from the sla table in the out-of-box system. Upgraded systems will still have a data policy record with a validation rule for this field.	Remove the validation entry for the "target" field in the datadict record for the sla table.

Table 8   Required changes to update applications from ServiceCenter 6.0 (cont'd)

Application	Change	Action Required
Table change	The deviceparent table has been removed and replaced by the cirelationship table. The upgrade utility does not delete your pre-existing deviceparent records but rather converts each deviceparent record into a cirelationship record as follows: • Field Name in deviceparent -> Field Name in cirelationship • parent ->logical.name • logical.name ->1 in related.cis • relationship ->relationship.type • port.no ->port.no • comments ->comments • logical.name ->relationship.name • outage.dependency ->True • outage.threshold ->1 After the upgrade, your system writes new records to the cirelationship table.	After you convert data to cirelationship, check each record and make sure information converted correctly. Do not purge the deviceparent table until all of the records have been converted successfully to the new table. You can manually set fields that were not in the deviceparent, such as outage.dependency and outage.threshold. The cirelationship table is one to many. You can consolidate multiple record in deviceparent into 1 record in cirelationship table. We provide a consolidation wizard. You can launch the wizard by selecting Consolidate Relationships from the options menu when viewing a CI.
Service Level Management	Service Level Agreement records have a new required SLA Type field.	The upgrade utility populates the SLA type field with the value of "Customer" for all existing SLAs.

ServiceCenter 6.1 to HP Service Manager 7.00

You must perform the following actions to update your applications from ServiceCenter 6.1 to HP Service Manager 7.00.

Table 9   Required changes to update applications from ServiceCenter 6.1

Application	Change	Action Required
Key changes	The ocmgroups table requires a new Nulls & Duplicates key.	Add a key for the ocmgroups table. Type: Nulls & Duplicates Fields in key: • members
Key changes	The operator table requires a new Nulls & Duplicates key.	Add a key for the operator table. Type: Nulls & Duplicates Fields in key: • contact.name
ODBC	Service Manager requires starting a legacy ServiceCenter listener to support existing ODBC connections.	See the *HP Service Manager 7.00 Installation Guide* for information on starting and configuring a legacy ServiceCenter listener.

Table 9   Required changes to update applications from ServiceCenter 6.1 (cont'd)

Application	Change	Action Required
Operators	HP Service Manager 7.00 requires that every operator have a contact record. You can still have a contact record without a corresponding operator record.	Review your existing operator records and create a contact record for every operator record that does not already have one.

HP Service Manager 7.00 provides four wizards that you can use to create the missing contact or operator records. These wizards are available from the Options menu of the contacts.g and operator.g forms.

- Create Operator - Creates an operator record from a contact record.
- Mass Create Operators - Creates a batch of operator records from a batch of contact records
- Create Contact - Creates a contact record from an operator record.
- Mass Create Contacts - Creates a batch of contact records from a batch of operator records.

Disable the "Synchronize contacts with operators" option in the System Information Definition before running these wizards.

You can customize how the wizards map fields from the contacts and operator tables by editing the `createUsers` JavaScript in the script library.

Table 9   Required changes to update applications from ServiceCenter 6.1 (cont'd)

Application	Change	Action Required
Service Catalog	The ApprovalDef table supporting Service Catalog approvals has been converted to a system table. You should not change the name of this table. The upgrade utility adds this table but does not populate it with any approval definition records.	Add approval definition records to support your Service Catalog approval process.
Service Level Management	Service Level Agreement records have a new required SLA Type field.	The upgrade utility populates the SLA type field with the value of "Customer" for all existing SLAs.
Service Level Management of Change Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per change record. Without the new field, each change record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type `cm3r` in the Table Name field, and click **Search**. 4 In SLA ID Field, select `agreement.ids`. 5 Click **Save**.
Service Level Management of Change Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per change task record. Without the new field, each change task record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type `cm3t` in the Table Name field, and click **Search**. 4 In SLA ID Field, select `agreement.ids`. 5 Click **Save**.

Table 9   Required changes to update applications from ServiceCenter 6.1 (cont'd)

Application	Change	Action Required
Service Level Management of Incident Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per incident record. Without the new field, each incident record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **probsummary** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 Click **Save**.
Service Level Management of Problem Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per problem record. Without the new field, each problem record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **rootcause** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 In CI Fields, type **affected.item**. 6 Click **Save**.
Service Level Management of Problem Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per problem task record. Without the new field, each problem task record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **rootcausetask** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 In CI Fields, type **affected.item**. 6 Click **Save**.

Table 9   Required changes to update applications from ServiceCenter 6.1 (cont'd)

Application	Change	Action Required
Service Level Management of Service Desk	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per interaction record. Without the new field, each interaction record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **incidents** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 In CI Fields, type **affected.item**. 6 Click **Save**.

Table 9   **Required changes to update applications from ServiceCenter 6.1 (cont'd)**

Application	Change	Action Required
Table change	The deviceparent table has been removed and replaced by the cirelationship table. The upgrade utility does not delete your pre-existing deviceparent records but rather converts each deviceparent record into a cirelationship record as follows: • Field Name in deviceparent -> Field Name in cirelationship • parent ->logical.name • logical.name ->1 in related.cis • relationship ->relationship.type • port.no ->port.no • comments ->comments • logical.name ->relationship.name • outage.dependency ->True • outage.threshold ->1 After the upgrade, your system writes new records to the cirelationship table.	After you convert data to cirelationship, check each record and make sure information converted correctly. Do not purge the deviceparent table until all of the records have been converted successfully to the new table. You can manually set fields that were not in the deviceparent, such as outage.dependency and outage.threshold. The cirelationship table is one to many. You can consolidate multiple record in deviceparent into 1 record in cirelationship table. We provide a consolidation wizard. You can launch the wizard by selecting Consolidate Relationships from the options menu when viewing a CI.
Table change	The application upgrade utility copies the web services API fields from the datadict table to the extaccess table. After the upgrade, your system will only use the extaccess table to manage web services.	Review the web services mappings in the extaccess table and verify that they list the desired service and object names.

ServiceCenter 6.2 to HP Service Manager 7.00

You must perform the following actions to update your applications from ServiceCenter 6.2 to HP Service Manager 7.00.

Table 10   Required changes to update applications from ServiceCenter 6.2

Application	Change	Action Required
ODBC	Service Manager requires starting a legacy ServiceCenter listener to support existing ODBC connections.	See the *HP Service Manager 7.00 Installation Guide* for information on starting and configuring a legacy ServiceCenter listener.
Service Level Management	Service Level Agreement records have a new required SLA Type field.	The upgrade utility populates the SLA type field with the value of "Customer" for all existing SLAs.
Service Level Management of Change Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per change record. Without the new field, each change record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **cm3r** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 Click **Save**.
Service Level Management of Change Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per change task record. Without the new field, each change task record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **cm3t** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 Click **Save**.

Table 10   Required changes to update applications from ServiceCenter 6.2 (cont'd)

Application	Change	Action Required
Service Level Management of Incident Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per incident record. Without the new field, each incident record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **probsummary** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 Click **Save**.
Service Level Management of Problem Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per problem record. Without the new field, each problem record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **rootcause** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 In CI Fields, type **affected.item**. 6 Click **Save**.
Service Level Management of Problem Management	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per problem task record. Without the new field, each problem task record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **rootcausetask** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 In CI Fields, type **affected.item**. 6 Click **Save**.

Table 10 Required changes to update applications from ServiceCenter 6.2 (cont'd)

Application	Change	Action Required
Service Level Management of Service Desk	Service Level Agreement requires a new field (agreement.ids) to be added to the SLA configuration record to track multiple SLAs per interaction record. Without the new field, each interaction record can only be associated to one SLA at a time.	1 Log on to HP Service Manager with an administrator account. 2 Click **Service Level Management** > **SLA Administration** > **Configure Application**. 3 Type **incidents** in the Table Name field, and click **Search**. 4 In SLA ID Field, select **agreement.ids**. 5 In CI Fields, type **affected.item**. 6 Click **Save**.
Table change	The application upgrade utility copies the web services API fields from the datadict table to the extaccess table. After the upgrade, your system will only use the extaccess table to manage web services.	Review the web services mappings in the extaccess table and verify that they list the desired service and object names.

C Optional application changes

This appendix lists all the optional application changes you can make to improve your system performance, usability, or compliance with ITIL conventions.

Added application features

The following sections list the application features that the upgrade utility adds when updating your applications to HP Service Manager 7.00. See the section for your current version of ServiceCenter for a cumulative list of added application features.

- Features added from ServiceCenter 5.1 to HP Service Manager 7.00 on page 174
- Features added from ServiceCenter 6.0 to HP Service Manager 7.00 on page 177
- Features added from ServiceCenter 6.1 to HP Service Manager 7.00 on page 179
- Features added from ServiceCenter 6.2 to HP Service Manager 7.00 on page 180

Features added from ServiceCenter 5.1 to HP Service Manager 7.00

The upgrade utility adds the following application features updating your applications from ServiceCenter 5.1 to HP Service Manager 7.00.

Table 11   Application features added updating from ServiceCenter 5.1

Application	Change	Suggested action
Knowledge Management	Knowledge Management adds the following Change Management category to the cm3rcategory table. • KM Document	Review customized menus, forms, and messages to determine if they need to be changed to use the new category.

Table 11   Application features added updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Knowledge Management	Knowledge Management adds the following Change Management category phases to the cm3rcatphase table. • KM 1 Triage • KM 2 Revise • KM 3 Review Read-only • KM 4 Conclude	Review customized menus, forms, and messages to determine if they need to be changed to use the new category phases.
Menu records	The menu record description field uses two colons (::) as the path separator between the group name and the menu item. For example, the description "Toolkit::Database Manager" specifies a folder called Toolkit and a menu item called Database Manager.	Review your existing custom menu records and verify that the description field uses two colons (::) as a path separator.
Operators	There are two wizards you can use to create operator records from contact records. • From the contacts detail form you can select Create operator from the options menu. • From a contacts record list you can select Mass create operators from the options menu.	Review your list of contacts and determine if any can be converted to operators or self service users.

Table 11   Application features added updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Problem Management (formerly RootCause)	Problem Management uses new categories, phases, and tasks similar to those in Change Management. Problem Management also includes new alerts and notifications to that use the new categories, phases, and tasks.	Review customized menus, forms, and messages to determine if they need to be changed to use the new categories, phases, tasks., alerts, or notifications.
Service Desk (formerly Service Management)	Service Desk offers a self service feature to provide infrequent users a means to open incidents or make service requests without consuming a user license. Self service users do not need special training or software. Self service users connect to HP Service Manager from a Web client.	Review your list of operators and determine if any of them can be converted to self service users.
System Information	The default value of the case.insensitive field in the System Information record is false.	Verify that the HP Service Manager case sensitivity setting matches the case sensitivity of your RDBMS.
Utilities	HP Service Manager offers a differential upgrade utility to identify application changes from prior versions of ServiceCenter.	You can use the differential upgrade utility to help create your custom upgrade files.
Utilities	HP Service Manager offers a entity relationship diagram (ERD) creation utility to graphically illustrate relationships between HP Service Manager tables.	You can use the ERD creation utility to help tailor your HP Service Manager system.

Table 11   Application features added updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Web Services API	The HOME menu has a link to "WSDL configuration" in the Toolkit group.	Review the HOME menu to determine if want your users to have access to this option.
Web Services API	The "External Access Definition" form provides a consolidated view of Web Services data from the extaccess and datadict tables.	You can use the new form to set the tables and options menu actions you want to be available through Web Services.

Features added from ServiceCenter 6.0 to HP Service Manager 7.00

The upgrade utility adds the following application features updating your applications from ServiceCenter 6.0 to HP Service Manager 7.00.

Table 12   Application features added updating from ServiceCenter 5.1

Application	Change	Suggested action
Knowledge Management	Knowledge Management adds the following Change Management category to the cm3rcategory table. • KM Document	Review customized menus, forms, and messages to determine if they need to be changed to use the new category.
Knowledge Management	Knowledge Management adds the following Change Management category phases to the cm3rcatphase table. • KM 1 Triage • KM 2 Revise • KM 3 Review Read-only • KM 4 Conclude	Review customized menus, forms, and messages to determine if they need to be changed to use the new category phases.

Table 12 Application features added updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Operators	There are two wizards you can use to create operator records from contact records. • From the contacts detail form you can select Create operator from the options menu. • From a contacts record list you can select Mass create operators from the options menu.	Review your list of contacts and determine if any can be converted to operators or self service users.
Problem Management (formerly RootCause)	Problem Management uses new categories, phases, and tasks similar to those in Change Management. Problem Management also includes new alerts and notifications to that use the new categories, phases, and tasks.	Review customized menus, forms, and messages to determine if they need to be changed to use the new categories, phases, tasks., alerts, or notifications.
Service Desk (formerly Service Management)	Service Desk offers a self service feature to provide infrequent users a means to open incidents or make service requests without consuming a user license. Self service users do not need special training or software. Self service users connect to HP Service Manager from a Web client.	Review your list of operators and determine if any of them can be converted to self service users.
Web Services API	The HOME menu has a link to "WSDL configuration" in the Toolkit group.	Review the HOME menu to determine if want your users to have access to this option.

Table 12   Application features added updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Web Services API	The "External Access Definition" form provides a consolidated view of Web Services data from the extaccess and datadict tables.	You can use the new form to set the tables and options menu actions you want to be available through Web Services.

Features added from ServiceCenter 6.1 to HP Service Manager 7.00

The upgrade utility adds the following application features updating your applications from ServiceCenter 6.1 to HP Service Manager 7.00.

Table 13   Application features added updating from ServiceCenter 5.1

Application	Change	Suggested action
Knowledge Management	Knowledge Management adds the following Change Management category to the cm3rcategory table. • KM Document	Review customized menus, forms, and messages to determine if they need to be changed to use the new category.
Knowledge Management	Knowledge Management adds the following Change Management category phases to the cm3rcatphase table. • KM 1 Triage • KM 2 Revise • KM 3 Review Read-only • KM 4 Conclude	Review customized menus, forms, and messages to determine if they need to be changed to use the new category phases.

Table 13   Application features added updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Operators	There are two wizards you can use to create operator records from contact records. • From the contacts detail form you can select Create operator from the options menu. • From a contacts record list you can select Mass create operators from the options menu.	Review your list of contacts and determine if any can be converted to operators or self service users.

Features added from ServiceCenter 6.2 to HP Service Manager 7.00

The upgrade utility adds the following application features updating your applications from ServiceCenter 6.2 to HP Service Manager 7.00.

Table 14   Application features added updating from ServiceCenter 6.2

Application	Change	Suggested action

Table changes

The following sections list the data definition changes to tables and columns that the upgrade utility makes when updating your applications to HP Service Manager 7.00. See the section for your current version of ServiceCenter for a cumulative list of table changes.

- Table changes from ServiceCenter 5.1 to HP Service Manager 7.00 on page 182
- Table changes from ServiceCenter 6.0 to HP Service Manager 7.00 on page 190
- Table changes from ServiceCenter 6.1 to HP Service Manager 7.00 on page 200
- Table changes from ServiceCenter 6.2 to HP Service Manager 7.00 on page 209

Table changes from ServiceCenter 5.1 to HP Service Manager 7.00

The upgrade utility makes the following data definition changes to tables and columns updating your applications from ServiceCenter 5.1 to HP Service Manager 7.00.

Table 15   Table changes made updating from ServiceCenter 5.1

Application	Change	Suggested action
Change Management	The upgrade utility renames the priority field in the cm3r and cm3t tables to priority.code so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original priority field to priority.code. Because the field has been aliased, any references to the old data will still work. If the priority.code field already exists in the dbdict, the upgrade does not add an alias.	If you had a previously existing priority.code field in the cm3r or cm3t tables and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc=jscall("PriorityCalc.getPriorityCalc") from the following Process records: • cm.close.save • cm.open.save • cm.update.save — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the ScriptLibrary "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Configuration Management	The upgrade utility adds the following fields to the environment table. • cm3SubscriptionAdd – lists the Change Management category to use when a user adds a subscription to a configuration item. • cm3SubscriptionRemove – lists the Change Management category to use when a user removes a subscription to a configuration item. • subscribeMode – lists the application that manages user subscriptions to configuration items.	Review the Configuration Management environment record and select the subscription features you want to enable.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Configuration Management	The deviceparent table has been removed and replaced by the cirelationship table. The upgrade routine converts each deviceparent record into a cirelationship record. After the upgrade, ServiceCenter writes new records to the "cirelationship" table. The upgrade utility does not delete your pre-existing deviceparent records. It converts fields from deviceparent to fields in cirelationship as follows: • Field Name remains unchanged • parent becomes logical.name • logical.name becomes 1 in related.cis • relationship becomes relationship.type • port.no remains unchanged • comments remains unchanged • logical.name becomes relationship.name • outage.dependency becomes True • outage.threshold becomes 1	After you convert data to cirelationship, check each record and make sure information converted correctly. Do not purge the deviceparent table until all of the records have been converted successfully to the new table. You can manually set fields that were not in the deviceparent, such as outage.dependency and outage.threshold. The cirelationship table is one to many. You can consolidate multiple record in deviceparent into 1 record in cirelationship table. We provide a consolidation wizard. You can launch the wizard by selecting Consolidate Relationships from the options menu when viewing a CI.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Incident Management	The upgrade utility renames the severity.code field in the probsummary table to severity so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original severity.code field to severity. Because the field has been aliased, any reference to the old data will still work. If the severity field already exists in the dbdict, the upgrade utility does not add an alias.	If you had a previously existing severity field in the probsummary table and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc= jscall("PriorityCalc.getPriorityCalc") from the following new Process records: • im.first • im.save • im.close — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Operators	Redundant fields removed from the operator table and moved to the contacts table. • authcode • authorid • change.approvals • change.groups • change.mgr.group • email.events • external.flag • fax • manager • pm.groups • priority • room • sc.manager • syslanguage • time.zone	Review customized menus, forms, and messages to determine if they still use the redundant fields. Update the field references if you want to use the new contacts table fields rather than the operator table fields.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Operators	Obsolete fields removed from the operator table • beeper • beeper.group • beeper.name • beeper.type • gl.number • graphics.printer • nodeid • page.response • pager.pin • pager.vendor • voice.mailbox • wdIsReadOnlyView • wdMailBOxName • wdResType • wdUD1 • wdUD2	Review new menus, forms, and messages to determine if you need to add references to any obsolete fields your system still uses.
Problem Management (formerly RootCause)	Problem Management uses three different tables: • rootcause • rootcausetask • knownerror.	Review customized menus, forms, and messages to determine if they need to be changed to use the new tables.
Service Level Management	Service Level Agreement availability and response time objectives are stored in a separate slo table.	Review customized menus, forms, and messages to determine if they need to be changed to use the new table.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Service Level Management	Service Level Management no longer uses clocks to store response time information. Instead, this information is stored in a separate sloresponse table.	Review customized menus, forms, and messages to determine if they need to be changed to use the new table.
Change Management	Now supports the use of multiple SLAs for change records.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers). If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
Incident Management	Now supports the use of multiple SLAs for incidents.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers). If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids. If you are currently using SLA for incidents, add the affected.item field to the CI Fields section of the SLA Integration Information record in the incidents table.

Table 15   Table changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Problem Management	Now supports the use of multiple SLAs for problem records and problem tasks.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
		If you are currently using SLA for problem records, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcause table.
		If you are currently using SLA for problem tasks, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcausetask table.
Service Desk	Now supports the use of multiple SLAs for interactions	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.

Table changes from ServiceCenter 6.0 to HP Service Manager 7.00

The upgrade utility makes the following data definition changes to tables and columns updating your applications from ServiceCenter 6.0 to HP Service Manager 7.00.

Table 16   Table changes made updating from ServiceCenter 6.0

Application	Change	Suggested action
Change Management	The upgrade utility renames the priority field in the cm3r and cm3t tables to priority.code so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original priority field to priority.code. Because the field has been aliased, any references to the old data will still work. If the priority.code field already exists in the dbdict, the upgrade does not add an alias.	If you had a previously existing priority.code field in the cm3r or cm3t tables and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc=jscall("PriorityCalc.getPriorityCalc") from the following Process records: • cm.close.save • cm.open.save • cm.update.save — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the ScriptLibrary "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Configuration Management	The upgrade utility adds the following fields to the environment table. • cm3SubscriptionAdd – lists the Change Management category to use when a user adds a subscription to a configuration item. • cm3SubscriptionRemove – lists the Change Management category to use when a user removes a subscription to a configuration item. • subscribeMode – lists the application that manages user subscriptions to configuration items.	Review the Configuration Management environment record and select the subscription features you want to enable.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Configuration Management	The deviceparent table has been removed and replaced by the cirelationship table. The upgrade routine converts each deviceparent record into a cirelationship record. After the upgrade, ServiceCenter writes new records to the "cirelationship" table. The upgrade utility does not delete your pre-existing deviceparent records. It converts fields from deviceparent to fields in cirelationship as follows: • Field Name in deviceparent -> Field Name in cirelationship • parent ->logical.name • logical.name ->1 in related.cis • relationship ->relationship.type • port.no ->port.no • comments ->comments • logical.name ->relationship.name • outage.dependency ->True • outage.threshold ->1	After you convert data to cirelationship, check each record and make sure information converted correctly. Do not purge the deviceparent table until all of the records have been converted successfully to the new table. You can manually set fields that were not in the deviceparent, such as outage.dependency and outage.threshold. The cirelationship table is one to many. You can consolidate multiple record in deviceparent into 1 record in cirelationship table. We provide a consolidation wizard. You can launch the wizard by selecting Consolidate Relationships from the options menu when viewing a CI.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Incident Management	The upgrade utility renames the severity.code field in the probsummary table to severity so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original severity.code field to severity. Because the field has been aliased, any reference to the old data will still work. If the severity field already exists in the dbdict, the upgrade utility does not add an alias.	If you had a previously existing severity field in the probsummary table and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc= jscall("PriorityCalc.getPriorityCalc") from the following new Process records: • im.first • im.save • im.close — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Operators	Redundant fields removed from the operator table and moved to the contacts table. • authcode • authorid • change.approvals • change.groups • change.mgr.group • email.events • external.flag • fax • manager • pm.groups • priority • room • sc.manager • syslanguage • time.zone	Review customized menus, forms, and messages to determine if they still use the redundant fields. Update the field references if you want to use the new contacts table fields rather than the operator table fields.

Table 16 Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Operators	Obsolete fields removed from the operator table • beeper • beeper.group • beeper.name • beeper.type • gl.number • graphics.printer • nodeid • page.response • pager.pin • pager.vendor • voice.mailbox • wdIsReadOnlyView • wdMailBOxName • wdResType • wdUD1 • wdUD2	Review new menus, forms, and messages to determine if you need to add references to any obsolete fields your system still uses.
Problem Management (formerly RootCause)	Problem Management uses three different tables: • rootcause • rootcausetask • knownerror.	Review customized menus, forms, and messages to determine if they need to be changed to use the new tables.
Service Level Management	Service Level Agreement availability and response time objectives are stored in a separate slo table.	Review customized menus, forms, and messages to determine if they need to be changed to use the new table.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Service Level Management	Service Level Management no longer uses clocks to store response time information. Instead, this information is stored in a separate sloresponse table.	Review customized menus, forms, and messages to determine if they need to be changed to use the new table.
Web Services API	The extaccess table includes the following additional fields: • object.name: Stores a logical name (alias) for a table that HP Service Manager uses to refer to the table in WSDL. • action.names: Stores an array of logical names (aliases) for the allowed options that HP Service Manager uses to refer to the options in WSDL. • service.name: Stores a logical name (alias) for a group of tables that HP Service Manager refers as a single service within WSDL.	Review your custom Web Services external access definitions and update them to use the new fields.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Web Services API	The datadict table includes the following additional fields: • soacaption: Stores a logical name (alias) for a field that HP Service Manager uses to refer to the field in WSDL. • soaexclude: Stores an array of Boolean values that determine if HP Service Manager should display a given field within WSDL. • soadatatype: Stores an XML data type that HP Service Manager uses when using field data within WSDL.	Review your custom Web Services data policy definitions and update them to use the new fields.
Change Management	Now supports the use of multiple SLAs for change records.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers). If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Incident Management	Now supports the use of multiple SLAs for incidents.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
		If you are currently using SLA for incidents, add the affected.item field to the CI Fields section of the SLA Integration Information record in the incidents table.
Problem Management	Now supports the use of multiple SLAs for problem records and problem tasks.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
		If you are currently using SLA for problem records, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcause table.
		If you are currently using SLA for problem tasks, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcausetask table.

Table 16   Table changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Service Desk	Now supports the use of multiple SLAs for interactions	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.

Table changes from ServiceCenter 6.1 to HP Service Manager 7.00

The upgrade utility makes the following data definition changes to tables and columns updating your applications from ServiceCenter 6.1 to HP Service Manager 7.00.

Table 17   Table changes made updating from ServiceCenter 6.1

Application	Change	Suggested action
Change Management	The upgrade utility renames the priority field in the cm3r and cm3t tables to priority.code so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original priority field to priority.code. Because the field has been aliased, any references to the old data will still work. If the priority.code field already exists in the dbdict, the upgrade does not add an alias.	If you had a previously existing priority.code field in the cm3r or cm3t tables and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc=jscall("PriorityCalc.getPriorityCalc") from the following Process records: • cm.close.save • cm.open.save • cm.update.save — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the ScriptLibrary "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Configuration Management	The upgrade utility adds the following fields to the environment table. • cm3SubscriptionAdd – lists the Change Management category to use when a user adds a subscription to a configuration item. • cm3SubscriptionRemove – lists the Change Management category to use when a user removes a subscription to a configuration item. • subscribeMode – lists the application that manages user subscriptions to configuration items.	Review the Configuration Management environment record and select the subscription features you want to enable.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Configuration Management	The deviceparent table has been removed and replaced by the cirelationship table. The upgrade routine converts each deviceparent record into a cirelationship record. After the upgrade, ServiceCenter writes new records to the "cirelationship" table. The upgrade utility does not delete your pre-existing deviceparent records. It converts fields from deviceparent to fields in cirelationship as follows: • Field Name in deviceparent -> Field Name in cirelationship • parent ->logical.name • logical.name ->1 in related.cis • relationship ->relationship.type • port.no ->port.no • comments ->comments • logical.name ->relationship.name • outage.dependency ->True • outage.threshold ->1	After you convert data to cirelationship, check each record and make sure information converted correctly. Do not purge the deviceparent table until all of the records have been converted successfully to the new table. You can manually set fields that were not in the deviceparent, such as outage.dependency and outage.threshold. The cirelationship table is one to many. You can consolidate multiple record in deviceparent into 1 record in cirelationship table. We provide a consolidation wizard. You can launch the wizard by selecting Consolidate Relationships from the options menu when viewing a CI.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Incident Management	The upgrade utility renames the severity.code field in the probsummary table to severity so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original severity.code field to severity. Because the field has been aliased, any reference to the old data will still work. If the severity field already exists in the dbdict, the upgrade utility does not add an alias.	If you had a previously existing severity field in the probsummary table and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc= jscall("PriorityCalc.getPriorityCalc") from the following new Process records: • im.first • im.save • im.close — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Operators	Redundant fields removed from the operator table and moved to the contacts table. • authcode • authorid • change.approvals • change.groups • change.mgr.group • email.events • external.flag • fax • manager • pm.groups • priority • room • sc.manager • syslanguage • time.zone	Review customized menus, forms, and messages to determine if they still use the redundant fields. Update the field references if you want to use the new contacts table fields rather than the operator table fields.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Operators	Obsolete fields removed from the operator table • beeper • beeper.group • beeper.name • beeper.type • gl.number • graphics.printer • nodeid • page.response • pager.pin • pager.vendor • voice.mailbox • wdIsReadOnlyView • wdMailBOxName • wdResType • wdUD1 • wdUD2	Review new menus, forms, and messages to determine if you need to add references to any obsolete fields your system still uses.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Web Services API	The extaccess table includes the following additional fields: • object.name: Stores a logical name (alias) for a table that HP Service Manager uses to refer to the table in WSDL. • action.names: Stores an array of logical names (aliases) for the allowed options that HP Service Manager uses to refer to the options in WSDL. • service.name: Stores a logical name (alias) for a group of tables that HP Service Manager refers as a single service within WSDL.	Review your custom Web Services external access definitions and update them to use the new fields.
Web Services API	The datadict table includes the following additional fields: • soacaption: Stores a logical name (alias) for a field that HP Service Manager uses to refer to the field in WSDL. • soaexclude: Stores an array of Boolean values that determine if HP Service Manager should display a given field within WSDL. • soadatatype: Stores an XML data type that HP Service Manager uses when using field data within WSDL.	Review your custom Web Services data policy definitions and update them to use the new fields.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Change Management	Now supports the use of multiple SLAs for change records.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers). If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
Incident Management	Now supports the use of multiple SLAs for incidents.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers). If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids. If you are currently using SLA for incidents, add the affected.item field to the CI Fields section of the SLA Integration Information record in the incidents table.

Table 17   Table changes made updating from ServiceCenter 6.1 (cont'd)

Application	Change	Suggested action
Problem Management	Now supports the use of multiple SLAs for problem records and problem tasks.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
		If you are currently using SLA for problem records, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcause table.
		If you are currently using SLA for problem tasks, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcausetask table.
Service Desk	Now supports the use of multiple SLAs for interactions	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.

Table changes from ServiceCenter 6.2 to HP Service Manager 7.00

The upgrade utility makes the following data definition changes to tables and columns updating your applications from ServiceCenter 6.2 to HP Service Manager 7.00.

Table 18   Table changes made updating from ServiceCenter 6.2

Application	Change	Suggested action
Configuration Management	The upgrade utility adds the following fields to the environment table. • cm3SubscriptionAdd – lists the Change Management category to use when a user adds a subscription to a configuration item. • cm3SubscriptionRemove – lists the Change Management category to use when a user removes a subscription to a configuration item. • subscribeMode – lists the application that manages user subscriptions to configuration items.	Review the Configuration Management environment record and select the subscription features you want to enable.
Change Management	Now supports the use of multiple SLAs for change records.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers). If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.

Table 18   Table changes made updating from ServiceCenter 6.2 (cont'd)

Application	Change	Suggested action
Incident Management	Now supports the use of multiple SLAs for incidents.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
		If you are currently using SLA for incidents, add the affected.item field to the CI Fields section of the SLA Integration Information record in the incidents table.
Problem Management	Now supports the use of multiple SLAs for problem records and problem tasks.	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.
		If you are currently using SLA for problem records, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcause table.
		If you are currently using SLA for problem tasks, add the logical.name field to the CI Fields section of the SLA Integration Information record in the rootcausetask table.

Table 18   Table changes made updating from ServiceCenter 6.2 (cont'd)

Application	Change	Suggested action
Service Desk	Now supports the use of multiple SLAs for interactions	If you currently use Event Services that have event maps against the agreement.id field, update the event map or create a new one that maps to the agreement.ids field (array of numbers).
		If you currently expose the aggreement.id field in any existing *extaccess* records, change the field to agreement.ids.

Name changes

The following sections list the name changes that the upgrade utility makes when updating your applications to HP Service Manager 7.00. See the section for your current version of ServiceCenter for a cumulative list of name changes.

- Name changes from ServiceCenter 5.1 to HP Service Manager 7.00 on page 212
- Name changes from ServiceCenter 6.0 to HP Service Manager 7.00 on page 215
- Name changes from ServiceCenter 6.1 to HP Service Manager 7.00 on page 218
- Name changes from ServiceCenter 6.2 to HP Service Manager 7.00 on page 220

Name changes from ServiceCenter 5.1 to HP Service Manager 7.00

The upgrade utility makes the following name changes updating your applications from ServiceCenter 5.1 to HP Service Manager 7.00.

Table 19   Name changes made updating from ServiceCenter 5.1

Application	Change	Suggested action
Capability words	The upgrade utility changes the following capability words: • CM3Admin renamed to ChMAdmin • SMAdmin renamed to SDAdmin	Review your list of user roles and operators and update any records that list the old capability words.

Table 19   Name changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Change Management	The upgrade utility renames the priority field in the cm3r and cm3t tables to priority.code so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original priority field to priority.code. Because the field has been aliased, any references to the old data will still work. If the priority.code field already exists in the dbdict, the upgrade does not add an alias.	If you had a previously existing priority.code field in the cm3r or cm3t tables and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc=jscall("PriorityCalc.getPriorityCalc") from the following Process records: • cm.close.save • cm.open.save • cm.update.save — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the ScriptLibrary "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.
Configuration Management (formerly Inventory Management)	Inventory Management renamed to Configuration Management	Review customized menus, formats, and messages that use the Inventory Management name to determine if they need to be changed to match the new naming convention.

Table 19   Name changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Incident Management	The upgrade utility renames the severity.code field in the probsummary table to severity so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original severity.code field to severity. Because the field has been aliased, any reference to the old data will still work. If the severity field already exists in the dbdict, the upgrade utility does not add an alias.	If you had a previously existing severity field in the probsummary table and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc= jscall("PriorityCalc.getPriorityCalc") from the following new Process records: • im.first • im.save • im.close — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.
Problem Management (formerly Root Cause)	Root Cause renamed to Problem Management	Review customized menus, formats, and messages that use the Root Cause name to determine if they need to be changed to match the new naming convention.

Table 19   Name changes made updating from ServiceCenter 5.1 (cont'd)

Application	Change	Suggested action
Service Desk (formerly Service Management)	Service Management renamed to Service Desk	Review customized menus, formats, and messages that use the Service Management name to determine if they need to be changed to match the new naming convention.
Service Desk (formerly Service Management)	Service Management calls renamed to Service Desk interactions	Review customized menus, formats, and messages that refer to Service Management calls to determine if they need to be changed to match the new naming convention.

Name changes from ServiceCenter 6.0 to HP Service Manager 7.00

The upgrade utility makes the following name changes updating your applications from ServiceCenter 6.0 to HP Service Manager 7.00.

Table 20   Name changes made updating from ServiceCenter 6.0

Application	Change	Suggested action
Capability words	The upgrade utility changes the following capability words: • CM3Admin renamed to ChMAdmin • SMAdmin renamed to SDAdmin	Review your list of user roles and operators and update any records that list the old capability words.

Table 20   Name changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Change Management	The upgrade utility renames the priority field in the cm3r and cm3t tables to priority.code so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original priority field to priority.code. Because the field has been aliased, any references to the old data will still work. If the priority.code field already exists in the dbdict, the upgrade does not add an alias.	If you had a previously existing priority.code field in the cm3r or cm3t tables and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc=jscall("PriorityCalc.getPriorityCalc") from the following Process records: • cm.close.save • cm.open.save • cm.update.save — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the ScriptLibrary "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.
Configuration Management (formerly Inventory Management)	Inventory Management renamed to Configuration Management	Review customized menus, formats, and messages that use the Inventory Management name to determine if they need to be changed to match the new naming convention.

Table 20   Name changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Incident Management	The upgrade utility renames the severity.code field in the probsummary table to severity so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original severity.code field to severity. Because the field has been aliased, any reference to the old data will still work. If the severity field already exists in the dbdict, the upgrade utility does not add an alias.	If you had a previously existing severity field in the probsummary table and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc= jscall("PriorityCalc.getPriorityCalc") from the following new Process records: • im.first • im.save • im.close — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.
Problem Management (formerly Root Cause)	Root Cause renamed to Problem Management	Review customized menus, formats, and messages that use the Root Cause name to determine if they need to be changed to match the new naming convention.

Table 20   Name changes made updating from ServiceCenter 6.0 (cont'd)

Application	Change	Suggested action
Service Desk (formerly Service Management)	Service Management renamed to Service Desk	Review customized menus, formats, and messages that use the Service Management name to determine if they need to be changed to match the new naming convention.
Service Desk (formerly Service Management)	Service Management calls renamed to Service Desk interactions	Review customized menus, formats, and messages that refer to Service Management calls to determine if they need to be changed to match the new naming convention.

Name changes from ServiceCenter 6.1 to HP Service Manager 7.00

The upgrade utility makes the following name changes updating your applications from ServiceCenter 6.1 to HP Service Manager 7.00.

Table 21   Name changes made updating from ServiceCenter 6.2

Application	Change	Suggested action
Capability words	The upgrade utility changes the following capability words: • CM3Admin renamed to ChMAdmin • SMAdmin renamed to SDAdmin	Review your list of user roles and operators and update any records that list the old capability words.

Table 21   Name changes made updating from ServiceCenter 6.2 (cont'd)

Application	Change	Suggested action
Change Management	The upgrade utility renames the priority field in the cm3r and cm3t tables to priority.code so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original priority field to priority.code. Because the field has been aliased, any references to the old data will still work. If the priority.code field already exists in the dbdict, the upgrade does not add an alias.	If you had a previously existing priority.code field in the cm3r or cm3t tables and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc=jscall("PriorityCalc.getPriorityCalc") from the following Process records: • cm.close.save • cm.open.save • cm.update.save — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the ScriptLibrary "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Table 21　Name changes made updating from ServiceCenter 6.2 (cont'd)

Application	Change	Suggested action
Incident Management	The upgrade utility renames the severity.code field in the probsummary table to severity so that the three fields used for the ITIL priority calculations are consistent across HP Service Manager applications. The Upgrade utility aliases the original severity.code field to severity. Because the field has been aliased, any reference to the old data will still work. If the severity field already exists in the dbdict, the upgrade utility does not add an alias.	If you had a previously existing severity field in the probsummary table and do not want to use the new functionality, you can: A. Remove the calculation $L.pri.calc= jscall("PriorityCalc.getPriorityCalc") from the following new Process records: • im.first • im.save • im.close — or — B. Modify the "PriorityCalc" ScriptLibrary. If you choose to update the "PriorityCalc" java script, you should be aware that other modules also use that code to calculate priority from the Initial Impact and Urgency. If you do not want to use the new ITIL based Priority calculation functionality, it is easy to remove the calculation from the Process record. If you do not remove the calculation, it will attempt to run using what ever information is in the severity field, which could cause unpredictable behavior.

Name changes from ServiceCenter 6.2 to HP Service Manager 7.00

The upgrade utility makes the following name changes updating your applications from ServiceCenter 6.2 to HP Service Manager 7.00.

Table 22   Name changes made updating from ServiceCenter 6.2

Application	Change	Suggested action
Incident Management	The label "Configuration Item" renamed to "Affected Item" on the create and search incidents forms.	Review customized menus, formats, and messages that refer to Configuration Items to determine if they need to be changed to match the new naming convention.
Service Desk	The label "Configuration Item" renamed to "Affected Item" on the create and search interactions forms.	Review customized menus, formats, and messages that refer to Configuration Items to determine if they need to be changed to match the new naming convention.

Key changes

You can perform the following key changes to optimize the performance of your upgraded system. All of these changes are optional. See the section for your current version of ServiceCenter for a list of performance tuning key changes.

- Key changes from ServiceCenter 5.1 to HP Service Manager 7.00 on page 222
- Key changes from ServiceCenter 6.0 to HP Service Manager 7.00 on page 233
- Key changes from ServiceCenter 6.1 to HP Service Manager 7.00 on page 244
- Key changes from ServiceCenter 6.2 to HP Service Manager 7.00 on page 248

Key changes from ServiceCenter 5.1 to HP Service Manager 7.00

The following key changes are for ServiceCenter 5.1 to HP Service Manager 7.00.

Table 23   Key changes to optimize performance from ServiceCenter 5.1

Table	Change	Suggested action
activityactions	Add a new Unique key.	Add a key for the activityactions table. Type: Unique Fields in key: • name • table
activitytype	Add a new Unique key.	Add a key for the activitytype table. Type: Unique Fields in Key: • activity.number • table

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
Alert	Add a new No Nulls keys.	Add a key for the Alert table. Type: No Nulls Fields in Key: • file.name • unique.key • active • alert.type
Alert	Add a new No Nulls keys.	Add a key for the Alert table. Type: No Nulls Fields in Key: • unique.key • file.name • active • alert.time • alert.type
calholidays	Add a new Unique key.	Add a key for the calholidays table. Type: Unique Fields in Key: • holiday • start.date • end.date
cm3r	Add a new Nulls & Duplicates key	Add a key for the cm3r table. Type: Nulls & Duplicates Fields in key: • logical.name

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
cm3t	Add new Nulls & Duplicates keys.	Add a key for the cm3t table. Type: Nulls & Duplicates Fields in key: • header • number
cm3t	Add new Nulls & Duplicates keys.	Add a key for the cm3t table. Type: Nulls & Duplicates Fields in key: • header • parent.change
company	Add new Nulls & Duplicates key.	Add a key for the company table. Type: Nulls & Duplicates Fields in key: • show.company
contacts	Add new No Duplicates key.	Add a key for the contacts table. Type: Nulls & Duplicates Fields in key: • user.id
contacts	Add new Nulls & Duplicates key.	Add a key for the contacts table. Type: Nulls & Duplicates Fields in key: • operator.id
datadict	Add a new No Duplicates key.	Add a key for the datadict table. Type: No Duplicates Fields in key: • sqlbasename

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
dept	Add a new Nulls & Duplicates key	Add a key for the dept table. Type: Nulls & Duplicates Fields in key: • serviceRequesters
diffupg	Add a new Unique key.	Add a key for the diffupg table. Type: Unique Fields in Key: • system.name • tag
displayevent	Add a new Unique key.	Add a key for the displayevent table. Type: Unique Fields in Key: • id
displayoption	Add a new No Nulls key.	Add a key for the displayoption table. Type: No Nulls Fields in Key: • screen.id • gui.option • action
displayoption	Add a new Unique key.	Add a key for the displayoption table. Type: Unique Fields in Key: • id
extaccess	Add a new No Duplicates key	Add a key for the extaccess table. Type: No Duplicates Fields in key: • object.name

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
extaccess	Update the Unique key	Update the fields in the Unique key for the extaccess table. Type: Unique Update fields in key to: • object.name • service.name
globallists	Add a new Nulls & Duplicates key.	Add a key for the globalists table. Type: Nulls & Duplicates Fields in key: • build.startup
help	Add a new Nulls & Duplicates key.	Add a key for the help table. Type: Nulls & Duplicates Fields in key: • pending.review
inbox	Update the Nulls & Duplicates key	Update the fields in the Nulls & Duplicates key for the inbox table. Type: Nulls & Duplicates Update fields in key to: • inbox.type • inbox.class • operator.name • audience.type • groups • role
incidents	Add a new Nulls & Duplicates key	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • affected.item

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • alternate.contact • callback.contact • contact.name • open • opened.by
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • alternate.contact • callback.contact • contact.name • open • opened.by
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • assignment • open
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • assignment • open

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • contract.id • open
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • initial.impact • severity • priority.code
irqueue	Add a new Nulls & Duplicates key.	Add a key for the irqueue table. Type: Nulls & Duplicates Fields in key: • hold
kmknowledgeba seupdates	Update the Unique key	Update the fields in the Unique key for the kmknowledgebaseupdates table. Type: Unique Update fields in key to: • id
location	Add a new Nulls & Duplicates key.	Add a key for the location table. Type: Nulls & Duplicates Fields in key: • updated.by

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
ocml	Add a new Nulls & Duplicates key.	Add a key for the ocml table. Type: Nulls & Duplicates Fields in key: • parent.quote • parent.line.item • addl.parents • open
ocmq	Add a new Nulls & Duplicates key	Add a key for the ocmq table. Type: Nulls & Duplicates Fields in key: • logical.name
operator	Add a new Nulls & Duplicates key.	Add a key for the operator table. Type: Nulls & Duplicates Fields in key: • ess.access.only • template.operator • name
outagedetail	Add a new No Nulls key.	Add a key for the outagedetail table. Type: No Nulls Fields in key: • logical.name • agreement.id

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
outagedetail	Add a new No Nulls key.	Add a key for the outagedetail table. Type: No Nulls Fields in key: • logical.name • agreement.id • slo.id • year • month
outagedetail	Add a new Unique key.	Add a key for the outagedetail table. Type: Unique Fields in key: • logical.name • agreement.id • slo.id • month • year • outage.id
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • flag • prob.mgmt.candidate
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • priority.code • severity • flag • initial.impact

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • severity
producttype	Update the Unique key	Update the fields in the Unique key for the producttype table. Type: Unique Update fields in key to: • category • subcategory • product.type • company
rootcause	Add a new Nulls & Duplicates key.	Add a key for the rootcause table. Type: Nulls & Duplicates Fields in key: • id • open
screlation	Add a new Nulls & Duplicates key.	Add a key for the screlation table. Type: Nulls & Duplicates Fields in key: • cartItemId
sla	Remove a No Nulls key.	Remove a key from the sla table. Type: No Nulls Fields in key: • keys • expiration

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
sla	Remove a Unique key.	Remove a key from the sla table. Type: Unique Fields in key: • title
slaactive	Add a new No Duplicates key.	Add a key for the slaactive table. Type: No Duplicates Fields in key: • foreign.key • foreign.filename
slaactive	Add a new Nulls & Duplicates key.	Add a key for the slaactive table. Type: Nulls & Duplicates Fields in key: • agreement.id • active
slamonthly	Add a new Nulls & Duplicates key.	Add a key for the slamonthly table. Type: Nulls & Duplicates Fields in key: • logical.name
slamonthly	Update fields in the Unique key.	Update the fields in the Unique key for the slamonthy table. Type: Unique Fields in key: • agreement.id • slo.id • logical.name • year • month

Table 23   Key changes to optimize performance from ServiceCenter 5.1 (cont'd)

Table	Change	Suggested action
slaresponse	Add a new Nulls & Duplicates key.	Add a key for the slaresponse table. Type: Nulls & Duplicates Fields in key: • slo.id • year • month
wfwenvironment	Add a new Unique key.	Add a key for the wfwenvironment table. Type: Unique Fields in key: • name
wfwenvironment	Remove a No Duplicates key.	Remove a key for the wfwenvironment table. Type: No Duplicates Fields in key: • name

Key changes from ServiceCenter 6.0 to HP Service Manager 7.00

The following key changes are for ServiceCenter 6.0 to HP Service Manager 7.00.

Table 24   Key changes to optimize performance from ServiceCenter 6.0

Table	Change	Suggested action
activityactions	Add a new Unique key.	Add a key for the activityactions table. Type: Unique Fields in key: • name • table

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
activitytype	Add a new Unique key.	Add a key for the activitytype table. Type: Unique Fields in Key: • activity.number • table
Alert	Add a new No Nulls keys.	Add a key for the Alert table. Type: No Nulls Fields in Key: • file.name • unique.key • active • alert.type
Alert	Add a new No Nulls keys.	Add a key for the Alert table. Type: No Nulls Fields in Key: • unique.key • file.name • active • alert.time • alert.type
calholidays	Add a new Unique key.	Add a key for the calholidays table. Type: Unique Fields in Key: • holiday • start.date • end.date

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
cm3r	Add a new Nulls & Duplicates key	Add a key for the cm3r table. Type: Nulls & Duplicates Fields in key: • logical.name
cm3t	Add a new Nulls & Duplicates key.	Add a key for the cm3t table. Type: Nulls & Duplicates Fields in key: • header • parent.change
cm3t	Add a new Nulls & Duplicates keys	Add a key for the cm3t table. Type: Nulls & Duplicates Fields in key: • header • number
company	Add a new Nulls & Duplicates key.	Add a key for the company table. Type: Nulls & Duplicates Fields in key: • show.company
contacts	Add a new No Duplicates key.	Add a key for the contacts table. Type: Nulls & Duplicates Fields in key: • user.id
contacts	Add a new Nulls & Duplicates key.	Add a key for the contacts table. Type: Nulls & Duplicates Fields in key: • operator.id

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
datadict	Add a new No Duplicates key.	Add a key for the datadict table. Type: No Duplicates Fields in key: • sqlbasename
dept	Add a new Nulls & Duplicates key	Add a key for the dept table. Type: Nulls & Duplicates Fields in key: • serviceRequesters
diffupg	Add a new Unique key.	Add a key for the diffupg table. Type: Unique Fields in Key: • system.name • tag
displayevent	Add a new Unique key.	Add a key for the displayevent table. Type: Unique Fields in Key: • id
displayoption	Add a new No Nulls key.	Add a key for the displayoption table. Type: No Nulls Fields in Key: • screen.id • gui.option • action
displayoption	Add a new Unique key.	Add a key for the displayoption table. Type: Unique Fields in Key: • id

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
extaccess	Add a new No Duplicates key	Add a key for the extaccess table. Type: No Duplicates Fields in key: • object.name
extaccess	Update the Unique key	Update the fields in the Unique key for the extaccess table. Type: Unique Update fields in key to: • object.name • service.name
globallists	Add a new Nulls & Duplicates key.	Add a key for the globalists table. Type: Nulls & Duplicates Fields in key: • build.startup
help	Add a new Nulls & Duplicates key.	Add a key for the help table. Type: Nulls & Duplicates Fields in key: • pending.review
inbox	Update the Nulls & Duplicates key	Update the fields in the Nulls & Duplicates key for the inbox table. Type: Nulls & Duplicates Update fields in key to: • inbox.type • inbox.class • operator.name • audience.type • groups • role

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
incidents	Add a new Nulls & Duplicates key	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • affected.item
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • alternate.contact • callback.contact • contact.name • open • opened.by
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • alternate.contact • callback.contact • contact.name • open • opened.by
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • assignment • open

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • assignment • open
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • contract.id • open
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • initial.impact • severity • priority.code
irqueue	Add a new Nulls & Duplicates key.	Add a key for the irqueue table. Type: Nulls & Duplicates Fields in key: • hold
kmknowledgeba seupdates	Update the Unique key	Update the fields in the Unique key for the kmknowledgebaseupdates table. Type: Unique Update fields in key to: • id
location	Add a new Nulls & Duplicates key.	Add a key for the location table. Type: Nulls & Duplicates Fields in key: • updated.by

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
ocml	Add a new Nulls & Duplicates key.	Add a key for the ocml table. Type: Nulls & Duplicates Fields in key: • parent.quote • parent.line.item • addl.parents • open
ocmq	Add a new Nulls & Duplicates key	Add a key for the ocmq table. Type: Nulls & Duplicates Fields in key: • logical.name
operator	Add a new Nulls & Duplicates key.	Add a key for the operator table. Type: Nulls & Duplicates Fields in key: • ess.access.only • template.operator • name
outagedetail	Add a new No Nulls key.	Add a key for the outagedetail table. Type: No Nulls Fields in key: • logical.name • agreement.id

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
outagedetail	Add a new No Nulls key.	Add a key for the outagedetail table. Type: No Nulls Fields in key: • logical.name • agreement.id • slo.id • year • month
outagedetail	Add a new Unique key.	Add a key for the outagedetail table. Type: Unique Fields in key: • logical.name • agreement.id • slo.id • month • year • outage.id
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • flag • prob.mgmt.candidate
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • priority.code • severity • flag • initial.impact

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • severity
producttype	Update the Unique key	Update the fields in the Unique key for the producttype table. Type: Unique Update fields in key to: • category • subcategory • product.type • company
rootcause	Add a new Nulls & Duplicates key.	Add a key for the rootcause table. Type: Nulls & Duplicates Fields in key: • id • open
screlation	Add a new Nulls & Duplicates key.	Add a key for the screlation table. Type: Nulls & Duplicates Fields in key: • cartItemId
sla	Remove a No Nulls key.	Remove a key from the sla table. Type: No Nulls Fields in key: • keys • expiration

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
sla	Remove a Unique key.	Remove a key from the sla table. Type: Unique Fields in key: • title
slaactive	Add a new No Duplicates key.	Add a key for the slaactive table. Type: No Duplicates Fields in key: • foreign.key • foreign.filename
slaactive	Add a new Nulls & Duplicates key.	Add a key for the slaactive table. Type: Nulls & Duplicates Fields in key: • agreement.id • active
slamonthly	Add a new Nulls & Duplicates key.	Add a key for the slamonthly table. Type: Nulls & Duplicates Fields in key: • logical.name
slamonthly	Update fields in the Unique key.	Update the fields in the Unique key for the slamonthy table. Type: Unique Fields in key: • agreement.id • slo.id • logical.name • year • month

Table 24   Key changes to optimize performance from ServiceCenter 6.0 (cont'd)

Table	Change	Suggested action
slaresponse	Add a new Nulls & Duplicates key.	Add a key for the slaresponse table. Type: Nulls & Duplicates Fields in key: • slo.id • year • month
wfwenvironment	Add a new Unique key.	Add a key for the wfwenvironment table. Type: Unique Fields in key: • name
wfwenvironment	Remove a No Duplicates key.	Remove a key for the wfwenvironment table. Type: No Duplicates Fields in key: • name

Key changes from ServiceCenter 6.1 to HP Service Manager 7.00

The following key changes are for ServiceCenter 6.1 to HP Service Manager 7.00.

Table 25   Key changes to optimize performance from ServiceCenter 6.1

Table	Change	Suggested action
cm3r	Add a new Nulls & Duplicates key	Add a key for the cm3r table. Type: Nulls & Duplicates Fields in key: • logical.name

Table 25   Key changes to optimize performance from ServiceCenter 6.1 (cont'd)

Table	Change	Suggested action
cm3t	Add a new Nulls & Duplicates keys.	Add a key for the cm3t table. Type: Nulls & Duplicates Fields in key: • header • number
cm3t	Add a new Nulls & Duplicates keys.	Add a key for the cm3t table. Type: Nulls & Duplicates Fields in key: • header • parent.change
dept	Add a new Nulls & Duplicates key	Add a key for the dept table. Type: Nulls & Duplicates Fields in key: • serviceRequesters
extaccess	Add a new No Duplicates key	Add a key for the extaccess table. Type: No Duplicates Fields in key: • object.name
extaccess	Update the Unique key	Update the fields in the Unique key for the extaccess table. Type: Unique Update fields in key to: • object.name • service.name
globallists	Add a new Nulls & Duplicates key.	Add a key for the globalists table. Type: Nulls & Duplicates Fields in key: • build.startup

Table 25   Key changes to optimize performance from ServiceCenter 6.1 (cont'd)

Table	Change	Suggested action
inbox	Update the Nulls & Duplicates key	Update the fields in the Nulls & Duplicates key for the inbox table. Type: Nulls & Duplicates Update fields in key to: • inbox.type • inbox.class • operator.name • audience.type • groups • role
incidents	Add a new Nulls & Duplicates key	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • affected.item
incidents	Add a new Nulls & Duplicates key.	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • initial.impact • severity • priority.code
kmknowledgeba seupdates	Update the Unique key	Update the fields in the Unique key for the kmknowledgebaseupdates table. Type: Unique Update fields in key to: • id
location	Add a new Nulls & Duplicates key.	Add a key for the location table. Type: Nulls & Duplicates Fields in key: • updated.by

Table 25   Key changes to optimize performance from ServiceCenter 6.1 (cont'd)

Table	Change	Suggested action
ocmq	Add a new Nulls & Duplicates key	Add a key for the ocmq table. Type: Nulls & Duplicates Fields in key: • logical.name
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • priority.code • severity • flag • initial.impact
probsummary	Add a new Nulls & Duplicates key.	Add a key for the probsummary table. Type: Nulls & Duplicates Fields in key: • severity
producttype	Update the Unique key	Update the fields in the Unique key for the producttype table. Type: Unique Update fields in key to: • category • subcategory • product.type • company
screlation	Add a new Nulls & Duplicates key.	Add a key for the screlation table. Type: Nulls & Duplicates Fields in key: • cartItemId

Table 25   Key changes to optimize performance from ServiceCenter 6.1 (cont'd)

Table	Change	Suggested action
wfwenvironment	Add a new Unique key.	Add a key for the wfwenvironment table. Type: Unique Fields in key: • name
wfwenvironment	Remove a No Duplicates key.	Remove a key for the wfwenvironment table. Type: No Duplicates Fields in key: • name

Key changes from ServiceCenter 6.2 to HP Service Manager 7.00

The following key changes are for ServiceCenter 6.2 to HP Service Manager 7.00.

Table 26   Key changes to optimize performance from ServiceCenter 6.2

Table	Change	Suggested action
cm3r	Add a new Nulls & Duplicates key	Add a key for the cm3r table. Type: Nulls & Duplicates Fields in key: • logical.name
dept	Add a new Nulls & Duplicates key	Add a key for the dept table. Type: Nulls & Duplicates Fields in key: • serviceRequesters
extaccess	Add a new No Duplicates key	Add a key for the extaccess table. Type: No Duplicates Fields in key: • object.name

Table 26   Key changes to optimize performance from ServiceCenter 6.2 (cont'd)

Table	Change	Suggested action
extaccess	Update the Unique key	Update the fields in the Unique key for the extaccess table. Type: Unique Update fields in key to: • object.name • service.name
inbox	Update the Nulls & Duplicates key	Update the fields in the Nulls & Duplicates key for the inbox table. Type: Nulls & Duplicates Update fields in key to: • inbox.type • inbox.class • operator.name • audience.type • groups • role
incidents	Add a new Nulls & Duplicates key	Add a key for the incidents table. Type: Nulls & Duplicates Fields in key: • affected.item
kmknowledgeba seupdates	Update the Unique key	Update the fields in the Unique key for the kmknowledgebaseupdates table. Type: Unique Update fields in key to: • id
ocmq	Add a new Nulls & Duplicates key	Add a key for the ocmq table. Type: Nulls & Duplicates Fields in key: • logical.name

Table 26   Key changes to optimize performance from ServiceCenter 6.2 (cont'd)

Table	Change	Suggested action
producttype	Update the Unique key	Update the fields in the Unique key for the producttype table. Type: Unique Update fields in key to: • category • subcategory • product.type • company
wfwenvironment	Add a new Unique key.	Add a key for the wfwenvironment table. Type: Unique Fields in key: • name
wfwenvironment	Remove a No Duplicates key.	Remove a key for the wfwenvironment table. Type: No Duplicates Fields in key: • name

D Using the RAD comparison utility

HP OpenView bundles the RAD Comparison Utility with the ServiceCenter Upgrade Utility to help you examine the differences between the new and old versions of an application. The RAD Comparison Utility displays a list of differences between elements, such as panels and lines that do not match. Use this utility to examine those applications where you must decide to keep or replace the old version or merge objects into a single version. You can view the comparison results online or print them. You can also view the old and new versions of each panel.

Topics in this section include:

The RAD Comparison Utility

To access the RAD Application Comparison utility, type `agcompare` on the ServiceCenter client command line. Press **Enter**.
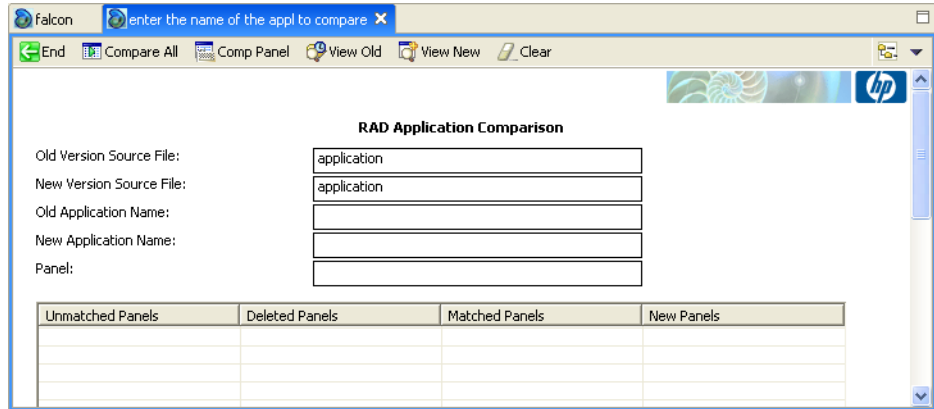
Toolbar buttons

The following table describes the functions in the Toolbar.

Table 1   RAD comparison utility toolbar options

Button	Definition
End	Returns you to the previous screen.
Compare All	Compares all the panels of the new version of the application named with all the panels of the old version.
Comp Panel	Compares the old and new versions of a single panel named in the Panel field of the Compare Application form.
View Old	Displays the old version of the panel named in the Panel field of the Compare Application form.

Table 1   RAD comparison utility toolbar options (cont'd)

Button	Definition
View New	Displays the new version of the panel named in the Panel field of the Compare Application form.
Clear	Clears all data from the panel comparison fields (Unmatched, Deleted, New, and Matched), and prepares the utility to perform another comparison. This option does not affect the old or new RAD applications.
Print All	Sends all currently displayed panel records to the printer.

Fields

The following table describes the fields on the RAD Application Comparison form.

Table 2   RAD comparison utility field descriptions

Field	Definition
Old Version Source File	Specifies the logical file containing the application records (RAD panels) referenced by **Old Application Name**. The default value of this field is application.
New Version Source File	Specifies the logical file containing the application records (RAD panels) referenced by **New Application Name**. The default value of this field is application.
Old Application Name	Specifies the name of the application that resides in **Old Version Source File**. The old version source file is the model for the application specified by **New Application Name**.
New Application Name	Specifies the name of the application that resides in **New Version Source File** that you want compare with the application specified by the **Old Application Name**.

Table 2   RAD comparison utility field descriptions (cont'd)

Field	Definition
Panel	Specifies the panel the utility should use for comparison checking. You can view the specified panel in the old or new version of the application.
Unmatched panels	A list of panel names where there are differences between the old and new versions of the RAD application. Warning: Do not make manual changes to the content of this field.
Deleted panels	Contains a list of panel names in the old version of the application that are not in the new version. Warning: Do not make manual changes to the content of this field.
Matched panels	Contains a list of panel names where there are no differences between the old and new versions of the RAD application. Warning: Do not make manual changes to the content of this field.
New panels	Contains a list of all panel names in the new version of the application and not in the old version. This field is set to allow for modifications and easy tabbing. Warning: Do not make manual changes to the content of this field.

⚠ By default, ServiceCenter contains one Application Library. If you find it necessary to maintain two or more Application Libraries, you must allocate and control the functionality of these files, and define the routines necessary for the exchange of data between files.

Comparing applications

You can compare single panels or all panels in an application.

To compare all panels

1   Access the RAD Application Comparison utility.

2   Type the appropriate data in the **Old Application Name** and **New Application Name** fields. Depending on the choice you made during the upgrade process, either the new version will have the name NEW<vvvnnn>, where vvv is the release name and nnn is the name of the object, or the old version will have the name OLD<vvvnnn>. For example, a new check.field.name could be NEWSC6.2check.field.name, or the old one could be OLDSC4check.field.name.

3   Click **Compare All**. ServiceCenter displays summary lists of Matched Panels, Unmatched Panels, Deleted Panels, and New Panels where they apply. Make selections from these lists and display additional panel information by choosing options in the Toolbar.

4   You can view old and new versions of application panels, review the detailed comparison results for panels in the Unmatched Panels list, and print all the panels.

5   To compare a different application, click **Clear** before proceeding. This resets all controls before processing begins.

Printing a report

To print a report of the Comparison Results, click **Print All**. The comparison report contains the following information.

Table 3   Comparison report items

Reported Item	Definition
Matched Panels	Summary of all panels that matched.
Unmatched Panels	Summary of all panels showing a change, printouts of the old and new versions of each unmatched panel, and the comparison results of each panel.
Deleted Panels	Summary of all deleted panels and a printout of each deleted panel.
New Panels	Summary of all new panels and a printout of each panel.

Comparing single panels

You can compare single panels before or after comparing the entire application.

To view a detailed comparison of a single panel after comparing the entire application

- Select the desired panel in the **Unmatched Panels** column. Click **Comp Panel**.

To view a detailed comparison of a single panel before comparing the entire application

- Type the name of the panel in the **Panel** field. Click **Comp Panel**.

The Detail Listing of Differences form displays the names of the Old and New Version Source Files and the names of the Old and New Application Name fields. The following figure shows the Detail Listing of Differences report.

Array and scalar field differences

When the old and new versions of an array or scalar field have differences, the information appears in the following format.

```
Line xx:action prompt
```

where:

xx is the element number of the array that the Upgrade Utility deleted or added.

action is the change to an element of an array. The old version of the element is considered deleted and the new version of the element is considered added. Changes to array or scalar field elements are accompanied by the phrases ADDED TO and DELETED FROM.

prompt is the name of the prompt on the RAD panel that corresponds to the array or scalar field that the Upgrade Utility changed.

Viewing versions of a panel

Click **View Old** or **View New** from the Detail Listing of Differences form or from the RAD Comparison form after a complete comparison. Type the name of the panel in the **Panel** field or select the panel from one of the lists.

Continuation lines

If the contents of a scalar field or an element of an arrayed field are greater than 72 bytes, the comparison utility uses continuation lines. Continuation lines appear in viewable and printed comparison results.

All continuation lines start with three asterisks (*******). The last two characters of a detail line appear as the first two characters of the next continuation line.

ERD Creator definitions

You can use the ERD Creator to determine which files are associated with an application.

To obtain the list of files associated with an application

1   Type db on the ServiceCenter client command line. Press **Enter**.

2   Type erdcreate in the File field. Click **Search**.

3   Click **Search** again to list all the records in this table. Database Manager displays a list of ServiceCenter applications.

4   Double-click any application. ServiceCenter displays a list of files related to the application you selected.

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