

HP Project and Portfolio Management Center

Software Version: 7.1

Upgrade Guide

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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
- Software release date, which indicates the release date of this version of the software

To check for recent updates, or to verify that you are using the most recent edition of a document, go to: <http://h20230.www2.hp.com/selfsolve/manuals>.

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- If you have an active HP Software support contract, visit the HP Software Support site and use the Self-Solve Knowledge Search to find answers to technical questions.
- For the latest information about support processes and tools available for products formerly produced by Mercury, we encourage you to visit the HP-Mercury Software Support web site at: support.mercury.com.
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HP Software Support

You can visit the HP Software Support web site at www.hp.com/managementsoftware/services.

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- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To find more information about access levels, go to: www.hp.com/managementsoftware/access_level.

To register for an HP Passport ID, go to: www.managementsoftware.hp.com/passport-registration.html.

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1 Upgrade Overview

In This Chapter:

- *Before You Begin*
 - *Overview of Upgrading to Version 7.1*
 - *Supported Upgrade Paths*
 - *Overview of Upgrade Tasks*
 - *Upgrading Document Management*
 - *Upgrading an HP Deployment Management Extension*
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Before You Begin

While this guide provides all of the information you need to prepare for and then perform the upgrade to HP Project and Portfolio Management Center version 7.1 (PPM Center), it does not contain details on the effects of the upgrade or on what has changed in version 7.1. Before you perform the upgrade steps presented in this guide, consult the following documents:

- *What's New and What's Changed*

HP strongly recommends that before you perform any of the tasks associated with upgrading to PPM Center version 7.1, you first read *What's New and What's Changed*. That document contains details about the impact of upgrading and information on the platforms desupported in version 7.1.

- *System Requirements and Compatibility Matrix*

To ensure that your operating environment meets *all* of the minimum requirements, check the *System Requirements and Compatibility Matrix*.

- *Release Notes*

The *Release Notes* both for both the original 7.1 release and the latest release provide product information that is not included in the regular documentation set.

To obtain these and other documents related to PPM Center, go to the HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>).

Overview of Upgrading to Version 7.1

This section provides information about the path for upgrading from installed releases of PPM Center and the high-level tasks you perform to upgrade to version 7.1.

Supported Upgrade Paths

To upgrade to PPM Center version 7.1, you must have either Mercury IT Governance Center version 6.0 or PPM Center version 7.0 installed. If you have a Mercury IT Governance Center instance earlier than version 6.0 installed, you must first upgrade to version 6.0, and then upgrade to PPM

Center version 7.1. For information about how to upgrade to version 6.0, see the documentation for that release.

For information on supported upgrade paths for an HP Deployment Management Extension or for an HP Accelerator, see the documentation for that product.

For information about supported paths for installing language pack, see [Language Pack Installation on page 12](#).

Overview of Upgrade Tasks

To upgrade to PPM Center version 7.1, do the following:

- ▶ If you do not have either Mercury IT Governance Center version 6.0 or PPM Center version 7.0 installed, upgrade to Mercury IT Governance Center version 6.0. You cannot upgrade to PPM Center version 7.0.
 1. Read the rest of this chapter.
 2. Read *System Requirements and Compatibility Matrix*.
 3. Read *What's New and What's Changed* for information about new features in version 7.1 and the potential effects of upgrading.
 4. Check the *Release Notes* for important information that is not in the version 7.1 document set.
 5. If you plan to upgrade one of the HP Deployment Management Extensions, or an HP Accelerator, see the documentation for the product.
- ▶ After you upgrade to, and then configure, PPM Center version 7.1, you can install or upgrade Extensions and Accelerators in any order you choose. For information about optional product installations, see the *System Administration Guide and Reference*.
 6. Read [Chapter 2, Preparing to Upgrade to PPM Center Version 7.1, on page 17](#) for information about how to prepare to upgrade.
 7. Back up both the file system and the database schema (using any third-party tool).
 8. Perform and verify the upgrade.

For detailed upgrade instructions, see [Chapter 3, Upgrading to Version 7.1, on page 31](#).
 9. Install or configure optional products you have purchased to work with PPM Center.

10. Install the latest PPM Center service pack.



After you upgrade, you must install the latest PPM Center service pack. To access the latest service pack, go to the Patches search page (<http://support.openview.hp.com/selfsolve/patches>).

Upgrading Document Management

If you have Mercury IT Governance Center version 6.0 installed and integrated with Document Management 5.2.5, HP recommends that you upgrade to Document Management 5.3 before you upgrade to PPM Center version 7.1. If you have PPM Center version 7.0 installed and integrated with Document Management 5.3, no further action is required.

For information on how to upgrade document management in PPM Center, see the *Document Management Guide and Reference*. You can access this document from the HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>).

Upgrading an HP Deployment Management Extension

If you have purchased one of the following HP Deployment Management Extensions, you must upgrade the Extension(s) after you upgrade PPM Center:

- HP Deployment Management Extension for Oracle E-Business Suite
- HP Deployment Management Extension for Oracle® Technology
- HP Deployment Management Extension for SAP Solutions
- HP Deployment Management Extension for PeopleSoft Enterprise

For detailed upgrade instructions, see the documentation for the individual products. You can access the documentation from the HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>).

HP Migrators

You are not required to upgrade HP Object Migrator or HP GL Migrator with PPM Center version 7.1.

Checking System Requirements

Before you start to upgrade to PPM Center version 7.1, ensure that your system environment meets all the requirements listed in the *System Requirements and Compatibility Matrix* document. You can access this document from the HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>).

Upgrading Best Practices

If the product license your organization purchased (with Mercury IT Governance Center version 6.0 or PPM Center version 7.0) included Best Practices, you had the option of installing request types and workflows specifically designed to enhance your use of HP Demand Management, HP Project Management, and HP Portfolio Management. If you already have Best Practices installed, this content is updated automatically during the upgrade.

The Best Practices content supplied with PPM Center versions 7.0 and 7.1 includes new HP Program Management request types and workflows. The content for HP Portfolio Management and HP Demand Management is the same in versions 7.0 and 7.1 as that supplied with earlier releases. *Table 1-1* lists the Best Practices content for HP Program Management supplied in Mercury IT Governance Center version 6.0 and in HP PPM Center versions 7.0 and 7.1.

Table 1-1. Best Practices content for HP Program Management in Mercury IT Governance Center version 6.0 and in PPM Center versions 7.0 and 7.1

Best Practices Content in Mercury IT Governance Center Version 6.0	Best Practices Content in PPM Center Versions 7.0 and 7.1
Program Management Request Types: <ul style="list-style-type: none"> ■ PMO - Issue ■ PMO - Risk ■ PMO - Scope Change Request ■ PMO - Program Request ■ PMO - Resource Request 	Program Management Request Types: <ul style="list-style-type: none"> ■ Program Issue ■ Project Risk ■ Project Scope Change Request ■ Project Issue ■ Project Details (version 7.1 only)
Program Management Workflows: <ul style="list-style-type: none"> ■ PMO - Issue Management Workflow ■ PMO - Risk Management Workflow ■ PMO - Scope Change Request Workflow ■ PMO - Program Request Workflow ■ PMO - Resource Request Workflow 	Program Management Workflows: <ul style="list-style-type: none"> ■ Issue Management Process ■ Risk Management Process ■ Scope Change Request Process

Except for customized request types, all Best Practices content in your current instance is preserved during the upgrade to version 7.1. This includes request types and workflows that are not delivered in version 7.1.



For information on installing a language pack on an instance on which Best Practices is installed, see [Language Pack Installation on page 12](#).

Keeping Customized Request Types Following the Upgrade

If you customized a Best Practices request type provided with an earlier release, and you want to keep that customization, do the following:

1. Log on to the current Mercury IT Governance Center version 6.0 or PPM Center version 7.0 instance.
2. From the menu bar, select **Administration > Open Workbench**.
The PPM Workbench opens.
3. From the shortcut bar, select **Demand Mgmt > Request Types**.
The Request Type Workbench opens.
4. Click **List**.
The Request Type Workbench lists all request types.
5. Double-click the row for a customized request type that you want to keep.
The Request Type window opens and displays the record.
6. In the **Request Type Name** field, type a new name for the request type.
7. Click **OK**.

Language Pack Installation

Language packs are available for PPM Center version 7.1 in French, Italian, German, Spanish, Brazilian Portuguese, and Korean. You can install the language pack on existing PPM Center installations (versions 7.0 or 7.0). However, you cannot install the language pack on PPM Center if English Best Practices is installed. Doing so will result in a corrupted Best Practices installation, which cannot easily be removed.

To install a language pack, do the following:

1. Upgrade to PPM Center version 7.1 (from either version 6.0 or 7.0).
2. Install the language pack.

3. Install a translated 7.1 version of Best Practices.



For detailed information on how to install a language pack, see the `ReadMe` file for that language pack.



Do not install any service pack after you install a language pack. Doing so may disable the user interface for the language and cause functional problems.

Backing Up the Database Schema and the PPM Center Home Directory

Before you upgrade to PPM Center version 7.1, you must back up both the file system and the database schema. You can use any third-party tool to perform the backup.



HP recommends that you set up a clone of your current instance and run the upgrade on that system before you upgrade your Production instance. For information on how to clone an instance, see the *System Administration Guide and Reference*.

Obtaining License Keys

You must have license keys for the earlier release of PPM Center or PPM Center that you purchased. PPM Center license keys are delivered in the `license.conf` file, which resides in the `<PPM_Home>/conf` directory after the first installation.

After you purchase HP Deployment Management Extensions or an HP Accelerator, you receive a user name and password that you can use to download product code from HP Software Support Online (<http://support.openview.hp.com>). You can access documentation from the HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>).

For information about changes in licensing requirements introduced in this release, see the document *What's New and What's Changed*.

Key Considerations

To prepare to install PPM Center, review the issues described in this section. This section addresses several decisions you must make before you begin to upgrade your PPM Center products.

Running on a Single Database Schema (HP Object Migrator)

Before you upgrade to version 7.1, HP recommends that you back up all of your PPM Center data. If the HP Object Migrator is installed and running on the same schema as PPM Center, it is especially important that you perform a cold backup before you begin the upgrade.



To perform a cold backup, shut down the Oracle database, and then copy all necessary files to a secure location. This is the safest way to back up because you do not risk copying data that may be in the process of being updated.

If you encounter problems during the upgrade, you can revert to the cold backup to preserve your HP Object Migrator installation.

Running in Graphic (Swing) or Console Mode (UNIX)

On Windows® platforms, you can only upgrade the PPM Server in graphic (or *swing*) mode. On UNIX® platforms, you can either upgrade the PPM Server in graphic mode or in console mode (from the command line).



In this guide, “UNIX” is used to refer to all supported UNIX-based operating systems. For a list of these, see the *System Requirements and Compatibility Matrix*.

In some cases, you can only perform a console upgrade. If you choose to upgrade in graphic mode, and you are accessing the target machine remotely, you may require additional software or configuration. For example, if you access a UNIX system from a Windows system, you must have software that allows the UNIX application to redirect the display to Windows.

Accessing PPM Center Documentation

To complete the upgrade successfully, it is important that you read the following PPM Center version 7.1 documentation:

- *What's New and What's Changed*
- The new *System Requirements and Compatibility Matrix*
- *Release Notes*

Accessing Documentation about PPM Center from PPM Center

You can access PPM Center documentation from the product itself.

To access the documentation library from the standard interface:

1. Log on to PPM Center.
2. From the menu bar, select **Product Information > Library**.

To access the documentation library from the PPM Workbench:

1. Log on to PPM Center.
2. From the menu bar, select **Administration > Open Workbench**.

The PPM Workbench opens.

3. From the shortcut bar, select **Product Information > Library**.

Accessing Documentation from the HP Software Product Manuals Site

The HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>) gives you access to the same PDF files that are available through the product itself, and to documents only available at that location.

2 Preparing to Upgrade to PPM Center Version 7.1

In This Chapter:

- *Preparing to Upgrade*
 - *Backing Up the Application*
 - *Collecting Required Information*
 - *Accessing the Upgrade Files*
 - *Verifying Environment Settings*
 - *Determining Whether the Upgrade is Likely to Hang During the Mount Process (UNIX Only)*
 - *Upgrading Your Custom Integrations*
 - *Modifying Oracle Database Parameters*
 - *If Your PPM Center Upgrade Involves an Oracle Upgrade*
 - *Configuring the Database to Speed Up the Upgrade Process*
 - *Setting the NLS_LENGTH_SEMANTICS Parameter*
 - *Setting the UNDO_RETENTION Parameter*
-

Preparing to Upgrade

Before you start the PPM Center upgrade procedure, perform the following tasks:

1. If you have a Mercury IT Governance Center instance earlier than version 6.0 installed, upgrade to version 6.0.



For information on how to upgrade to Mercury IT Governance Center version 6.0, see the *System Administration Guide and Reference* for version 6.0.

2. Check *What's New and What's Changed* for details about the impact of upgrading and information on platforms desupported in version 7.1.



You can get PPM Center documentation from the HP Software Product Manuals site (<http://h20230.www2.hp.com/selfsolve/manuals>).

3. Check the *System Requirements and Compatibility Matrix* document to make sure that your system meets the minimum requirements.
4. Check the *Release Notes* any recent changes to the product or upgrade process that are not in the product documentation.
5. Shut down your PPM Center instance.
6. Back up your PPM Center instance (the file system and the database).
7. Back up any customizations from your PPM Center system that you want to keep.

The upgrade process overrides graphics left in the system.

8. Make copies of the `tune.conf`, `cache.conf`, `siteminder.conf`, and `LdapAttribute.conf` files.

These configuration files are automatically backed up as part of the upgrade, and overwritten. If you have made changes to these, you can revert each `.conf` file to `.conf.pre7.1.0`.

9. Back up any customizations that you want to apply to version 7.1.
10. Collect the information you are required to provide during the upgrade process (see *Table 2-1* on page 22).
11. Determine whether the upgrade is likely to hang during the mount process.

12. To get the upgrade files, go to the Software Update Manager (http://support.openview.hp.com/software_updates.jsp), and use your Service Agreement ID to access and download the files.

The upgrade files are in the file named `mitg-710-upgrade.zip`.

13. Extract the upgrade files.
14. Verify that the `JAVA_HOME` and `ORACLE_HOME` environment variables are set.
15. Temporarily reset the values for the database parameters `undo_retention` and `undo_tablespace`.

These tasks are described in the following sections.

The placeholder `<PPM_Home>` is used throughout this document. It refers to the directory where PPM Center is installed. The specific name and location of this directory are up to you.



Extract the files in `mitg-710-upgrade.zip` to `<PPM_Home>`. This creates a new directory that contains the upgrade executable file (`upgrade.exe`).

Backing Up the Application

Always back up the file system and database schema before you start to upgrade PPM Center.



HP recommends that you set up a clone of your current instance and run the upgrade on that system before you upgrade your Production instance. For information on how to clone an instance, see the *System Administration Guide and Reference*.

Backing Up the File System

There are many ways to back up the PPM Server file system. A common approach is described in *Backing Up the File System On Windows* and *Backing Up the File System On UNIX on page 20*. Regardless of the method you use to back up the file system, you must stop the PPM Server first.



The following procedure specifies that you stop the PPM Server and not restart it until after the upgrade is complete. The upgrade cannot run if the server is running. If you do not stop the server, users may be able to access the system; if problems occur, any data stored between the time you backed it up and the time the upgrade completes may be unrecoverable.

Backing Up the File System On Windows

To back up the file system on Windows:

1. Open the as control panel.
2. To stop the PPM Center service, select it (the default name is HP PPM <id>), and then click **Stop**.
3. Open a Command Prompt window and navigate to the parent directory of <PPM_Home>.
4. Create a zip archive by executing the following command:

```
zip <backup_filename>.zip -r <PPM_Home>
```

The archive named <backup_filename>.zip is put in the parent directory of <PPM_Home>. Keep this archive at least until you verify that the upgrade completed successfully and works correctly.

If you must restore the archive later, move the <backup_filename>.zip file into the <PPM_Home> directory, and then run the following command:

```
unzip <backup_filename>.zip
```

- ▶ The Windows instructions vary, depending on the version of the compression utility on your system. HP recommends that you use WinZip.

Backing Up the File System On UNIX

To back up the file system on UNIX:

- ▶ The REMOTE_ADMIN_REQUIRE_AUTH server configuration parameter determines whether user authentication is required for remote administration. If this parameter is set to TRUE, you must provide a user name and password.
- ▶ In this guide, “UNIX” is used to refer to all supported UNIX-based operating systems. For a list of these, see the *System Requirements and Compatibility Matrix*.

1. To stop the PPM Server, run the kStop.sh script, which is located in the <PPM_Home>/bin directory:

```
sh kStop.sh -now
```

2. In the <PPM_Home> directory, create a tar archive of the complete PPM Center directory tree by typing the following command (ensure that you have enough disk space):

```
tar cvf ../<backup_filename>.tar
```

The `<backup_filename>.tar` archive file is put in the `<PPM_Home>` directory. Keep this archive at least until you verify that the upgrade completed successfully and works correctly.

If you must restore the archive later, move the `<backup_filename>.tar` file to the `<PPM_Home>` directory, and then type the following command:

```
tar xvf <backup_filename>.tar
```

Exporting the Database Schema

Before you begin the upgrade procedure, back up all PPM Center schemas and tablespaces. This section provides information about a common method used to back up schemas and tablespaces.

From the command line on an Oracle server that has direct or SQL*Net access to the database on which the PPM Center database schema resides, type the following command (all on one line):

```
exp USERID=system/<system_password>@<connect_string> COMPRESS=N  
INDEXES=Y FILE=<mitg>_<date>.dmp OWNER=knta
```

where `<mitg>` is the name of the PPM Center database schema, `<mitg_date>.dmp` is the name of the file that is to contain the export, and `<date>` is the current date.

Keep the exported file at least until you verify that the upgrade is successful.

If you must restore the archive later, remove the schema from the database, reinitialize the database schema, and then import from the export file. To do this, execute the `CreateKintanaUser.sql` script and the `GrantSysPrivs.sql` script. Both of these scripts are located in the installation bundle.



You must execute the `CreateKintanaUser.sql` script as SYSTEM, and execute the `GrantSysprivilege.sql` script as SYS DBA.

Collecting Required Information

The PPM Center upgrade utility asks you to provide the information listed in *Table 2-1*.

Table 2-1. Required upgrade information (page 1 of 2)

Prompt	Description
PPM Center Schema	PPM Center database schema password.
System Password	System password (if required).
License Configuration File	File containing valid PPM Center license keys. The PPM Server is activated by license keys, provided in a <code>license.conf</code> file, which you must obtain before installation. If you do not have a valid <code>license.conf</code> file, contact HP-Mercury support (support.Mercury.com).
JAVA_HOME	Directory in which Java™ is installed (Windows).
Holiday Schedule	Holiday schedule on which your PPM Center default regional calendar is to be based. Holidays in the schedule you select are preset for up to ten years as non-working days in your current (version 6.0 or 7.0) base calendar, which will become the system default regional calendar. All other non-working days configured in the base calendar are also preserved. If you select None , no holidays are added to the base calendar (system default regional calendar). Note: Whatever schedule you choose (or the system default) is applied to existing data during the upgrade. You can change these values later, if necessary.

Table 2-1. Required upgrade information (page 2 of 2)

Prompt	Description
System Calendar	<p>Name of the PPM Center default regional calendar.</p> <p>The current (version 6.0 or 7.0) base calendar becomes the system default regional calendar, which is used if a regional calendar is not specified or available. The system default regional calendar is also used as the default calendar for request work item fields.</p> <p>Note: The calendar you choose (or the system default) is applied to existing data during the upgrade. You can change these values later, if necessary.</p>
Region Name	<p>Name of the region for the installation, which is defined by a combination of calendar and currency.</p> <p>This region name is added to all existing entities to preserve their current settings. If you have only one region, name it “Enterprise” or use your company name.</p>
Currency Code	<p>Three-letter code for the default currency used to report company financial information.</p> <p>Existing currency values are assumed to be expressed as this currency type. The system default is US dollars (USD).</p> <p>Warning: After you choose the currency code during installation, you cannot change it.</p>

Accessing the Upgrade Files

You can obtain the PPM Center upgrade files from the Software Update Manager (SUM) site.



Before you upgrade your Production instance, be sure to check with your CSO representative to see if there are any new patches for the Mercury IT Governance Server 6.0 to PPM Center 7.1 upgrade.

To access the upgrade files:

1. Go to the Software Support Online site (<http://support.openview.hp.com>).
2. In the **Where do I find** section, select **More**.
3. On the Where do I find page, click the **Software updates** link.

The Software updates page opens.

4. Download the PPM Center upgrade files you need.



If you need instructions on how to perform the download, click the **Software Update Manager User Guide (.PDF)** link, and then follow the instructions provided in the *Software Update Manager User Guide*.

5. Unzip the PPM Center upgrade file (`mitg-710-upgrade.zip`) into the `<PPM_Home>` directory.

This creates the `<PPM_Home>/upgrade_710` subdirectory.

After you extract the files, you can delete the `mitg-710-upgrade.zip` file.



You can also get the upgrade files for HP Deployment Management Extensions and the HP Accelerator for IT Service Management through the Software Support Online site (<http://support.openview.hp.com>).

If you plan to upgrade one or more an Extension or the Accelerator, see the corresponding product documentation for product-specific installation instructions.

Verifying Environment Settings

PPM Center requires that the `JAVA_HOME` and `ORACLE_HOME` environment variables be set in the system environment of the user account that is to be used to start the PPM Server(s).

Determining the `JAVA_HOME` or `ORACLE_HOME` Path

To determine the environment variable path from the command prompt on a Windows system:

- At the command line, type `echo %<ENVIRONMENT_VARIABLE_NAME>%`.

To determine the environment variable path in a UNIX shell (SH, BASH, or KSH):

- At the prompt, type `echo ${ENVIRONMENT_VARIABLE_NAME}`.

Setting the JAVA_HOME or ORACLE_HOME Path

To set the environment variable value on a Windows system:

1. Open Control Panel.
2. Open the System Properties window.
3. Click the **Advanced** tab.
4. Click **Environment Variables**.
5. Under **System Variables**, click **New**.

The New System Variable dialog box opens.

6. In the **Variable name** field, type `%<ENVIRONMENT_VARIABLE_NAME>%`.
7. In the **Variable Value** field, type the full install directory path.
8. Click **OK**.
9. Click **OK**.

To set the environment variable value from the command prompt, run the following:

```
set <ENVIRONMENT_VARIABLE_NAME>=<Install_Directory>
```

To set the environment variable value in UNIX using the Bourne shell (SH, BASH, or KSH), run the following:

```
<ENVIRONMENT_VARIABLE_NAME>=<Install_Dir>  
export <ENVIRONMENT_VARIABLE_NAME>
```

Determining Whether the Upgrade is Likely to Hang During the Mount Process (UNIX Only)

During an upgrade on a UNIX machine that has a high number of mount points, the upgrade process can hang indefinitely. The problem is that the upgrade utility calls the 'mount' program and tries to analyze its output. If the output is 4096 or more characters long, the upgrade hangs.

To prevent this problem from occurring before you start to upgrade PPM Center on a UNIX machine, do the following:

Run the following command:

```
mount | wc -c
```

The result is a number. If the number returned is 4096 or higher, unmount some file systems until the command returns a number less than 4096. The upgrade will then run without hanging.

Upgrading Your Custom Integrations

If you have custom integrations that can be used to update PPM Center version 7.1 data, then make sure that you perform the updates using a supported interface. Using SQL to update the data directly in the database using SQL is very risky and could corrupt the data. If you have any integration on Mercury IT Governance Center 6.0 that performs direct updates, you must redesign these to work with PPM Center version 7.1. HP strongly discourages direct updates to the database tables.

Modifying Oracle Database Parameters

This section provides information about changes that you must make to the Oracle database before you upgrade PPM Center. It also gives you information on how you can modify Oracle database parameters to improve upgrade performance.

If Your PPM Center Upgrade Involves an Oracle Upgrade

If your upgrade from Mercury IT Governance Server version 6.0 to PPM Center version 7.1 involves an upgrade from Oracle 9i to 10g, you must ensure that the Oracle parameters are set to PPM Center version 7.1 recommendations. For specific database parameter recommendations, see the *System Requirements and Compatibility Matrix*. For information on how to obtain this document, see *Accessing PPM Center Documentation* on page 15.

Configuring the Database to Speed Up the Upgrade Process

You can reduce the amount of time it takes for the upgrade process to complete by configuring your database. After the upgrade is completed, you can reset the database parameters to their original values.

To configure your Oracle database for a faster upgrade:

1. If you are using Oracle 10g, set the Oracle parameter `SGA_TARGET` to a minimum of 1.66 GB. If you are using Oracle 9i, set the `DB_CACHE_SIZE` parameter to at least 800 MB, and `SHARED_POOL_SIZE` to at least 450 MB.
2. Whether you are using Oracle 10g or 9i, set the following Oracle parameters:
 - To reduce log switches, set `LOG_BUFFER` to 50 MB.
 - Set `UNDO_RETENTION` to a minimum of 21600 seconds (6 hours).
 - For large deployments, set `UNDO_TABLESPACE` to at least 10 GB.
3. If your upgrade involves more than 1000 projects:
 - a. Drop the REDO LOG GROUPS.
 - b. Create two REDO LOG GROUPS, each in separate fast disks, and each with a single redo log file of 250 MB.



Creating the two new REDO LOG GROUPS reduces expensive log switches.

4. Set `CURSOR_SHARING` to "similar."
5. Set `PGA_AGGREGATE_TARGET` to at least 1 GB.
6. Turn archivelogging off before you upgrade.

Setting the `NLS_LENGTH_SEMANTICS` Parameter

HP strongly recommends that you use a database whose `NLS_LANG_SEMANTICS` value is set to `CHAR`, especially if you are running a non-English version of PPM Center. If `NLS_LENGTH_SEMANTICS` is set to `CHAR`, Oracle allocates storage for `varchar` fields in characters, not bytes. This is important if data contains international characters, which require more than one byte to store. So if `NLS_LENGTH_SEMANTICS` is set to `BYTE`, it accepts strings with international characters with length of two to three times less than the declared field length.

To see the current value set for `NLS_LENGTH_SEMANTICS`, run the following statement:

```
select * from v$nls_parameters;
```

To change the value to `CHAR`, run the following statement:

```
alter system set NLS_LENGTH_SEMANTICS=char scope=both;
```

Alternatively, you can change this parameter in (or add it to) the `init.ora` file.

Setting the `UNDO_RETENTION` Parameter

The database parameter `UNDO_RETENTION` specifies the minimum length of time that the system keeps undo information. The Oracle database retains undo information for at least the time specified for this parameter, and automatically tunes the undo retention period to satisfy the undo requirements of the queries. The default value for `UNDO_RETENTION` is 900 seconds, or 15 minutes.



To determine the amount of time for which undo information is retained for the Oracle database for the current undo tablespace, query the `TUNED_UNDORETENTION` column of the `V$UNDOSTAT` dynamic performance view.

Because upgrade operations can run for hours, especially with large databases, HP strongly recommends that you do the following before you start to upgrade to PPM Center version 7.1:

- Set the `UNDO_RETENTION` parameter value to 21600 seconds, or six hours.

To set this parameter dynamically, execute the following:

```
SQL> alter system set undo_retention = 21600 scope=both;
```

- Set the `UNDO_TABLESPACE` parameter to 2 GB (4 GB for very large databases) during upgrade.



To modify these parameter settings, you must have SYS DBA privileges.

After you verify a successful upgrade, you can restore the parameter defaults.

3 Upgrading to Version 7.1

In This Chapter:

- *Performing the Upgrade*
 - *Upgrading PPM Center in a Server Cluster Configuration*
 - *Upgrading On a Windows System*
 - *Upgrading On a UNIX System*
 - *Configuring the FTP Server (Windows Systems Only)*
 - *Verifying the Upgrade*
 - *Integrating Microsoft Project with HP Project and Portfolio Management Center*
 - *If You Upgraded from Mercury IT Governance Center Version 6.0*
 - *Testing Your Custom Integrations*
 - *Minimizing Dependence on the Compatibility Meta Layer*
 - *Testing Custom Portlets and Validations for Performance*
 - *What To Do Next*
 - *Contacting Support*
-

Performing the Upgrade

This section provides the steps used to run the upgrade utility on Windows and on UNIX systems. It also includes information on what you must do to upgrade PPM Center in a server cluster system configuration. The procedures described apply if you are upgrading from Mercury IT Governance Center version 6.0 or from PPM Center version 7.0.

▶ In this guide, “UNIX” refers to all supported UNIX-based operating systems. For a list of these, see the *System Requirements and Compatibility Matrix*.

▶ HP strongly recommends that you upgrade a test instance before you upgrade your production instance. If you do not have a test instance, consider creating an instance for this purpose. For information on how to do this, see “Copying an Instance to Create a New Instance” in the *System Administration Guide and Reference*.

The upgrade executable (Windows) or upgrade utility (UNIX) starts the file system and database schema upgrade process. The database schema upgrade can last for several hours. The upgrade utility asks you for password for the PPM Center user, and possibly a user with system-level database accounts.

If you do not have a public grant to v_\$session, do the following:

▶ For PPM Center to keep track of the open database sessions it uses, ensure that a public grant exists on the v_\$session dynamic performance table. To do this, connect as SYS DBA to the database that contains the PPM Center database schema, and then execute the following SQL statement:

```
SQL> grant select on v_$session to public;
```

Upgrading PPM Center in a Server Cluster Configuration

To upgrade PPM Center installed in a server cluster setup, you upgrade every PPM Server in the cluster.

To upgrade PPM Center in a server cluster setup:

1. Stop all servers in the cluster.

▶ For information on how to stop and start a PPM Server, see the *System Administration Guide and Reference*.

2. Perform the upgrade on every server in the cluster. (See *Upgrading On a Windows System* on page 33 and *Upgrading On a UNIX System* on page 36.)

▶ When you run the upgrade on the first server, both the file system and the database portions of the upgrade are executed. Running the upgrade on each subsequent server will be much faster because only the file system portion is run.

3. Restart the servers.

For detailed information about server cluster configurations, see the *System Administration Guide and Reference*.

Upgrading On a Windows System

Perform the following steps to upgrade from Mercury IT Governance Center version 6.0 or from PPM Center version 7.0 to PPM Center version 7.1 on a Windows system.

To run the upgrade utility on a Windows system:

1. Navigate to the `<PPM_Home>/upgrade_710` directory, and then double-click `upgrade.exe`.

The upgrade asks you for password information, performs system tests (to check for temporary tables left over from a previous upgrade), and begins the upgrade.



If any system tests fail, follow the prompts to fix the problem. After all temporary tables are reconciled, you can restart the upgrade. If you encounter unexpected errors at that point, contact HP-Mercury support (support.Mercury.com).

The upgrade wizard starts and displays basic requirements information.

2. Click **Next**.

The upgrade utility asks you to indicate whether you want to check space availability before you continue.

3. To check space availability for the tablespaces, in the **Password** field, type your Oracle system user password. To skip this check, leave the field empty.

4. Click **Next**.

If you provided your Oracle system user password, the wizard displays information about the tablespaces created for the PPM Center schemas.

5. Click **Next**.

6. In the **Password** field, type the PPM Center schema password.

7. Click **Next**.

Only if you are upgrading from Mercury IT Governance Center 6.0 to PPM Center version 7.1, the upgrade utility asks you to indicate whether you want to run the prevalidation step.



Prevalidation checks for corrupted data in the database and other problems that might cause the upgrade to fail. HP strongly recommends that you perform this step as part of the upgrade from Mercury IT Governance Center 6.0.

8. To perform prevalidation, leave **Yes, I would like to run PreValidation step now** selected, and click **Next**. To skip prevalidation, select **No, I would like to skip the PreValidation step**, and then click **Next**.

If you chose to run prevalidation, the wizard performs the step.

Next, the upgrade wizard:

- Checks to ensure that the PPM Server is shut down.
- Checks for old tables.
- Determines which directories in `<PPM_Home>/server` to upgrade and lists these. The upgrade process moves directories that do not require upgrade to the `<PPM_Home>/BACKUP` directory.

9. Click **Next**.

The wizard displays the directory path in which the upgrade is to be installed, and the total size (in MB) of the upgraded files.

10. Click **Next**.

The actual upgrade begins. The wizard displays labeled indicators so that you can monitor the upgrade process.

The upgrade wizard asks you to indicate whether you want to install updated request types and workflows.

11. Do one of the following:

- To install the updated request types and workflows:
 - i. Leave **Yes, I want to install the updated request types and workflows** selected.
 - ii. In the **User** field, type a valid PPM Center user name.
 - iii. In the **Password** field, type the password for the user.
 - iv. Click **Next**.

The wizard installs the request types and workflows.

- If you prefer to skip the step and install the request types and workflows later, select **No, I want to skip this step**, and then click **Next**.

The PPM Center standard interface uses Java Server Page (JSP) technology to display dynamic content. Each page must be compiled the first time it is accessed, which results in a delay.

12. To precompile all JSP pages now, leave **Yes, I would like to compile all JSP files now** selected. To skip this step, select **No, I will let the server compile them at run-time**.

13. Click **Next**.

The upgrade wizard asks you to indicate whether you want to generate database statistics now. This process improves performance.

14. To generate database statistics, leave **Yes, I would like to gather the statistics now** selected. To skip this step, select **No, I will gather the statistics myself later**.

15. Click **Next**.

Only if you are upgrading from Mercury IT Governance Center 6.0 to PPM Center version 7.1, the upgrade wizard asks you to indicate whether you want to perform postvalidation to check for corrupted data and other problems that could cause the upgrade to fail.



HP strongly recommends that you perform this step as part of an upgrade from Mercury IT Governance Center 6.0.

16. To run the postvalidation step, leave **Yes, I would like to run PostValidation step now** selected. To skip postvalidation, select **No, I would like to skip the PostValidation step**.

17. Click **Next**.

After the upgrade is completed, the upgrade wizard displays the upgrade log file path, and asks you to check subsequent wizard screens for information about what (if any) actions you need to take regarding the PPM Server.

18. Click **Next**.

The upgrade process next checks the database tables and generates log files.

19. Click **Next**.

The upgrade wizard displays any invalid database objects, and advises you to reconcile these before you start the PPM Server.

20. Make a note of any and all invalid database objects listed, and then click **Next**.
21. After the upgrade is completed, click **Finish**.
22. Investigate and recompile any invalid database objects that the upgrade detected individually.



After you upgrade, you must install the latest PPM Center service pack. To access the latest service pack, go to the Patches search page (<http://support.openview.hp.com/selfsolve/patches>).

Upgrading On a UNIX System

To perform the upgrade:



In this guide, “UNIX” is used to refer to all supported UNIX-based operating systems. For a list of these, see the *System Requirements and Compatibility Matrix*.

1. Navigate to the `<PPM_Home>/upgrade_710` directory:

```
cd <PPM_Home>/upgrade_710
```

2. Do one of the following:

- a. Run the script in console mode (described in the following steps):

```
sh upgrade.sh -console
```

- b. Run the script in graphical mode:

```
sh upgrade.sh -swing
```



If you run the driver in graphical mode, run in an X Window session.

3. To accept the default and continue with the upgrade, press `Enter`.

The upgrade utility asks you to indicate whether you want to check space availability before you continue.

4. Do one of the following:

- To skip the check, press `Enter`.
- To check for space availability:
 - i. At the Password prompt, type your Oracle System user password.
 - ii. At the next Password prompt, type the PPM Center schema password.

Only if you are upgrading from Mercury IT Governance Center 6.0 to PPM Center version 7.1, the upgrade utility asks you to indicate whether you want to run the prevalidation step.



Prevalidation checks for corrupted data in the database and other problems that might cause the upgrade to fail. HP strongly recommends that you perform this step as part of the upgrade from Mercury IT Governance Center 6.0.

5. To run prevalidation, press `Enter`. (To skip prevalidation, type `2`, and then press `Enter`.)

The upgrade utility displays summary prevalidation results. To see the detailed results, open the `PreValidationResultsIndex.html` file, which is located in the `<PPM_Home>/upgrade_710/logs/reports/html/integrity/validator` directory.

Next, the upgrade utility:

- Checks to ensure that the PPM Server is shut down.
- Checks for old tables.
- Determines which directories in `<PPM_Home>/server` to upgrade, and moves the directories that do not require upgrade to the `<PPM_Home>/BACKUP` directory.

6. To continue with the upgrade, press `Enter`.

The upgrade utility lists items that are not supported in version 7.1.

7. Document the desupported items in case you must resolve these after the upgrade.

8. To continue, press `Enter`.

The upgrade utility displays installation directory path and the amount of space (in MB) required to upgrade.

9. To continue, press `Enter`.

The upgrade begins.

10. To continue, press `Enter`.

The upgrade utility asks you to indicate whether you want to install updated request types and workflows. Updated request types include PFM - Asset, PFM - Project, PFM - Proposal, Project Issue, Project Risk, Project Scope Change Request, Program Issue, DEM - Application Bug, and DEM - Application Enhancement.



If the request types and workflows are already installed on your instance (as Best Practices), and you want the updated versions of these, then you must first rename the existing versions. The upgrade utility does not overwrite the installed versions that have the standard names.

11. To install the updated request types and workflows, press `Enter`. To skip the step and install the request types and workflows later, type `2`, and then press `Enter`.

The PPM Center standard interface uses Java Server Page (JSP) technology to display dynamic content. Each page must be compiled the first time it is accessed, which results in a delay.

12. To precompile all JSP pages now, press `Enter`. To skip this step and have the PPM Server compile the pages at run time, type `2`, and then press `Enter`.

The upgrade utility asks you to indicate whether you want to generate database statistics. This process improves performance.

13. To generate database statistics, press `Enter`. To skip this step, type `2`, and then press `Enter`.

Only if you are upgrading from Mercury IT Governance Center 6.0 to PPM Center version 7.1, the upgrade utility asks you to indicate whether you want to perform postvalidation. Postvalidation checks for corrupted data and other problems that could cause the upgrade to fail.



HP strongly recommends that you perform the postvalidation step as part of an upgrade from Mercury IT Governance Center 6.0.

14. To run the postvalidation step, press `Enter`. To skip postvalidation, type `2`, and then press `Enter`.

After it completes postvalidation, the upgrade utility asks you to indicate whether you want to view invalid database objects (if any).

15. To view the list of invalid database objects detected during postvalidation, press `Enter`. To quit, type `q`, and then press `Enter`.
16. Make a note of any and all invalid objects listed, so that you can reconcile these after you finish the upgrade.
17. To continue, press `Enter`.

After the upgrade is complete, the upgrade utility advises you to perform any additional actions that the postvalidation results indicated are required.

18. To quit the upgrade utility, press `Enter`.
19. Reconcile any invalid objects detected during the upgrade process.



After you upgrade, you must install the latest PPM Center service pack. To access the latest service pack, go to the Patches search page (<http://support.openview.hp.com/selfsolve/patches>).

Configuring the FTP Server (Windows Systems Only)

PPM Center uses FTP to move files between machines. To transfer files between machines on a network, each source and destination machine must be running an FTP server. On UNIX platforms, this is standard functionality, but machines running Windows require additional FTP server configuration to function with PPM Center.

If you are configuring PPM Server after upgrading, you probably already have an FTP server set up. If you do, ensure that the installed FTP server is supported. Supported FTP servers are listed in the *System Requirements and Compatibility Matrix* document.

For information about how to configure an FTP server, see the *System Administration Guide and Reference*.

Verifying the Upgrade

To verify the installation, perform the following tasks:

1. Open the `mitg_upgrade.log` file (located in the `<PPM_Home>/upgrade_710` directory) and check for error messages at the end of the file.
2. Log on to PPM Center.
3. Start the PPM Workbench.
4. Run a report.
5. Create a request.
6. Test the graphical view of the request.
7. If your upgrade fails, zip the `<PPM_Home>/upgrade_710` directory and send the compressed file to your Professional Services representative.

8. If you encounter problems or have additional questions, contact the HP Software Support web site at www.hp.com/managementsoftware/services.

To resolve outstanding data conversions or population issues, you can perform the actions described in this section as the final phase of the upgrade process.

Integrating Microsoft Project with HP Project and Portfolio Management Center

If you are a Microsoft® Project user upgrading from Mercury IT Governance Center version 6.0, note that, starting with PPM Center version 7.0, integrating PPM Center with Microsoft Project involves downloading and installing the Plug-in for PPM. For information on the HP Project Management and Microsoft Project requirements for installing the Plug-in for PPM, see the *HP Project Management User's Guide*.



If you are upgrading from PPM Center version 7.0, you must download and install the latest version of the Plug-in for PPM. However, before you install the latest version, you must first manually uninstall the earlier version using **Add or Remove Programs** from Control Panel.

If You Upgraded from Mercury IT Governance Center Version 6.0

If you upgraded from Mercury IT Governance Center version 6.0 to PPM Center version 7.1, and you log on to the standard interface, you will see that the PPM Dashboard menu in version 7.1 displays two links to **Front Page** modules. One link is labeled **Front Page** and the other is labeled **Front Page (Standard PPM Dashboard)**. To address this, delete the **Front Page** module and leave the **Front Page (Standard PPM Dashboard)** module. For information on how to delete a module, see *Creating Portlets and Modules*.

Testing Your Custom Integrations

The PPM Center version 7.1 data model is very different from the Mercury IT Governance Center 6.0 data model. If your system has custom integrations with other applications, you must thoroughly test all in-bound and out-bound integrations to ensure that everything is working as designed. If you have complex integrations, you will probably have to rework these manually to some extent after you upgrade.

Minimizing Dependence on the Compatibility Meta Layer

Try to minimize the dependence on Compatibility Meta Layer (CML) as much as possible. CMLs are complex views that mimic the Mercury IT Governance Center 6.0 data model. The SQL execution plan for your custom portlets, validations, and so on can be very different from what you had in IT Governance Center 6.0.

HP strongly recommends that you use the latest data model over using the CML. Using the new PPM Center 7.1 data model will likely improve system performance.

If you must use CML, ensure that you:

- Only use CML temporarily and have a clear plan to rework it at a later time.
- Thoroughly test all of your custom portlets, validations, and so on that use the CMLs for performance.

Testing Custom Portlets and Validations for Performance

Thoroughly test all your important custom portlets and validations in high traffic areas for performance.

What To Do Next

After you verify that PPM Center was successfully upgraded and is working correctly, you can delete all but the `logs` subdirectory in the `upgrade_710` directory.

Contacting Support

If you encounter any problems, or have questions about the upgrade, visit the HP Software Support web site at www.hp.com/managementsoftware/services.

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