

Oracle® Fusion Middleware

Patching Guide

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Preface

The *Oracle Fusion Middleware Patching Guide* describes the tools and procedures required for you to patch your existing Oracle Fusion Middleware environment or upgrade your existing Oracle Application Server environment.

Intended Audience

This guide is intended for existing Oracle Fusion Middleware users who are upgrading their Oracle Fusion Middleware products to a more recent version or to the latest version. To follow the instructions provided in this document, the reader should be comfortable running system administration operations, such as creating users and groups, adding users to groups, and installing operating system patches on the computer where the products are going to be installed. Users on UNIX systems who are updating their Oracle Fusion Middleware software may need `root` access to run some scripts.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

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Related Documents

For additional information, see the following manuals:

- *Oracle Fusion Middleware Concepts*. This book introduces the common terms and concepts in an Oracle Fusion Middleware environment.
- *Oracle Fusion Middleware Administrator's Guide*. This book contains information for managing your Oracle Fusion Middleware environment after installation and configuration is complete.
- *Oracle Fusion Middleware High Availability Guide*. This book contains information for installing Oracle Fusion Middleware in high availability environments.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Oracle Fusion Middleware Patching and Upgrade Overview

This book describes the tools available for you to patch your existing Oracle Fusion Middleware or upgrade your existing Oracle Application Server environment.

The following topics are covered:

- Section 1.1, "Installation, Patching, and Upgrade Terminology"
- Section 1.2, "Patching and Upgrade Tools"
- Section 1.3, "About Database Patches for Oracle Fusion Middleware"

1.1 Installation, Patching, and Upgrade Terminology

This section describes various terms that you should be familiar with before you continue.

1.1.1 Patching

Patching involves copying a small collection of files over an existing installation. A **patch** is normally associated with a particular version of an Oracle product and involves updating from one minor version of the product to a newer minor version of the same product (for example, from version 11.1.1.2.0 to version 11.1.1.3.0).

A **patch set** is a single patch that contains a collection of patches designed to be applied together.

1.1.2 Migration

Migration typically involves moving from a third-party (non-Oracle) product to an Oracle product.

It can also be used to refer to moving an existing set of software parameters (for example, an existing configuration or existing domain) from one release to another. For example, instructions for migrating your configuration from Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) to 11g Release 1 (11.1.1.2.0) are provided in Appendix C, "Using Patch Assistant to Migrate from 11g Release 1 (11.1.1.1.0) to Release 1 (11.1.1.2.0)".

1.1.3 Upgrade

Upgrade involves moving from a previous major version to a new major version. For example, an upgrade would be required to move from Oracle Application Server 10g to Oracle Fusion Middleware 11g.

1.1.4 Installation

Installation is when new software is copied onto your system for use. After the new software is installed, you can patch it or upgrade it as necessary.

1.2 Patching and Upgrade Tools

Table 1–1 provides a brief summary of the patching and upgrade tools, and provides pointers to more detailed information.

Table 1–1 Summary of Patching, Migration, and Upgrade Tools

Tool	Description	More Information
OPatch	<p>OPatch is typically used to patch the software on your system by copying a small collection of files over your existing installation.</p> <p>In Oracle Fusion Middleware, OPatch is used to patch an existing Oracle Fusion Middleware 11g installation.</p>	Chapter 2, "Patching Oracle Fusion Middleware with Oracle OPatch"
WebLogic Server Upgrade Installer	<p>WebLogic Server Upgrade Installer is used to update your existing Oracle WebLogic Server installation to the latest available version.</p> <p>Oracle Fusion Middleware products require the presence of Oracle WebLogic Server and its directory structure on your system. When you update your Oracle Fusion Middleware software, you must also update the version of Oracle WebLogic Server on your system using the WebLogic Server Upgrade Installer.</p> <p>The WebLogic Server Upgrade Installer is only available from My Oracle Support.</p>	<i>Oracle Fusion Middleware Upgrade Guide for Oracle WebLogic Server</i>
Product Installer and Patch Set Installer	<p>The Patch Set Installer is used to update your existing Fusion Middleware product to the latest version. At the time of publication, the latest version is 11g Release 1 (11.1.1.6.0) and in this release, only Oracle Portal, Forms, Reports and Discoverer require updating with the Patch Set Installer. All other Oracle Fusion Middleware products in this release can be updated with their usual product installer.</p>	<p>See Chapter 3, "Applying the Latest Oracle Fusion Middleware Patch Set" for instructions on how to use the Patch Set Installer for Oracle Portal, Forms, Reports and Discoverer.</p> <p>See Section 3.6.1, "About the Installers Used for Patching" for more information about the types of installers available for patching.</p>
Patch Set Assistant	<p>Patch Set Assistant is used to update your database schemas to prepare them for use with the latest version of Oracle Fusion Middleware software.</p> <p>This tool is used with Patch Set updates only and cannot be used for updates.</p> <p>If you need to add or drop schemas, you should use the Repository Creation Utility (RCU).</p>	Chapter 4, "Updating Your Schemas with Patch Set Assistant"
Upgrade Assistant	<p>The Upgrade Assistant is used to upgrade schemas and configuration information from Oracle Application Server 10g to Oracle Fusion Middleware 11g.</p>	<i>Oracle Fusion Middleware Upgrade Planning Guide</i>

1.3 About Database Patches for Oracle Fusion Middleware

This guide provides instructions for applying Oracle Fusion Middleware patches to your existing Oracle Fusion Middleware installations.

However, there are specific cases where you might be instructed to apply an Oracle Database patch to an existing Oracle Fusion Middleware Oracle home. This is because

some Oracle Fusion Middleware products include specialized components, such as application programming interfaces (APIs), software libraries, and other software code developed for Oracle Database products.

In these specific cases, you might be referred to Oracle Database patching and installation documentation for more information.

Note that in most cases Oracle Fusion Middleware patches include all necessary software updates. You should apply Database patches only when specifically instructed or if you are experiencing a specific issue that can be resolved by the database patch.

Patching Oracle Fusion Middleware with Oracle OPatch

This document describes patching in an Oracle Fusion Middleware environment.

The following topics are covered:

- Section 2.1, "About Patching"
- Section 2.2, "About OPatch"
- Section 2.3, "OPatch in a Fusion Middleware Environment"
- Section 2.4, "Running OPatch"
- Section 2.5, "Troubleshooting OPatch in a Fusion Middleware Environment"

2.1 About Patching

Patches are a small collection of files copied over to an existing installation. They are associated with particular versions of Oracle products.

2.1.1 Types of Patches That can be Used with OPatch

OPatch can be used for the following types of patches:

A patch set exception (also known as a PSE, one-off, or interim patch)

This is usually a single fix for a single problem. One-offs in ST products (GC, DB/AS Control etc) are packaged and applied via OPatch. One-offs are bug fixes given to customers in critical need and are not cumulative, regressed or versioned. You can use the `opatch lsinventory` command to see which one-off patches are installed on your system.

A patch bundle (also known as an MLR patch)

This type of patch is created by putting several fixes into a single patch. This is usually done if several fixes are needed and the various interim patches apply to the same modules and cause the prior patch to be removed if applied individually as they can not coexist. Patch bundles are also applied using OPatch and metadata information about them are also kept in a set of XML files in the inventory and manipulated by OPatch.

Security Patches (also known as Critical Patch Updates or CPUs)

Security patches are different from other patch types in that they only fix a single or small number of problems, and that they should be applied as soon as possible – when

a security patch is released extra attention is brought to the existence of the security problem. CPUs are periodic security bundles released by Oracle and are very much like interim patches and will be applied just like an interim patch using OPatch. Just like interim patches, CPUs are not versioned.

Patch Set Updates (PSUs)

Patch Set Updates are released on a quarterly basis, following the same schedule as the Critical Patch Updates (CPUs). These come out the closest Tuesday to the 15th of the months of January, April, July and October. Patch Set Update content is intended to address the top fifty critical bugs affecting the broad customer base.

2.1.2 Types of Patches That can not be Used with OPatch

The only type of patch that cannot be used with OPatch is a patch set. A patch set contains a large number of merged patches, is thoroughly tested, changes the version of the product it is applied to, and can sometimes introduce new functionality. Patch sets are cumulative bug fixes that fix all bugs and consume all patches since the last base release. Patch sets and the Patch Set Assistant are usually applied through OUI-based product specific installers.

2.2 About OPatch

OPatch is a Java-based utility that runs on all supported operating systems and requires installation of the Oracle Universal Installer. This document contains information pertaining to OPatch commands that are most commonly used in an Oracle Fusion Middleware environment. You can use all supported OPatch commands if you choose; for a full list of OPatch commands and for more information about the OPatch utility, refer to the *Oracle Universal Installer and OPatch User's Guide* at the following URL:

http://download.oracle.com/docs/cd/E11882_01/em.112/e12255/toc.htm

This section contains the following:

- Section 2.2.1, "Getting OPatch"
- Section 2.2.2, "Getting Patches"
- Section 2.2.3, "OPatch Environment Variables"
- Section 2.2.4, "OPatch System Requirements"
- Section 2.2.5, "Backup and Recovery Considerations for Patching"

2.2.1 Getting OPatch

OPatch can be found in your Fusion Middleware product's `ORACLE_HOME/OPatch` (on UNIX operating systems) or `ORACLE_HOME\OPatch` (on Windows operating systems) directory.

Oracle recommends that you always check for and obtain the latest version of OPatch from My Oracle Support (formerly Oracle MetaLink).

1. Access and log into My Oracle Support at the following location:

<http://support.oracle.com/>

2. In the Search Knowledge Base field, enter **224346.1**. This is the ID of the document that describes how to obtain the latest version of OPatch.

3. In the search results, click on the link corresponding to document ID 224346.1.
4. In the document, click on the **Patch 6880880** link which will take you to the screen where you can obtain the latest version of OPatch based on release versions and platforms.

Make sure you verify that the OPatch release number in the "Release" column is "11.1.0.0.0" as this is the correct version of OPatch for Oracle Fusion Middleware 11g products.

2.2.2 Getting Patches

You can obtain the latest patches by specifying the patch ID in My Oracle Support (formerly *MetaLink*):

1. Access and log into My Oracle Support at the following location:
`http://support.oracle.com/`
2. Click the **Patches & Updates** link.
3. Enter the **Patch ID or Number**, then click **Search**. A Patch Search Results table appears.
4. Using the Release and Platform columns, find the desired patch, then click the associated Patch ID.
5. In the page that now appears, click the **Download** button in the right-hand column.

2.2.3 OPatch Environment Variables

OPatch uses the environment variables listed in Table 2–1:

Table 2–1 *OPatch Environment Variables*

Variable	Description
ORACLE_HOME	Points to the location of the Oracle home directory.
MW_HOME	Points to the location of the Middleware home directory.
PATH	Points to the location(s) from which various commands should be run.

2.2.4 OPatch System Requirements

The OPatch utility has the following requirements:

- The ORACLE_HOME environment variable must point to a valid Oracle home directory and match the value used during installation of the Oracle home directory.
- If the `-invPtrLoc` command-line argument was used during installation, then it must be used when using the OPatch utility. Oracle recommends the use of the default central inventory for a platform.
- The `java`, `ar`, `cp`, and `make` commands must be available in one of the directories listed in the PATH environment variable. The commands are not available for all platforms.

2.2.5 Backup and Recovery Considerations for Patching

It is highly recommended that you back up the `ORACLE_HOME` before any patch operation. You can back up the `ORACLE_HOME` using your preferred method. You can use any method such as `zip`, `cp -r`, `tar`, and `cpio` to compress the `ORACLE_HOME`.

If the `ORACLE_HOME` does not appear when you execute the `opatch lsinventory -detail` command, the `ORACLE_HOME` might be missing from the Central Inventory, or the Central Inventory itself could be missing or corrupted.

If the `ORACLE_HOME` is listed when you execute the `opatch lsinventory -detail` command, but the products and components within the `ORACLE_HOME` are not listed, the inventory within the `ORACLE_HOME` (local inventory) might be missing or corrupted.

If the local inventory is corrupted or lost for some reason, you can simply restore the `ORACLE_HOME/inventory` (on UNIX operating systems) or `ORACLE_HOME\inventory` (on Windows operating systems) if it was backed up. If a backup does not exist, you may have to reinstall the software.

2.3 OPatch in a Fusion Middleware Environment

This section describes the Oracle OPatch utility as it pertains to an Oracle Fusion Middleware environment. You should be familiar with the Oracle Fusion Middleware concepts introduced in the *Oracle Fusion Middleware Installation Planning Guide*, which is available at the following URL:

http://download.oracle.com/docs/cd/E15523_01/install.1111/b32474/toc.htm

This section contains the following:

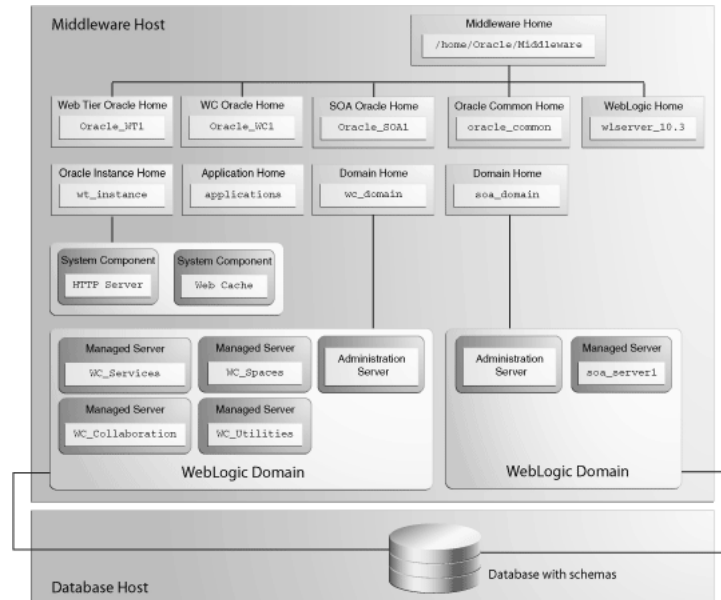
- Section 2.3.1, "A Typical Patching Scenario"
- Section 2.3.2, "Patching a Fusion Middleware Product"
- Section 2.3.3, "Patching in a Distributed Environment"
- Section 2.3.4, "Patching Artifacts Deployed Outside the Oracle Home"

2.3.1 A Typical Patching Scenario

Consider a common, non-distributed Fusion Middleware topology for Oracle SOA Suite and Oracle WebCenter, as show in Figure 2–1:

Note: OPatch can be used to patch any Fusion Middleware product, even though only a few are shown in this example. OPatch can not be used to patch Oracle WebLogic Server.

Figure 2–1 Common Fusion Middleware Topology for Oracle SOA Suite and Oracle WebCenter



Suppose you have a problem in the SOA Domain. Below is a typical patching process:

Step 1. Contact Oracle Support

You can contact your Oracle support representative, or you can go to My Oracle Support (formerly OracleMetaLink):

<http://support.oracle.com/>

Step 2. Check for Existing Patches

If Oracle Support is not able to resolve the issue, they may ask to see if you have any patches already installed on your system. To determine this information, you should run the `opatch lsinventory` command.

To check if a particular patch is installed in the Oracle home (or the set of Oracle homes within a Middleware home) you use the `opatch checkInstalledOneOfFs` command. See Section 2.4.7, "Listing Patches Applied to an Oracle Home or WebLogic Domain" for more information about this command.

Step 3. Obtain OPatch and the Necessary Patch

Upon determining that you are in need of a new patch and it has not already been installed on your system, you should do the following:

1. Make certain that you have the latest version of OPatch, as described in Section 2.2.1, "Getting OPatch".
2. Obtain the patch as described in Section 2.2.2, "Getting Patches".

Step 4. Determine the Oracle Home

Once you obtain the patch, determine the Oracle home directory to which you are going to apply the patch.

The most common type of patch available in a Fusion Middleware environment involves patching a specific Oracle home directory. Some patches (for example, a patch pertaining to JRF) may apply to multiple Oracle home directories within a specific

Middleware home. A third type of patch could involve client components in one Oracle home and server components in a different Oracle home (for example, Oracle WebCenter in the WebCenter Oracle home depends on BPEL Process Manager in the Oracle SOA Suite Oracle home).

If you do not know the name of your Oracle home, you should run the `opatch lshomes` command as described in Section 2.4.6, "Listing the Applicable Oracle Homes for a Patch" to obtain a list of Oracle homes that pertain to the domain. In this example, the Oracle home to which the patch should be applied is the SOA Oracle home.

After you determine your Oracle home, you should run the `opatch checkApplicable` command as described in Section 2.4.6, "Listing the Applicable Oracle Homes for a Patch" to make sure that the patch can actually be applied to the Oracle home.

As the Middleware home is the top-level entity in a Fusion Middleware topology, the location of your Middleware home will be required for many of the OPatch commands in a Fusion Middleware environment.

Step 5. Read the README File

Read the README file that accompanies the patch. This file contains important information and instructions that must be followed prior to applying your patch.

For example, the README file may instruct you apply the patch using the `-auto` option (described in Section 2.4.1.2, "Using the `-auto` Option"). The more common scenario is that the README will instruct you to use a series of OPatch commands, including `opatch stop` and `opatch start` (see Section 2.4.8, "Starting or Stopping a Runtime Instance").

Step 6. Apply the Patch

After you determine the Oracle home to which you need to apply the patch, you should apply the patch with the `opatch apply` command as described in Section 2.4.1, "Applying Patches and Deploying Patched Artifacts to WebLogic Servers".

After Applying the Patch...

In most cases, after you apply the patch the instructions in the README file will tell you to run the `opatch start` command to re-start your servers.

After the patching is complete and your servers are restarted, you should check your product software to verify that the issue has been resolved.

If for some reason the result is not satisfactory, you can use the `opatch rollback` command to remove the patch from the Oracle home. See Section 2.4.2, "Rolling Back Patches and Deploying Patched Artifacts to WebLogic Servers" for more information, and consult the README file for specific instructions.

2.3.2 Patching a Fusion Middleware Product

Many Fusion Middleware artifacts are deployed to a runtime environment, where applications pick up these binaries for execution. A common example of this are J2EE artifacts (for example, `.ear`, `.war`, or `.rar` files) or J2EE shared libraries deployed to a Managed Server or cluster running within a domain. Patching in a Fusion Middleware environment involves updating and replacing these artifacts in the Oracle home. The servers to which the artifacts are deployed need to be restarted for the changes to take effect.

After the artifacts are deployed, there are various staging modes that affect how WebLogic Server treats these artifacts, which in turn determine how the applications are patched. All artifacts in Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0) are deployed in NoStage Mode, which means that each Managed Server must access the archive files from a single source directory for deployment. If a J2EE application is deployed to three Managed Servers within a cluster, each Managed Server must be able to access the same application archive files from a shared or network-mounted directory in order to deploy the new J2EE application.

Take note of the following:

- If multiple Managed Servers on multiple machines are used, the path to the application bits must be the same on all machines because there is a single point of entry for the application in the domain configuration.
- Since the source location for the application bits is fixed and points back to its own *ORACLE_HOME* location, all domains that were created using a given *ORACLE_HOME* will pick up the patched bits once the *ORACLE_HOME* is patched.
- If you are using multiple Managed Servers on multiple machines and the product *ORACLE_HOME* is not shared or network-mounted on the target Managed Servers, then each machine must have the product installed on an *ORACLE_HOME* on the local file system from which the Managed Servers can access the application binaries. Therefore, the *ORACLE_HOME* on each local file system of each machine must be patched separately.

The steps that need to be performed for this scenario are as follows:

1. Stop all Managed Servers in the WebLogic Domain to which the application is deployed.
2. Use the `opatch apply` command to apply the bits to an Oracle home.
3. Restart all the Managed Servers in the same WebLogic Domain.

Steps 1 and 3 are performed by the Fusion Middleware capabilities in OPatch.

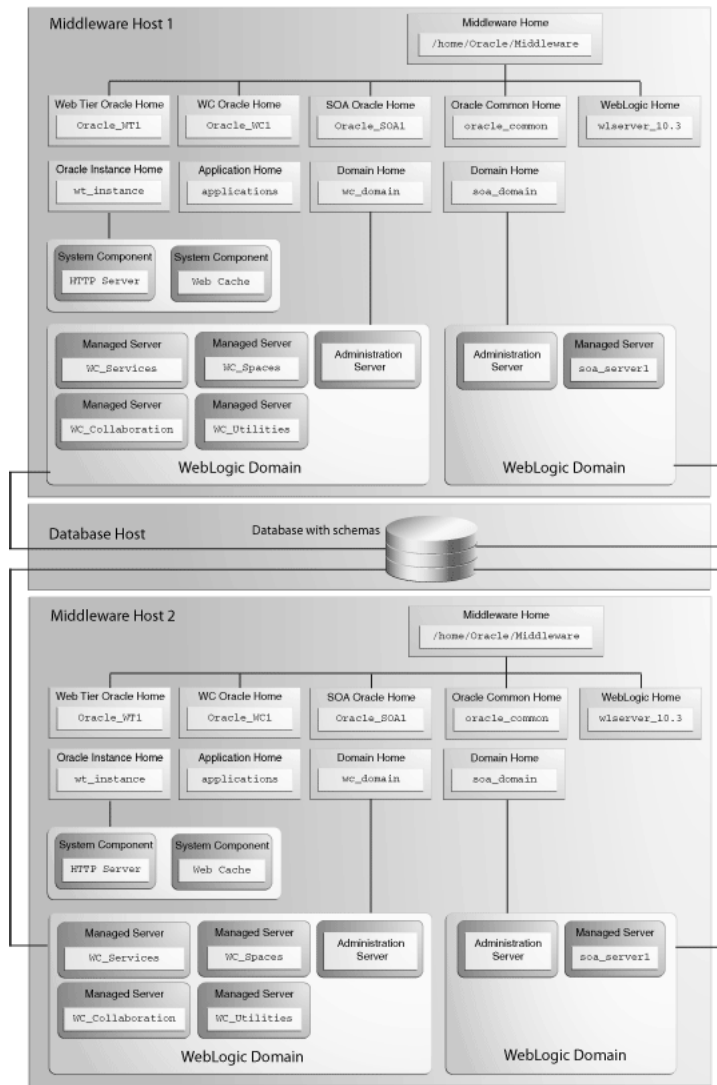
2.3.3 Patching in a Distributed Environment

The process to patch in a distributed environment depends on whether or not your Middleware home directory is shared or not shared.

2.3.3.1 Patching with a Local Middleware Home

Consider the environment shown in Figure 2–2. This is a distributed environment, where you have identical topologies on separate machines, each with its own local Middleware home and Fusion Middleware products inside the Middleware home:

Figure 2–2 Distributed Fusion Middleware Topology for Oracle SOA Suite and Oracle WebCenter

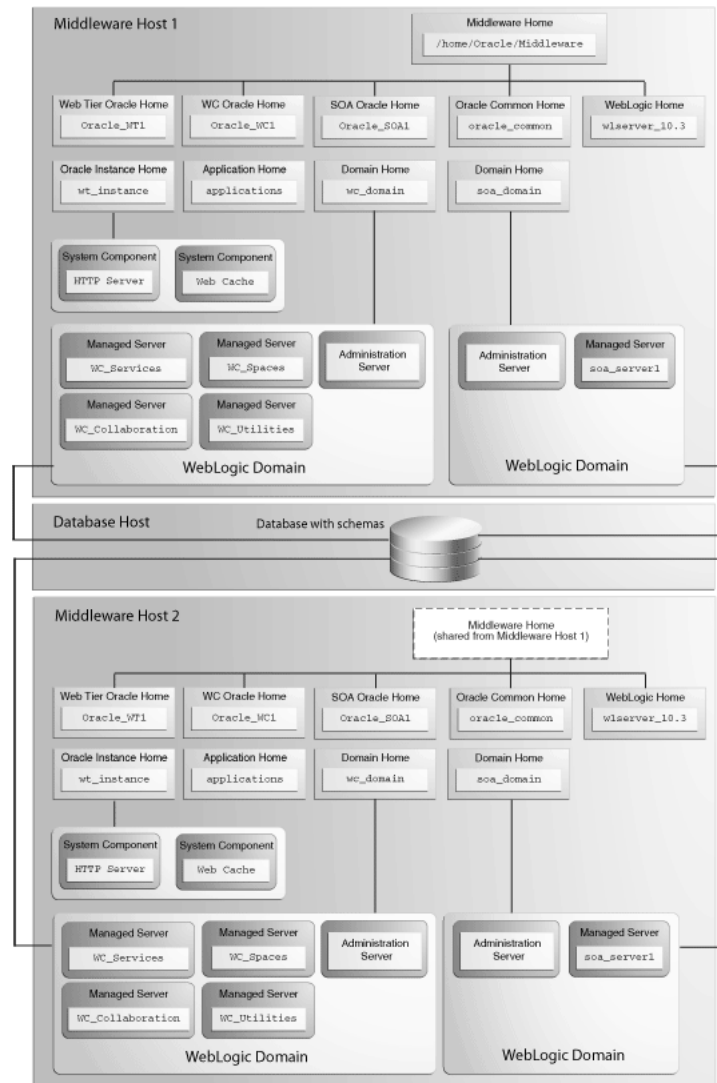


If you encountered a problem in the SOA domain, you would have to patch the corresponding Oracle home on each machine separately, according to the instructions in the README file. After you patch the SOA Oracle home on "Middleware Host 1," for example, you must then repeat the same procedure on "Middleware Host 2."

2.3.3.2 Patching with a Shared Middleware Home

Consider the environment shown in Figure 2–3. This is also a distributed environment, where you have identical topologies on separate machines, but the Middleware home on "Middleware Host 2" is shared or NFS mounted:

Figure 2–3 Distributed Fusion Middleware Topology for Oracle SOA Suite and Oracle WebCenter



In this topology, if you encountered a problem in the SOA Domain, you would only need to patch the SOA Oracle home on either "Middleware Host 1" or "Middleware Host 2" in accordance with the instructions in the README file, and OPatch would automatically patch all of the matching Oracle homes that share the same Middleware home.

2.3.4 Patching Artifacts Deployed Outside the Oracle Home

Some applications, such as Oracle Enterprise Manager Fusion Middleware Control and Oracle Web Services Manager Policy Manager (WSM-PM), are deployed outside of the product Oracle home (in the Oracle Common Home or `oracle_common`) directory. OPatch can also apply patches to files that reference the `oracle_common` directory.

2.4 Running OPatch

The OPatch utility is located in the `ORACLE_HOME/OPatch` (on UNIX operating systems) or `ORACLE_HOME\OPatch` (on Windows operating systems) directory. Below is the syntax for the OPatch utility:

```
path_to_opatch/opatch command -options
```

Acceptable values for *command* are described in Table 2–2.

Valid *options* for each *command* are described in the sections that describe each *command*.

Table 2–2 Commands for the OPatch Utility in a Fusion Middleware Environment

Command	Description
apply	Apply the patch to an Oracle home and deploy the patch to a WebLogic domain. For details, see Section 2.4.1, "Applying Patches and Deploying Patched Artifacts to WebLogic Servers".
rollback	Remove the patch from an Oracle home. For details, see Section 2.4.2, "Rolling Back Patches and Deploying Patched Artifacts to WebLogic Servers".
deploy	Deploy the patch to a WebLogic domain. For details, see Section 2.4.3, "Deploying Patched Artifacts to WebLogic Servers".
checkApplicable	List all Oracle homes to which a patch can be applied. For details, see Section 2.4.6, "Listing the Applicable Oracle Homes for a Patch".
lshomes	List the Oracle homes that have been used to create WebLogic Domains. For details, see Section 2.4.4, "Listing the Source Oracle Homes".
lsdomains	List all WebLogic domains created from the Middleware home or specific Oracle home. For details, see Section 2.4.5, "Listing the Domains Created from the Middleware Home or Oracle Home".
checkInstalledOneOffs	Check if certain patches are installed on any Oracle homes. For details, see Section 2.4.7, "Listing Patches Applied to an Oracle Home or WebLogic Domain".
start stop	Start or Stop a WebLogic Administration Server, Managed Server, or Cluster. For details, see Section 2.4.8, "Starting or Stopping a Runtime Instance".

To view additional information for these Fusion Middleware options, use the following command:

```
path_to_OPatch/opatch -help -fmw
```

2.4.1 Applying Patches and Deploying Patched Artifacts to WebLogic Servers

The `apply` command in a Fusion Middleware environment applies the patch to the Oracle home on the local machine.

Note: The option to apply a patch to a Middleware home (including all Oracle homes inside that Middleware home) is not yet available.

2.4.1.1 Using the OPatch Property File

Sensitive information such as Administration Server credentials, and other important information such as the Administration Server URL, domain location and applications directory location, are obtained by prompts from the console. In some cases, default values may be found and specified by OPatch; in these cases, press Enter to use these default values.

Automation applications such as Grid Control may invoke OPatch with the `-silent` option, which does not prompt for any input from the console. To supply the necessary Administration Server credentials and other information, a response file can be created and passed to OPatch as an argument with the `-property_file` option.

For Fusion Middleware components, `userConfigFile` and `userKeyFile` can be specified in the property file as keys with corresponding file names. The `userConfigFile` file contains an encrypted user name and password, while the `userKeyFile` contains a secret key that is used to encrypt and decrypt the user name and password. Similarly, the `AdminServerURL` (URL of the Administration Server), `DomainHome` (full path to the `domains` directory) and `ApplicationsDir` (full path to the `applications` directory) can also be specified in the properties file.

2.4.1.2 Using the `-auto` Option

Some patches are certified by Oracle Product Support as capable of being used with the `-auto` option, which can automate certain portions of your patching procedure. The `-auto` option applies the patch to the Oracle home; verifies that the patch is actually applied, then performs any necessary redeploy operations against the specified WebLogic Domain, including stopping and starting all the servers that are affected by the patch. If your patch is certified for use with the `-auto` option, you will be informed of such in the patch's README file.

2.4.1.2.1 Configuring Node Manager Beginning with OPatch release 11.1.0.8.2, the `-auto` option requires the Node Manager user name and password. In order for OPatch to be used properly:

- The Administration Server must be up and running.
- If the Managed Servers are up and running, OPatch will stop the servers, apply the patch, then restart the servers.

If the Managed Servers are not running, OPatch will apply the patch but then you must manually start the servers in order to see the effects of the patch.

To configure Node Manager, refer to "General Node Manager Configuration" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

2.4.1.2.2 Using the `-auto` Option with the `-domain` Option The `-auto` option should be used in conjunction with the `-domain` option; the only exception is if only one WebLogic Domain was configured from the Oracle home. In such cases, OPatch will use that domain as the default domain. If multiple domains have been created and the `-domain` option is not used, then it is the user's responsibility to run `opatch deploy` to redeploy the patched artifacts to their respective domains, and also stop and start the affected servers in each of the domains.

2.4.1.3 Using the apply Command

The `apply` command (with the `-auto` option specified) performs the following:

1. Stops all affected target servers.
 - This might involve stopping server instances on other nodes for:
 - a. Staged mode applications.
 - b. NoStage mode applications sharing the Oracle home.
2. Applies the patch to the Oracle home on the local machine.
3. Performs any required deploy operations for patched artifacts.
4. Restarts all affected servers.

The syntax for the `apply` command is shown below:

```
opatch apply
  [-auto [-domain domain_name]]
  [-mw_home MW_HOME]
  [-oh ORACLE_HOME]
  [-property_file path_to_property_file]
  [-report]]
```

A summary of the options for the `apply` command are described in Table 2–3.

Table 2–3 Options for the OPatch apply Command

Option	Description
<code>-auto [-domain <i>domain_name</i>]</code>	Optional - causes OPatch to automate the rollout of the patch to Oracle Fusion Middleware entities. If <code>-auto</code> is used then <code>-domain</code> must also be used to indicate the name of the domain in which the rollout should occur; the exception is when there is only one domain configured out of the Oracle home, in which case the <code>-domain</code> flag is optional. See Section 2.4.1.2, "Using the -auto Option" for more information.
<code>-mw_home <i>MW_HOME</i></code>	Optional - The Middleware home to which the patch will be applied. The Middleware home specified here supersedes the <code>MW_HOME</code> environment variable. If neither is specified, then the Middleware home from where the command is run will be used.
<code>-oh <i>ORACLE_HOME</i></code>	Optional - This option is used to specify the Oracle home to which the patch should be applied. This value supersedes the <code>ORACLE_HOME</code> environment variable. If neither is specified, OPatch will apply the updates to the Oracle home from which it was launched.
<code>-property_file <i>name</i></code>	Optional - absolute path and name of the property file. See Section 2.4.1.1, "Using the OPatch Property File" for more information.
<code>-report</code>	Optional - print out the actions that will be taken by executing the command, but does not actually execute the command.

2.4.1.4 Sample Output for the apply Command

Below is a sample output from the `opatch apply` command on a UNIX operating system:

```
[aime@stادن41 Oracle_SOA1]$ ./OPatch/opatch apply
-auto /OracleFMW/Middleware_PS1_RC2/FMWpatches/9991008/
```

```
-oh /OracleFMW/Middleware_PS1_RC2/oracle_common/  
-domain MySOAWebCenterDist  
Invoking OPatch 11.1.0.6.9
```

```
Oracle Interim Patch Installer version 11.1.0.6.9  
Copyright (c) 2009, Oracle Corporation. All rights reserved.
```

```
Oracle Home      : /OracleFMW/Middleware_PS1_RC2/oracle_common  
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory  
                  from      : /etc/oraInst.loc  
OPatch version   : 11.1.0.6.9  
OUI version      : 11.1.0.7.0  
OUI location     : /OracleFMW/Middleware_PS1_RC2/oracle_common//oui  
Log file location : /OracleFMW/Middleware_PS1_RC2/oracle_  
common/cfgtoollogs/opatch/opatch2009-12-06_09-44-02AM.log
```

```
Patch history file: /OracleFMW/Middleware_PS1_RC2/oracle_  
common/cfgtoollogs/opatch/opatch_history.txt
```

```
OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"
```

```
Please enter the WebLogic Admin Server username:> weblogic  
Please enter the WebLogic Admin Server password:>  
Please enter the WebLogic Admin Server URL(t3://stadr41:7011):>  
Please enter the WebLogic domain directory  
location(/OracleFMW/MyDomains/domains/MySOAWebCenterDist):>  
Please enter the WebLogic applications directory  
location(/OracleFMW/MyDomains/applications/MySOAWebCenterDist):>  
[FMW] Running apply '-auto' prerequisite checks...  
      [FMW] ProductDriver::preReq_Product() succeeded  
      [FMW] ProductDriver::preReq_Deploy() succeeded
```

```
All the applications affected by this patch are deployed in 'No Stage' mode.  
Redeploy operation will not be performed for the affected applications.  
Please refer to the log file for more details.
```

```
      [FMW] ProductDriver::preReq_LifeCycle() succeeded  
[FMW] Apply '-auto' prerequisite checks succeeded...
```

```
ApplySession applying interim patch '9991008' to OH '/OracleFMW/Middleware_PS1_  
RC2/oracle_common'
```

```
Running prerequisite checks...
```

```
You selected -local option, hence OPatch will patch the local system only.
```

```
Please shutdown Oracle instances running out of this ORACLE_HOME on the local  
system.  
(Oracle Home = '/OracleFMW/Middleware_PS1_RC2/oracle_common')
```

```
Is the local system ready for patching? [y|n]
```

```
Y
```

```
User Responded with: Y
```

```
Backing up files and inventory (not for auto-rollback) for the Oracle Home  
Backing up files affected by the patch '9991008' for restore. This might take a  
while...
```

```
Backing up files affected by the patch '9991008' for rollback. This might take a
while...
```

```
Patching component oracle.jrf.j2ee, 11.1.1.2.0...
Copying file to "/OracleFMW/Middleware_PS1_RC2/oracle_common/modules/oracle.jrf_
11.1.1/jrf-api.jar"
```

```
Patching component oracle.jrf.dms, 11.1.1.2.0...
Copying file to "/OracleFMW/Middleware_PS1_RC2/oracle_common/modules/oracle.dms_
11.1.1/dms.war"
ApplySession adding interim patch '9991008' to inventory
```

```
Verifying the update...
Inventory check OK: Patch ID 9991008 is registered in Oracle Home inventory with
proper meta-data.
Files check OK: Files from Patch ID 9991008 are present in Oracle Home.
```

The local system has been patched and can be restarted.

```
[FMW] Ignoring Deploy operations as all patched artifacts are deployed in 'No
Stage' mode
```

```
[FMW] Performing Auto Post-Deploy Actions
```

```
[FMW] Performing Auto Post-Bounce Actions
```

```
-----
The following warnings have occurred during OPatch execution:
```

```
1) OUI-67851:
```

```
All the applications affected by this patch are deployed in 'No Stage' mode.
Redeploy operation will not be performed for the affected applications.
Please refer to the log file for more details.
```

```
-----
OPatch Session completed with warnings.
```

```
OPatch completed with warnings.
```

2.4.2 Rolling Back Patches and Deploying Patched Artifacts to WebLogic Servers

The `rollback` command allows you to remove an existing one-off patch by specifying the unique patch ID.

The `rollback` command (with the `-auto` option specified) performs the following:

1. Stops all affected target servers.

This might involve stopping server instances on other nodes for:

- a. Staged mode applications.
 - b. NoStage mode applications sharing the Oracle home.
2. Rolls back the patch on the Oracle home on the local machine.
 3. Performs any required deploy operations for patched artifacts.
 4. Restarts all affected servers.

The syntax for the `rollback` option is shown below:

```
opatch rollback -id patch_id
  [-auto [-domain domain_name]]
  [-mw_home MW_HOME]
  [-oh ORACLE_HOME]
  [-property_file path_to_property_file]
  [-report]]
```

A summary of the options for the `rollback` command are described in Table 2-4.

Table 2-4 Options for the OPatch rollback Command

Option	Description
<code>-id patch_id</code>	Use the <code>-lsinventory</code> option to display all applied patch IDs. Each one-off patch is uniquely identified by an ID. To rollback to a previous patch version, that patch version's ID must be supplied.
<code>-auto [-domain domain_name]</code>	Optional - causes OPatch to automate the rollout of the patch to Oracle Fusion Middleware entities. If <code>-auto</code> is used then <code>-domain</code> must also be used to indicate the name of the domain in which the rollout should occur; the exception is when there is only one domain configured out of the Oracle home, in which case the <code>-domain</code> flag is optional. Refer to Section 2.4.1, "Applying Patches and Deploying Patched Artifacts to WebLogic Servers" for more information.
<code>-mw_home MW_HOME</code>	Optional - The Middleware home to which the patch will be applied. The Middleware home specified here supersedes the <code>MW_HOME</code> environment variable. If neither is specified, then the Middleware home from where the command is run will be used.
<code>-oh ORACLE_HOME</code>	Optional - This option is used to specify the Oracle home to which the patch should be applied. This value supersedes the <code>ORACLE_HOME</code> environment variable. If neither is specified, OPatch will apply the updates to the Oracle home from which it was launched.
<code>-property_file name</code>	Optional - absolute path and name of the property file. Refer to Section 2.4.1, "Applying Patches and Deploying Patched Artifacts to WebLogic Servers" for more information.
<code>-report</code>	Optional - print out the actions that will be taken by executing the command, but does not actually execute the command.

2.4.3 Deploying Patched Artifacts to WebLogic Servers

This operation deploys modified artifacts from the Fusion Middleware `ORACLE_HOME` to the Fusion Middleware domain.

The location of the patch binaries must be specified using the `-ph` option. If the patch is installed in the current Oracle home (the Oracle home from which you are running this command) then the `-ph` option is not required.

If the patch is already applied to the Oracle home, the `-id` option can be used to specify the patch you want to use for deployment.

The syntax for the `deploy` command is shown below:

```
opatch deploy -id patch_id -ph patch_location
[-auto [-domain domain_name]]
[-mw_home MW_HOME]
[-oh ORACLE_HOME]
[-property_file path_to_property_file]
[-report]]
```

A summary of the options for the `deploy` command are described in Table 2-5.

Table 2–5 Options for the OPatch deploy Command

Option	Description
<code>-id patch_id</code>	The unique ID of the patch that is installed in the Oracle home.
<code>-ph patch_location</code>	The absolute path to the location of the patch. If none is specified, then the current directory is used.
<code>-auto [-domain domain_name]</code>	Optional - causes OPatch to automate the rollout of the patch to Oracle Fusion Middleware entities. If <code>-auto</code> is used then <code>-domain</code> must also be used to indicate the name of the domain in which the rollout should occur; the exception is when there is only one domain configured out of the Oracle home, in which case the <code>-domain</code> flag is optional. Refer to Section 2.4.1, "Applying Patches and Deploying Patched Artifacts to WebLogic Servers" for more information.
<code>-mw_home MW_HOME</code>	Optional - The Middleware home to which the patch will be applied. The Middleware home specified here supersedes the <code>MW_HOME</code> environment variable. If neither is specified, then the Middleware home from where the command is run will be used.
<code>-oh ORACLE_HOME</code>	Optional - This option is used to specify the Oracle home to which the patch should be applied. This value supersedes the <code>ORACLE_HOME</code> environment variable. If neither is specified, OPatch will apply the updates to the Oracle home from which it was launched.
<code>-property_file name</code>	Optional - absolute path and name of the property file. Refer to Section 2.4.1, "Applying Patches and Deploying Patched Artifacts to WebLogic Servers" for more information.
<code>-report</code>	Optional - print out the actions that will be taken by executing the command, but does not actually execute the command.

2.4.4 Listing the Source Oracle Homes

The `lshomes` command lists all the Oracle homes pertaining to logical entities such as Host or Domain. For a Host, the list of Oracle homes is obtained from the machine's central inventory. For a WebLogic domain, the list of homes is limited to product Oracle homes that are installed within a top-level Middleware home.

If the `-domain` or `-domaindir` option is used, the command lists the Oracle homes that have been used to create or extend the WebLogic domain. If not, all the homes registered with the machine's central inventory or the inventory location specified using `-invPtrLoc` are listed.

The Middleware home can be specified by using the `-mw_home` option or by setting the `MW_HOME` environment variable. When the Middleware home is specified and the `-domain` or `-domaindir` option is not specified, this command will list all the Oracle homes within the Middleware home that are registered with the machine's central inventory or the specified inventory location.

The syntax for the `lshomes` option is shown below:

```
opatch lshomes
  [-domain domain_name | -domain_dir domain_location]
  [-mw_home MW_HOME ]
  [-invPtrLoc path_to_oraInst.loc]
```

A summary of the options for the `lshomes` command are described in Table 2–6.

Table 2–6 Options for the OPatch lshomes Command

Option	Description
<code>-domain <i>domain_name</i></code>	Optional - list the Oracle homes that have been used to create or extend this WebLogic Domain.
<code>-domain_dir <i>domain_location</i></code>	Optional - list the Oracle homes that have been used to create or extend the WebLogic Domain at this location. You must specify the absolute path to the WebLogic Domain.
<code>-mw_home <i>MW_HOME</i></code>	Optional - list only the Oracle homes registered with the machine's central inventory that are located in this Middleware home. You must specify the absolute path to the Middleware home directory; this value supersedes the <i>MW_HOME</i> environment variable. If neither is available, the Middleware home from which the command is executed will be used.
<code>-invPtrLoc <i>path_to_oraInst.loc</i></code>	Optional - absolute path to the location of your <code>oraInst.loc</code> file; this option is needed if the installation was performed using the <code>-invPtrLoc</code> option.

Below is an example of the `opatch lshomes` command on a UNIX operating system:

```
[aime@stadr41 Oracle_SOA1]$ ./OPatch/opatch lshomes
-domain MySOAWebCenterDist
Invoking OPatch 11.1.0.6.9

Oracle Interim Patch Installer version 11.1.0.6.9
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UTIL session

Oracle Home      : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory
  from           : /etc/oraInst.loc
OPatch version   : 11.1.0.6.9
OUI version      : 11.1.0.7.0
OUI location     : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/oui
Log file location : /OracleFMW/Middleware_PS1_RC2/Oracle_
SOA1/cfgtoollogs/opatch/opatch2009-12-06_10-57-49AM.log

Patch history file: /OracleFMW/Middleware_PS1_RC2/Oracle_
SOA1/cfgtoollogs/opatch/opatch_history.txt

OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"

Invoking utility "lshomes"
Home path = "/OracleFMW/Middleware_PS1_RC2/oracle_common"
Home path = "/OracleFMW/Middleware_PS1_RC2/Oracle_SOA1"
Home path = "/OracleFMW/Middleware_PS1_RC2/Oracle_WC1"
OPatch command 'lshomes' done.

OPatch succeeded.
```

2.4.5 Listing the Domains Created from the Middleware Home or Oracle Home

The `lsdomains` command lists all the WebLogic Domains that have been created from a certain Oracle home:

- If the Oracle home is specified, then only those domains created from the specified Oracle home are listed. If no Oracle home is specified, OPatch will list the domains created from the Oracle home as defined by the `ORACLE_HOME` environment variable. If neither is available, then OPatch will use the Oracle home directory from which the command is run.
- If a Middleware home is specified, all domains created from all Oracle homes within the specified Middleware home are listed.
- If neither is specified, and neither the `MW_HOME` or `ORACLE_HOME` environment variable is defined, then OPatch will run the command for the Middleware home from where the command was run.

The syntax for the `lsdomains` command is shown below:

```
opatch lsdomains
  [-oh ORACLE_HOME]
  [-mw_home MW_HOME]
  [-invPtrLoc path_to_oraInst.loc]
```

A summary of the options for the `lsdomains` command are described in Table 2-7.

Table 2-7 Options for the OPatch lsdomains Command

Option	Description
<code>-oh ORACLE_HOME</code>	Optional - absolute path to the Oracle home directory.
<code>-mw_home MW_HOME</code>	Optional - absolute path to the Middleware home directory.
<code>-invPtrLoc path_to_oraInst.loc</code>	Optional - absolute path to the location of your <code>oraInst.loc</code> file; this option is needed if the installation was performed using the <code>-invPtrLoc</code> option.

Below is an example of the `opatch lsdomains` command on a UNIX operating system:

```
[aime@stادن41 Oracle_SOA1]$ ./OPatch/opatch lsdomains
-oh /OracleFMW/Middleware_PS1_RC2/oracle_common
Invoking OPatch 11.1.0.6.9

Oracle Interim Patch Installer version 11.1.0.6.9
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UTIL session

Oracle Home      : /OracleFMW/Middleware_PS1_RC2/oracle_common
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory
  from           : /etc/oraInst.loc
OPatch version   : 11.1.0.6.9
OUI version      : 11.1.0.7.0
OUI location     : /OracleFMW/Middleware_PS1_RC2/oracle_common/oui
Log file location : /OracleFMW/Middleware_PS1_RC2/oracle_
common/cfgtoollogs/opatch/opatch2009-12-06_11-04-41AM.log

Patch history file: /OracleFMW/Middleware_PS1_RC2/oracle_
common/cfgtoollogs/opatch/opatch_history.txt

OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"

Invoking utility "lsdomains"
Domain Name = "MySOAWebCenterDist" Path =
```

```
"/OracleFMW/MyDomains/domains/MySOAWebCenterDist"
Domain Name = "MyWebCenterOnly" Path =
"/OracleFMW/MyDomains/domains/MyWebCenterOnly"
OPatch command 'lsdomains' done.
```

OPatch succeeded.

2.4.6 Listing the Applicable Oracle Homes for a Patch

This `checkApplicable` command produces a list of Oracle homes to which the patch can be applied. For Fusion Middleware, this command is limited in scope to the top-level Middleware home:

- If only the Middleware home is specified, OPatch will check to see whether or not this patch can be applied to all Oracle homes within the specified Middleware home.
- If an Oracle home is specified in addition to the Middleware home, OPatch will check to see if the patch can be applied to the specified Oracle home in the specified Middleware home.
- If neither is specified, and neither the `MW_HOME` or `ORACLE_HOME` environment variable is defined, then OPatch will run the command for the Middleware home from where the command was run.

The syntax for the `checkApplicable` command is shown below:

```
opatch checkApplicable
  [-ph patch_location]
  [-mw_home MW_HOME]
  [-oh ORACLE_HOME]
  [-invPtrLoc path_to_oraInst.loc]
```

A summary of the options for the `checkApplicable` command are described in Table 2–8.

Table 2–8 Options for the OPatch `checkApplicable` Command

Option	Description
<code>-ph <i>patch_location</i></code>	Optional - location of the patch for which you want to run the <code>checkApplicable</code> command. If not specified, then the patch in the current directory is used.
<code>-mw_home <i>MW_HOME</i></code>	Optional - absolute path to the Middleware home directory.
<code>-oh <i>ORACLE_HOME</i></code>	Optional - absolute path to the Oracle home directory.
<code>-invPtrLoc <i>path_to_oraInst.loc</i></code>	Optional - absolute path to the location of your <code>oraInst.loc</code> file; this option is needed if the installation was performed using the <code>-invPtrLoc</code> option.

Below is an example of the `opatch checkApplicable` command on a UNIX operating system:

```
[aime@stadn41 Oracle_SOA1]$ ./OPatch/opatch checkapplicable
-ph /OracleFMW/Middleware_PS1_RC2/FMWpatches/9991008/
Invoking OPatch 11.1.0.6.9
```

```
Oracle Interim Patch Installer version 11.1.0.6.9
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```

UTIL session

```

Oracle Home      : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory
    from         : /etc/oraInst.loc
OPatch version   : 11.1.0.6.9
OUI version      : 11.1.0.7.0
OUI location     : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/oui
Log file location : /OracleFMW/Middleware_PS1_RC2/Oracle_
SOA1/cfgtoollogs/opatch/opatch2009-12-06_10-59-57AM.log

```

```

Patch history file: /OracleFMW/Middleware_PS1_RC2/Oracle_
SOA1/cfgtoollogs/opatch/opatch_history.txt

```

OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"

Invoking utility "checkapplicable"

```

"checkApplicable" passed for Patch "9991008" and Oracle Home
"/OracleFMW/Middleware_PS1_RC2/oracle_common".
"checkApplicable" failed for Patch "9991008" and Oracle Home
"/OracleFMW/Middleware_PS1_RC2/Oracle_SOA1".
The details are:
Patch 9991008: Required component(s) missing : [ oracle.jrf.j2ee, 11.1.1.2.0 ] , [
oracle.jrf.dms, 11.1.1.2.0 ]
"checkApplicable" failed for Patch "9991008" and Oracle Home
"/OracleFMW/Middleware_PS1_RC2/Oracle_WC1".
The details are:
Patch 9991008: Required component(s) missing : [ oracle.jrf.j2ee, 11.1.1.2.0 ] , [
oracle.jrf.dms, 11.1.1.2.0 ]
Some of the Oracle Homes under the Middleware Home "/OracleFMW/Middleware_PS1_RC2"
have failed this check.

```

OPatch command 'checkApplicable' done.

```

-----
The following warnings have occurred during OPatch execution:
1) OUI-67124:Some of the Oracle Homes under the Middleware Home
"/OracleFMW/Middleware_PS1_RC2" have failed this check.
-----

```

OPatch Session completed with warnings.

OPatch completed with warnings.

2.4.7 Listing Patches Applied to an Oracle Home or WebLogic Domain

The `checkInstalledOneOffs` command checks to see if the specified patch or patches have been applied to certain Oracle homes or WebLogic Domains:

- If a Middleware home is specified, OPatch checks all the Oracle homes within the specified Middleware home that are registered with the machine's central inventory. If not specified, then the `MW_HOME` environment variable is used.
- If an Oracle home is specified, OPatch checks the patch against the specified Oracle home only.
- If neither is specified, and neither the `MW_HOME` or `ORACLE_HOME` environment variable is defined, then OPatch will run the command for the Middleware home from where the command was run.
- If a WebLogic Domain is specified, OPatch checks against all the Oracle homes within the specified WebLogic Domain.

The syntax for the `checkInstalledOneOffs` command is shown below:

```
opatch checkInstalledOneOffs -id patch_IDS
    [-mw_home MW_HOME]
    [-oh ORACLE_HOME]
    [-domain domain_name]
    [-invPtrLoc path_to_oraInst.loc]
```

A summary of the options for the `checkInstalledOneOffs` command are described in Table 2-9.

Table 2-9 Options for the OPatch `checkInstalledOneOffs` Command

Option	Description
<code>-id patch_IDS</code>	ID of the patch or patches that you want to check. Separate multiple patch IDs with a comma (,) character.
<code>-mw_home MW_HOME</code>	Optional - absolute path to the Middleware home directory.
<code>-oh ORACLE_HOME</code>	Optional - absolute path to the Oracle home.
<code>-domain domain_name</code>	Optional - name of the WebLogic Domain.
<code>-invPtrLoc path_to_oraInst.loc</code>	Optional - absolute path to the location of your <code>oraInst.loc</code> file; this option is needed if the installation was performed using the <code>-invPtrLoc</code> option.

Below is an example of the `opatch checkInstalledOneOffs` command on a UNIX operating system. In this example, patch 8965224 is installed in the SOA Oracle home and patch 9991008 is installed in the Oracle Common Home:

```
[aime@stadr41 Oracle_SOA1]$ ./OPatch/opatch checkinstalleddoneoffs
-id 8965224,9991008
Invoking OPatch 11.1.0.6.9

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UTIL session

Oracle Home      : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory
  from           : /etc/oraInst.loc
OPatch version   : 11.1.0.6.9
OUI version      : 11.1.0.7.0
OUI location     : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/oui
Log file location : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/cfgtoollogs/opatch/opatch2009-12-06_09-40-41AM.log

Patch history file: /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/cfgtoollogs/opatch/opatch_history.txt

OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"

Invoking utility "checkinstalleddoneoffs"

"checkInstalledOneOffs" failed for Oracle Home "/OracleFMW/Middleware_PS1_RC2/oracle_common".
Not Installed Patch IDs: [8965224]

"checkInstalledOneOffs" failed for Oracle Home "/OracleFMW/Middleware_PS1_
```

```

RC2/Oracle_SOA1".
Not Installed Patch IDs: [9991008]

"checkInstalledOneOffs" failed for Oracle Home "/OracleFMW/Middleware_PS1_
RC2/Oracle_WC1".
Not Installed Patch IDs: [8965224, 9991008]

Some of the Oracle Homes under the Middleware Home "/OracleFMW/Middleware_PS1_RC2"
have failed this check.
OPatch command 'checkInstalledOneOffs' done.
-----
The following warnings have occurred during OPatch execution:
1) OUI-67124:Some of the Oracle Homes under the Middleware Home
"/OracleFMW/Middleware_PS1_RC2" have failed this check.
-----
OPatch Session completed with warnings.

OPatch completed with warnings.

```

2.4.8 Starting or Stopping a Runtime Instance

The `start` and `stop` commands allow Fusion Middleware runtime entities to be started or stopped, respectively. Only entities of the same type can be started or stopped; if you need to start or stop entities of multiple types, you must run this command separately for each entity type.

In order to run this command:

- Node Manager must be configured and running on the target server machine.
- The `WebLogic_Home/common/nodemanager/nodemanager.domains` (on UNIX operating systems) or `WebLogic_Home\common\nodemanager\nodemanager.domains` (on Windows operating systems) must be populated.
- You must be able to connect to the Administration Server, which must be up and running.

The syntax for the `start` and `stop` commands is shown below:

```

opatch start|stop
  -domain domain_name
  -targets product_entity_name
  -target_type product_entity_type
  [-oh ORACLE_HOME]

```

A summary of the options for the `start` and `stop` commands are described in Table 2–10.

Table 2–10 Options for the OPatch start and stop Commands

Option	Description
<code>-domain <i>domain_name</i></code>	The name of the domain in which the specified targets will be started or stopped.
<code>-targets <i>product_entity_name</i></code>	The name of the WebLogic or Fusion Middleware entity you want to start or stop. Only entities of the same type can be specified; multiple entities should be separated by a comma.

Table 2-10 (Cont.) Options for the OPatch start and stop Commands

Option	Description
<code>-target_type target_type</code>	<p>The type of WebLogic or Fusion Middleware entity you want to start. Valid values are:</p> <ul style="list-style-type: none"> ▪ <code>fmwApplication</code> ▪ <code>fmwServer</code> ▪ <code>fmwCluster</code> ▪ <code>fmwContainer</code> <p>The <code>fmwContainer</code> option starts or stops the container (for example, the WebLogic Server) hosting the application.</p> <p>The <code>fmwServer</code> option starts or stops the actual java process that is running (for example, a Managed Server).</p>
<code>-oh ORACLE_HOME</code>	<p>Optional - the absolute path to the Oracle home directory. If this is not specified, the value in the <code>ORACLE_HOME</code> environment variable is used. If neither is available, then the Oracle home from which the command is executed is used.</p>

Below is an example of the `opatch start` command on a UNIX operating system:

```
[aime@stادن41 Oracle_SOA1]$ ./OPatch/opatch start
-targets soa_server1
-target_type fmwserver
-domain MySOAWebCenterDist
```

Invoking OPatch 11.1.0.6.9

```
Oracle Interim Patch Installer version 11.1.0.6.9
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```

UTIL session

```
Oracle Home      : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory
  from           : /etc/oraInst.loc
OPatch version   : 11.1.0.6.9
OUI version      : 11.1.0.7.0
OUI location     : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/oui
Log file location : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/cfgtoollogs/opatch/opatch2009-12-06_12-30-31PM.log
```

```
Patch history file: /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/cfgtoollogs/opatch/opatch_history.txt
```

OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"

Invoking utility "start"

```
Please enter the WebLogic Admin Server username:> weblogic
Please enter the WebLogic Admin Server password:>
Please enter the WebLogic Admin Server URL(t3://stادن41:7011):>
[FMW] Performing Start Actions
[FMW] Finished Start Actions
OPatch command 'start' done.
```

OPatch succeeded.

Below is an example of the `opatch stop` command on a UNIX operating system:

```
[aime@stادن41 Oracle_SOA1]$ ./OPatch/opatch stop -targets soa_server1 -target_type
fmwserver -domain MySOAWebCenterDist
Invoking OPatch 11.1.0.6.9

Oracle Interim Patch Installer version 11.1.0.6.9
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UTIL session

Oracle Home      : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1
Central Inventory : /ade/aime_dte6989/oracle/work/EM_SH_1/oraInventory
   from          : /etc/oraInst.loc
OPatch version   : 11.1.0.6.9
OUI version      : 11.1.0.7.0
OUI location     : /OracleFMW/Middleware_PS1_RC2/Oracle_SOA1/oui
Log file location : /OracleFMW/Middleware_PS1_RC2/Oracle_
SOA1/cfgtoollogs/opatch/opatch2009-12-06_11-13-59AM.log

Patch history file: /OracleFMW/Middleware_PS1_RC2/Oracle_
SOA1/cfgtoollogs/opatch/opatch_history.txt

OPatch detects the Middleware Home as "/OracleFMW/Middleware_PS1_RC2"

Invoking utility "stop"
Please enter the WebLogic Admin Server username:> weblogic
Please enter the WebLogic Admin Server password:>
Please enter the WebLogic Admin Server URL (t3://stادن41:7011):>
[FMW] Performing Stop Actions
[FMW] Finished Stop Actions
OPatch command 'stop' done.

OPatch succeeded.
```

2.5 Troubleshooting OPatch in a Fusion Middleware Environment

This section describes common issues you may encounter when running the OPatch utility in a Fusion Middleware environment.

2.5.1 Notes About Patching the MDS Repository

For special information about patching the MDS repository, refer to "Understanding the MDS Repository" in the *Oracle Fusion Middleware Administrator's Guide*.

2.5.2 Setting the Machine Name and Listen Address

The machine name of the Administration Server and Managed Servers must be set to a valid value. It cannot be set to blank or None.

The listen address of the Administration and Managed Servers must be set to the real physical host's address (hostname, FQDN, or IP address). It cannot be set to blank or localhost.

These values need to be properly set only once; you will not need to reset them should you ever need to patch your software.

To set the machine name and listed address of the Managed Servers:

1. Open the Administration Console.

2. In the Domain Structure, navigate to *domain_name* > **Environments** > **Machines**.
3. If your WebLogic Server is running in Production Mode, click the **Lock & Edit** button on the left hand side. If your WebLogic Server is running in Development Mode, this step is not needed.
4. Click the **New** button to create a new machine. Specify a name and select the operating system.
5. Select the machine you just created, go to **Configuration** > **Node Manager** and change the Listen Address to the host on which the Node Manager is listening, then click the **Save** button.
6. In the Domain Structure, navigate to *domain_name* > **Environments** > **Servers**.
7. For each Managed Server, assign the machine you just created. In the Listen Address field, specify the name of the host on which the Node Manager is listening. Click **Save** when you are finished.
8. If your WebLogic Server is running in Production Mode, click the **Activate Changes** button on the left hand side. If your WebLogic Server is running in Development Mode, this step is not needed.

To set the machine name and listen address of the Administration Server:

1. Stop the Administration Server and all Managed Servers.
2. Back up the `config.xml` file in the domain.

The default location of this file is the `config` directory inside your Domain home.

3. Modify the existing `config.xml` file as follows:

- a. Find the following line:

```
<name>AdminServer</name>
```

- b. Add the following lines:

```
<machine>host_name</machine>
<listen-address>host_name</listen-address>
```

- c. Save the file.

4. Restart the Administration Server and all the Managed Servers.

If you encounter any problems, revert back to the saved version of the `config.xml` file and contact Oracle Support.

Applying the Latest Oracle Fusion Middleware Patch Set

This chapter describes how to patch your existing Oracle Fusion Middleware software to the latest version. The specific patching instructions you follow depend on the version of your current software. Instructions in this chapter are provided for software versions 11.1.1.2.0 and later.

Note: If you have Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0), you must update to Release 1 (11.1.1.2.0) before you can update your software to Release 11.1.1.6.0. See Appendix C, "Using Patch Assistant to Migrate from 11g Release 1 (11.1.1.1.0) to Release 1 (11.1.1.2.0)" for instructions.

This chapter contains the following content:

- Section 3.1, "Summary of the Oracle Fusion Middleware Patching Process"
- Section 3.2, "New Product Names for Oracle WebCenter and Oracle Enterprise Content Management Suite"
- Section 3.3, "Special Instructions for Patching Oracle WebCenter"
- Section 3.4, "Special Instructions for Patching Oracle Identity and Access Management"
- Section 3.5, "General Pre-Patching Tasks"
- Section 3.6, "Downloading and Starting the Installer"
- Section 3.7, "Applying the Patch Set"
- Section 3.8, "Update Your Schemas with Patch Set Assistant"
- Section 3.9, "Post-Patching Tasks"
- Section 3.10, "Start the Servers and Processes"
- Section 3.11, "Verifying Your Patch Set Installation"

3.1 Summary of the Oracle Fusion Middleware Patching Process

Figure 3–1 shows the general patching procedures for Oracle Fusion Middleware.

Figure 3–1 Oracle Fusion Middleware Patching Process Overview and Roadmap

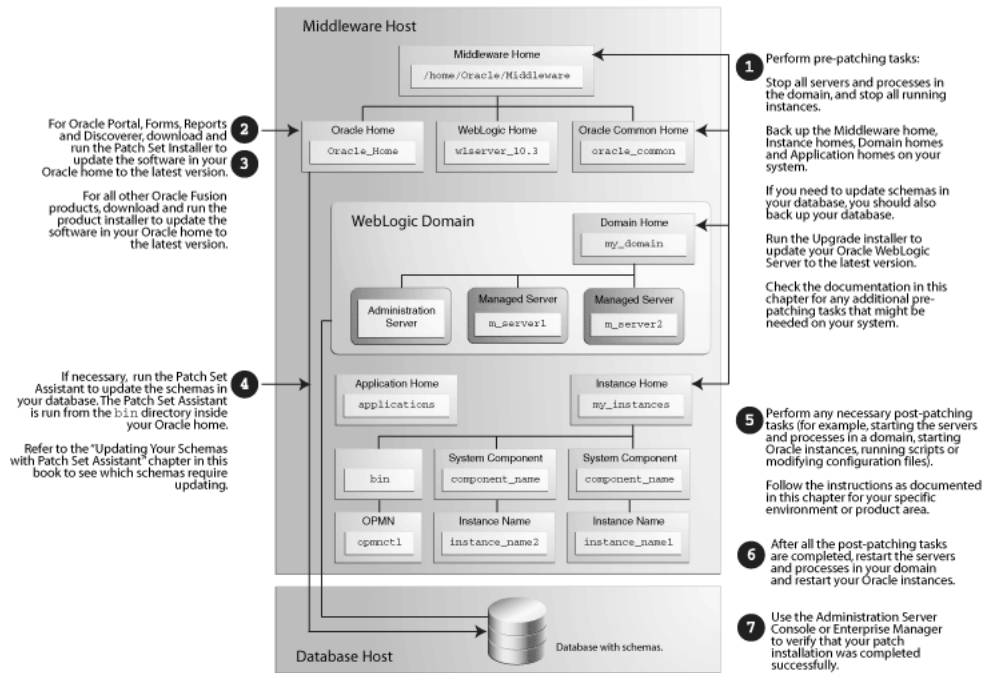


Table 3–1 provides links to additional information for each of the patching steps.

Table 3–1 Summary of Patching Procedures and Links to Documentation

Step	Description
1	<p>Perform the following general pre-patching tasks:</p> <ol style="list-style-type: none"> Section 3.5.1, "Stopping the Servers and Processes" Section 3.5.2, "Backing Up Your Middleware Home, Domain Home and Oracle Instances" Section 3.5.3, "Backing Up Your Database and Database Schemas" Section 3.5.4, "Backing Up Additional Configuration Information" <p>Back up procedures exist for the following products:</p> <ul style="list-style-type: none"> Configurations and stores Oracle Portal (OmniPortlet and WebClipping customizations) Oracle B2B (XEngine customizations) Oracle Business Intelligence Presentation Catalogs Oracle Data Integrator (Standalone agent) Oracle Identity Federation <p>5. Section 3.5.5, "Patching Oracle WebLogic Server"</p> <p>If you are patching in silent mode, see Section 3.5.6, "Renaming the emCCR File for Silent Patching".</p>
2	<p>Download and start the appropriate installer for your product: For details, see Section 3.6, "Downloading and Starting the Installer".</p>
3	<p>Update the software in your Oracle home using the downloaded Installer.</p>

Table 3–1 (Cont.) Summary of Patching Procedures and Links to Documentation

Step	Description
4	<p>If necessary, update your database schemas with the Patch Set Assistant.</p> <p>To see if you need to run the Patch Set Assistant, refer to Table 4–1, "Schemas That Require Updating for the Latest Release".</p> <p>For more information, see Section 3.8, "Update Your Schemas with Patch Set Assistant".</p>
5	<p>Perform any necessary post-patching tasks (for example, starting the servers and processes in a domain, starting Oracle instances, running scripts or modifying configuration files). The tasks that need to be performed will vary depending on the version of your existing software and components configured in your environment. Refer to the tables in the following sections for details:</p> <ul style="list-style-type: none"> ■ Section 3.9.1, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.2.0" ■ Section 3.9.2, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.3.0" ■ Section 3.9.3, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.4.0" ■ Section 3.9.4, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.5.0"
6	<p>Start the servers and processes.</p> <p>For more information, see Section 3.10, "Start the Servers and Processes".</p>
7	<p>Verify that your patch installation is complete.</p> <p>For more information, see Section 3.11, "Verifying Your Patch Set Installation".</p>

If you are running your products in a distributed environment (for example, you have Managed Servers running in multiple domains on multiple systems) and you have set up a shared Middleware home on a shared network drive mounted to each machine that is part of your domain, then this need patching procedure only needs to be done once (see Section 2.3.3, "Patching in a Distributed Environment").

If your distributed environment has a separate Middleware home on each system, then this patching procedure must be repeated for each domain on each system.

More information about distributed topologies can be found in the Enterprise Deployment Guide for your specific product.

3.2 New Product Names for Oracle WebCenter and Oracle Enterprise Content Management Suite

For Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0), the Oracle WebCenter and Enterprise Content Management Suite products have been rebranded with new product and component names.

For more information, see Section 5.1, "New Product Names for Oracle WebCenter and Oracle Enterprise Content Management Suite".

3.3 Special Instructions for Patching Oracle WebCenter

The procedures you need to follow for patching your existing Oracle WebCenter software depend on your current software version:

- If your existing Oracle WebCenter software version is 11.1.1.2.0 or 11.1.1.3.0, follow the instructions in Section 5.3, "Patching an Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0 Installation" to patch your software.
- If your existing software version is 11.1.1.4.0 or 11.1.1.5.0, follow the instructions in Section 5.2, "Patching an Oracle WebCenter 11.1.1.4.0 or 11.1.1.5.0 Installation" to patch your software.

After you complete these steps, return to this chapter and go to Section 3.10, "Start the Servers and Processes" and Section 3.11, "Verifying Your Patch Set Installation".

3.4 Special Instructions for Patching Oracle Identity and Access Management

Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0) contains updated Oracle Identity Management products, including Oracle Internet Directory, Oracle Virtual Directory, and Oracle Identity Federation.

However, it does not contain updates for the Oracle Identity and Access Management products. For more information, see Chapter 6, "Patching Oracle Identity and Access Management".

3.5 General Pre-Patching Tasks

This section describes tasks that should be completed before you patch your software:

- Section 3.5.1, "Stopping the Servers and Processes"
- Section 3.5.2, "Backing Up Your Middleware Home, Domain Home and Oracle Instances"
- Section 3.5.3, "Backing Up Your Database and Database Schemas"
- Section 3.5.4, "Backing Up Additional Configuration Information"
- Section 3.5.5, "Patching Oracle WebLogic Server"
- Section 3.5.6, "Renaming the emCCR File for Silent Patching"

3.5.1 Stopping the Servers and Processes

Before you run the Installer to update your software, you should stop all servers and processes (including OPMN) on all machines which are part of any domain used from the Middleware home.

Instructions for stopping an Oracle Fusion Middleware environment are provided in "Stopping an Oracle Fusion Middleware Environment" in *Oracle Fusion Middleware Administrator's Guide*.

If your environment is running Oracle Process Manager and Notification Server (OPMN), you should also stop OPMN with the `opmnctl stopall` command.

If you are running Node Manager, you should also stop Node Manager. You can do this by closing the console window in which Node Manager is running, or by using the `stopNodeManager WLST` command.

Note: In order for the `stopNodeManager` command to work, Node Manager must be configured with `QuitEnabled=true`.

See "stopNodeManager" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference* for more information.

3.5.2 Backing Up Your Middleware Home, Domain Home and Oracle Instances

After stopping the servers and processes, back up your Middleware home directory (including the Oracle home directories inside the Middleware home), your local

Domain home directory, your local Oracle instances, and also the Domain home and Oracle instances on any remote systems that use the Middleware home.

If your patch set installation is unexpectedly interrupted, or if you choose to cancel out of the installation before it is complete, you may not be able to install the patch unless you restore your environment to the previous configuration before running the Installer again.

3.5.3 Backing Up Your Database and Database Schemas

If your database schemas require updating, you should also back up your database before you begin the patching procedure. Make sure this back up includes the schema version registry table, as each Fusion Middleware schema has a row in this table. The name of the schema version registry table is `SYSTEM.SCHEMA_VERSION_REGISTRY$`. Refer to your database documentation for instructions on how to do this.

If you run the Patch Set Assistant to update an existing schema and it does not succeed, you must restore the original schema before you can try again. Make sure you backup your existing database schemas before you run the Patch Set Assistant.

To see if your schemas require updating, refer to Table 4–1, "Schemas That Require Updating for the Latest Release" in Chapter 4, "Updating Your Schemas with Patch Set Assistant".

3.5.4 Backing Up Additional Configuration Information

Depending on your specific environment, you might also need to back up the following before performing any patching procedures:

- Back Up Configurations and Stores

Each WebLogic Server domain must be updated using the `upgradeOpss()` WLST command. Before running the `upgradeOpss()` command, make sure that you backup the store to be updated. In case of a LDAP store, backup all data under the root node of the store (which is specified as a property of the store in the configuration file). In case of an update failure, restore that node entirely.

For more information, see "Upgrading Policies with `upgradeOpss`" in *Oracle Fusion Middleware Security Guide*.

- Save OmniPortlet and WebClipping Customizations for Oracle Portal

If you are using OmniPortlet and WebClipping customizations, and they are being used with a file-based preferences store, you must save your customizations as described in Section 5.3.3.1, "Save Your OmniPortlet and WebClipping Customizations".

After saving your customizations and patching your software, you must follow the instructions in Section 5.3.5.5, "Restoring Your OmniPortlet and WebClipping Customizations".

- Save XEngine Customizations for Oracle B2B

This procedure is needed only if you use custom XEngine configurations in cases where B2B server is integrated with B2B EDI endpoints. In such cases, all B2B domains created from the same installation share the a single XEngine configuration stored within a single directory. This directory must be backed up prior to patching, and then restored after patching is complete.

For more information, see Section 3.9.7.8, "Saving and Restoring XEngine Customizations for Oracle B2B".

- Back Up Existing Oracle BI Presentation Catalogs

When updating your Oracle Business Intelligence (BI) software from Release 11.1.1.3.0 to 11.1.1.6.0, you must manually update your Oracle BI Presentation Catalogs. See Section 3.9.11.2, "Updating Oracle Business Intelligence Catalogs" for more information.

- Back Up Files for Oracle Data Integrator Java EE Standalone Agent

Make sure the following files and directories are backed up (they should be if you backed up your Oracle home directory, as specified in Section 3.5.2, "Backing Up Your Middleware Home, Domain Home and Oracle Instances"):

1. Backup the `ODI_HOME/oracledi/agent/bin/odiparams.sh` (on UNIX operating systems) or `ODI_HOME\oracledi\agent\bin\odiparams.bat` (on Windows operating systems) file.
2. Backup the `ODI_HOME/oracledi/agent/drivers` (on UNIX operating systems) or `ODI_HOME\oracledi\agent\drivers` (on Windows operating systems) directory.

After Oracle Data Integrator is patched, follow the instructions in Section 3.9.12.3, "Reconfiguring the ODI Standalone Agent".

- Back up custom JSPs for Oracle Identity Federation

If you are updating your Oracle Identity Federation to the latest release, you should back up any custom JSPs before patching to the latest version. The patching process will overwrite the JSPs included in the `oif.ear` file.

After the patching process is complete, you should restore your custom JSPs.

3.5.5 Patching Oracle WebLogic Server

If Oracle WebLogic Server is already installed on your system, make sure you have patched Oracle WebLogic Server to either version 10.3.6 or 10.3.5 (both are supported in Release 11.1.1.6.0) using the Upgrade installer. To do so:

1. Download the Upgrade installer from My Oracle Support.

For instructions, see "Downloading an Upgrade Installer From My Oracle Support" in *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*.

2. Run the Upgrade installer in graphical mode to patch your WebLogic Server.

For instructions, see "Running the Upgrade Installer in Graphical Mode" in *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*.

If you want to run the Upgrade installer in silent mode (for example, you have an environment where you need to patch multiple instances of Oracle WebLogic Server), see the instructions in "Running the Installation Program in Silent Mode" in *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*.

3.5.6 Renaming the emCCR File for Silent Patching

If you are patching your software in silent mode, you may encounter the following error messages:

```
"SEVERE:Values for the following variables could not be obtained from the command  
line or response file(s):  
MYORACLESUPPORT_USERNAME(MyOracleSupportUsername) "
```


To work around this issue, rename the `ORACLE_HOME/CCR/bin/emCCR` (on UNIX operating systems) or `ORACLE_HOME\CCR\bin\emCCR` (on Windows operating systems) file.

For example, on a UNIX operating system:

```
cd ORACLE_HOME/CCR/bin
mv emCCR emCCR_LAST
```

On a Windows operating system:

```
cd ORACLE_HOME\CCR\bin
mv emCCR emCCR_LAST
```

See "Silent Oracle Fusion Middleware Installation and Deinstallation" in *Oracle Fusion Middleware Installation Planning Guide* for more details about silent installation.

3.6 Downloading and Starting the Installer

The following sections contain instructions on how to obtain the proper installer required to patch your product:

- Section 3.6.1, "About the Installers Used for Patching"
- Section 3.6.2, "Downloading the Required Installer"
- Section 3.6.3, "Start the Installer"

3.6.1 About the Installers Used for Patching

The installers you use to apply the latest Oracle Fusion Middleware patch sets vary in their behavior and capabilities, depending upon the product you are using. Before you begin the patching process, review Table 3–2 for information about the types of installers and what to expect when you run the installer to apply the latest patch set.

Note that this table is not a complete list of Oracle Fusion Middleware products. For a complete list of the products available with each patch set release, see the *Oracle Fusion Middleware Download, Installation, and Configuration ReadMe Files*.

Table 3–2 Summary of the Oracle Fusion Middleware Installers Used to Apply the Latest Patch Set

Products	Type and Behavior of the Installer
Oracle Application Developer Runtime Oracle SOA Suite Oracle Service Bus Oracle WebCenter Portal Oracle WebCenter Content	These installers are full installers that can also function as update installers. You can use them to update an existing 11g Release 1 Oracle home, or you can use them to install a new, complete Oracle home.
Oracle Identity Management Oracle Web Tier Oracle Business Intelligence	These installers are full installers that can also function as update installers. They can be used to update an existing 11g Release 1 Oracle home, or they can be used to install a new, complete Oracle home. These installers also offer a configuration option. When using them to apply a patch set, you must select the option to install the software only. Do not select the option to configure the software. The domain you are patching is already configured and does not require any reconfiguration.

Table 3–2 (Cont.) Summary of the Oracle Fusion Middleware Installers Used to Apply the Latest Patch Set

Products	Type and Behavior of the Installer
Oracle Portal, Forms, Reports and Discoverer	This installer is an update-only installer, which requires an existing Oracle Fusion Middleware 11g Release 1 Oracle home.

3.6.2 Downloading the Required Installer

To download and unpack the Installer files for your product:

1. Download the installer from the Oracle Technology Network, My Oracle Support, or Oracle Software Delivery Cloud (formerly E-Delivery).

For more information, see "Select an Oracle Fusion Middleware Software Download Site" and "Download the Software Required for Your Starting Point" in *Oracle Fusion Middleware Download, Installation, and Configuration ReadMe Files*.

2. Unpack the downloaded archive that contains the installer and software that you want to install into a directory on the target computer.

3.6.3 Start the Installer

To start the installer you just downloaded and unpacked:

1. Change directory to the `Disk1` folder inside the unpacked archive folder.
2. Start the Installer:

On UNIX operating systems:

```
./runInstaller
```

On Windows operating systems:

```
setup.exe
```

Depending on your system environment and product you are updating, you may be prompted to provide the location of a JRE/JDK on your system when you start the installer. When you installed Oracle WebLogic Server, a JRE was installed in the `jdk160_version` directory inside the Middleware home; you can use this location to start the installer.

If you do not have Oracle WebLogic Server installed on your system, you can use the JDK in the `jdk` directory inside the Oracle home.

Make sure you specify the absolute path to your JRE/JDK location; relative paths are not supported.

The Installer can also be run in silent mode. See "Silent Oracle Fusion Middleware Installation and Deinstallation" in *Oracle Fusion Middleware Installation Planning Guide* for more details.

3.7 Applying the Patch Set

After you have started the Installer, follow the instructions in on the screen to apply the patch set to your existing Middleware home.

Note: If your domain includes multiple host computers, you must run the Installer separately on each host to update the software on that host.

As you review each screen of the installer, note that there are two significant differences between applying a patch set and installing software for the first time:

- When you are applying a patch set, you must identify an existing Middleware home on the Specify Installation Location screen.
- If you are installing Oracle Identity Management, Oracle Business Intelligence, or Oracle Web Tier, then you must perform a software only install and select the existing Middleware home and Oracle home you want to patch. There is no need to configure or re-configure your existing software.

Table 3–3 provides a summary of the typical installation screens you will see when you are applying a patch set to an existing Middleware home.

If you need additional help with any of the installation screens, refer to Appendix A, "Oracle Portal, Forms, Reports and Discoverer Patch Set Installer Screens" or click **Help** to access the online help.

Table 3–3 Typical Installation Flow For Installing a Patch Set

Screen	When Does This Screen Appear?	Description
Welcome	Always.	This page introduces you to the Oracle Fusion Middleware Installer.
Specify Installation Location	Always.	Specify your existing Oracle Middleware home and product Oracle home locations.
Specify Security Updates	Only if you have not previously registered for security updates for your products.	Enter your E-mail address if you want to receive the latest product information and security updates. If you have a My Oracle account and wish to receive updates via this mechanism, select I wish to receive security updates via My Oracle Support , then enter your account password. If you do not wish to register for security updates, leave all the fields on this screen blank.
Installation Summary	Always.	Verify the information on this screen, then click Install to begin the installation.
Installation Progress	Always.	This screen shows the progress of the installation. Click Next when the installation is 100% complete.
Installation Complete	Always.	Click Save to save your configuration information to a file. This information includes port numbers, installation directories, URLs, and component names which you may need to access at a later time. After saving your configuration information, click Finish to dismiss the installer.

3.8 Update Your Schemas with Patch Set Assistant

To see if your schema requires updating with the Patch Set Assistant, refer to Table 4–1, "Schemas That Require Updating for the Latest Release" in Section 4.1, "Which Schemas Need to be Updated with Patch Set Assistant?".

If the product you are patching uses one of the schemas listed in the table, follow the instructions in Chapter 4, "Updating Your Schemas with Patch Set Assistant" to update your schemas.

If the product you are patching does not use one of these schemas, you can skip this section and proceed to Section 3.9, "Post-Patching Tasks".

3.9 Post-Patching Tasks

This section contains information about manual tasks that must be performed after the patch installation is complete. Some of the tasks may not apply to your environment as you may not be using the products in question. However, if you are, then the manual steps must be performed in order for your domain to work correctly.

The following topics are covered:

- Section 3.9.1, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.2.0"
- Section 3.9.2, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.3.0"
- Section 3.9.3, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.4.0"
- Section 3.9.4, "Post-Patching Tasks If Your Starting Point is Release 11.1.1.5.0"
- Section 3.9.5, "Post-Patching Tasks for System Components"
- Section 3.9.6, "Post-Patching Tasks for Your WebLogic Server Domain"
- Section 3.9.7, "Post-Patching Tasks for Oracle SOA Suite"
- Section 3.9.8, "Post-Patching Tasks for Oracle WebCenter Content"
- Section 3.9.9, "Adding New OWSM Pre-Defined Policies"
- Section 3.9.10, "Oracle Service Bus Domain Configuration"
- Section 3.9.11, "Post-Patching Tasks for Oracle Business Intelligence"
- Section 3.9.12, "Post-Patching Tasks for Oracle Data Integrator"

3.9.1 Post-Patching Tasks If Your Starting Point is Release 11.1.1.2.0

Table 3–4 summarizes the post-patching tasks that may be required depending on your existing Release 11.1.1.2.0 environment. Locate the applicable product area in the table, then refer to the documentation link for instructions.

Table 3–4 Post-Patching Tasks If Your Starting Point is Release 11.1.1.2.0

Product Area	Documentation
System Components	
Patch any system component(s) associated with a WebLogic Server domain.	Section 3.9.5.1, "Upgrading System Components"
Oracle Identity Federation.	Section 3.9.5.2, "Updating Configuration Properties in Oracle Identity Federation"
Oracle Internet Directory, if you plan to add more than one million entries.	Section 3.9.5.3, "Adding Datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE Tablespaces for Oracle Internet Directory"
Oracle Internet Directory listening on dual network addresses.	Section 3.9.5.4, "Configuring Oracle Identity Management to Listen on Dual Network Addresses"

Table 3–4 (Cont.) Post-Patching Tasks If Your Starting Point is Release 11.1.1.2.0

Product Area	Documentation
Oracle Configuration Manager for Oracle Identity Management or Oracle Portal, Forms, Reports and Discoverer (Windows operating system only).	Section 3.9.5.5, "Updating Oracle Configuration Manager"
Oracle Reports and Oracle Portal.	Section 3.9.5.6, "Resolving JDBC Errors in Oracle Reports and Oracle Portal" Section 3.9.5.7, "Updating the Configuration in SSL-Enabled Oracle Portal Instances"
WebLogic Server Domain	
Shared Libraries.	Section 3.9.6.1, "Updating Fusion Middleware Shared Libraries"
Configurations and Stores.	Section 3.9.6.2, "Updating Configurations and Stores"
Web Services Atomic Transaction.	Section 3.9.6.3, "Enabling WS-AtomicTransaction"
Oracle SOA Suite	
SOA Schemas and database growth.	Section 3.9.7.1, "Loading the Oracle SOA Suite Purge Scripts for Database Management"
SOA Composer and BPM Workspace.	Section 3.9.7.2, "Removing the tmp Folder for SOA Composer and BPM Workspace"
Application Policy Store.	Section 3.9.7.4, "Run bpm-ps5-upgrade.py to Update the Policy Store"
Policy Store and Shared Library.	Section 3.9.7.5, "Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library"
BAM-ODI Integration.	Section 3.9.7.6, "Updating the Oracle Data Integrator Clients if BAM-ODI Integration is Enabled"
SOA Composer.	Section 3.9.7.7, "Committing or Reverting Open Edit Sessions in SOA Composer"
Oracle B2B.	Section 3.9.7.8, "Saving and Restoring XEngine Customizations for Oracle B2B"
Oracle Web Services Manager	
Oracle Web Services Manager.	Section 3.9.9, "Adding New OWSM Pre-Defined Policies"
Oracle Service Bus	
Oracle Service Bus.	Section 3.9.10, "Oracle Service Bus Domain Configuration"

3.9.2 Post-Patching Tasks If Your Starting Point is Release 11.1.1.3.0

Table 3–5 summarizes the post-patching tasks that may be required depending on your existing Release 11.1.1.3.0 environment. Locate the applicable product area in the table, then refer to the documentation link for instructions.

Table 3–5 Post-Patching Tasks If Your Starting Point is Release 11.1.1.3.0

Product Area	Documentation
System Components	
Patch any system component(s) associated with a WebLogic Server domain.	Section 3.9.5.1, "Upgrading System Components"
Oracle Identity Federation.	Section 3.9.5.2, "Updating Configuration Properties in Oracle Identity Federation"

Table 3–5 (Cont.) Post-Patching Tasks If Your Starting Point is Release 11.1.1.3.0

Product Area	Documentation
Oracle Internet Directory, if you plan to add more than one million entries.	Section 3.9.5.3, "Adding Datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE Tablespaces for Oracle Internet Directory"
Oracle Internet Directory listening on dual network addresses.	Section 3.9.5.4, "Configuring Oracle Identity Management to Listen on Dual Network Addresses"
Oracle Configuration Manager for Oracle Identity Management or Oracle Portal, Forms, Reports and Discoverer (Windows operating system only).	Section 3.9.5.5, "Updating Oracle Configuration Manager"
Oracle Reports and Oracle Portal.	Section 3.9.5.6, "Resolving JDBC Errors in Oracle Reports and Oracle Portal" Section 3.9.5.7, "Updating the Configuration in SSL-Enabled Oracle Portal Instances"
WebLogic Server Domain	
Shared Libraries.	Section 3.9.6.1, "Updating Fusion Middleware Shared Libraries"
Configurations and Stores.	Section 3.9.6.2, "Updating Configurations and Stores"
Oracle SOA Suite	
SOA Schemas and database growth.	Section 3.9.7.1, "Loading the Oracle SOA Suite Purge Scripts for Database Management"
SOA Composer and BPM Workspace.	Section 3.9.7.2, "Removing the tmp Folder for SOA Composer and BPM Workspace"
Oracle SOA <code>soa-infra</code> application.	Section 3.9.7.3, "Updating the soa-infra Application in Warning State"
Application Policy Store.	Section 3.9.7.4, "Run bpm-ps5-upgrade.py to Update the Policy Store"
Policy Store and Shared Library.	Section 3.9.7.5, "Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library"
BAM-ODI Integration.	Section 3.9.7.6, "Updating the Oracle Data Integrator Clients if BAM-ODI Integration is Enabled"
SOA Composer.	Section 3.9.7.7, "Committing or Reverting Open Edit Sessions in SOA Composer"
Oracle B2B.	Section 3.9.7.8, "Saving and Restoring XEngine Customizations for Oracle B2B"
Oracle WebCenter Content	
Oracle WebCenter Content: Imaging.	Section 3.9.8.1, "Updating Oracle WebCenter Content: Imaging"
Oracle WebCenter Content application adapters.	Section 3.9.8.2, "Updating Oracle Application Adapters for Oracle WebCenter Content"
Oracle Web Services Manager	
Oracle Web Services Manager.	Section 3.9.9, "Adding New OWSM Pre-Defined Policies"
Oracle Service Bus	
Oracle Service Bus.	Section 3.9.10, "Oracle Service Bus Domain Configuration"
Oracle Business Intelligence	
Oracle Business Intelligence Code Grants.	Section 3.9.11.1, "Updating Oracle Business Intelligence Code Grants"
Oracle Business Intelligence Catalogs.	Section 3.9.11.2, "Updating Oracle Business Intelligence Catalogs"

Table 3–5 (Cont.) Post-Patching Tasks If Your Starting Point is Release 11.1.1.3.0

Product Area	Documentation
Oracle Real-Time Decisions.	Section 3.9.11.3, "Updating Oracle Real-Time Decisions"
Oracle Data Integrator	
Oracle Data Integrator repository objects.	Section 3.9.12.1, "Finalizing Repository Patching"
Oracle Data Integrator Java EE Agent.	Section 3.9.12.2, "Reconfiguring the Java EE Agent"
Oracle Data Integrator Standalone Agent.	Section 3.9.12.3, "Reconfiguring the ODI Standalone Agent"
Oracle Enterprise Manager.	Section 3.9.12.4, "Reconfiguring Oracle Enterprise Manager Properties"
Oracle Data Integrator Console.	Section 3.9.12.5, "Reconfiguring the ODI Console"
Oracle Data Integrator odi-sdk-ws Application.	Section 3.9.12.6, "Adding the Version Number for the odi-sdk-ws Application in config.xml"

3.9.3 Post-Patching Tasks If Your Starting Point is Release 11.1.1.4.0

Table 3–6 summarizes the post-patching tasks that may be required depending on your existing Release 11.1.1.4.0 environment. Locate the applicable product area in the table, then refer to the documentation link for instructions.

Table 3–6 Post-Patching Tasks If Your Starting Point is Release 11.1.1.4.0

Product Area	Documentation
System Components	
Patch any system component(s) associated with a WebLogic Server domain.	Section 3.9.5.1, "Upgrading System Components"
Oracle Internet Directory, if you plan to add more than one million entries.	Section 3.9.5.3, "Adding Datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE Tablespaces for Oracle Internet Directory"
Oracle Internet Directory listening on dual network addresses.	Section 3.9.5.4, "Configuring Oracle Identity Management to Listen on Dual Network Addresses"
Oracle Configuration Manager for Oracle Identity Management (Windows operating system only).	Section 3.9.5.5, "Updating Oracle Configuration Manager"
Oracle Reports and Oracle Portal. NOTE: although there is no release of Oracle Portal, Forms, Reports and Discoverer in Release 11.1.1.5.0, this step is still applicable for Oracle Portal, Forms, Reports and Discoverer Release 11.1.1.4.0 against Oracle WebLogic Server version 10.3.5. which is the version used with Oracle Fusion Middleware 11.1.1.5.0.	Section 3.9.5.6, "Resolving JDBC Errors in Oracle Reports and Oracle Portal" Section 3.9.5.7, "Updating the Configuration in SSL-Enabled Oracle Portal Instances"
Oracle SOA Suite	
SOA Composer and BPM Workspace (this is only applicable if your Release 11.1.1.4.0 software is updated from Release 11.1.1.3.0. If you installed and configured Release 11.1.1.4.0 from scratch then you do not need to perform this task).	Section 3.9.7.2, "Removing the tmp Folder for SOA Composer and BPM Workspace"

Table 3–6 (Cont.) Post-Patching Tasks If Your Starting Point is Release 11.1.1.4.0

Product Area	Documentation
Oracle SOA <i>soa-infra</i> application (this is only applicable if your Release 11.1.1.4.0 software is updated from Release 11.1.1.3.0. If you installed and configured Release 11.1.1.4.0 from scratch then you do not need to perform this task).	Section 3.9.7.3, "Updating the soa-infra Application in Warning State"
Application Policy Store.	Section 3.9.7.4, "Run bpm-ps5-upgrade.py to Update the Policy Store"
Policy Store and Shared Library (this is only applicable if your Release 11.1.1.4.0 software is updated from Release 11.1.1.3.0. If you installed and configured Release 11.1.1.4.0 from scratch then you do not need to perform this task).	Section 3.9.7.5, "Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library"
BAM-ODI Integration.	Section 3.9.7.6, "Updating the Oracle Data Integrator Clients if BAM-ODI Integration is Enabled"
SOA Composer.	Section 3.9.7.7, "Committing or Reverting Open Edit Sessions in SOA Composer"
Oracle B2B.	Section 3.9.7.8, "Saving and Restoring XEngine Customizations for Oracle B2B"
Oracle WebCenter Content	
Oracle WebCenter Content: Imaging.	Section 3.9.8.1, "Updating Oracle WebCenter Content: Imaging"
Oracle WebCenter Content application adapters.	Section 3.9.8.2, "Updating Oracle Application Adapters for Oracle WebCenter Content"

3.9.4 Post-Patching Tasks If Your Starting Point is Release 11.1.1.5.0

Table 3–7 summarizes the post-patching tasks that may be required depending on your existing Release 11.1.1.5.0 environment. Locate the applicable product area in the table, then refer to the documentation link for instructions.

Table 3–7 Post-Patching Tasks If Your Starting Point is Release 11.1.1.5.0

Product Area	Documentation
System Components	
Patch any system component(s) associated with a WebLogic Server domain.	Section 3.9.5.1, "Upgrading System Components"
Oracle Internet Directory, if you plan to add more than one million entries.	Section 3.9.5.3, "Adding Datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE Tablespaces for Oracle Internet Directory"
Oracle Internet Directory listening on dual network addresses.	Section 3.9.5.4, "Configuring Oracle Identity Management to Listen on Dual Network Addresses"
Oracle Configuration Manager for Oracle Identity Management (Windows operating system only).	Section 3.9.5.5, "Updating Oracle Configuration Manager"
Oracle Reports and Oracle Portal.	Section 3.9.5.6, "Resolving JDBC Errors in Oracle Reports and Oracle Portal" Section 3.9.5.7, "Updating the Configuration in SSL-Enabled Oracle Portal Instances"
Oracle SOA Suite	

Table 3-7 (Cont.) Post-Patching Tasks If Your Starting Point is Release 11.1.1.5.0

Product Area	Documentation
SOA Composer and BPM Workspace (this is only applicable if your Release 11.1.1.4.0 software is updated from Release 11.1.1.3.0. If you installed and configured Release 11.1.1.4.0 from scratch then you do not need to perform this task).	Section 3.9.7.2, "Removing the tmp Folder for SOA Composer and BPM Workspace"
Oracle SOA <code>soa-infra</code> application (this is only applicable if your Release 11.1.1.4.0 software is updated from Release 11.1.1.3.0. If you installed and configured Release 11.1.1.4.0 from scratch then you do not need to perform this task).	Section 3.9.7.3, "Updating the soa-infra Application in Warning State"
Application Policy Store.	Section 3.9.7.4, "Run bpm-ps5-upgrade.py to Update the Policy Store"
Policy Store and Shared Library (this is only applicable if your Release 11.1.1.4.0 software is updated from Release 11.1.1.3.0. If you installed and configured Release 11.1.1.4.0 from scratch then you do not need to perform this task).	Section 3.9.7.5, "Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library"
BAM-ODI Integration.	Section 3.9.7.6, "Updating the Oracle Data Integrator Clients if BAM-ODI Integration is Enabled"
SOA Composer.	Section 3.9.7.7, "Committing or Reverting Open Edit Sessions in SOA Composer"
Oracle B2B.	Section 3.9.7.8, "Saving and Restoring XEngine Customizations for Oracle B2B"
Oracle Service Bus	
Oracle Service Bus.	Section 3.9.10.1, "Updating an Oracle Service Bus Domain After Applying the Latest Patch Set"
Oracle Service Bus IDE.	Section 3.9.10.2, "Using Oracle WebLogic Server Release 10.3.5 with Oracle Service Bus Release 11.1.1.6.0" Section 3.9.10.3, "Additional Post-Update Tasks for Oracle Service Bus IDE"
Oracle WebCenter Content	
Oracle WebCenter Content: Imaging.	Section 3.9.8.1, "Updating Oracle WebCenter Content: Imaging"
Oracle WebCenter Content application adapters.	Section 3.9.8.2, "Updating Oracle Application Adapters for Oracle WebCenter Content"
Oracle Business Intelligence	
Oracle Business Intelligence.	Section 3.9.11.5, "Enabling bicontentserver Features for 11g Release 1 (11.1.1.6.0)"

3.9.5 Post-Patching Tasks for System Components

A system component is a manageable process that is not deployed as a Java application. Instead, a system component is managed by Oracle Process Manager and Notification (OPMN). For more information, see "Understanding Key Oracle Fusion Middleware Concepts" in *Oracle Fusion Middleware Administrator's Guide*.

Oracle Fusion Middleware system components include the following:

- Products included with Oracle Web Tier, including Oracle HTTP Server and Oracle Web Cache.
- Products included with Oracle Portal, Forms, Reports and Discoverer.
- Products included with Oracle Business Intelligence, including BI Server, BI Scheduler and BI Presentation Services.
- Products included with Oracle Data Integrator.
- Products included Oracle Identity Management, including Oracle Internet Directory, Oracle Directory Integration Platform, Oracle Virtual Directory, Oracle Directory Services Manager and Oracle Identity Federation.

If you have patched one or more of these components, the tasks in this section must be performed. For more information about system components, refer to "Understanding Key Oracle Fusion Middleware Concepts" in *Oracle Fusion Middleware Administrator's Guide*.

The following tasks must be performed:

- Section 3.9.5.1, "Upgrading System Components"
- Section 3.9.5.2, "Updating Configuration Properties in Oracle Identity Federation"
- Section 3.9.5.3, "Adding Datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE Tablespaces for Oracle Internet Directory"
- Section 3.9.5.4, "Configuring Oracle Identity Management to Listen on Dual Network Addresses"
- Section 3.9.5.5, "Updating Oracle Configuration Manager"
- Section 3.9.5.6, "Resolving JDBC Errors in Oracle Reports and Oracle Portal"
- Section 3.9.5.7, "Updating the Configuration in SSL-Enabled Oracle Portal Instances"

3.9.5.1 Upgrading System Components

This step is required for any system component that is associated with a WebLogic domain. In some cases (for example, Oracle Web Tier and Oracle Internet Directory), you can choose to create system components that are not associated with any domain; in these cases, you do not have to perform this procedure.

After you have patched your system component software that is associated with a WebLogic domain, you must run the `ORACLE_HOME/opmn/bin/upgradenonj2eeapp.sh` (on UNIX operating systems) or `ORACLE_HOME\opmn\bin\upgradenonj2eeapp.bat` (on Windows operating systems) script to update your system components.

Before running this script, make sure:

1. The Administration Server is up and running.
2. The `ORACLE_HOME` environment variable has been set to your product's Oracle home directory.
3. The OPMN instance in the `bin` directory in the Instance home is up and running.

On UNIX operating systems:

```
cd INSTANCE_HOME/bin
./opmnctl start
```

On Windows operating systems:

```
cd INSTANCE_HOME\bin
opmnctl start
```

To run the script on UNIX operating systems:

```
cd ORACLE_HOME/opmn/bin
./upgradenonj2eeapp.sh
-oracleInstance Instance_Home_Location
-adminHost WebLogic_Server_Host_Name
-adminPort administration_server_port_number
-adminUsername administration_server_user
```

On Windows operating systems:

```
cd ORACLE_HOME\opmn\bin
upgradenonj2eeapp.bat
-oracleInstance Instance_Home_Location
-adminHost WebLogic_Server_Host_Name
-adminPort administration_server_port_number
-adminUsername administration_server_user
```

3.9.5.2 Updating Configuration Properties in Oracle Identity Federation

This release (11.1.1.6.0) of Oracle Identity Federation introduces new features and bug fixes that require new properties to be defined in the Oracle Identity Federation configuration file. If you want to take advantage of the functionality provided by these new properties, you must run one of the following WLST scripts:

- Run the `oif-upgrade-11.1.1.2.0-11.1.1.6.0.py` script if you are updating your software from 11.1.1.2.0 or 11.1.1.3.0 to 11.1.1.6.0.
- Run the `oif-upgrade-11.1.1.4.0-11.1.1.6.0.py` script if you are updating your software from 11.1.1.4.0 or 11.1.1.5.0 to 11.1.1.6.0.

The instructions to run either script are shown below:

1. On Linux operating systems, enter the `bash` command:

```
bash
```

2. Set the `DOMAIN_HOME` variable to your Oracle Identity Federation Domain home location.
3. Set the `ORACLE_HOME` variable to your Oracle Identity Federation Oracle home location.
4. Run the `setOIFEnv` script.

On UNIX operating systems:

```
bash
export DOMAIN_HOME=full_path_to_domain_home_directory
source ORACLE_HOME/fed/scripts/setOIFEnv.sh
```

On Microsoft Windows operating systems:

```
cd ORACLE_HOME\fed\scripts
setOIFEnv.cmd
```

5. Run the `oif-upgrade-11.1.1.2.0-11.1.1.6.0.py` or `oif-upgrade-11.1.1.4.0-11.1.1.6.0.py` script.

For example, on UNIX operating systems:

```
cd ORACLE_HOME/fed/scripts
```

```
java weblogic.WLST oif-upgrade-11.1.1.2.0-11.1.1.6.0.py
```

On Microsoft Windows operating systems:

```
cd ORACLE_HOME\fed\scripts
java weblogic.WLST oif-upgrade-11.1.1.4.0-11.1.1.6.0.py
```

You will be prompted for the WebLogic Server Administrator credentials (user name and password) and the location of the Managed Server where Oracle Identity Federation is running. You only need to do this for one Managed Server even if you have multiple Managed Servers in your domain.

3.9.5.3 Adding Datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE Tablespaces for Oracle Internet Directory

If your Oracle Internet Directory schema was created during installation of a version prior to 11g Release 1 (11.1.1.6.0), you must add datafiles to the OLTS_CT_STORE and OLTS_ATTRSTORE tablespaces if you intend to add more than a million entries to Oracle Internet Directory. Perform this step prior to the `bulkload` or `ldapadd` operation.

For details, see "Creating Datafiles and Adding Datafiles to a Tablespace" in *Oracle Database Administrator's Guide*.

3.9.5.4 Configuring Oracle Identity Management to Listen on Dual Network Addresses

If you are patching Oracle Identity Management to 11g Release 1 (11.1.1.6.0) from any previous 11g version, and you are changing your configuration from a machine listening on one network address to a machine listening on dual network addresses, you must do the following after applying the patch:

1. Stop all servers and instances in your domain.
2. Reset the value of IPv6 to false in the `DOMAIN_HOME/bin/setDomainEnv.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\setDomainEnv.bat` (on Windows operating systems) script.
3. Restart the servers and instances in your domain.

3.9.5.5 Updating Oracle Configuration Manager

If you are patching Oracle Identity Manager or Oracle Portal, Forms, Reports and Discoverer, you must run some `emCCR` commands after applying the latest patch set in order for the correct version to appear. `emCCR` is used by Oracle Configuration Manager, which is used to collect client configuration information and upload it to the Oracle repository:

1. Go to the `ORACLE_HOME\ccr\bin` directory.
2. Set the `ORACLE_CONFIG_HOME` environment variable to the Instance home that contains Oracle Configuration Manager.

For example, on a Windows operating system:

```
set ORACLE_CONFIG_HOME=C:\Oracle\Middleware\Instances\asinst_ocmoc
```

Below is an example on a UNIX operating system:

```
setenv ORACLE_CONFIG_HOME /home/Oracle/Middleware/asinst_ocmoc
```

3. Run the following `emCCR` commands:

```
emccr collect
emccr status
```

3.9.5.6 Resolving JDBC Errors in Oracle Reports and Oracle Portal

If you have Oracle Reports or Oracle Portal configured in a domain and you apply the latest patch set, you will see the following error if you try to change the invalidation password:

```
Error. Check logs for details. [OK].
```

The following errors are seen in the `portal_wls.log` and `wls_portal.out` log files:

```
<Date and time> <Warning> <RMI> <BEA-080003>
<RuntimeException thrown by rmi server:
javax.management.remote.rmi.RMIConnectionImpl.invoke
(Ljavax.management.ObjectName;Ljava.lang.String;Ljava.rmi.MarshalledObject;[Ljava.
lang.String;Ljava.security.auth.Subject;)
javax.management.RuntimeErrorException:
oracle.jdbc.driver.T2CConnection.getLibraryVersionNumber()I
javax.management.RuntimeErrorException:
oracle.jdbc.driver.T2CConnection.getLibraryVersionNumber()I
at
oracle.as.jmx.framework.standardmbeans.spi.OracleStandardEmitterMBean.doInvoke(Or
acleStandardEmitterMBean.java:991)
at
oracle.adf.mbean.share.AdfMBeanInterceptor.internalInvoke(AdfMBeanInterceptor.java
:104)
at
oracle.as.jmx.framework.generic.spi.interceptors.AbstractMBeanInterceptor.doInvoke
(AbstractMBeanInterceptor.java:252)
....

Caused By: java.lang.UnsatisfiedLinkError:
oracle.jdbc.driver.T2CConnection.getLibraryVersionNumber()I
at oracle.jdbc.driver.T2CConnection.getLibraryVersionNumber(Native
Method)
at oracle.jdbc.driver.T2CConnection$1.run(T2CConnection.java:3537)
at java.security.AccessController.doPrivileged(Native Method)
at oracle.jdbc.driver.T2CConnection.loadNativeLibrary
(T2CConnection.java:3532)
....
```

You must perform the following in order to avoid these JDBC error messages:

1. Go to the bin directory inside your `DOMAIN_HOME`.
2. Edit the `setDomainEnv.sh` (on UNIX operating systems) or `setDomainEnv.cmd` (on Windows operating systems) file and search for `EXT_PRE_CLASSPATH`.
3. Change the definition to match the following:

On UNIX operating systems:

```
EXT_PRE_CLASSPATH=$ORACLE_HOME/jdbc/lib/ojdbc6.jar
export EXT_PRE_CLASSPATH
```

For example:

```
if [ "${EXT_PRE_CLASSPATH}" != "" ] ; then
    if [ "${PRE_CLASSPATH}" != "" ] ; then
```

```

EXT_PRE_CLASSPATH=$ORACLE_HOME/jdbc/lib/ojdbc6.jar // add this line
export EXT_PRE_CLASSPATH // add this line
PRE_CLASSPATH="${EXT_PRE_CLASSPATH}${CLASSPATHSEP}${PRE_CLASSPATH}"
export PRE_CLASSPATH
else
EXT_PRE_CLASSPATH=$ORACLE_HOME/jdbc/lib/ojdbc6.jar // add this line
export EXT_PRE_CLASSPATH // add this line
PRE_CLASSPATH="${EXT_PRE_CLASSPATH}"
export PRE_CLASSPATH
fi
fi

```

On Windows operating systems:

```

if NOT "%EXT_PRE_CLASSPATH%"==" " (
  if NOT "%PRE_CLASSPATH%"==" " (
    set EXT_PRE_CLASSPATH=%ORACLE_HOME%\jdbc\lib\ojdbc6.jar // add this line
    set PRE_CLASSPATH=%EXT_PRE_CLASSPATH%;%PRE_CLASSPATH%
  ) else (
    set EXT_PRE_CLASSPATH=%ORACLE_HOME%\jdbc\lib\ojdbc6.jar // add this line
    set PRE_CLASSPATH=%EXT_PRE_CLASSPATH%
  )
)

```

4. Restart the Portal Managed Server.

3.9.5.7 Updating the Configuration in SSL-Enabled Oracle Portal Instances

Due to security changes in WebLogic Server, if you were running an SSL-enabled 11g version of Oracle Portal and patched it to Release 11.1.1.6.0, you will need to perform the steps mentioned in the "Enable the WebLogic Plug-In, and WLProxySSL and WLProxySSLPassThrough Parameters" section of the *Oracle Fusion Middleware Administrator's Guide for Oracle Portal* before your Oracle Portal instance will be functional again.

3.9.6 Post-Patching Tasks for Your WebLogic Server Domain

Your existing WebLogic Server Domain must be updated by performing the following tasks:

- Section 3.9.6.1, "Updating Fusion Middleware Shared Libraries"
- Section 3.9.6.2, "Updating Configurations and Stores"
- Section 3.9.6.3, "Enabling WS-AtomicTransaction"
- Section 3.9.6.4, "Optimizing Performance for WebLogic Server Domains on 64-Bit Platforms"

3.9.6.1 Updating Fusion Middleware Shared Libraries

For each WebLogic Server domain, you must run the `updateJRF()` WLST command to update the shared libraries in your domain:

Note: If you are patching Oracle WebCenter Portal, you do not need to run this command if you follow the directions in Chapter 5, "Patching Oracle WebCenter".

1. Stop all running instances, Managed Servers, Administration Server, and Node Manager in the domain. See "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide* for more information.

2. Start WLST.

On UNIX operating systems:

```
cd oracle_common/common/bin
./wlst.sh
```

On Windows operating systems:

```
cd oracle_common\common\bin
wlst.cmd
```

3. Run the `upgradeJRF()` command on the node or system where the Administration Server is located for each domain you want to update. Your domain location is passed as a parameter:

```
wlst> upgradeJRF (' /DOMAIN_HOME')
```

Note: After you run this command, any custom changes that you have made to your `setDomainEnv` script will be lost. Oracle recommends that you keep your custom modifications in a separate script that is called by `setDomainEnv` in order to minimize the disruption that is caused when other domain templates are applied and the `setDomainEnv` script is regenerated.

If you have set IPv6 to false in your `setDomainEnv` script, this change will be overwritten when you run the `upgradeJRF()` command. Make sure you reset IPv6 to false in the `setDomainEnv` script after you run the `upgradeJRF()` command.

3.9.6.2 Updating Configurations and Stores

For each WebLogic Server domain, you must run the `upgradeOpss()` WLST command to update your configurations and stores from previous releases to Release 11.1.1.6.0 configurations and stores using a `system-jazn-data` file in Release 11.1.1.6.0.

Note: If you are patching Oracle WebCenter Portal, you do not need to run this script if you follow the directions in Chapter 5, "Patching Oracle WebCenter".

Before running this command, start WLST as shown below:

On UNIX operating systems:

```
cd MW_HOME/oracle_common/common/bin
./wlst.sh
```

On Windows operating systems:

```
cd MW_HOME\oracle_common\common\bin
wlst.cmd
```

After WLST is started, run the `upgradeOpss()` command. The syntax for the command is below:

```
upgradeOpss(jpsConfig="existing_jps_config_file", jaznData="system_jazn_data_file")
```

- *existing_jps_config_file*

Full path to the location of the existing `jps-config.xml` file, usually `DOMAIN_HOME/config/fmwconfig/jps-config.xml` (on UNIX operating systems) or `DOMAIN_HOME\config\fmwconfig\jps-config.xml` (on Windows operating systems).

- *system_jazn_data_file*

Full path to the location of the Release 11.1.1.6.0 `system-jazn-data.xml` file, usually `MW_HOME/oracle_common/modules/oracle.jps_11.1.1/domain_config/system-jazn-data.xml` (on UNIX operating systems) or `MW_HOME\oracle_common\modules\oracle.jps_11.1.1\domain_config\system-jazn-data.xml` (on Windows operating systems).

For more information, see "Upgrading Policies with `upgradeOpss`" in *Oracle Fusion Middleware Security Guide*.

3.9.6.3 Enabling WS-AtomicTransaction

WS-AtomicTransaction is a web services feature which was introduced in Oracle Fusion Middleware Release 11.1.1.3.0 release. If you are upgrading a domain which is at the 11.1.1.2.0 release, then you need to perform the following steps to ensure that WS-AtomicTransactions are enabled:

1. Edit the following file.

On UNIX operating systems:

```
DOMAIN_HOME/config/fmwconfig/policy-accessor-config.xml
```

On Windows operating systems:

```
DOMAIN_HOME\config\fmwconfig\policy-accessor-config.xml
```

2. In the Interceptors section, add the following XML code:

```
<interceptor name="ClientWSATInterceptor"
  class="oracle.j2ee.ws.client.transaction.ClientWSATInterceptor"
  category="transaction" />
<interceptor name="ServerWSATInterceptor"
  class="oracle.j2ee.ws.server.transaction.ServerWSATInterceptor"
  category="transaction" />
```

3. In the Interceptor Chains section:

- `<interceptor-ref name="ServerWSATInterceptor" />` should be added in the existing entry of `SOAPServiceBindingInterceptorChain` between the Context and RM interceptors. For example:

```
<interceptor-chain name="SOAPServiceBindingInterceptorChain"

  @ class="oracle.integration.platform.common.SOAPBindingInterceptorChain">
  <interceptor-ref name="MTOMInterceptor" />
  <interceptor-ref name="BindingSecurityInterceptor" />
  <interceptor-ref name="ServerAddressingInterceptor" />
  <interceptor-ref name="MEXInterceptor" />
  <interceptor-ref name="WSRMServerInterceptor" />
  <interceptor-ref name="ServerWSATInterceptor" />
  <interceptor-ref name="ContextInterceptor" />
```



```

        <interceptor-ref name="BindingManagementInterceptor"/>
    </interceptor-chain>

```

- `<interceptor-ref name="ClientWSATInterceptor"/>` should be added in the existing entry of `SOAPReferenceBindingInterceptorChain` between the Context and RM interceptors. For example:

```

<interceptor-chain name="SOAPReferenceBindingInterceptorChain"

@ class="oracle.integration.platform.common.SOAPBindingInterceptorChain">
    <interceptor-ref name="BindingManagementInterceptor"/>
    <interceptor-ref name="ContextInterceptor"/>
    <interceptor-ref name="ClientWSATInterceptor"/>
    <interceptor-ref name="WSRMClientInterceptor"/>
    <interceptor-ref name="ClientAddressingInterceptor"/>

    <interceptor-ref name="BindingSecurityInterceptor"/>
    <interceptor-ref name="MTOMInterceptor"/>
</interceptor-chain>

```

3.9.6.4 Optimizing Performance for WebLogic Server Domains on 64-Bit Platforms

If you are upgrading any existing 11g Oracle WebLogic Domain to Release 11.1.1.6.0, it is recommended to make the changes in the `setDomainEnv` file as described below to optimize performance:

```

if [ "${JAVA_USE_64BIT}" = "true" ] ; then
    if [ "${JAVA_VENDOR}" = "Oracle" ] ; then
        EXTRA_JAVA_PROPERTIES="-XXcompressedRefs:enable=TRUE
${EXTRA_JAVA_PROPERTIES}"
        export EXTRA_JAVA_PROPERTIES
    fi
fi
if [ "${JAVA_VENDOR}" = "Oracle" ] ; then
    EXTRA_JAVA_PROPERTIES="-XX:+UseLargePagesForHeap
${EXTRA_JAVA_PROPERTIES}"
    export EXTRA_JAVA_PROPERTIES
fi

EXTRA_JAVA_PROPERTIES="-Djps.auth.debug=false ${EXTRA_JAVA_PROPERTIES}"
export EXTRA_JAVA_PROPERTIES

```

The applicable `EXTRA_JAVA_PROPERTIES` are described in

Table 3–8 Description of Parameters for `EXTRA_JAVA_PROPERTIES`

Property	Description
<code>-XXcompressedRefs</code>	<p>This option governs the use of compressed references, limiting all pointers stored on the heap to 32 bits. Compressed references use fewer Java heap resources and transport less data on the memory bus, thereby improving the performance. This option also frees space on the heap.</p> <p><code>-XXcompressedRefs:enable=TRUE</code> is applicable for the JRockit JVM running on a 64-bit operating system.</p>

Table 3–8 (Cont.) Description of Parameters for EXTRA_JAVA_PROPERTIES

Property	Description
-XX: +UseLargePagesForHeap	This option enables the use of large pages (if they are available) for the Java heap and code in the JVM. Large pages allow your application to more effectively use the translation look-aside buffer (TLB) in the processor. This option is applicable for the JRockit JVM.
-Djps.auth.debug	This option is used to make sure JPS debugging is turned off. This option is applicable for all JVM types.

3.9.7 Post-Patching Tasks for Oracle SOA Suite

This section contains the following topics for completing your Oracle SOA Suite patch:

Note: Before you perform any of the tasks in this section, make sure you have completed the tasks in Section 3.9.6, "Post-Patching Tasks for Your WebLogic Server Domain".

- Section 3.9.7.1, "Loading the Oracle SOA Suite Purge Scripts for Database Management"
- Section 3.9.7.2, "Removing the tmp Folder for SOA Composer and BPM Workspace"
- Section 3.9.7.3, "Updating the soa-infra Application in Warning State"
- Section 3.9.7.4, "Run bpm-ps5-upgrade.py to Update the Policy Store"
- Section 3.9.7.5, "Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library"
- Section 3.9.7.6, "Updating the Oracle Data Integrator Clients if BAM-ODI Integration is Enabled"
- Section 3.9.7.7, "Committing or Reverting Open Edit Sessions in SOA Composer"
- Section 3.9.7.8, "Saving and Restoring XEngine Customizations for Oracle B2B"
- Section 3.9.7.9, "Configuring Oracle JMS Adapter with IBM WebSphere MQ JMS"

3.9.7.1 Loading the Oracle SOA Suite Purge Scripts for Database Management

When the amount of data in Oracle Fusion Middleware databases grows very large, maintaining the databases can become difficult and can affect performance. Oracle Fusion Middleware 11g Release 1 (11.1.1.4.0) and later provide a set of tools that can help you purge the Oracle Fusion Middleware of unneeded data.

When a new Oracle Fusion Middleware user installs the latest Oracle SOA Suite schemas using the Repository Creation Utility (RCU), stored procedures required by the Oracle SOA Suite purge scripts are automatically installed in the database.

However, if you are running Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) or Release 1 (11.1.1.3.0), these stored procedures are not installed automatically. As a result, after you run the Patch Set Assistant to update your Oracle SOA Suite schemas to the latest version, you must manually install the necessary database objects using the following procedure. This procedure is necessary if you want to use the purging capabilities provided by Oracle SOA Suite 11g Release 1 (11.1.1.4.0) or later:

1. Locate, download, and unpack the latest Oracle Fusion Middleware 11g Repository Creation Utility (RCU) software archive.

For more information, see "Obtaining RCU" in the *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

The directory where you unpack the RCU software is referred to as the *RCU_HOME* directory.

2. Using SQLPlus, connect to the database where the Oracle SOA Suite schemas are installed using the database user that owns the SOAINFRA schema.
3. Run the following script to load the database objects required for purging Oracle SOA Suite data:

```
RCU_HOME/rcu/integration/soainfra/sql/soa_purge/soa_purge_scripts.sql
```

4. Run the following script to load the database objects required for verifying the Oracle SOA Suite data in the database:

```
RCU_HOME/rcu/integration/soainfra/sql/verify/soa_verify_scripts.sql
```

After you load the database objects using the provided SQL scripts, refer to "Managing Database Growth" in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite* for more information.

3.9.7.2 Removing the tmp Folder for SOA Composer and BPM Workspace

This manual step must be performed if:

- You are upgrading Oracle SOA Composer from Release 11.1.1.2.0 or 11.1.1.3.0; the SOA Composer login screen may appear blank after you patch to the latest version.
- You are upgrading Oracle BPM Workspace from Release 11.1.1.3.0; the Oracle BPM Workspace application will not start after you patch to the latest version.

To resolve these issues, do the following:

1. Stop all servers (Administration Server and all Managed Servers).
2. Remove the tmp directory in *DOMAIN_HOME/servers/AdminServer* (on UNIX operating systems) or *DOMAIN_HOME\servers\AdminServer* (on Windows operating systems).
3. Remove the tmp directory in *DOMAIN_HOME/servers/soa_server1* (on UNIX operating systems) or *DOMAIN_HOME\servers\soa_server1* (on Windows operating systems).

If the name of your SOA Managed Server is not *soa_server1*, replace *soa_server1* with the name of your SOA Managed Server.

4. Start all the servers.

3.9.7.3 Updating the soa-infra Application in Warning State

If you have a Release 11.1.1.3.0 Oracle SOA Suite domain with only Oracle SOA configured (no Oracle BAM and no Oracle BPM), or only Oracle SOA and Oracle BAM configured (no Oracle BPM), the *soa-infra* application (The weblogic server EAR file which contains the underlying logic for the SOA Suite infrastructure) will have a deployment status of **Warning** which will be visible within the WebLogic Server Administration Console. This state will not cause any loss or degradation in service.

If you want to fix this issue, contact Oracle Support.

3.9.7.4 Run bpm-ps5-upgrade.py to Update the Policy Store

To update your policy store to add the new Code Source Permissions, run the `bpm-ps5-upgrade.py` script must be run from the `bin` directory inside your SOA Oracle home.

Note: This script must be run as a WLST online script. Make sure the Administration Server and Managed Servers are up and running before running this script.

On a UNIX operating system:

```
cd $SOA_ORACLE_HOME/bin
../common/bin/wlst.sh bpm-ps5-upgrade.py
```

On a Windows operating system:

```
cd $SOA_ORACLE_HOME\bin
..\common\bin\wlst.cmd bpm-ps5-upgrade.py
```

The command will prompt you for the following items of information:

- Administrator username for your Oracle BPM domain.
- Administrator password for your Oracle BPM domain.
- Host name and Administration Server listen port number where your WebLogic Server/Oracle BPM domain are installed. This should be specified in the following format:

```
t3://host:port
```

After the script has completed, stop and restart all the servers.

3.9.7.5 Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library

To update your policy store and deploy shared libraries, run the `soa-upgrade.py` WLST script, which does the following:

- Adds a new Role Grant and Policy grant within the `soa-infra` application stripe in the Policy Store.
- Deploys the `oracle.soa.worklist.webapp` shared library to the SOA domain.

The `soa-upgrade.py` script must be run from the `bin` directory inside your SOA Oracle home. The syntax for the `soa-upgrade.py` script is shown below.

Note: This script must be run as a WLST online script.

If you are upgrading from Release 11.1.1.4.0 or earlier, make sure the Administration Server is the only server that is up and running before running this script. The other Managed Servers should be shut down.

If you are upgrading from all other previous releases, make sure the Administration Server and all other Managed Servers are up and running before running this script.

On a UNIX operating system:

```
cd SOA_ORACLE_HOME/bin
../common/bin/wlst.sh soa-upgrade.py
--username admin_username
--password admin_password
--wlsHost wls_host
--adminServerListenPort admin_port
--targetList list_of_SOA_servers_or_migratable_targets
```

On a Windows operating system, run `wlst.cmd` from the same directory.

Table 3–9 describes the command line parameters.

Table 3–9 Command Line Parameters for the soa-upgrade.py Script

Parameter	Description
username	Administrator username for your SOA domain.
password	Administrator password for your SOA domain.
wlsHost	Host name where your WebLogic Server/SOA domain are installed.
adminServerListenPort	Administration Server listen port number for your SOA domain.
targetList	Comma-separated list of SOA Managed Servers or SOA clusters in the SOA domain.

After running this command, stop and restart all the servers.

3.9.7.6 Updating the Oracle Data Integrator Clients if BAM-ODI Integration is Enabled

If you are currently using Oracle BAM and Oracle Data Integrator (ODI) integration, you must re-run an installation script to update your ODI clients after patching your software.

The Oracle BAM interface used by ODI has undergone some changes between releases which require an update by all ODI client endpoints. This manual step is only required for domains where a BAM-ODI integration has been configured.

For each such domain, you must run the `SOA_ORACLE_HOME/bam/bin/bam_odi_configuration.sh` (on UNIX operating systems) or `SOA_ORACLE_HOME\bam\bin\bam_odi_configuration.bat` (on Microsoft Windows operating systems) script. Use the `PATCH` command line parameter to copy the Oracle BAM artifacts. For details, see "Using Oracle Data Integrator With Oracle BAM" in *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

If ODI and Oracle BAM Server are installed on hosts in different networks, or for any reason you cannot use the script in your environment, you must manually do the following to update your ODI clients:

1. Using the Middleware home directory under which Oracle BAM is installed, generate a `wlfullclient.jar` file by using the instructions in "Using the WebLogic JarBuilder Tool" in *Oracle Fusion Middleware Programming Stand-alone Clients for Oracle WebLogic Server*.
2. Copy `wlfullclient.jar` to the `ODI_ORACLE_HOME/lib/weblogic` (on UNIX operating systems) or `ODI_ORACLE_HOME\lib\weblogic` (on Windows operating systems) directory.

- Copy the following Oracle BAM .jar files to the lib directory in the ODI Oracle home:

On UNIX operating systems:

```
SOA_ORACLE_HOME/bam/modules/oracle.bam_11.1.1/oracle-bam-common.jar
SOA_ORACLE_HOME/bam/modules/oracle.bam_11.1.1/oracle-bam-etl.jar
SOA_ORACLE_HOME/bam/modules/oracle.bam_11.1.1/oracle-bam-adc-ejb.jar
SOA_ORACLE_HOME/bam/modules/oracle.bam.thirdparty_11.1.1/commons-codec-1.3.jar
SOA_ORACLE_HOME/bam/modules/oracle.bam.thirdparty_11.1.1/xstream-1.3.1.jar
oracle_common/modules/oracle.odl_11.1.1/ojdl.jar
oracle_common/modules/oracle.jps_11.1.1/jps-api.jar
oracle_common/modules/oracle.dms_11.1.1/dms.jar
oracle_common/modules/org.jaxen_1.1.1.jar
```

On Windows operating systems:

```
SOA_ORACLE_HOME\bam\modules\oracle.bam_11.1.1\oracle-bam-common.jar
SOA_ORACLE_HOME\bam\modules\oracle.bam_11.1.1\oracle-bam-etl.jar
SOA_ORACLE_HOME\bam\modules\oracle.bam_11.1.1\oracle-bam-adc-ejb.jar
SOA_ORACLE_HOME\bam\modules\oracle.bam.thirdparty_11.1.1\commons-codec-1.3.jar
SOA_ORACLE_HOME\bam\modules\oracle.bam.thirdparty_11.1.1\xstream-1.3.1.jar
oracle_common\modules\oracle.odl_11.1.1\ojdl.jar
oracle_common\modules\oracle.jps_11.1.1\jps-api.jar
oracle_common\modules\oracle.dms_11.1.1\dms.jar
oracle_common\modules\org.jaxen_1.1.1.jar
```

- Copy the following Oracle BAM Knowledge Modules from the *SOA_ORACLE_HOME/bam/ODI/knowledge_modules* (on UNIX operating systems) or *SOA_ORACLE_HOME\bam\ODI\knowledge_modules* (on Windows operating systems) directory to the *ODI_HOME/lib* (on UNIX operating systems) or *ODI_HOME\lib* (on Windows operating systems) directory:

```
KM_CKM Get Oracle BAM Metadata.xml
KM_IKM SQL to Oracle BAM (delete).xml
KM_IKM SQL to Oracle BAM (insert).xml
KM_IKM SQL to Oracle BAM (looksert natural).xml
KM_IKM SQL to Oracle BAM (looksert surrogate).xml
KM_IKM SQL to Oracle BAM (update).xml
KM_IKM SQL to Oracle BAM (upsert).xml
KM_LKM Get Source Metadata.xml
KM_LKM Oracle BAM to SQL.xml
KM_RKM Oracle BAM.xml
```

- Backup the following *ODI_HOME* configuration files.

On UNIX operating systems:

```
ODI_HOME/lib/bam_odi.logging.properties
ODI_HOME/lib/config/BAMODIConfig.xml
```

On Windows operating systems:

```
ODI_HOME\lib\bam_odi.logging.properties
ODI_HOME\lib\config\BAMODIConfig.xml
```

- Copy the new version of the ODI configuration files from the *SOA_ORACLE_HOME/bam/ODI* (on UNIX operating systems) or *SOA_ORACLE_HOME\bam\ODI* (on Windows operating systems) directory to the *ODI_ORACLE_HOME* directory as follows.

Note: If you made any changes to the ODI configuration files before you installed the patch set, then you must make those changes again after you copy the new configuration files from the SOA Oracle home.

On UNIX operating systems:

```
SOA_ORACLE_HOME/bam/ODI/config/bam_odi.logging.properties to ODI_HOME/lib/bam_odi.logging.properties
SOA_ORACLE_HOME/bam/ODI/config/BAMODIConfig.xml to ODI_HOME/lib/config/BAMODIConfig.xml
```

On Windows operating systems:

```
SOA_ORACLE_HOME\bam\ODI\config\bam_odi.logging.properties to ODI_HOME\lib\bam_odi.logging.properties
SOA_ORACLE_HOME\bam\ODI\config\BAMODIConfig.xml to ODI_HOME\lib\config\BAMODIConfig.xml
```

3.9.7.7 Committing or Reverting Open Edit Sessions in SOA Composer

original content comes from bug 9891566.

Before upgrading from a previous release to 11.1.1.6.0, make sure all Edit sessions in SOA Composer are committed or reverted.

SOA Composer provides DT@RT functionality to edit rules dictionaries after deployment. After upgrading to the latest version, all uncommitted sessions in SOA Composer will be lost or there can be issues accessing the edit sessions. This is because the MDS sandboxes (used for handling sessions) are not updated by the patch set.

To commit or revert the sessions:

1. Log in to the SOA Composer (`/soa/composer`) as any user with active sessions.
2. Go to **Open > My Edits** to view all of your active sessions.
3. Open each document listed in "My Edits" and do one of the following:
 - a. Click **Commit** to commit the session changes.
 - b. Select **Revert > Clear all session edits and saved changes** to abort the changes.

Either step will result in the session being closed.

3.9.7.8 Saving and Restoring XEngine Customizations for Oracle B2B

The procedure in this section is needed only if you use custom XEngine configurations in cases where B2B server is integrated with B2B EDI endpoints.

In such cases, all B2B domains created from the same installation share the a single XEngine configuration stored within the following directory:

- On UNIX operating systems:

```
MW_HOME/SOA_ORACLE_HOME/soa/thirdparty/edifecs/XEngine
```

- On Windows operating systems:

```
MW_HOME\SOA_ORACLE_HOME\soa\thirdparty\edifecs\XEngine
```

To preserve your XEngine customizations:

1. Prior to patching Oracle SOA Suite, back up all contents in the following directory:

```
MW_HOME/SOA_ORACLE_HOME/soa/thirdparty/edifecs/XEngine
```

For example, on a UNIX operating system:

```
cp -pr SOA_ORACLE_HOME/soa/thirdparty/edifecs/XEngine backup_location
```

2. Run the Installer to update the software.
3. Unzip the XEngine ZIP file in the following directory:

```
MW_HOME/SOA_ORACLE_HOME/soa/thirdparty/edifecs/XEngine
```

For example, on a UNIX operating system:

```
cd SOA_ORACLE_HOME/soa/thirdparty/edifecs
gunzip XEngine.tar.gz
tar -xvf XEngine.tar
```

4. Restore only the customized configuration files from your backup location.

For example, if you made changes to the `XERegistry.xml` file on a UNIX operating system:

```
cp backup_location/config/XERegistry.xml
   SOA_ORACLE_HOME/soa/thirdparty/edifecs/XEngine/config
```

3.9.7.9 Configuring Oracle JMS Adapter with IBM WebSphere MQ JMS

This step is needed if you are upgrading Oracle SOA Suite from release 11.1.1.2.0 or earlier to the latest release, and you have developed and deployed composites that leverage the Oracle JMS Adapter to access JMS messages that are utilizing IBM WebSphere MQ for message transport/persistence services.

If the Outbound Connection Pool entry created for the JMS Adapter is to be used with `Topics`, you must use the following additional connection property, which must be added to the end of the connection factory properties for Outbound Connection Pool entry:

```
ThirdPartyJMSProvider=true
```

For more information, see "Configuring Oracle JMS Adapter with IBM WebSphere MQ JMS" in *Oracle Fusion Middleware User's Guide for Technology Adapters*.

3.9.8 Post-Patching Tasks for Oracle WebCenter Content

This section contains the following topics:

- Section 3.9.8.1, "Updating Oracle WebCenter Content: Imaging"
- Section 3.9.8.2, "Updating Oracle Application Adapters for Oracle WebCenter Content"

3.9.8.1 Updating Oracle WebCenter Content: Imaging

After updating your Oracle WebCenter Content software to Release 11.1.1.6.0 from any previous version, the manual steps in this section must be performed to target a newly distributed library to the Oracle WebCenter Content: Imaging deployment. If these steps are not performed, the Oracle WebCenter Content: Imaging Managed Server (default of `IPM_server1`) will not start.

1. Make sure Oracle WebLogic Server is started, then open the Oracle WebLogic Server Administration Console:

```
http://administration_server_host:administration_server_port/console
```
2. For production systems, go to the "Change Center" portion of the navigation panel on the left and click **Lock & Edit**.
3. Targeting the Oracle Application Core Stub file:
 - a. In the "Domain Structure" portion of the navigation panel on the left, click **Deployments**.
 - b. Above the "Deployments" table, click the **Install** button.
 - c. In the "Path" field, browse to the directory containing the Oracle Application Core Stub file.

The default location is `MW_HOME/oracle_common/atgpf/modules/oracle.applcore.model_11.1.1` (on UNIX operating systems) or `MW_HOME\oracle_common\atgpf\modules\oracle.applcore.model_11.1.1` (on Windows operating systems).
 - d. Select the `oracle.applcore.model.stub.ear` file and click **Next**.
 - e. Select **Install this deployment as a library** and click **Next**.
 - f. Select `IPM_server1` as the deployment target and click **Next**.
 - g. Click **Finish**.
4. Targeting the Oracle SOA Libraries file for BPM:

Note: If `oracle.soa.workflow.wc.jar` is already installed due to Oracle SOA Suite being a part of the domain, you should skip the following Steps a-f. Instead, navigate to `oracle.soa.workflow.wc` in deployments, then go into its "Targets" tab and target `IPM_server1`.

- a. In the "Domain Structure" portion of the navigation panel on the left, click **Deployments**.
- b. Above the "Deployments" table, click the **Install** button.
- c. In the "Path" field, browse to the directory containing the Oracle SOA Libraries file.

The default location is `ECM_ORACLE_HOME/soa/modules/oracle.soa.workflow_11.1.1` (on UNIX operating systems) or `ECM_ORACLE_HOME\soa\modules\oracle.soa.workflow_11.1.1` (on Windows operating systems).

- d. Select the `oracle.soa.workflow.wc.jar` file and click **Next**.

A message indicating errors while parsing the deployment will appear in the "Messages" box at the top of the screen. The configuration will treat this as a library deployment. This is expected.
- e. Select `IPM_server1` as the deployment target and click **Next**.
- f. Click **Finish**.

5. For production systems, go to the "Change Center" portion of the navigation panel on the left and click **Accept Changes**.
6. Any instances of the IPM Managed Server must be restarted for this change to take effect.
7. Redeploy the `imaging.ear` file that is installed by the patch set.

The `imaging.ear` file is saved by the installer to the following directory:

```
ECM_ORACLE_HOME/ipm/lib/imaging.ear
ECM_ORACLE_HOME\ipm\lib\imaging.ear
```

To redeploy the EAR file, you can use the command-line, or you can use the Oracle WebLogic Server Administration Console:

- For information about redeploying an EAR file in from the Administration Console, see "Update (redeploy) an Enterprise application" in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*.
- From the command-line, you can use the Oracle WebLogic Server deployer command; for example:

```
java weblogic.Deployer -redeploy -name appName
```

Where `appName` is the name of the EAR file as defined in the `config.xml` file.

- You can also redeploy using the WLST `redeploy()` command:

```
redeploy("appName")
```

For more information about the `redeploy()` WLST command, see "redeploy" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

3.9.8.2 Updating Oracle Application Adapters for Oracle WebCenter Content

The Oracle WebCenter Content application adapters as described in *Oracle Fusion Middleware Administrator's Guide for Oracle Application Adapters for Oracle Enterprise Content Management* contain manual steps for installing the adapters to their respective ERP system (EBS and PeopleSoft). In order to update to from any previous release to Release 11.1.1.6.0, these adapters must be reinstalled.

To reinstall the EBS adapter:

1. Follow the instructions in "Compiling Oracle E-Business Suite Forms" in *Oracle Fusion Middleware Administrator's Guide for Oracle Application Adapters for Oracle Enterprise Content Management* to update the `AXF_CUSTOM.PLL` module.
2. If you are configured for SSL, follow the instructions in "Configuring the Integration for SSL" in *Oracle Fusion Middleware Administrator's Guide for Oracle Application Adapters for Oracle Enterprise Content Management*.

To re-import the PeopleSoft project, follow the instructions (steps 1-6) in "Importing the Oracle PeopleSoft Project" in *Oracle Fusion Middleware Administrator's Guide for Oracle Application Adapters for Oracle Enterprise Content Management*.

3.9.9 Adding New OWSM Pre-Defined Policies

Each new patchset of Oracle Web Services Manager (OWSM) can contain new pre-defined web services policies. If your existing domain was created or extended with the **Oracle WSM Policy Manager** template in the Configuration Wizard, you must do the following to take advantage of these new policies for your domain:

1. Use `connect ()` to connect to the server running the `owsm-pm` application.
2. Run the `upgradeWSMPolicyRepository ()` WLST command as described in "Upgrading the Oracle WSM Policies in the MDS Repository" in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.

3.9.10 Oracle Service Bus Domain Configuration

Follow the instructions in this section to update your Oracle Service Bus Release 11.1.1.2.0 or 11.1.1.3.0 domain configuration information to Release 11.1.1.6.0, after you have patched your Oracle Service Bus software to Release 11.1.1.6.0:

- Section 3.9.10.1, "Updating an Oracle Service Bus Domain After Applying the Latest Patch Set"
- Section 3.9.10.2, "Using Oracle WebLogic Server Release 10.3.5 with Oracle Service Bus Release 11.1.1.6.0"
- Section 3.9.10.3, "Additional Post-Update Tasks for Oracle Service Bus IDE"

3.9.10.1 Updating an Oracle Service Bus Domain After Applying the Latest Patch Set

To update your Oracle Service Bus domain configuration information:

1. Make sure you have backed up and shut down all domains to be updated.
2. Under each Oracle Service Bus domain to be updated, open a command window and run the `DOMAIN_HOME/bin/setDomainEnv.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\setDomainEnv.cmd` (on Windows operating systems) command.
3. In the command window, switch to the directory in which the update scripts resides:

```
OSB_ORACLE_HOME/common/lib/upgrade
```

4. On the command line, run the appropriate script for your operating system:

```
(UNIX) java weblogic.WLST ./domainUpgrade.py
(Windows) java weblogic.WLST domainUpgrade.py
```

3.9.10.2 Using Oracle WebLogic Server Release 10.3.5 with Oracle Service Bus Release 11.1.1.6.0

Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0) supports both Oracle WebLogic Server release 10.3.5 and 10.3.6. However, if you have already configured Oracle Service Bus 11g Release 1 (11.1.1.5.0) with Oracle WebLogic Server 10.3.5 and you want to update Oracle Service Bus with Oracle Service Bus IDE to 11g Release 1 (11.1.1.6.0), then you must also update Oracle WebLogic Server to release 10.3.6. Oracle WebLogic Server 10.3.5 is not supported in an Oracle Service Bus IDE 11g Release 1 (11.1.1.6.0) environment.

If you must update Oracle Service Bus to 11g Release 1 (11.1.1.6.0), and you want to keep your Oracle WebLogic Server release at 10.3.5, then you must disable Oracle Service Bus IDE by manually deleting the following file:

```
(UNIX) MW_HOME/oepe_11.1.1.8.0/dropins/oracle.osb.ide.lnk
(Windows) MW_HOME\oepe_11.1.1.8.0\dropins\oracle.osb.ide.lnk
```

3.9.10.3 Additional Post-Update Tasks for Oracle Service Bus IDE

If you are using Oracle Service Bus IDE in your environment, this section describes the required tasks after updating your Oracle Service Bus software to the latest version.

3.9.10.3.1 Deleting Oracle WebLogic Server 11g Release 1 (10.3.3) You need to create a new Server pointing to Weblogic Server 11g Release 1 (10.3.6) to successfully publish the Oracle Service Bus configuration to the server. In order to do this, you need to delete Oracle WebLogic Server 11g Release 1 (10.3.3).

To delete Oracle WebLogic Server 11g Release 1 (10.3.3), use the following steps:

1. Select Oracle WebLogic Server 11g Release 1 (10.3.3), right click and select **Delete** option.
2. Uncheck **Stop server(s) before deleting** and click **OK**.

3.9.10.3.2 Creating Servers You can deploy (publish) and test your Oracle Service Bus configuration on a running server in Eclipse. When connected to a running server in development, you can also connect to resources in the run-time environment such as JNDI resources and remote EJBs.

If you have an existing Oracle WebLogic Server you want to connect to, the server creation process simply involves you pointing at the existing server domain. If you want to create a new server, the new server wizard lets you create one using the Oracle Fusion Middleware Configuration Wizard.

To create a server in Eclipse, use the following steps:

1. In the Oracle Service Bus perspective, select **File > New > Server**. The New Server wizard appears.
2. Select the server type/version you want to create or connect to.
3. For **Server's host name**, enter **localhost** for a local server or enter the name or IP address of the remote system hosting an existing server.
4. The **Server name** is for display purposes in Eclipse.
5. Click **Next**.
6. For **WebLogic home**, click **Browse** and select the *WebLogic_Server_HOME* in the Oracle Fusion Middleware installation where the server domain is to reside (or already resides). The default WebLogic home directory is called *wlserver_10.3*.

For example, if you are creating a new server in *MW_HOME_1*, select the *MW_HOME_1/wlserver_10.3*; or if you are connecting to an existing server domain in *MW_HOME_2*, select the *MW_HOME_2/wlserver_10.3*.

Note: You cannot reference a *WebLogic_Server_HOME* that is outside of the server's installation *MW_HOME*, even if the external *MW_HOME* is the same product version.

7. The **Java home** should be populated automatically. If you want to use a different JRE, such as the default Oracle JRockit JRE, click **Browse** and select the JRE under the same *MW_HOME* as the server.
8. Click **Next**.
9. Select whether the server is **Local** or **Remote**. Remote implies an existing remote server.

- If **Local**, either select an existing server in the Domain Directory field or click the link to create a new domain. After creating a new domain, select it in the Domain Directory field.

Set other options as desired, such as automatic publishing and debug mode.

For information on creating a new Oracle Service Bus domain, see "Configuring Oracle Service Bus" in the *Oracle Fusion Middleware Installation Guide for Oracle Service Bus Installation Guide*.

- If **Remote**, enter the connection settings to an existing remote server.

10. Click **Next**.

11. Move any Oracle Service Bus configuration(s) you want to publish on the server to the Configured pane. You can modify this targeting after you create the server by right-clicking the server and selecting **Add and Remove**.

12. Click **Finish**. The new server appears in the Servers view in Eclipse, where you can start, stop, and publish to the server.

3.9.11 Post-Patching Tasks for Oracle Business Intelligence

This section contains instructions for post-patching tasks for Oracle Business Intelligence. It contains the following topics:

- Section 3.9.11.1, "Updating Oracle Business Intelligence Code Grants"
- Section 3.9.11.2, "Updating Oracle Business Intelligence Catalogs"
- Section 3.9.11.3, "Updating Oracle Real-Time Decisions"
- Section 3.9.11.4, "Upgrading Renamed Views"

Note: Before you continue, make sure you have performed the tasks in Section 3.9.5, "Post-Patching Tasks for System Components" to update your Oracle Business Intelligence system components.

3.9.11.1 Updating Oracle Business Intelligence Code Grants

Bug 10349186.

If you are updating to the latest version of Oracle Business Intelligence (BI) from Release 11.1.1.3.0, you must run the `bi-upgrade.py` script in each Oracle BI domain. This script configures the code grants necessary to ensure that SSL works correctly for Oracle BI, and must be run even if SSL is not used.

To run the script on UNIX operating systems:

```
cd MW_HOME/oracle_common/common/bin
./wlst.sh BI_ORACLE_HOME/bin/bi-upgrade.py --bioraclehome BI_ORACLE_HOME
--domainhome bi_domain_home
```

To run the script on Windows operating systems:

```
cd MW_HOME\oracle_common\common\bin
wlst.cmd BI_ORACLE_HOME\bin\bi-upgrade.py --bioraclehome BI_ORACLE_HOME
--domainhome bi_domain_home
```

Replace `BI_ORACLE_HOME` with the full path to your Business Intelligence Oracle home location, and replace `bi_domain_home` with the full path to your Business Intelligence domain home location.

3.9.11.2 Updating Oracle Business Intelligence Catalogs

content provided from bug 11678827.

When updating your Oracle Business Intelligence (BI) software from Release 11.1.1.3.0 to 11.1.1.6.0, you must manually update your Oracle BI Presentation Catalogs.

Instructions are provided below:

1. Shut down Oracle BI Presentation Services using Oracle Enterprise Manager.

For details, see "Using Fusion Middleware Control to Start and Stop Oracle Business Intelligence System Components and Java Components" in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

2. Back up your Release 11.1.1.3.0 catalogs by using the 7-Zip utility to create a compressed file for it.
3. Create a backup copy of the `instanceconfig.xml` file.

The `instanceconfig.xml` file is located in the `ORACLE_INSTANCE/config/OracleBIPresentationServicesComponent/coreapplication_obipsn` (on UNIX operating systems) or `ORACLE_INSTANCE\config\OracleBIPresentationServicesComponent\coreapplication_obipsn` (on Windows operating systems) directory.

4. Change the `upgradeAndExit` option to `true` in the `instanceconfig.xml` file.

Find the following code:

```
<ps:Catalog xmlns:ps="oracle.bi.presentation.services/config/v1.1">
  <ps:UpgradeAndExit>false</ps:UpgradeAndExit>
</ps:Catalog>
```

Change it to the following:

```
<ps:Catalog xmlns:ps="oracle.bi.presentation.services/config/v1.1">
  <ps:UpgradeAndExit>>true</ps:UpgradeAndExit>
</ps:Catalog>
```

5. Start Oracle BI Presentation Services using the following OPMN command the update the catalogs:

```
opmnctl startproc ias-component=coreapplication_obipsn
```

For example, on a UNIX operating system:

```
cd ORACLE_INSTANCE/bin
./opmnctl startproc ias-component=coreapplication_obips1
```

On a Windows operating system:

```
cd ORACLE_INSTANCE\bin
opmnctl startproc ias-component=coreapplication_obips1
```

6. After the catalogs are updated, edit the `instanceconfig.xml` file again and change the `upgradeAndExit` option back to `false`.
7. Restart Oracle BI Presentation Services using Fusion Middleware Control.

3.9.11.3 Updating Oracle Real-Time Decisions

content comes from steve brar via email on 4/12/2011. also bug 11056366.

This section describes how to update Oracle Real-Time Decisions (RTD) to the latest patch set. The following steps are required only if you are patching from 11g Release 1 (11.1.1.3.0) to 11g Release 1 (11.1.1.5.0) or 11g Release 1 (11.1.1.6.0); you do not need to perform these steps if you are patching from 11g Release 1 (11.1.1.5.0) to 11g Release 1 (11.1.1.6.0).

- Section 3.9.11.3.1, "Update the `rtd_ils` Resource Type Using WLST"
- Section 3.9.11.3.2, "Add Permissions to the BIAdministrator Principle Using EM"
- Section 3.9.11.3.3, "Removing JMS"

3.9.11.3.1 Update the `rtd_ils` Resource Type Using WLST Perform the following to add actions to the `rtd_ils` resource type:

1. Navigate to the `MW_HOME/oracle_common/common/bin` (on UNIX operating systems) or `MW_HOME\oracle_common\common\bin` (on Windows operating systems) directory.

2. Launch the WebLogic Scripting Tool (WLST).

On UNIX operating systems:

```
./wlst.sh
```

On Windows operating systems:

```
wlst.cmd
```

3. Connect to the WebLogic Server using the `connect()` command:

```
connect('adminuser', 'adminuser_password', 't3://admin_server_host:admin_server_port')
```

Replace `adminuser` and `adminuser_password` with the name and password of the Administrator you provided during the Oracle BI installation. Replace `admin_server_host` and `admin_server_port` with the host name and port number of the system where Oracle WebLogic Server is running. Below is a sample command:

```
connect('exampleuser', 'examplepassword', 't3://examplehost:7001')
```

4. List all resources of the resource type "rtd_ils" using the following command:

```
listResources(appStripe="obi", type="rtd_ils")
```

This will list all ILS's deployed to the RTD server. For example, if the sample ILS CrossSell was deployed to your RTD server, you would see the following:

```
[Name: CrossSell Type: rtd_ils DisplayName: CrossSell Description: CrossSell ]
```

5. Delete all resources of resource type "rtd_ils" using the following command:

```
deleteResource(appStripe="obi", name=resource_name, type="rtd_ils")
```

For example, the following command would delete the CrossSell resource:

```
deleteResource(appStripe="obi", name="CrossSell", type="rtd_ils")
```

6. Run the `listResources()` command again to ensure all the resources have been deleted:

```
listResources(appStripe="obi", type="rtd_ils")
```

There should be no resources listed.

7. Delete the resource type "rtd_ils":

```
deleteResourceType(appStripe="obi", resourceTypeName="rtd_ils")
```

8. Create a resource type "rtd_ils" using the following `createResourceType()` command:

```
createResourceType(appStripe="obi",
resourceTypeName="rtd_ils",
displayName="ILS",
description="Inline Service name",
matcher="oracle.security.jps.ResourcePermission",
allowedActions="choice_editor,decision_service:stress,open_
service:write,decision_service:normal,open_service:read,deploy_
service,download_service,clear_choice_history,clear_statistics,clear_
study,clear_all_operational_data,delete_service,unlock_service,clear_model",
delimiter=",")
```

9. Disconnect from Oracle WebLogic Server:

```
disconnect()
```

10. Exit from the WebLogic Scripting Tool:

```
exit()
```

3.9.11.3.2 Add Permissions to the BIA Administrator Principle Using EM The steps in this section need to be performed if you are using the BIA Administrator principle included with the product, or if you have replaced the BIA Administrator principle included with the product with your own principle:

1. Using a browser, connect to Fusion Middleware Control:

```
http://admin_server_host:admin_server_port/em
```

2. In the left tree view, select Weblogic Domain / bifoundation_domain.
3. In the content pane, select **Security/Application Policies** from the drop down "WebLogic Domain".
4. Check **Select Application Stripe to Search**, and select "obi" from its drop down list.
5. Leave the Principal and Permissions blank.
6. Click the **Search** button next to the Permission field.
7. From the search result, click on the Principal "BIA Administrator" (or the name of your own principle if you are not using "BIA Administrator").
8. Click the **Edit** button.
9. In the Edit Application Grant pane, go to the Permissions section and click the **Add** button.
10. In the Add Permission dialog, under the Customize section, add the following entries:

```
Permission Class: oracle.security.jps.ResourcePermission
Resource Name: resourceType=rtd_ils,resourceName=_all_
Permission Actions: clear_choice_history,clear_statistics,clear_study,clear_
all_operational_data,delete_service,unlock_service,clear_model
```


11. Click **OK** in the Add Permission dialog.
12. Click **OK** button in the Edit Application Grant pane.

3.9.11.3 Removing JMS In earlier releases, Oracle RTD relied on JMS for its intra-member cluster communication. In the latest release, JMS is replaced with JRF web services. This is an optional step and no functionality will be affected if you choose not to perform this step.

To remove JMS for Oracle RTD:

1. Using a browser, connect to the Administration Server Console:
`http://admin_server_host:admin_server_port/console`
2. Click **Lock & Edit**.
3. Under Domain Structure, expand **Services > Messaging**.
4. Click **JMS Modules**.
5. On JMS Modules table in the right pane, select RTDJMSMODULE.
6. Click the **Delete** button, then click the **Yes** button to confirm.
7. On the left pane, click **JMS Servers** (under Services > Messaging).
8. On the JMS Servers table on the right pane, select RTDJmsServer.
9. Click the **Delete** button, then click the **Yes** button to confirm.
10. Click the **Activate Changes** button.

3.9.11.4 Upgrading Renamed Views

content comes from bug 13443559.

In Oracle Business Intelligence releases prior to 11g Release 1 (11.1.1.6.0), to rename a view, you used the **Rename** button in the view selector view. This name change took effect only in the view selector view. In 11g Release 1 (11.1.1.6.0), to rename a view, you use the new **Rename** button on the view editor toolbar. This name change takes effect globally.

When a view that was renamed in a previous release is upgraded, the name change will be applied globally. In the case where there are two view selector views, each renaming the same view, the name from the first view selector view is used.

3.9.11.5 Enabling bicontentserver Features for 11g Release 1 (11.1.1.6.0)

If you are upgrading Oracle Business Intelligence from 11g Release 1 (11.1.1.5.0) to 11g Release 1 (11.1.1.6.0), you must perform the following if you want to enable the `bicontentserver` configuration template features:

1. Make sure all processes in the domain are stopped, including all Oracle instances, the Administration Server, all Managed Servers, and Node Manager.
2. Start the Configuration Wizard.

On UNIX operating systems:

```
cd WebLogic_Home/common/bin
./config.sh
```

On Windows operating systems:

```
cd WebLogic_Home\common\bin
```

config.bat

3. On the Welcome screen, select **Extend an existing WebLogic domain**.
4. On the Select a WebLogic Domain Directory screen, select the location of your existing Oracle BI domain.
5. On the Select Extension Source screen, select **Extend my domain using an existing extension template** and select the following:

On UNIX operating systems:

```
ORACLE_HOME/common/templates/applications/oracle.bicontentserver_template_11.1.1.jar
```

On Windows operating systems:

```
ORACLE_HOME\common\templates\applications\oracle.bicontentserver_template_11.1.1.jar
```

6. Continue with the remainder of the Configuration Wizard screens to apply this template.
7. After the template is applied, restart all Oracle Instances, the Administration Server, Managed Servers, and Node Manager.

3.9.12 Post-Patching Tasks for Oracle Data Integrator

This section contains instructions for post-patching tasks for Oracle Data Integrator. It contains the following topics:

- Section 3.9.12.1, "Finalizing Repository Patching"
- Section 3.9.12.2, "Reconfiguring the Java EE Agent"
- Section 3.9.12.3, "Reconfiguring the ODI Standalone Agent"
- Section 3.9.12.4, "Reconfiguring Oracle Enterprise Manager Properties"
- Section 3.9.12.5, "Reconfiguring the ODI Console"
- Section 3.9.12.6, "Adding the Version Number for the odi-sdk-ws Application in config.xml"

3.9.12.1 Finalizing Repository Patching

After you have patched the Oracle Data Integrator schemas in your database (Chapter 4, "Updating Your Schemas with Patch Set Assistant"), you must update the following repository objects (technologies, profiles, knowledge modules), which are not updated with Patch Set Assistant:

- Technology Changes
 - Added: ComplexFile and Groovy
 - Changed: Oracle
 - * Natural keyword join was added
 - * Join capability was extended to BOTH
 - * Default table name prefixes were added
 - Changed: Teradata
 - Changed: PostgreSQL

- Changed: Netezza
- Changed: OracleBI
- Changed: Hypersonic In-Memory Engine
- Changed: PostgreSQL supports SQL for retrieving sequences
- Language Changes: Groovy was added
- Profile Changes

Changes were made to LoadPlan support in the following profiles:

 - [NG] DESIGNER
 - [NG] REPOSITORY EXPLORER
 - [NG] VERSION ADMIN
 - OPERATOR
 - SECURITY_ADMIN
- Knowledge Modules

LKM File to Oracle (SQLLDR) works after removing 'import javaos' from KM step 'call sqlldr'. The old LKM no longer works with an upgraded Jython version.

For more information about how to update these repository objects, see "Oracle Data Integrator Post-Upgrade Tasks" in *Oracle Fusion Middleware Upgrade Guide for Oracle Data Integrator*.

3.9.12.2 Reconfiguring the Java EE Agent

By default, ODI ships a static Java EE Agent deployment template. To reconfigure the Java EE agent:

1. Run the Configuration Wizard. On the Select Domain Source screen, select the **Oracle Data Integrator – Agent – 11.1.1.0** template.

For more information, see "Configure a WebLogic Domain" in *Oracle Fusion Middleware Installation Guide for Oracle Data Integrator*.

2. On UNIX operating systems, check `DOMAIN_HOME/bin/setDomainEnv.sh` for the following line:

```
-Dodi.oracle.home=${ODI_ORACLE_HOME}
```

On Windows operating systems, check `DOMAIN_HOME\bin\setDomainEnv.cmd` for the following line:

```
-Dodi.oracle.home=%ODI_ORACLE_HOME%
```

On either operating system, if this line is not present, add it to the `EXTRA_JAVA_PROPERTIES` parameter.

3. Make sure the Administrator Server and ODI Managed Servers are up and running.
4. Add the WebLogic Server classes to the `CLASSPATH` environment variable and the `WebLogic_Home/server/bin` (on UNIX operating systems) or `WebLogic_Home\server\bin` (on Windows operating systems) directory to the `PATH` environment variable.

This can be accomplished by sourcing the `setWLSEnv` script located in the `WebLogic_Home/server/bin` (on UNIX operating systems) or `WebLogic_Home\server\bin` (on Windows operating systems) directory. For example:

```
source setWLSEnv.sh
```

5. Redeploy the version 11.1.1.3.0 Java EE agent from your domain using the following command:

```
java weblogic.Deployer -url admin_server_url -username admin_server_username
-password admin_server_password -targets odi_server_name -name odi_agent_name
-redeploy
```

For example:

```
java weblogic.Deployer -url t3://examplehost.com:7001 -username exampleuser
-password examplepassword -targets odi_server1 -name oraclediagent -redeploy
```

For more information, see "Managing Deployed Applications" in *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*.

ODI also enables you to generate a Java EE agent deployment template from ODI Studio. You can customize the Java EE agent with additional data sources and libraries. To do so:

1. Undeploy the version 11.1.1.3.0 Java EE agent from your domain.
For more information, see "Managing Deployed Applications" in *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server*.
2. Using ODI Studio version 11.1.1.6.0 or the command line script to generate equivalent Java EE agent template with required data sources and additional libraries.
For more information on data source declaration, deployment and template generation in ODI Studio, see "Java EE Agent" in the *Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator*.
3. Run the Configuration Wizard. On the Select Domain Source screen, select **Oracle Data Integrator – Agent Libraries– 11.1.1.0** to deploy the template.
4. Run the Configuration Wizard a second time, and on the Select Domain Source screen, deploy the generated version 11.1.1.6.0 ODI Java EE agent template to the domain.

3.9.12.3 Reconfiguring the ODI Standalone Agent

To reconfigure the ODI standalone agent:

1. Make sure you have backed up the necessary files and directories as described in "Back Up Files for Oracle Data Integrator Java EE Standalone Agent" in Section 3.5.4, "Backing Up Additional Configuration Information".
2. Run the Oracle Data Integrator installer.
On the Configure Repositories Install screen, choose **Skip Repository Creation**.
3. After the installation is complete:
 - Restore the `ODI_HOME/oracledi/agent/bin/odiparams.sh` (on UNIX operating systems) or `ODI_HOME\oracledi\agent\bin\odiparams.bat` (on Windows operating systems) file.

- Restore the `ODI_HOME/oracledi/agent/drivers` (on UNIX operating systems) or `ODI_HOME\oracledi\agent\drivers` (on Windows operating systems) directory.

For more information, see "Stopping a Standalone Agent" and "Manually Configure the Standalone Agent" in *Oracle Fusion Middleware Installation Guide for Oracle Data Integrator*.

3.9.12.4 Reconfiguring Oracle Enterprise Manager Properties

After you have patched Oracle Data Integrator, some of the properties in Oracle Enterprise Manager are lost. To restore these properties, set the following property before starting the Managed Server on which the Oracle Data Integrator Console is deployed:

```
set JAVA_OPTIONS="-Doracle.odi.repex.view.main.init.skipem=false"
```

3.9.12.5 Reconfiguring the ODI Console

If the domain created in Release 11.1.1.3.0 contains `odiconsole` components, reconfigure the `odiconsole` application as follows:

1. Extend the domain with Oracle Shared SDK Library 11.1.1.0 and target the deployment to `odi_server1`.
2. Set the `CLASSPATH` by running the `Weblogic_Home/server/bin/setWLSEnv.sh` (on UNIX operating systems) or `Weblogic_Home\server\bin\setWLSEnv.cmd` (on Windows operating systems) script.
3. Start the Administration Server and the `odi_server1` Managed Server.
4. Redeploy the `odiconsole` application using the following command:

```
java weblogic.Deployer -url administration_server_url -username administration_server_username -password administration_server_password -targets odi_server_name -name odi_console_name -redeploy
```

For example:

```
java weblogic.Deployer -url t3://examplehost.com:7001 -username exampleuser -password examplepassword -targets odi_server1 -name odiconsole -redeploy
```

3.9.12.6 Adding the Version Number for the `odi-sdk-ws` Application in `config.xml`

In 11g Release 1 (11.1.1.6.0), the `odi-sdk-ws` application was updated to introduce a version number. This version number must be added to the `config.xml` file prior to starting the Administration server or Managed Servers in the domain.

To do this:

1. Edit the `DOMAIN_HOME/config/config.xml` (on UNIX operating systems) or `DOMAIN_HOME\config\config.xml` (on Windows operating systems) file.
2. Change the following line:

```
<name>odi-sdk-ws</name>
```

to add a version number, as shown below:

```
<name>odi-sdk-ws#11.1.1.6.0.1</name>
```

3. Start or restart the Administration Server and Managed Servers in the domain.

3.10 Start the Servers and Processes

After you have finished patching your software and performing any necessary post-patching tasks, you are ready to start the servers and processes.

Instructions for starting an Oracle Fusion Middleware environment are provided in "Starting an Oracle Fusion Middleware Environment" in *Oracle Fusion Middleware Administrator's Guide*.

You can start Node Manager as described in "Starting Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

3.11 Verifying Your Patch Set Installation

To verify the installation after applying the patch set, start your browser and enter the following URLs:

- To access the Administration Server console:

`http://host:admin_server_port/console`

- If you configured your Administration Server to accept SSL connection, use the following URL to access the Administration Server console in secure mode:

`https://host:secure_admin_server_port/console`

- To access Enterprise Manager:

`http://host:admin_server_port/em`

You should receive a login screen. Enter your Administration Server user name and password to access the site.

For more information about the Administration Console, see "Getting Started Using Oracle WebLogic Server Administration Console" in *Oracle Fusion Middleware Administrator's Guide*.

For more information about Enterprise Manager, see "Getting Started Using Oracle Enterprise Manager Fusion Middleware Control" in *Oracle Fusion Middleware Administrator's Guide*.

Updating Your Schemas with Patch Set Assistant

The Patch Set Assistant is used in patch set releases only to update the database schemas of Oracle Fusion Middleware components. The schemas that are valid for updating with the Patch Set Assistant must meet one of the following criteria:

- The schema was created in an 11g release using the Repository Creation Utility (RCU).
- The schema was upgraded from 10g to 11g using the Upgrade Assistant.

Note: The Patch Set Assistant does not upgrade schemas that are in customer databases, which includes any database that has not been updated using the Upgrade Assistant (UA), Repository Creation Utility (RCU), or Patch Set Assistant (PSA).

If you are an Oracle Portal user, note that the Oracle Portal schema can in certain circumstances be installed in a customer database. For more information, refer to Section 4.2, "Special Instructions for Standalone Oracle Portal Repository Schemas".

The Patch Set Assistant updates 11g Release 1 schema versions starting at 11.1.1.2.0 to version 11.1.1.6.0. See Table 4–1 for specific information.

If your existing schema version is 11.1.1.1.0, you must migrate to version 11.1.1.2.0 before you can run the Patch Set Assistant. See Appendix C, "Using Patch Assistant to Migrate from 11g Release 1 (11.1.1.1.0) to Release 1 (11.1.1.2.0)" for more information.

If you are interested in creating new schemas or dropping existing schemas, you must use the Repository Creation Utility (RCU). Information is provided in *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

This chapter contains the following topics:

- Section 4.1, "Which Schemas Need to be Updated with Patch Set Assistant?"
- Section 4.2, "Special Instructions for Standalone Oracle Portal Repository Schemas"
- Section 4.3, "Before You Begin Using the Patch Set Assistant"
- Section 4.4, "Running the Patch Set Assistant"
- Section 4.5, "Patch Set Assistant Log Files"

4.1 Which Schemas Need to be Updated with Patch Set Assistant?

The component schemas in Table 4–1 (default names shown) must be updated with the Patch Set Assistant in order to update them to 11g Release 1 (11.1.1.6.0).

Schemas that are not listed in Table 4–1 do not need to be upgraded to 11g Release 1 (11.1.1.6.0).

Notes About the Schemas That Need to Be Updated

- Table 4–1 lists only the schemas for products that are available in the latest Oracle Fusion Middleware 11g Release 1 patch set.

For example, the Oracle Identity and Access Management components are not available in the current patch set and are not listed here.

To apply the latest patch set and upgrade the schemas for those products, see the *Oracle Fusion Middleware Patching Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.5.0) documentation library.

- Oracle Portal is included in this Oracle Fusion Middleware patch set, but a schema upgrade is not required. As a result, the Patch Set Assistant for this release upgrades the PORTAL schema to its latest version, which is currently 11.1.1.4.0.
- If the Discussions Crawler schema has not previously been installed using RCU, then migrating Discussions will automatically install the Discussions Crawler schema, assigning the same password as the Discussions schema. If you then attempt to update the Discussions Crawler schema individually, the Patch Set Assistant will warn that the schema has already been updated.
- The component names shown in Table 4–1 are the component names used in previous Oracle Fusion Middleware releases. Some of these product and component names have changed for Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0).

For more information, see Section 5.1, "New Product Names for Oracle WebCenter and Oracle Enterprise Content Management Suite".

Table 4–1 Schemas That Require Updating for the Latest Release

Component Name	Schema(s)	Dependencies	Required For
Audit Services	<i>prefix_IAU</i>	None.	11.1.1.2.0 to 11.1.1.6.0 11.1.1.3.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
Metadata Services	<i>prefix_MDS</i>	None.	11.1.1.2.0 to 11.1.1.6.0 11.1.1.3.0 to 11.1.1.6.0 11.1.1.4.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
Oracle Enterprise Scheduler Service	<i>prefix_ESS</i>	The <i>prefix_MDS</i> schema must be updated first.	11.1.1.5.0 to 11.1.1.6.0
Oracle Platform Security Services	<i>prefix_OPSS</i>	None.	11.1.1.4.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
Portal	<i>prefix_PORTAL</i>	None.	11.1.1.2.0 to 11.1.1.4.0 11.1.1.3.0 to 11.1.1.4.0

Table 4–1 (Cont.) Schemas That Require Updating for the Latest Release

Component Name	Schema(s)	Dependencies	Required For
Oracle Internet Directory	ODS	None.	11.1.1.2.0 to 11.1.1.6.0
	NOTE: The Oracle Internet Directory schema (ODS) cannot be prepended with a custom prefix.		11.1.1.3.0 to 11.1.1.6.0
			11.1.1.4.0 to 11.1.1.6.0
			11.1.1.5.0 to 11.1.1.6.0
Oracle Business Intelligence Platform	<i>prefix_BIPLATFORM</i>	The <i>prefix_MDS</i> schema must be updated first.	11.1.1.3.0 to 11.1.1.6.0
Master and Work Repository (Oracle Data Integrator)	<i>prefix_ODI_REPO</i>	None.	11.1.1.3.0 to 11.1.1.6.0
SOA Infrastructure	<i>prefix_SOAINFRA</i>	The <i>prefix_MDS</i> schema must be updated first.	11.1.1.2.0 to 11.1.1.6.0 11.1.1.3.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
WebCenter Spaces	<i>prefix_WEBCENTER</i>	The <i>prefix_MDS</i> schema must be updated first.	11.1.1.2.0 to 11.1.1.6.0 11.1.1.3.0 to 11.1.1.6.0
Discussions (WebCenter Suite)	<i>prefix_DISCUSSIONS</i>	None.	11.1.1.2.0 to 11.1.1.6.0 11.1.1.3.0 to 11.1.1.6.0
Discussions Crawler	<i>prefix_DISCUSSIONS_CRAWLER</i>	The <i>prefix_DISCUSSIONS</i> schema must be updated first.	11.1.1.2.0 to 11.1.1.6.0 11.1.1.3.0 to 11.1.1.6.0
Activity Graph and Analytics	<i>prefix_ACTIVITIES</i>	None.	11.1.1.4.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
Oracle Universal Records Management 11g	<i>prefix_URMSERVER</i>	None.	11.1.1.4.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
Oracle Content Server 11g - Complete	<i>prefix_OCS</i>	None.	11.1.1.4.0 to 11.1.1.6.0 11.1.1.5.0 to 11.1.1.6.0
Oracle Secure Enterprise Search	<i>prefix_SEARCHSYS</i>	The <i>prefix_ESS</i> must be updated first.	11.2.1 to 11.2.2

4.2 Special Instructions for Standalone Oracle Portal Repository Schemas

If you are using an Oracle Portal repository stored outside of the OracleAS Metadata Repository (any database that has not used the Upgrade Assistant, Repository Creation Utility, or Patch Set Assistant), then do not use the Patch Set Assistant to update the Portal schemas in the repository. Instead, refer to "Upgrading an Oracle Portal Repository in a Customer Database" in *Oracle Fusion Middleware Upgrade Guide for Oracle Portal, Forms, Reports, and Discoverer*.

4.3 Before You Begin Using the Patch Set Assistant

This section contains information about things you should check before you run the Patch Set Assistant:

- Section 4.3.1, "Back Up Your Database and Database Schemas"

- Section 4.3.2, "Check Your Database and Schemas"
- Section 4.3.3, "Shut Down All Components Using the Schemas You Want to Update"
- Section 4.3.4, "Check the aq_tm_processes Value for Oracle Portal"

4.3.1 Back Up Your Database and Database Schemas

Make sure you have backed up your existing database and database schemas before you run the Patch Set Assistant, as instructed in Section 3.5.3, "Backing Up Your Database and Database Schemas".

4.3.2 Check Your Database and Schemas

Before running Patch Set Assistant, you should check to make sure that your database is up and running and that the schemas you want to upgrade are at versions that are supported for upgrade. To check this, perform the following SQL command:

```
SELECT VERSION, STATUS, UPGRADED FROM SCHEMA_VERSION_REGISTRY;
```

If the number in the "VERSION" column is 11.1.1.2.0 or greater, then the schema is supported for upgrade.

If you are using an Oracle database, you should recompile database objects after running the Patch Set Assistant by connecting to the database as SYS and running the following from SQL*Plus:

```
@?/rdbms/admin/utlrp.sql
```

After running `utlrp.sql`, and before you upgrade your schema, issue the following query to ensure there are no longer any invalid database objects:

```
SELECT owner, object_name FROM all_objects WHERE status='INVALID';
```

Take note of any invalid objects. The existence of invalid database objects may prevent the upgrade from completing successfully.

4.3.3 Shut Down All Components Using the Schemas You Want to Update

Before running Patch Set Assistant, shut down any Oracle Fusion Middleware components (including the Managed Server and Oracle instances) that may be using the schemas you want to update.

4.3.4 Check the aq_tm_processes Value for Oracle Portal

If you are running the Patch Set Assistant for the Oracle Portal schema on an Oracle database, make user that the `aq_tm_processes` value in your database is greater than 0. To check, use the following command after connecting to the database:

```
show parameter aq_tm_processes;
```

If the value returned is 0, use the following command to change the value to 1:

```
alter system set aq_tm_processes=1 scope=both;
```

4.4 Running the Patch Set Assistant

The following sections describe how to run the Patch Set Assistant when you are installing the Oracle Fusion Middleware 11g Release 1 (11.1.1.5.0) patch set:

- Section 4.4.1, "General Information about the Patch Set Assistant"
- Section 4.4.2, "Starting the Patch Set Assistant"
- Section 4.4.3, "Using the Patch Set Assistant Graphical Interface"
- Section 4.4.4, "Using the Patch Set Installer from the Command Line"
- Section 4.4.5, "Verifying the Schema Version Number After Update"
- Section 4.4.6, "Checking for Invalid Database Objects"

4.4.1 General Information about the Patch Set Assistant

The Patch Set Assistant is installed into the `bin` directory in the Oracle Common home by the Product or Patch Set Installer (see Section 3.6.1, "About the Installers Used for Patching").

You can use the Patch Set Assistant to patch any component schema in the Middleware home from where the Patch Set Assistant started.

4.4.2 Starting the Patch Set Assistant

To start Patch Set Assistant, go to the `bin` directory in the Oracle Common home, then run the following command:

On UNIX operating systems:

```
cd MW_HOME/oracle_common/bin
./psa
```

On Windows operating systems:

```
CD MW_HOME\oracle_common\bin
psa.bat
```

4.4.3 Using the Patch Set Assistant Graphical Interface

Follow the instructions in Table 4–2 to use the Patch Set Assistant to update your schemas.

If you need additional help with any of the screens, refer to Appendix B, "Patch Set Assistant Screens" or click **Help** on the screen to access the online help.

Table 4–2 Patch Set Assistant Screens

Screen	Description
Welcome	This page introduces you to the Patch Set Assistant.
Select Component	Select the top-level component you want to upgrade. NOTE: If you are upgrading from Release 11.1.1.2.0 or 11.1.1.3.0, the <code>prefix_ACTIVITIES</code> schema will not be available in your environment as this schema was not introduced until Release 11.1.1.4.0. Make sure you de-select this schema from the WebCenter Portal component; otherwise the Patch Set Assistant will ask for credentials for this schema.
Prerequisites	Verify that you have satisfied the database prerequisites.

Table 4–2 (Cont.) Patch Set Assistant Screens

Screen	Description
Schema	Specify your database credentials to connect to your database, then select the schema you want to update. Note that this screen appears once for each schema that must be updated as a result of the component you selected on the Select Component screen.
Examine	This page displays the status of the Patch Set Assistant as it examines each component schema. Verify that your schemas have a "successful" indicator in the Status column.
Upgrade Summary	Verify that the schemas listed to be upgraded are the ones you expect.
Upgrade Progress	This screen shows the progress of the schema update.
Upgrade Success	

4.4.4 Using the Patch Set Installer from the Command Line

The full command line syntax for the Patch Set Assistant is shown below:

```
./psa (or psa.bat)
  -response response_file
  [-logLevel log_level]
  [-help]
```

See Table 4–3 for descriptions for these parameters.

Table 4–3 Patch Set Assistant Command Line Parameters

Parameter	Required or Optional Parameter?	Description
-response	Required.	Full path and name of the input response file.
-logLevel	Optional.	Logging level. One of the following: <ul style="list-style-type: none"> ▪ TRACE ▪ NOTIFICATION ▪ WARNING ▪ ERROR ▪ INCIDENT_ERROR The default logging level is NOTIFICATION.
-help	Optional.	View all of the command line options.

To generate the response file used with the `-response` parameter, you should run the Patch Set Assistant GUI (Section 4.4.3, "Using the Patch Set Assistant Graphical Interface"). On the Upgrade Summary screen, click **Save Response File** to save your information to a response file.

4.4.5 Verifying the Schema Version Number After Update

You can use the SQL command below to verify that the schema version in `schema_version_registry` has been properly updated:

```
SELECT VERSION, STATUS, UPGRADED FROM SCHEMA_VERSION_REGISTRY;
```

Check that the number in the "VERSION" column matches the latest version number for that schema.

If the status appears as "INVALID" then the schema update failed. You should examine the logs files to determine the reason for the failure. For more information, see Section 4.5, "Patch Set Assistant Log Files".

4.4.6 Checking for Invalid Database Objects

If you are using an Oracle database, you should recompile database objects after running the Patch Set Assistant by connecting to the database as SYS and running the following from SQL*Plus:

```
SQL> @?/rdms/admin/utlrp.sql
```

This will compile the database objects that were updated by Patch Set Assistant.

Then issue the following query to ensure there are no longer any invalid database objects:

```
SELECT owner, object_name FROM all_objects WHERE status='INVALID';
```

None of the database objects for the updated schema should be invalid at this point. If there are any, run the `utlrp.sql` command again and check again. If the problem persists, you should file a service request.

4.5 Patch Set Assistant Log Files

The Patch Set Assistant writes log files to the following locations:

On UNIX operating systems:

```
MW_HOME/oracle_common/upgrade/logs/psatimestamp.log
```

On Windows operating systems:

```
MW_HOME\oracle_common\upgrade\logs\psatimestamp.log
```

Some components will create a second log file called `psatimestamp.out`, also in the same location.

The *timestamp* will reflect the actual date and time that Patch Set Assistant was run.

Should any failures occur when running Patch Set Assistant, these log files will be needed to help diagnose and correct the problem; do not delete them. You can alter the contents of your log files by specifying a different `-logLevel` from the command line.

Some of the operations performed by the Patch Set Assistant may take longer to complete than others. If you want to see the progress of these long operations, you can see this information in the log file, or you can use the following query:

```
SELECT VERSION, STATUS, UPGRADED FROM SCHEMA_VERSION_REGISTRY WHERE OWNER='schema_name';
```

In the query results, the STATUS field will be either "UPGRADING" or "UPGRADED" during the schema patching operation, and will become "VALID" when the operating is finished.

Patching Oracle WebCenter

This chapter provides instructions for Oracle WebCenter users who want to apply the 11.1.1.6.0 patch set to their existing Oracle WebCenter installations.

The chapter includes the following sections:

- Section 5.1, "New Product Names for Oracle WebCenter and Oracle Enterprise Content Management Suite"
- Section 5.2, "Patching an Oracle WebCenter 11.1.1.4.0 or 11.1.1.5.0 Installation"
- Section 5.3, "Patching an Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0 Installation"
- Section 5.4, "Patching an Oracle WebCenter 11.1.1.1.0 Installation"
- Section 5.5, "Troubleshooting Issues"

For additional information about the various starting points available for installing and patching Oracle WebCenter, refer to *Oracle WebCenter Portal Installation and Configuration Roadmap*.

5.1 New Product Names for Oracle WebCenter and Oracle Enterprise Content Management Suite

With Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0), Oracle WebCenter and Oracle Universal Content Management have been rebranded. Table 5–1 provides a mapping of the old product names and terminology with the new ones.

Note: This chapter uses the old terminology unless a product name is accompanied by the release number (11.1.1.6.0 or 11g) or a release 11.1.1.6.0-specific feature is discussed.

Table 5–1 Mapping Old Terminology with the Release 11.1.1.6.0 Terminology

Old Name	New Name in Release 11.1.1.6.0
Product Name Changes	
Oracle WebCenter	Oracle WebCenter Portal
Oracle WebCenter Spaces	Oracle WebCenter Portal: Spaces
Oracle Universal Content Management	Oracle WebCenter Content
Oracle Content Server	Oracle WebCenter Content Server

Table 5–1 (Cont.) Mapping Old Terminology with the Release 11.1.1.6.0 Terminology

Old Name	New Name in Release 11.1.1.6.0
Feature Name Changes in Documentation	
WebCenter application	WebCenter Portal application (Umbrella term for: Framework applications, Portlet Producer applications, and the Spaces application)
WebCenter Portal application/WebCenter custom application	WebCenter Portal: Framework application/Framework application
Group Space workflows/WebCenter Spaces workflows	Spaces workflows
Personal Space	Home space
Group Space/Space	space
WebCenter domain	WebCenter Portal domain
WebCenter Spaces	Spaces/Spaces application

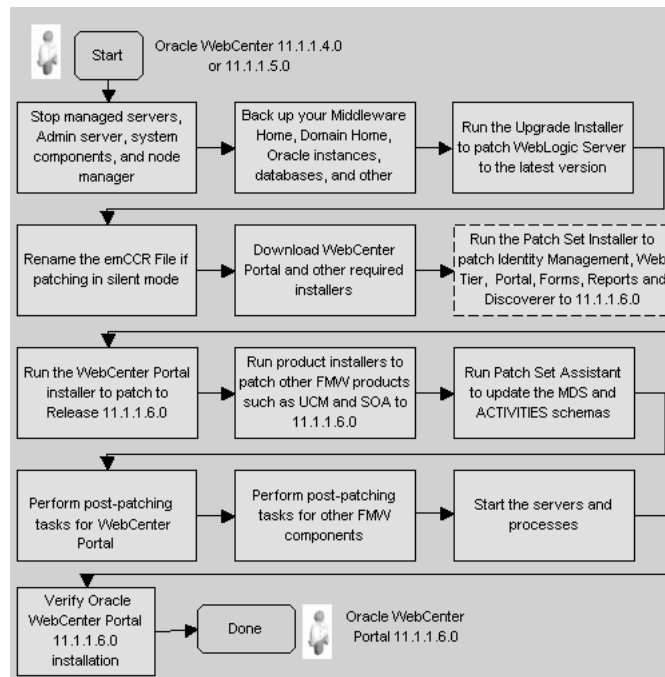
5.2 Patching an Oracle WebCenter 11.1.1.4.0 or 11.1.1.5.0 Installation

Figure 5–1 illustrates the steps required to update an Oracle WebCenter 11.1.1.4.0 or 11.1.1.5.0 installation to 11.1.1.6.0. Click the steps in the flow chart or follow the instructions in Table 3–1, "Summary of Patching Procedures and Links to Documentation" to navigate to the information for each step.

Note: Table 3–1 lists the generic tasks for patching a release. When upgrading from WebCenter 11.1.1.4.0 or 11.1.1.5.0, WebCenter-specific additional upgrade tasks include the following (as shown in Figure 5–1):

- Updating the MDS and ACTIVITIES schemas
- Performing post-patching tasks for WebCenter, including extending the domain with the upgraded Pagelet Producer template and updating OHS and SSO configuration.

For information about these tasks, see Chapter 4, "Updating Your Schemas with Patch Set Assistant" and Section 5.2.1, "Performing Post-Patching Tasks for Oracle WebCenter."

Figure 5–1 Applying the Latest Patch to Oracle WebCenter 11.1.1.4.0 or 11.1.1.5.0

Note: In Release 11.1.1.6.0, a new WebCenter Services Portlets producer is available for exposing task flows from WebCenter services as portlets. You can consume portlets from WebCenter Services Portlets in Oracle Portal, Oracle WebLogic Portal, and Oracle WebCenter Interaction applications. For information, see Section 5.3.8.1, "Installing Activity Graph, Analytics, Pagelet Producer, Personalization Server, and WebCenter Services Portlets."

Note: After patching to Release 11.1.1.6.0, you can optionally disable the Analytics Collector TRACE log level and enable the NOTIFICATION log level for a stable server performance. On the WC_Utilities managed server, the level attribute of the com.plumtree.analytics logger is set to value TRACE:32. Change this value to NOTIFICATION:16. For more information, see "Setting the Level of Information Written to Log Files" in *Oracle Fusion Middleware Administrator's Guide*.

5.2.1 Performing Post-Patching Tasks for Oracle WebCenter

This section describes the post-patching tasks that you may need to perform in your upgraded WebCenter environment. It includes the following subsections:

- Section 5.2.1.1, "Extending the Domain Using the Pagelet Producer Upgrade Template"
- Section 5.2.1.2, "Updating SSO and OHS Configuration"

5.2.1.1 Extending the Domain Using the Pagelet Producer Upgrade Template

A new version of Pagelet Producer is available in WebCenter Portal 11.1.1.6.0. If your upgraded WebCenter instance already has Pagelet Producer installed, you can choose to apply the new Pagelet Producer upgrade template to your domain to take advantage of the new features.

To apply the Pagelet Producer upgrade template:

1. Stop the Admin server and all managed servers.
2. Start the Configuration Wizard on the machine running the Admin server.
On UNIX, run `WebCenter_ORACLE_HOME/common/bin/config.sh`.
On Windows, run `WebCenter_ORACLE_HOME\common\bin\config.cmd`.
3. Select **Extend an existing WebLogic domain** and click **Next**.
4. Select your domain and click **Next**.
5. Select the **Extend my domain using an existing extension template** option.
6. Specify the path to the template, `oracle.pagelet-producer-upgrade_template_11.1.1.jar` and click **Next**. The template is available at the following location:

```
WebCenter_ORACLE_  
HOME/common/templates/applications/oracle.pagelet-producer-up  
grade_template_11.1.1.jar
```

7. Click **Next** on the remaining screens until you get the Configuration Summary screen, then click **Extend**.

For more information on extending a domain, see "Extending a WebLogic Domain in Graphical Mode" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

8. Start the Admin server and all managed servers.
9. Reconfigure the Pagelet Producer connections for the Spaces application and WebCenter custom applications (Framework applications) by using Fusion Middleware Control or WLST. For information, see "Registering the Pagelet Producer" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

Note: In the previous release, it was mandatory to deploy Pagelet Producer to the following path:

```
http://<pagelet-producer-server>:<port>/
```

Pagelet Producer could not be accessed if it was deployed at any other location other than the root '/'. In Release 11.1.1.6.0, Pagelet Producer is deployed to the following path:

```
http://<pagelet-producer-server>:<port>/pagelets/
```

Where *pagelets* refers to any location of your choice where you want to deploy Pagelet Producer. Therefore, after extending the domain using the new Pagelet Producer upgrade template, you must reconfigure your Pagelet Producer connections.

If you have OHS and SSO configured, you must configure them to use the new context root. For information, see Section 5.2.1.2, "Updating SSO and OHS Configuration."

10. Undeploy the older version of Pagelet Producer.
 - a. In WLS Console, click **Deployments**.
 - b. Select the checkbox next to pagelet-producer (11.1.1.4.0) deployment.
 - c. Click **Delete**.
11. Target the WebCenterDS data source to WC_Portlet. This is required to enable the OpenSocial feature.
 - a. In WLS Console, go to **Services > Data Source**.
 - b. Click **WebCenterDS**.
 - c. On the Targets tab, select WC_Portlet and click **Save**.

5.2.1.2 Updating SSO and OHS Configuration

If you have Oracle HTTP Server (OHS) and Single Sign-on (SSO) configured in your upgraded WebCenter environment, you may need to update the configuration for Pagelet Producer, Portlet Producer applications and Oracle SES.

This section includes the following subsections:

- Section 5.2.1.2.1, "Updating OHS Configuration for Pagelet Producer"
- Section 5.2.1.2.2, "Updating SSO Configuration for Pagelet Producer"
- Section 5.2.1.2.3, "Updating SSO Configuration for Portlet Producer Applications"
- Section 5.2.1.2.4, "Updating SSO Configuration for Oracle SES"

5.2.1.2.1 Updating OHS Configuration for Pagelet Producer In Release 11.1.1.6.0, Pagelet Producer's web context root has changed from "/" to */pagelets*, where *pagelets* refers to any location of your choice where Pagelet Producer is deployed. Before Release 11.1.1.6.0, since Pagelet Producer used "/" as a web context root, virtual host configuration was recommended, but it is no longer required.

If you have OHS configured, you must update the OHS entry in `mod_wl_ohs.conf`. This file is available at the following path:

```
WT_ORACLE_HOME/instances/your_instance/config/OHS/ohs1
```

Where, *WT_ORACLE_HOME* refers to the Web Tier Oracle Home.

Replace the following entries, if present:

```
<Location /pageletadmin>
  SetHandler weblogic-handler
  WebLogicHost webcenter.example.com
  WebLogicPort 8889
</Location>

<Location /authenticateWithApplicationServer>
  SetHandler weblogic-handler
  WebLogicHost webcenter.example.com
  WebLogicPort 8889
</Location>
```

With the following entry:

```
<Location /pagelets>
  SetHandler weblogic-handler
  WebLogicHost webcenter.example.com
  WebLogicPort 8889
```

</Location>

5.2.1.2.2 Updating SSO Configuration for Pagelet Producer In Release 11.1.1.6.0, Pagelet Producer's web context root has changed from "/" to "/pagelets". If SSO is configured for your WebCenter environment, you must update your SSO configuration or policy to use the new context root for protected and public URIs.

This section describes how you can update the policy for OAM 11g, OAM 10g, and OSSO.

Updating OAM 11g policies for Pagelet Producer

Updating OAM 11g policies for Pagelet Producer involves creating the following resources:

- /pagelets* and /pagelets/.../*
- /pagelets/authenticateWithApplicationServer* and /pagelets/authenticateWithApplicationServer/.../*
- /pagelets/admin* and /pagelets/admin/.../*

To update OAM 11g policies for Pagelet Producer:

1. Log in to the OAM Console using the following URL format:
`http://host:port/oamconsole`
2. Go to **Policy Configuration > Application Domains**. The Policy Manager pane displays.
3. Locate the application domain created while registering the WebGate agent.
4. Open the **Resources** tab, and click **New Resource**.
5. Add the resources for Pagelet Producer applications.

To add the /pagelets* resource:

- a. In Resource Type, select **HTTP**.
 - b. In the Host Identifier field, select the host created while registering the WebGate agent.
 - c. In the Resource URL field, enter /pagelets*.
 - d. In the Description field, enter a description for the resource.
 - e. Set Protection Level to **Unprotected**.
 - f. Set Authentication Policy to **Public Resource Policy**.
 - g. Set Authorization Policy to **Protected Resource Policy**.
 - h. Click **Apply**.
6. Repeat step 5 to add /pagelets/.../* as a resource.
 7. Add /pagelets/authenticateWithApplicationServer* as a resource:
 - a. In the Resource Type field, select **HTTP**.
 - b. In the Host Identifier field, select the host created while registering the WebGate agent.
 - c. In the Resource URL field, enter /pagelets/authenticateWithApplicationServer*.

- d. In the Description field, enter a description for the resource.
 - e. Set Protection Level to **Protected**.
 - f. Set Authentication Policy to **Protected Resource Policy**.
 - g. Set Authorization Policy to **Protected Resource Policy**.
 - h. Click **Apply**.
8. Repeat step 7 to add `/pagelets/authenticateWithApplicationServer/.../*` as a protected resource.
 9. Repeat step 7 to add `/pagelets/admin*` as a protected resource.
 10. Repeat step 7 to add `/pagelets/admin/.../*` as a protected resource.
 11. On the **Resources** tab, search for `/pageletadmin*` and `/authenticateWithApplicationServer*` and remove these old resources.
 12. Restart Web Tier and verify your changes.

Updating OAM 10g Policies for Pagelet Producer

Updating OAM 10g policies for Pagelet Producer involves creating the following resources:

- `/pagelets`
- `/pagelets/authenticateWithApplicationServer`
- `/pagelets/admin`

To update OAM 10g policies for Pagelet Producer:

1. Log in to the OAM Console using the following URL format:
`http://host:port/access/oblix`
2. Select **Policy Manager**.
3. Locate the policy domain that you created to protect your WebCenter resources.
4. Open the **Resources** tab and click **Add**.
5. Add the `/pagelets` resource. For the resource:
 - a. Select **HTTP** as the resource type.
 - b. Select the Host Identifier for the WebCenter Web Tier.
 - c. Enter the URL Prefix `/pagelets`.
 - d. Enter a description for the resource.
 - e. Ensure that **Update Cache** is selected, and then click **Save**.
6. Repeat step 5 to add `/pagelets/authenticateWithApplicationServer` as a resource.
7. Repeat step 5 to add `/pagelets/admin` as a resource.
8. Go to the **Policies** tab and locate the public policy.
9. Open the public policy and select the resource created in step 5 (that is, `/pagelets`) to apply public policy to this resource.

Do not select the other two resources
(/pagelets/authenticateWithApplicationServer and
/pagelets/admin) created as we want them to be protected by default.

10. Save your changes.
11. On the **Resources** tab, delete the old resource entries, /pageletadmin and /authenticateWithApplicationServer.
12. Restart Web Tier and verify your changes.

Updating OSSO Configuration for Pagelet Producer

If you have an OSSO setup, to update the policy for Pagelet Producer:

1. In the mod_osso.conf file, replace the following entry:

```
<Location /pageletadmin>
    OsoSendCacheHeaders off
    require valid-user
    AuthType Oso
</Location>
```

With:

```
<Location /pagelets/admin>
    OsoSendCacheHeaders off
    require valid-user
    AuthType Oso
</Location>
```

2. Replace the following entry:

```
<Location /authenticateWithApplicationServer*>
    OsoSendCacheHeaders off
    require valid-user
    AuthType Oso
</Location>
```

With:

```
<Location /pagelets/authenticateWithApplicationServer*>
    OsoSendCacheHeaders off
    require valid-user
    AuthType Oso
</Location>
```

3. Restart Web Tier and verify your changes.

5.2.1.2.3 Updating SSO Configuration for Portlet Producer Applications In Release 11.1.1.6.0, you must explicitly exclude the portlets URI in an OAM setup. You must update all custom and out-of-the-box Portlet Producer applications configured with SSO. For information, see the following sections in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*:

- Configuring Portlet Producer Applications for OAM 11g
- Configuring Portlet Producer Applications for OAM 10g

5.2.1.2.4 Updating SSO Configuration for Oracle SES In Release 11.1.1.4.0 and 11.1.1.5.0, the recommendation was to use virtual host configuration to configure SES crawl and authorization end points. However, this is no longer required in Release 11.1.1.6.0.

You can consider marking the SES endpoints as excluded resources in OAM configuration. For information, see the following sections in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*:

- For OAM 11g: Registering the WebGate Agent
- For OAM 10g: Configuring the WebCenter Portal Policy Domain

5.3 Patching an Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0 Installation

This section describes the procedures involved in migrating Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0 installation to 11.1.1.6.0. It contains the following subsections:

- Section 5.3.1, "Managed Server Changes"
- Section 5.3.2, "Migration Roadmap for Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0"
- Section 5.3.3, "Performing Pre-Patching Tasks Specific to Oracle WebCenter"
- Section 5.3.4, "Patching to Oracle WebCenter 11.1.1.6.0"
- Section 5.3.5, "Performing Post-Patching Tasks for Oracle WebCenter"
- Section 5.3.6, "Performing Post-Patching Tasks for Oracle WebCenter Spaces"
- Section 5.3.7, "Performing Post-Patching Tasks for Oracle WebCenter Security"
- Section 5.3.8, "Adding New Features to Oracle WebCenter"

5.3.1 Managed Server Changes

From release 11.1.1.4.0 onward, managed servers have been renamed from `WLS_name` to `WC_name`, where *name* refers to the name of the managed server. For more information, see the "WebCenter Portal Managed Servers" section in *Oracle Fusion Middleware Patching Guide*.

In Release 11.1.1.2.0 and 11.1.1.3.0, the `WLS_Services` managed server hosts Oracle WebCenter Discussions and Oracle WebCenter Wiki and Blog Server. From release 11.1.1.4.0 onward, `WLS_Services` is no longer supported. Oracle WebCenter Discussions is deployed to `WC_Collaboration`, and wikis and blogs reside on Content Server.

From release 11.1.1.4.0 onward, a new managed server, `WC_Uutilities`, is supported that hosts the following WebCenter components: Oracle WebCenter Analytics Collector, Oracle WebCenter Activity Graph Engines, and Oracle WebCenter Personalization.

5.3.2 Migration Roadmap for Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0

Figure 5–2 illustrates the steps required to update an Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0 installation to 11.1.1.6.0. Click the steps in the flow chart or use Table 5–2 to navigate to the information for each step.

Figure 5–2 Applying the Latest Patch to Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0

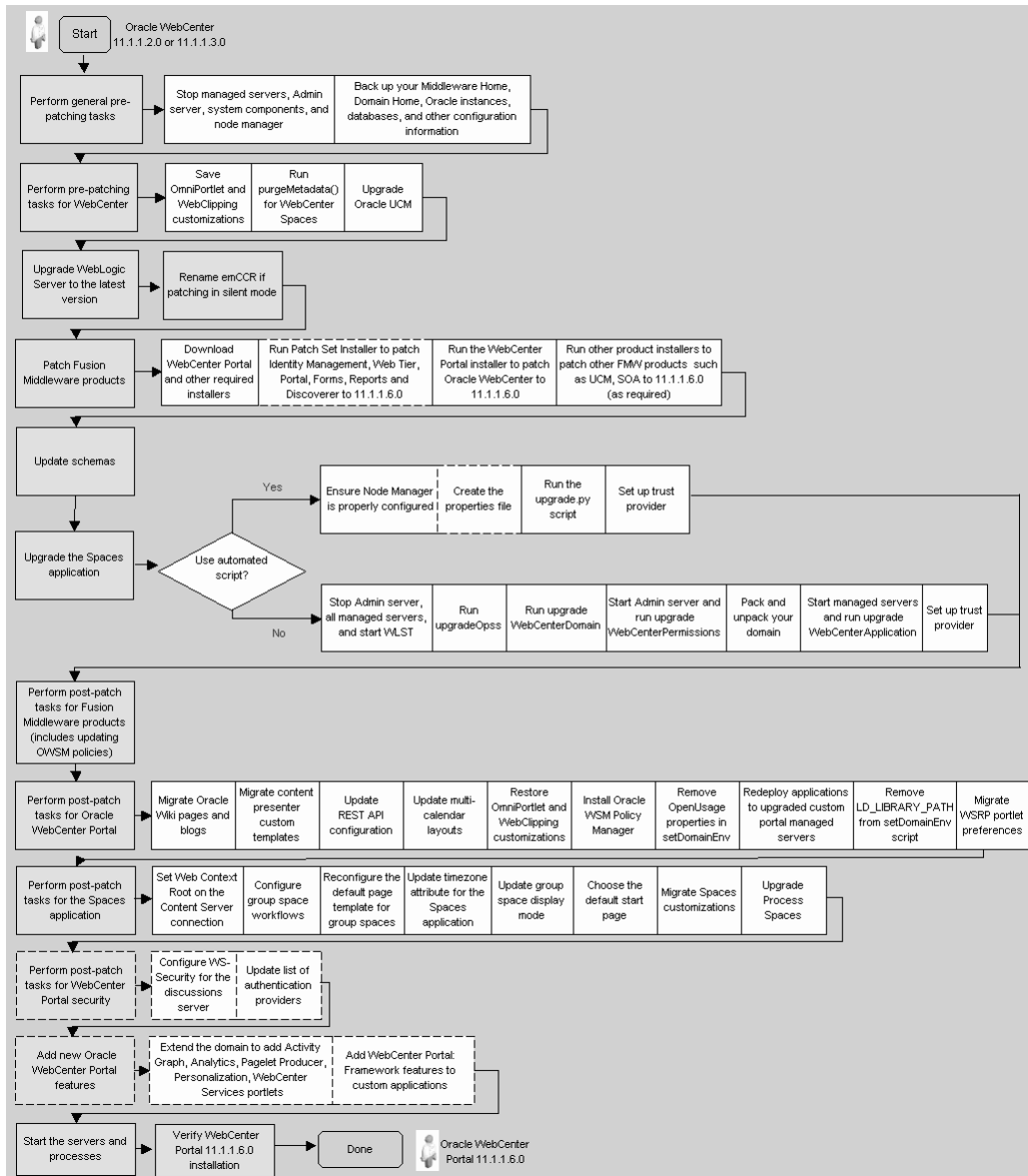


Table 5–2 Applying the Latest Patch to Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0

Task and Link to More Information	Mandatory or Optional?	Notes
Stop managed servers, Admin server, system components, and node manager	Mandatory	
Back up your current WebCenter environment <ul style="list-style-type: none"> ■ Back up your Middleware home, Domain home, and Oracle instances ■ Back up your database and database schemas ■ Back up other configuration information 	Mandatory	
Perform pre-patch tasks for WebCenter: <ul style="list-style-type: none"> ■ Save OmniPortlet and WebClipping customizations ■ Run <code>purgeMetadata ()</code> for WebCenter Spaces ■ Upgrade Oracle UCM 	Mandatory	Both Oracle WebCenter and Oracle Universal Content Management (Oracle UCM) must be of the same patchset level. When you patch Oracle WebCenter to the latest release, you must also patch Oracle Universal Content Management to that release. So, if you are patching to Oracle WebCenter 11.1.1.6.0, you must also patch to Universal Content Management 11.1.1.6.0.
Patch WebLogic Server to the latest version	Mandatory	
Rename the emCCR File if using the silent mode for patching	Mandatory for silent mode	
Download the installer for WebCenter Portal and other required products	Mandatory	
Run Patch Set Installer to patch the following Fusion Middleware products to 11.1.1.6.0: <ul style="list-style-type: none"> ■ Oracle Identity Management ■ Oracle Web Tier (Oracle HTTP Server) ■ Oracle Portal, Forms, Reports and Discoverer 	Mandatory	Mandatory only if these products are installed in your environment
Run the WebCenter Portal 11.1.1.6.0 installer to patch Oracle WebCenter to release 11.1.1.6.0	Mandatory	
Run other product installers to patch other required Fusion Middleware products, such as: <ul style="list-style-type: none"> ■ Oracle WebCenter Content Server (earlier called UCM) ■ Oracle SOA 	Mandatory	Mandatory only for the products installed in the Middleware home

Table 5–2 (Cont.) Applying the Latest Patch to Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0

Task and Link to More Information	Mandatory or Optional?	Notes
<p>Update the required schemas. WebCenter specific schemas include <code>WEBCENTER</code>, <code>DISCUSSIONS</code>, <code>DISCUSSIONS_CRAWLER</code>, and <code>ACTIVITIES</code>.</p> <p>Also update the common schemas (<code>MDS</code> and <code>IAU</code>) and schemas for all other required Fusion Middleware products.</p>	Mandatory	<p>Mandatory for existing schemas that need to be updated.</p> <p>For WebCenter Spaces schemas that were originally installed using the Release 11.1.1.1.0 Repository Creation Utility and have subsequently been upgraded to Release 11.1.1.2.0/11.1.1.3.0, it is necessary to grant an additional privilege to the WebCenter Spaces schema owner prior to running the Patch Set Assistant to upgrade the schema to Release 11.1.1.6.0. Connect as a <code>SYSDBA</code> user to the database containing the WebCenter Spaces schema using <code>SQL*Plus</code>, and grant <code>create view</code> to the WebCenter Spaces schema owner.</p>
<p>Update the Spaces application using one of the following:</p> <ul style="list-style-type: none"> ■ Node Manager and Automated Script ■ WLST commands 	Mandatory	
<p>Perform post-patch tasks for the required Fusion Middleware products. This includes updating the OWSM policies.</p>	Mandatory	
<p>Perform post-patch tasks for WebCenter Portal:</p> <ul style="list-style-type: none"> ■ Migrate Oracle Wiki pages and blogs ■ Migrate Content Presenter custom templates ■ Update REST API configuration ■ Update multi-calendar layouts ■ Restore your OmniPortlet and WebClipping customizations ■ Extend a domain to install Oracle WSM Policy Manager ■ Remove <code>OpenUsage</code> properties in <code>setDomainEnv</code> ■ Redeploy applications to upgraded custom portal managed servers ■ Remove <code>LD_LIBRARY_PATH</code> from <code>setDomainEnv</code> script ■ Migrate WSRP portlet preferences 	Mandatory	

Table 5–2 (Cont.) Applying the Latest Patch to Oracle WebCenter 11.1.1.2.0 or 11.1.1.3.0

Task and Link to More Information	Mandatory or Optional?	Notes
Perform post-patch tasks for WebCenter Spaces:	Mandatory	
<ul style="list-style-type: none"> ■ Set the Web Context Root on the Content Server connection ■ Configure group space Workflows ■ Reconfigure a default template set for group spaces ■ Update the timezone attribute ■ Update the group spaces display mode ■ Choose a default start (or landing) page ■ Migrate Spaces custom library ■ Upgrade Process Spaces 		
Perform post-patch tasks for WebCenter security:	Optional	
<ul style="list-style-type: none"> ■ Configure Web Services security for the discussions server ■ Update the list of authentication providers to add the Oracle Single Sign-On authentication provider 		
Add new Oracle WebCenter Portal features:	Optional	
<ul style="list-style-type: none"> ■ Extend the domain to add Activity Graph, Analytics, Pagelet Producer, Personalization, and WebCenter Services Portlets ■ Upgrade custom WebCenter applications to add WebCenter Portal: Framework features 		
Start the servers and processes	Mandatory	
Verify Oracle WebCenter Portal 11.1.1.6.0 installation	Mandatory	

5.3.3 Performing Pre-Patching Tasks Specific to Oracle WebCenter

Preparing to patch your Oracle WebCenter environment involves performing generic tasks such as stopping the servers, backing up your environment, and upgrading to the latest version of WebLogic server. It also involves performing various WebCenter-specific pre-patching tasks. This section describes the tasks that you must perform to prepare your WebCenter installation for patching. It contains the following subsections:

- Section 5.3.3.1, "Save Your OmniPortlet and WebClipping Customizations"
- Section 5.3.3.2, "Run purgeMetadata() for WebCenter Spaces"
- Section 5.3.3.3, "Upgrade Oracle Universal Content Management"

5.3.3.1 Save Your OmniPortlet and WebClipping Customizations

Note: Perform the procedure listed in this section only if you are using OmniPortlet and WebClipping customizations, and they are stored in a file-based preferences store. By default, in Oracle WebCenter and Oracle Portal, a file-based preferences store is not used. Such stores are used by default only for 11g Release 1 (11.1.1) Portal environments that are upgraded from their 10g versions.

When you apply the latest patch set for Oracle WebCenter or Oracle Portal, both the OmniPortlet and WebClipping applications are re-deployed, and all configuration data stored within file-based preference stores is lost. You must save the OmniPortlet and WebClipping configuration and customizations to ensure that customizations are not lost when you apply the patch set.

To save and back up your customizations:

1. Locate the following directories:

On UNIX operating systems:

- `path_to_war_directory/WEB-INF/providers/omniPortlet`
- `path_to_war_directory/WEB-INF/providers/webclipping`

On Windows operating systems:

- `path_to_war_directory\WEB-INF\providers\omniPortlet`
- `path_to_war_directory\WEB-INF\providers\webclipping`

Where `path_to_war_directory` refers to the following path:

- On a UNIX operating system: `DOMAIN_HOME/servers/WLS_PORTAL/tmp/_WL_user/portalTools_version/randomly_generated_directory/war`
- On a Windows operating system: `DOMAIN_HOME\servers\WLS_PORTAL\tmp_WL_user\portalTools_version\randomly_generated_directory\war`

Where, `DOMAIN_HOME` is the domain home locations for your Oracle Portal or Oracle WebCenter domain, as specified on the "Specify Domain Name and Location" screen in the Configuration Wizard.

2. Run the following command to back up the directory:

- On UNIX operating systems:

```
cp -fr path_to_war_directory/WEB-INF/providers/omniPortlet backup_location
```

- On Windows operating systems:

```
xcopy /y/e path_to_war_directory\WEB-INF\providers\omniPortlet backup_location
```

5.3.3.2 Run `purgeMetadata()` for WebCenter Spaces

If you are using WebCenter Spaces, you must run the `purgeMetadata()` WLST command to remove older versions of documents in MDS. This enables the patching process to run on a smaller set of data and thus decrease the time required to upgrade.

To purge metadata for WebCenter Spaces:

1. Start your Administration Server and Spaces Managed Server (`WLS_Spaces`) as the `purgeMetadata()` command is an online command.
2. Start WLST from your WebCenter Oracle home.

On UNIX operating systems:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh
```

On Windows operating systems:

```
cd WebCenter_ORACLE_HOME\common\bin
wlst.cmd
```

3. Connect to the Administration Server using the WLST `connect()` command.
4. Run the `purgeMetadata()` WLST command. For example, run the following command to purge metadata older than 3060 seconds:

```
purgeMetadata('webcenter', 'WLS_Spaces', 3060)
```

See "purgeMetadata" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference* for more details.

5. Re-collect the database statistics. For example, you can connect to the WebCenter MDS schema using SQLPlus:

```
execute dbms_stats.gather_schema_stats(ownname=>null, options=>'GATHER AUTO');
```

6. Stop your `WLS_Spaces` managed server and Administration Server.

For more information, see "Metadata Services (MDS) Custom WLST Commands" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

5.3.3.3 Upgrade Oracle Universal Content Management

Note: In Release 11.1.1.6.0, Oracle Universal Content Management has been rebranded as Oracle WebCenter Content, and Oracle Content Server is referred as Oracle WebCenter Content Server (or just Content Server).

This section includes the following subsections:

- Section 5.3.3.3.1, "Using Oracle Content Server 10g"
- Section 5.3.3.3.2, "Using Oracle WebCenter Content Server 11g"
- Section 5.3.3.3.3, "Comparing Oracle Content Server Features Available in Release 10g and 11g"

5.3.3.3.1 Using Oracle Content Server 10g

If you choose to stay with Oracle Content Server 10g, you must install the latest `UpdateBundle` and `Folders_g` components. You can obtain these from My Oracle Support (formerly OracleMetaLink: <https://support.oracle.com>).

Note: Oracle strongly recommends that you upgrade to Oracle WebCenter Content 11g. This is important to take advantage of the full set of features that the 11g release provides. If you choose not to upgrade to release 11g, you can access only a limited set of content management features (described in Table 5–3).

5.3.3.3.2 Using Oracle WebCenter Content Server 11g

You can choose either to upgrade your existing Oracle Content Server 10g installation to Content Server 11.1.1.6.0 or install a new instance of Content Server 11.1.1.6.0.

Note: Both WebCenter Portal and Content Server 11g must be of the same patch set level. When you patch WebCenter Portal to the latest release, you must also patch Content Server to that release. So, if you are patching to Oracle WebCenter Portal 11.1.1.6.0, you must also patch to Content Server 11.1.1.6.0.

Upgrading to Oracle WebCenter Content Server 11g

For information about upgrading to Content Server 11g, see *Oracle Fusion Middleware Upgrade Guide for Oracle WebCenter Content*.

To configure Content Server for WebCenter Portal 11g, you must ensure that `folders_g` is enabled.

Note: For Content Server 11g, Oracle recommends Folders (the `FrameworkFolders` component) as the folder interface instead of Contribution Folders (the `Folders_g` component). However, WebCenter Portal uses the `Folders_g` foldering capability. Therefore, to use Content Server 11g as a content repository for WebCenter Portal, you MUST have `Folders_g` enabled and `FrameworkFolders` disabled. You cannot have both enabled on an Oracle WebCenter Content instance.

Installing Oracle WebCenter Content Server 11g

For instructions about installing Content Server 11g, see *Oracle WebCenter Content Installation Guide*. For information about configuring it for WebCenter Portal 11g, see "Configuration Roadmaps for Content Server" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

To configure Content Server for WebCenter Portal 11g, you must ensure that `folders_g` is enabled.

If Oracle WebCenter and Content Server are installed in the same domain, no additional configuration is required for using an external LDAP authentication provider as authentication provider configuration is applicable to an entire domain.

5.3.3.3 Comparing Oracle Content Server Features Available in Release 10g and 11g

Table 5–3 provides a comparison of features available in Oracle Content Server 10g and 11g.

Table 5–3 Oracle WebCenter Features Supported by Oracle Content Server 10.1.3.5.1 and 11g

Feature	Description	Support Available in OCS 10.1.3.5.1?	Support Available in OCS 11g?
Spaces (or Group Spaces)	Support available for Space folder creation and role mapping.	No	Yes
Home Space (or Personal space)	Support available for automatic creation of Home Space folders.	No	Yes
IFRAME Support	Support to show Oracle Content Server UI directly in WebCenter applications. Support also available for creating content profiles and editing advanced properties of items.	No	Yes, if OHS installed and <code>webContextRoot</code> set in your connection, and IFRAME is enabled.
Wiki Document	Support for creating a wiki document.	No	Yes

Table 5–3 (Cont.) Oracle WebCenter Features Supported by Oracle Content Server 10.1.3.5.1 and 11g

Feature	Description	Support Available in OCS 10.1.3.5.1?	Support Available in OCS 11g?
Advanced metadata edit	Support for editing advanced metadata details, such as the user access list and web site object. If properties are editable, an Edit button is displayed in the Properties pane.	No	Yes, if IFRAME is enabled.
Thumbnails	When viewing a document, in the Properties pane, a thumbnail is rendered at the top. If there are multiple versions of the document, a thumbnail is rendered for each version.	No	Yes
Upload profiles	When uploading a document, you can choose the profile to use.	No	Yes, if IFRAME feature is available.
Document Previewer - Web rendition	When viewing a document, if there is a web rendition, it is displayed. The web rendition is the native file of the web viewable (html, image or PDF), or in the case of OCS, the IBR has created one (PDF rendition only, in this case).	No When clicking on a document, if it is not a file type which can be rendered without slide previewer/renditions (image, .html, .txt) properties are shown instead.	Yes If Oracle Content Server is not set up to have web renditions, it shows file properties.
Document Previewer - Slide Previewer	When viewing a document, a slide preview of the document is rendered.	No	Yes, if IFRAME and DynamicConverter are enabled, and Dynamic Converter templates are created.
Item Level Security	An item gets security from its own settings; it does not inherit the security from the Space in which it resides.	No	Yes, if: <ul style="list-style-type: none"> ■ UseEntitySecurity=true ■ Document or folder security group included in SpecialAuthGroups ■ RoleEntityACL component is enabled
AutoVue	Support for document review and collaboration feature available in Oracle AutoVue	No	Yes
Wiki and blogs page styles	Wiki and Blog page styles available for creating a page	No	Yes, in a Space or Home Space in which the Documents service is enabled.

Table 5–3 (Cont.) Oracle WebCenter Features Supported by Oracle Content Server 10.1.3.5.1 and 11g

Feature	Description	Support Available in OCS 10.1.3.5.1?	Support Available in OCS 11g?
Site Studio content creation and editing	Ability to create and edit Site Studio content from within the Content Presenter wizard, and from the content contribution mode of Content Presenter.	No	Yes, if Site Studio components are installed on Oracle Content Server.
Site Studio region templates	Ability to use Site Studio region templates to render Site Studio content.	No	Yes, if Site Studio components are installed on Oracle Content Server, and region templates are created for the selected content.
Content edit	Ability to edit non-Site Studio content from within the Content Presenter wizard.	No	Yes

5.3.4 Patching to Oracle WebCenter 11.1.1.6.0

You can update Oracle WebCenter 11.1.1.6.0 using either Node Manager and automated script, or WebLogic Scripting Tool (WLST).

This section includes the following subsections:

- Section 5.3.4.1, "Updating Oracle WebCenter Using Node Manager and Automated Script"
- Section 5.3.4.2, "Updating Oracle WebCenter Using WLST Commands"

Note: If Oracle WebCenter is installed on multiple machines, you can update your software only by using WLST commands, and not through the automated script. Make sure that the product installer is run on each WebCenter Oracle home directory on each machine, and all the domains are updated using pack/unpack.

5.3.4.1 Updating Oracle WebCenter Using Node Manager and Automated Script

The Oracle WebCenter patch includes a script called `upgrade.py` that you can use to upgrade to the latest release. This script shuts down all the Managed Servers and the Administration Server at the beginning of the update process, and then starts all the servers during the update process.

You can use this script to update Oracle WebCenter only if you have set up Node Manager, have Oracle WebCenter installed on a single machine, and have verified that it is configured correctly. If your Node Manager is not configured correctly, you must use the WLST commands instead of this script to patch Oracle WebCenter.

This section includes the following subsections:

- Section 5.3.4.1.1, "Configure Node Manager"
- Section 5.3.4.1.2, "Verify Your Node Manager Configuration"
- Section 5.3.4.1.3, "Update Oracle WebCenter"
- Section 5.3.4.1.4, "How to Run the Oracle WebCenter Automated Script"

5.3.4.1.1 Configure Node Manager To use the `upgrade.py` script, you must configure Node Manager as follows:

1. Make sure that all the servers in the domain (including the Administration Server) are associated with a machine that is configured to use your Node Manager. See "Configure a Machine to Use Node Manager" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.
2. If you are using demo certificates (the certificates that ship with Oracle WebLogic Server), disable host name verification for all the servers. For more information, see "Disable host name verification" at the following URL:

```
http://download.oracle.com/docs/cd/E12839_01/apirefs.1111/e13952/taskhelp/security/DisableHostNameVerification.html
```

3. Ensure the following properties are set to `true` in the `nodemanager.properties` file:
 - `StartScriptEnabled` for the Node Manager, so that Managed Servers can receive proper classpath and command arguments.
 - `DomainRegistrationEnabled`, so that domain can be registered.

Refer to *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server* for more information.

4. Make sure the `nmConnect` command can be used to connect to the Node Manager in WLST. If you are in a production environment, follow the instructions in "Using `nmConnect` in a Production Environment" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.
5. Make sure the `nmStart` command can be used to start the Administration Server in WLST. If you are in a production environment, a user name and password may be required to start the Administration Server, so ensure that Node Manager has the required credentials.

For more information, refer to "nmstart" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*, and also "How Node Manager Starts an Administration Server" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

5.3.4.1.2 Verify Your Node Manager Configuration

To verify that Node Manager has been configured correctly:

1. Stop all the servers in your domain.
2. Start WLST and connect to the Node Manager using `nmConnect`. For example, on a UNIX operating system:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh
nmConnect(username = 'weblogic', password = 'examplepassword', host =
'localhost', port = '5556', domainDir = 'DOMAIN_HOME', nmType = 'ssl')
```

3. Start the Administration Server using `nmStart`. For example:

```
nmStart('AdminServer')
```

4. Connect to the Administration Server in WLST and start a Managed Server. For example:

```
connect()
start('WLS_Spaces')
```

5. Check that the Managed Server you started is running. For example, try to access the following URL and log in:

```
http://localhost:8888/webcenter
```

Note: If you are not able to verify your Note Manager configuration, then you must use WLST commands instead of the automated script to update Oracle WebCenter.

5.3.4.1.3 Update Oracle WebCenter To update Oracle WebCenter using the Node Manager and the automated script:

1. Ensure that you have run the Oracle WebCenter installer to update your software. For information, see Section 3.6.2, "Downloading the Required Installer" and Section 3.6.3, "Start the Installer."
2. Ensure that you have updated your database schemas using the Patch Set Assistant. For information, see Section 3.8, "Update Your Schemas with Patch Set Assistant".
3. Run the `upgrade.py` script as described in Section 5.3.4.1.4, "How to Run the Oracle WebCenter Automated Script".
4. Copy the Trust Store file from the Oracle home directory to the Oracle WebLogic Server domain directory.

For example:

```
cp MW_HOME/oracle_common/modules/oracle.jps_11.1.1/jps-wls-trustprovider.jar  
  DOMAIN_HOME/lib/mbeantypes/jps-wls-trustprovider.jar
```

5. Restart the Node Manager, Administration Server, and the Managed Servers in the domain.

5.3.4.1.4 How to Run the Oracle WebCenter Automated Script The `upgrade.py` script must be run on the same machine as the Administration Server. The script is located in the `WebCenter_ORACLE_HOME/webcenter/scripts/upgrade_11.1.1.4` (on UNIX operating systems) or `WebCenter_ORACLE_HOME\webcenter\scripts\upgrade_11.1.1.4` (on Windows operating systems) directory.

The following is the command line syntax for running the `upgrade.py` script:

```
upgrade.py path_to_upgrade_properties_file administrator_password node_manager_password
```

The `upgrade.py` script takes optional command line parameters, where:

- `path_to_upgrade_properties_file` is the path to the upgrade properties file
See Section 5.3.4.1.9, "Properties That can be Set in the Upgrade Properties File" and Section 5.3.4.1.10, "Formatting Your Properties File" for more information about the properties file.
- `administrator_password` is the password for the Administration Server.
- `node_manager_password` is the password for the Node Manager.

Refer to the following sections for examples of how to run the `upgrade.py` script.

5.3.4.1.5 Example 1: No Optional Parameters Specified If no optional parameters are specified, the script uses the default values for all the properties with the exception of the `domain.directory` and the passwords; you are prompted for these values. Here is an example:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh WebCenter_ORACLE_HOME/webcenter/scripts/upgrade_11.1.1.4/upgrade.py
```

5.3.4.1.6 Example 2: Specifying a Properties File and Setting the Value of user.config.file If you specify a properties file that sets the value of the `user.config.file` property, then the script overrides the default values of the properties with the values specified in the properties file and connects to the Administration Server and Node Manager with the credentials stored in the user configuration file. Here is an example:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh WebCenter_ORACLE_HOME/webcenter/scripts/upgrade_11.1.1.4/upgrade.py
~/upgrade.properties
```

If you specify a properties file and that properties file does not set the value of the `user.config.file` property and you do not pass the Administration Server and Node Manager passwords as a command line argument, then the script overrides the default values of the properties with the values specified in the properties file and prompt for passwords.

5.3.4.1.7 Example 3: Specifying a Properties File and Administrator Password If you specify a properties file and `administrator_password`, then the script overrides the default values of the properties with the values specified in the properties file and uses the specified password to connect to the Administration Server. You will be prompted for the Node Manager password even if the Node Manager user name is same as the Administrator user name. Here is an example:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh WebCenter_ORACLE_HOME/webcenter/scripts/upgrade_11.1.1.4/upgrade.py
~/upgrade.properties example_admin_password
```

5.3.4.1.8 Example 4: Specifying a Properties File, Administrator Password, and Node Manager Password If you specify a properties file, `administrator_password` and `node_manager_password`, then it overrides the default values of the properties with the values specified in the properties file and uses the passwords specified to connect to the Administration Server and Node Manager. Here is an example:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh WebCenter_ORACLE_HOME/webcenter/scripts/upgrade_11.1.1.4/upgrade.py
~/upgrade.properties example_admin_password example_nm_password
```

5.3.4.1.9 Properties That can be Set in the Upgrade Properties File Table 5–4 lists the properties that can be set in the upgrade properties file.

Tip: A sample upgrade properties (`upgrade.properties`) file is available in the `WebCenter_ORACLE_HOME/webcenter/scripts/upgrade_11.1.1.4` directory.

Table 5–4 Upgrade Properties File

Property	Description
<code>domain.directory</code>	Path to the domain directory (Domain Home).
<code>oracle.home</code>	Path to the WebCenter Oracle home directory.

Table 5-4 (Cont.) Upgrade Properties File

Property	Description
<code>admin.user</code>	<p>Name of a user that is part of the LDAP wired to WebCenter Spaces and has Administrator privileges in the WLS embedded LDAP.</p> <p>To give a user Administrator privileged in WLS embedded LDAP:</p> <ol style="list-style-type: none"> 1. Log in to the WebLogic Server console. 2. Click Security Realms and select the security realm. 3. Click the Roles/Policies tab. 4. Expand Global Roles and Roles, then click "View Role Conditions" for the Admin role. 5. Select the User role from the drop-down list, enter the user ID, then click Add. 6. Save your changes and exit.
<code>admin.url</code>	URL used to connect to the Administration Server.
<code>admin.server</code>	Name of the Administration Server.
<code>nodemanager.user</code>	User name for the Node Manager.
<code>nodemanager.host</code>	Host name for the Node Manager server.
<code>nodemanager.port</code>	Port number for the Node Manager server.
<code>nodemanager.type</code>	Connection type for the Node Manager server.
<code>upgrade.custom.spaces</code>	<p>Indicates whether previous WebCenter Spaces customizations using the <code>custom.webcenter.spaces</code> shared library (if any) are migrated to the upgraded instance.</p> <p>Set this property to <code>true</code> to migrate your customizations.</p> <p>Warning: If you upgrade your WebCenter domain with <code>upgrade.custom.spaces</code> set to <code>FALSE</code>, none of your previous customizations will be available in the upgraded WebCenter Spaces instance, and there is no facility to migrate WebCenter Spaces customizations after the upgrade process.</p>
<code>user.config.file</code>	<p>Name and location of a user configuration file which contains an encrypted username and password. When you create a user configuration file, the <code>storeUserConfig</code> command uses a key file to encrypt the username and password. Only the key file that encrypts a user configuration file can decrypt the username and password.</p> <p>NOTE: If you set this property, you do not need to pass a password and it does not use the <code>admin.user</code> and <code>admin.url</code> properties.</p> <p>See <code>help('storeUserConfig')</code> in WLST for details on how to create a user configuration file.</p>
<code>user.key.file</code>	<p>Name and location of the key file that is associated with the specified user configuration file and is used to decrypt it.</p> <p>NOTE: You need to set this property only if you set the <code>user.config.file</code> property.</p> <p>See <code>help('storeUserConfig')</code> in WLST for details on how to create a user configuration file.</p>

5.3.4.1.10 Formatting Your Properties File You must make sure you escape values correctly in your properties file. This is particularly important when entering

Windows paths because all backslashes must be escaped with backslashes (in other words, a single backslash is represented by two backslashes in a Java properties file).

Refer to the following URL for details:

<http://download.oracle.com/javase/6/docs/api/java/util/Properties.html#load%28java.io.Reader%29>

The following is a sample properties file on a Windows operating system:

```
domain.directory=C:\\Middleware\\domains\\domain_name
oracle.home=C:\\Middleware\\Oracle_WC1
admin.user=weblogic
admin.url=t3://examplehost:7001
admin.server=AdminServer
nodemanager.user=node_manager_user
nodemanager.host=localhost
nodemanager.port=5556
nodemanager.type=ssl
upgrade.custom.spaces=false
```

The following is a sample properties file on a UNIX operating system:

```
domain.directory=/home/Middleware/domains/domain_name
oracle.home=/home/Middleware/Oracle_WC1
admin.user=weblogic
admin.url=t3://examplehost:7001
admin.server=AdminServer
nodemanager.user=node_manager_user
nodemanager.host=localhost
nodemanager.port=5556
nodemanager.type=ssl
upgrade.custom.spaces=false
```

5.3.4.2 Updating Oracle WebCenter Using WLST Commands

If you choose not to configure the Node Manager, you can update your middle tier by using WLST commands. You must run the WLST commands from the same machine on which the Administration Server is running.

Before you upgrade Oracle WebCenter using WLST:

- Ensure that you have updated your Oracle WebCenter software by using Oracle WebCenter installer.
For more information, see Section 3.6.2, "Downloading the Required Installer" and Section 3.6.3, "Start the Installer".
- Ensure that you have updated your database schemas.
For more information, see Section 3.8, "Update Your Schemas with Patch Set Assistant".

To update Oracle WebCenter using WLST commands:

1. Stop the Administration Server and all Managed Servers.
2. Start WLST from the WebCenter Oracle home.

On UNIX operating systems:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh
```

On Windows operating systems:

```
cd WebCenter_ORACLE_HOME\common\bin
wlst.cmd
```

3. Ensure the external LDAP server is up and running, then run the `upgradeOpss` command in offline mode (without connecting to any server):

On UNIX operating systems:

```
upgradeOpss(jpsConfig='DOMAIN_HOME/config/fmwconfig/jps-config.xml',
jazzData='MW_HOME/oracle_common/modules/oracle.jps_11.1.1/domain_
config/system-jazz-data.xml')
```

On Windows operating systems:

```
upgradeOpss(jpsConfig='DOMAIN_HOME\config\fmwconfig\jps-config.xml',
jazzData='MW_HOME\oracle_common\modules\oracle.jps_11.1.1\domain_
config\system-jazz-data.xml')
```

Note: If you need to re-run the `upgradeOpss()` command, you must exit the current WLST session and start a new session before re-running `upgradeOpss()`.

4. Run the `upgradeWebCenterDomain` command in offline mode:

```
upgradeWebCenterDomain(domainDirName='DOMAIN_HOME', oracleHome='WebCenter_
ORACLE_HOME', upgradeCustomSpaces=[1|0])
```

Where:

- `domainDirName` - Replace `DOMAIN_HOME` with the full path to your Domain home directory.
- `oracleHome` - Replace `WebCenter_ORACLE_HOME` with the full path to your WebCenter Oracle home directory.
- `upgradeCustomSpaces` - Set to 1 if you used the `custom.webcenter.spaces` shared library to customize WebCenter Spaces and you want to migrate your customizations to the upgraded instance. For information about how to use your extensions in WebCenter Spaces, refer to:

<http://www.oracle.com/technetwork/middleware/webcenter/owcs-ps4-wcs-ext-samples-wp-406559.pdf>

WARNING: If you upgrade your WebCenter domain with `upgradeCustomSpaces` set to 0, none of your previous customizations and resources that you developed, like page templates and skins, will be available in the upgraded WebCenter Spaces instance; there is no facility to migrate WebCenter Spaces customizations after the upgrade process.

For example:

```
upgradeWebCenterDomain(domainDirName='/home/Oracle/Domains/wc_domain',
oracleHome='/home/Oracle/Middleware/Oracle_WC1', upgradeCustomSpaces=1)
```

Note: You may see error messages when you run the `upgradeWebCenterDomain` command. These errors can be safely ignored so long as there is some text indicating that your operation was completed successfully. For more information about error messages, refer to *Oracle Fusion Middleware Release Notes*.

5. Start the Administration Server.

6. Connect to the Administration Server.

```
connect ()
```

7. In the domain running the WebCenter Spaces Managed Server, run the `upgradeWebCenterPermissions` command to add the required permission to the LDAP store.

```
upgradeWebCenterPermissions ()
```

Note: You may see error messages when you run the `upgradeWebCenterPermissions` command. These errors can be safely ignored so long as there is some text indicating that your operation was completed successfully. For more information about error messages, refer to the *Oracle Fusion Middleware Release Notes*.

8. All of the instructions to this point have been for a single node. If your domain has servers running on more than one machine, you need to pack and unpack your domain to replicate the changes to other nodes in your cluster.

To pack and unpack your updated domain:

- a. Pack the Administration Server:

```
cd WebCenter_ORACLE_HOME/common/bin
./pack.sh -managed=true -domain=DOMAIN_HOME -template=wcdomaintemplate.jar
-template_name=wc_domain_template
```

- b. Copy `wcdomaintemplate.jar` to the `WebCenter_ORACLE_HOME/common/bin` on the other machines.

- c. Remove or move the old domain directories (`DOMAIN_HOME` and `APPLICATION_HOME`) on the other machines.

- d. Unpack the domain on each of the other machines:

```
cd WebCenter_ORACLE_HOME/common/bin
./unpack.sh -domain=DOMAIN_HOME -template=wcdomaintemplate.jar
```

9. Start the WebCenter Managed Servers:

- `WC_Spaces` (WebCenter Spaces)
- `WC_Portlet` (Oracle Portlet Producers)
- `WC_Collaboration` (Oracle WebCenter Discussion Server)

Make sure the `WC_Spaces` server is up and running before moving on to the next step.

10. Disconnect from the Administration Server, and connect to the `WC_Spaces` server as an Oracle WebCenter administrator that is defined in the external LDAP server and is defined as an administration user in the embedded Oracle WebLogic Server.

Note: It is important to note that the administration user must be defined both as a user in the external LDAP directory and as a user with administration privileges in the embedded Oracle WebLogic Server LDAP directory.

If necessary, you can add a user to the Administration Group of the embedded Oracle WebLogic Server LDAP server as follows:

1. Log in to the WebLogic Server console.
 2. Click **Security Realms** and select the "myrealm" link.
 3. Click the **Roles/Policies** tab.
 4. Expand **Global Roles**, then expand **Roles**, then click "View Role Conditions" for the **Admin** role.
 5. Click **Add Condition**, then select **User** from the "Predicate List" field, then click **Next**.
 6. Enter the user name in the "User Argument Name" field, then click **Add**.
 7. Click **Finish**. The user you just entered should now be listed along with the administrators.
 8. Save your changes and exit.
11. In the domain running the WebCenter Spaces managed server, run the `upgradeWebCenterApplication` command.

```
upgradeWebCenterApplication(appName='webcenter')
```

If you have a cluster environment where there are multiple servers with WebCenter Spaces deployed, you must specify the server name. For example:

```
upgradeWebCenterApplication(appName='webcenter', server="server_name")
```

12. Copy the Trust Store file from the Oracle home directory to the Oracle WebLogic Server domain directory.

For example:

```
cp MW_HOME/oracle_common/modules/oracle.jps_11.1.1/jps-wls-trustprovider.jar  
   DOMAIN_HOME/lib/mbeantypes/jps-wls-trustprovider.jar
```

13. Restart the Administration Server and the Managed Servers in the domain.

5.3.5 Performing Post-Patching Tasks for Oracle WebCenter

This section describes the tasks that you may need to perform, depending on your system environment, after patching to Oracle WebCenter Portal 11.1.1.6.0.

The section contains the following subsections:

- Section 5.3.5.1, "Migrating Oracle Wiki Pages and Blogs"
- Section 5.3.5.2, "Migrating Content Presenter Custom Templates"

- Section 5.3.5.3, "Updating the Configuration for WebCenter REST APIs"
- Section 5.3.5.4, "Updating Multi-Calendar Layouts"
- Section 5.3.5.5, "Restoring Your OmniPortlet and WebClipping Customizations"
- Section 5.3.5.6, "Extending a Domain to Install Oracle WSM Policy Manager"
- Section 5.3.5.7, "Remove `openusage` Properties in `setDomainEnv`"
- Section 5.3.5.8, "Redeploying your Custom Applications to Upgraded Custom Managed Servers"
- Section 5.3.5.9, "Remove the `LD_LIBRARY_PATH` Entry from the `setDomainEnv` Script"
- Section 5.3.5.10, "Migrating WSRP Portlet Preferences"

5.3.5.1 Migrating Oracle Wiki Pages and Blogs

This section contains the following sections to help you migrate your existing Wiki pages and blogs for use in the newly patched Oracle WebCenter domain:

- Section 5.3.5.1.1, "How to Migrate Oracle Wiki Pages and Blogs"
- Section 5.3.5.1.2, "Troubleshooting Problems During Wiki Migration"

5.3.5.1.1 How to Migrate Oracle Wiki Pages and Blogs If you had Oracle Wiki installed, you must run the Wiki Migrator utility `wiki-upgrade.jar` to migrate the wiki pages and blogs. The utility is available in the following directory in the WebCenter Oracle home:

`WebCenter_ORACLE_HOME/webcenter/archives/wiki-upgrade.jar`

This Wiki Migrator utility migrates your wiki pages and blogs into Space-specific folders in Oracle Content Server. Existing WebCenter Spaces pages for wikis and blogs are migrated, accordingly. The utility also migrates attachments and provide links to them in your wiki pages as appropriate. Links to other wiki pages within your wiki page content are updated to point to the new locations, provided that the URL in each link has the same WebCenter Spaces root that is provided in the migration parameters. The utility does not migrate comments, discussion threads, templates, nor it alters wiki or blog content.

If you encounter any errors during the migration process, check the output log, which is located in the same directory as the `wiki-upgrade.jar` file. For more information, see Section 5.3.5.1.2, "Troubleshooting Problems During Wiki Migration".

Before performing wiki migration, do the following:

1. Make sure Oracle Universal Content Management (UCM) is upgraded to Release 11g (see Section 5.3.3.3, "Upgrade Oracle Universal Content Management").

Note: In Release 11.1.1.6.0, Oracle Universal Content Management is referred as Oracle WebCenter Content, and Oracle Content Server is referred as Oracle WebCenter Content Server.

2. Verify that the root folder `PersonalSpaces` exists in Oracle WebCenter Content; this is the folder in which all personal folders get created. Wiki migration may fail if the `PersonalSpaces` folder does not exist in Oracle WebCenter Content. The `PersonalSpaces` folder gets created when the Spaces managed server is started.

Therefore, it is recommended that you start the Spaces managed server prior to performing wiki migration.

3. Update the folder limit in Oracle WebCenter Content as follows:
 - a. Log in to the Oracle WebCenter Content user interface, go to **Administration > Folder Configuration** and change the "Maximum Folders Per Virtual Folder" and "Maximum Content Per Virtual Folder" to 1000.
 - b. Create a temporary folder that the Wiki migration utility will use to store the orphan data (for example, the data that does not have a corresponding Group Space). This does NOT have to be a root folder; it can be created as the Administrator user under the **PersonalSpaces or Group Space** root folder. If a root folder is preferred, the service using the URL `IdcService=COLLECTION_ADD` will need to be used. For example:

```
http://host:port/idc/idcplg?IdcService=COLLECTION_
ADD&dParentCollectionID=-1&hasParentCollectionID=true&force=true%20&xForceF
olderSecurity=FALSE&ignoreMaxFolderLimit=true&hasMark=true&dCollectionName=
PS3WikiMigration_Orphans&mark=PS3WikiMigration_
Orphans&dDocAccount=PUBLIC&idcToken=1290338486670:A17C2CCCC0C2FD2544E0A1B2
F03DB67
```

Note the `idcToken` can be retrieved via the browser's Page Source from a logged in session to Oracle WebCenter Content. Alternatively, the attribute `DisableAuthorizationTokenCheck` can be disabled by selecting **Administration > Content Server > General Configuration > Additional Configuration Variables -> DisableAuthorizationTokenCheck=true** and then restarting the server.

4. Choose one of the following ways to run the `wiki-upgrade.jar` file from WebCenter Oracle home:
 - Do not pass any arguments from the command line, as follows:

```
> cd WebCenter_ORACLE_HOME/webcenter/archives
> MW_HOME/jdk160_21/bin/java -jar wiki-upgrade.jar
```

You will be prompted for each of the required arguments listed in Table 5–5.

- Pass a properties file (`WikiMigrator.properties`) as an argument:

```
MW_HOME/jdk160_21/bin/java
-jar WebCenter_ORACLE_HOME/webcenter/archives/wiki-upgrade.jar
WikiMigrator.properties
```

The `WikiMigrator.properties` must reside in the same directory as `wiki-upgrade.jar`. The following is a sample properties file:

```
MDSConn      = jdbc:oracle:thin:@exampleDB:1521:exampleSID
MDSUser      = dbuser_example_mds
UCMConn     = idc://examplehost:9444
UCMUser      = sysadmin
UCMConnName  = example_connection_name
UCMTempFolderPath = /RootFolder/.../TempFolder
wikiConn     = jdbc:oracle:thin:@exampleDB:1521:exampleSID
wikiUser     = example_wiki
SpacesRootURL = http://examplehost:port/webcenter
```

You will be prompted for the MDS, UCM, and Wiki passwords from the command line.

- Pass all arguments from the command line:

```

MW_HOME/jdk160_21/bin/java -jar wiki-upgrade.jar
  MDSConn MDSUser MDSPswd UCMConn UCMTempFolderPath UCMUser UCMPswd
UCMConnName
  wikiConn wikiUser wikiPswd SpacesRootURL

```

For example:

```

java -jar WikiMigrator.jar
  jdbc:oracle:thin:@exampleDB:1521:exampleSID
  dbuser_example_mds
  example_mds_password
  idc://examplehost:9444
  sysadmin
  example_ucm_password
  example_ucm_connection_name
  example_path_to_ucm_temporary_folder
  jdbc:oracle:thin:@example:1521:exampleSID
  example_wiki
  example_wiki_password
  http://examplehost:port/webcenter

```

Table 5–5 Descriptions and Examples of the Wiki Migration Utility Arguments

Argument	Description
MDSConn	Name of the connection used to connect to the MDS data source. For example: <code>jdbc:oracle:thin:@host:port:SID</code>
MDSUser	Name of the database user used to connect to the MDS data source.
MDSPswd	Password to the database user that is used to connect to the MDS data source.
UCMConn	UCM connection URL over the <code>idc</code> protocol. For example: <code>idc://host:port</code>
UCMUser	Use <code>sysadmin</code> as the UCM user; the user <code>weblogic</code> does not get administrator privileges with socket connections.
UCMPswd	Password for the UCM user account.
UCMConnName	Name used in Enterprise Manager or WLST to create the connection to UCM.
UCMTempFolderPath	Temporary folder on UCM to store orphaned data For example: <code>/RootFolder/.../TempFolder</code>
wikiConn	Name of the connection used to connect to the Wiki data source. For example: <code>jdbc:oracle:thin:@host:port:SID</code>
wikiUser	Name of the database user that is used to connect to the Wiki data source.
wikiPswd	Password for the database user connecting to the Wiki data source.
SpacesRootURL	Spaces root URL. For example: <code>http://host:port/context_root</code>

Note: If you have wiki or blog pages that use Query String parameters, then after upgrade these parameters do not take effect. Any links that pointed to other wiki pages through a URL such as the following are converted to a Resource Action Handler URL that points to the corresponding wiki document in the content repository, assuming the `server:port` value entered for `SpacesRootURL` matches the `server:port` value in the URL.

```
http://server:port/owc_
wiki/page/show.jz?inline=1&scope=#{communityContext.communityName}&
theme=#{adfFacesContext.skinFamily}
```

Special Note for 10g and Release 1 (11.1.1.1.0) Users

If you are upgrading from a 10g release or Release 1 (11.1.1.1.0) version of Wiki, then after you run the Migrator utility `wiki-upgrade.jar`, there may be some wiki and blog folders that end up in the `MigrationTemp` folder. You must manually move these folders to the correct group space folders on UCM.

Perform the following steps after migrating Oracle Wiki pages and blogs:

1. Log on to UCM and go to the **MigrationTemp** folder under `sysadmin` (or the UCM user running the migration program). Move the wiki and blog folders to the correct group space folders. You may need to rename the wiki and blog folders to match the corresponding group space names in WebCenter Spaces.
2. Log in to the Spaces application, navigate to the required group space and create a new page with Wiki or Blog page style. The name of the page must match the name of the wiki/blog folder in order for the page to properly display the wiki/blog content.

5.3.5.1.2 Troubleshooting Problems During Wiki Migration During wiki migration, you may see some error messages in the output log. Descriptions and available workarounds are described below.

Error Message 1

```
[INFO] PROCESSING Domain: domain_name
[INFO] migrating to temp folder - there is no webcenter page information stored on
the domain: domain_name
```

This message indicates that there is no data specified in the domain to connect it with a group space page (the `wcURL` on the domain is missing).

Note: The last part of the migration program will find any remaining unmigrated group space pages that still point to `owc_wiki` and will try to gather domain information from the page's source URL to be matched against a `jzwiki` domain. If the proper information is found, it will move the folder and content out of migration `temp` and into the proper group space folder.

Error Message 2

```
[INFO] PROCESSING Domain: domain_name
[INFO] migrating to temp folder - invalid group space that corresponds to the
guid: group_space_guid
```

This message indicates that there is either no group space information specified in the domain, or the group space guid specified is not valid (the group space guid specified in the wcURL is not valid).

Error Message 3

```
[INFO] PROCESSING Domain: domain_name
[INFO] migrating to temp folder - no group space that corresponds to the guid:
group_space_guid
```

This message indicates that the domain's group space information points to a group space that no longer exists. Doing a lookup with the group space guid does not find a corresponding group space name. Most likely the group space has been deleted.

Error Message 4

```
[INFO] PROCESSING Domain: domain_name
[ERROR] migrating to temp folder - no UCM folder for the groupspace exists: page_name, gsname: group_space_name
```

This message indicates that the spaces page has been migrated already, but the UCM folder for that group space does not exist.

To correct this, create the group space folder (by provisioning the Document service in the group space), and then move the folder (with the same name as the domain) from migration temp to the group space folder. Then rename the domain folder to have the same name as the page.

Error Message 5

```
[INFO] PROCESSING Domain: domain_name
[ERROR] migrating to temp folder - could not get UCM folder for the wiki domain,
page: page_name, gsname: group_space_name
```

This message indicates that the spaces page has been migrated already, but the UCM folder for domain could not be created in the group space folder.

To correct this, move the folder (with the same name as the domain) from migration temp to the group space folder. Then rename the domain folder to have the same name as the page.

Error Message 6

```
[INFO] PROCESSING Domain: domain_name
[ERROR] migrating to temp folder - no UCM folder exists for the user: user_name,
page: page_name
```

This message indicates that the spaces page has been migrated already, but the UCM folder for the user does not exist.

To correct this, create the user's personal folder (this folder is created when the user accesses Documents from the home space), and then move the folder (with the same name as the domain) from migration temp to the personal folder. Then rename the domain folder to have the same name as the page.

Error Message 7

```
[INFO] PROCESSING Domain: domain_name
[ERROR] migrating to temp folder - could not get personal UCM folder for the user:
user_name, page: page_name
```

This message indicates that the spaces page has been migrated already, but the UCM folder for the domain could not be created in the user's personal folder.

To correct this, move the folder (with the same name as the domain) from migration temp to the user's personal folder. Then rename the domain folder to have the same name as the page.

Error Message 8

```
[INFO] PROCESSING Domain: domain_name
[INFO] migrating to temp folder - default scope, but no user specified on page:
page_name
```

This message indicates that this is a personal wiki or blog, but the information stored on the domain (the wcURL passed in from the spaces page) does not indicate a user.

Error Message 9

```
[INFO] PROCESSING Domain: domain_name
[INFO] sourceUrl: source_url
[INFO] migrating to temp folder - the page source url is not pointing to the
correct domain, page: page_name, wcURL: wcURL
```

This message indicates that there is more than one domain pointing to the same group space and page information, and the current domain being processed does not match the domain indicated in the source URL.

Error Message 11

```
[INFO] PROCESSING User Blog: blog_name
[INFO] migrating to temp folder - could not get user UCM folder for the user:
user_name
```

This is a jzwiki user blog that is not connected with a domain. The message indicates that the UCM folder for the user does not exist, so the content could not be migrated there.

Error Message 12

```
[INFO] PROCESSING User Blog: blog_name
[INFO] migrating to temp folder - could not get UCM folder for the user: user_name
```

This is a jzwiki user blog that is not connected with a domain. The message indicates that the "Blogs" UCM folder for the user does not exist and could not be created, so the content could not be migrated there.

5.3.5.2 Migrating Content Presenter Custom Templates

Content Presenter custom templates used in Release 11.1.1.3.0 applications are not automatically migrated when you upgrade to Release 11.1.1.6.0. You must register the required custom templates in Release 11.1.1.6.0 version of your applications.

To migrate Content Presenter custom templates from Release 11.1.1.3.0:

1. In JDeveloper 11.1.1.6.0, create or open a WebCenter Portal application.
2. On the filesystem, copy your Release 11.1.1.3.0 .`jsff` files to your Release 11.1.1.6.0 application.

From the Release 11.1.1.3.0 version of your application, copy the required custom template from following folder:

```
PROJECT_ROOT/public_
html/oracle/webcenter/content/templates/custom
```

Copy the custom template to the following folder of your upgraded Release 11.1.1.6.0 application:

`PROJECT_ROOT/public_html/oracle/webcenter/portalapp`

3. In JDeveloper, create the Content Presenter custom template as a portal resource. The properties that you set for the custom template application must match those that were previously registered in your Release 11.1.1.3.0 application.

For information, see "Export a Content Presenter Display Template as a Portal Resource" in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

4. Redeploy your application using the new custom Managed Servers, as described in Section 5.3.5.8, "Redeploying your Custom Applications to Upgraded Custom Managed Servers."
5. If the custom template is also used in WebCenter Spaces, prepare the template to be used in your upgraded environment:

- a. Using JDeveloper, export the Content Presenter display template as a portal resource.
- b. Log in to the Spaces application and navigate to Spaces Administration.
- c. Select **Resources > Content Presenter** and upload your template.

For information, see "Using Content Presenter Display Templates in a Framework Application" in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

5.3.5.3 Updating the Configuration for WebCenter REST APIs

Before you can use the WebCenter Representational State Transfer (REST) APIs, you must perform the server-side configurations. You must configure an identityasserter. You must also seed the required entries in the credential store, which enables the REST security tokens to function properly.

This section includes the following subsections:

- Section 5.3.5.3.1, "Configure an Identity Asserter"
- Section 5.3.5.3.2, "Configure the Credential Store"

Note: This configuration is not required for the navigation REST APIs or for the CMIS REST APIs.

For more information about security tokens, see "Security Considerations for CMIS REST APIs" in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

5.3.5.3.1 Configure an Identity Asserter You must configure an identityasserter before using the REST APIs. For detailed instructions, see "Configuring the REST Service" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5.3.5.3.2 Configure the Credential Store You must seed entries in the credential store that enable the REST security tokens to function properly. Run the following WLST commands to configure the credential store:

```
createCred(map="o.webcenter.jf.csf.map", key="keygen.algorithm",
  user="keygen.algorithm", password="AES")
createCred(map="o.webcenter.jf.csf.map", key="cipher.transformation",
  user="cipher.transformation", password="AES/CBC/PKCS5Padding")
```

Run these commands while the Administration server is running. You do not have to restart the server after executing these commands. For more information, see "createCred" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

5.3.5.4 Updating Multi-Calendar Layouts

In Release 11.1.1.2.0 and 11.1.1.3.0, the Calendar Overlay Style FULL could be used to enable multiple calendars for some events task flow and add multiple Space calendars in one events task flow. In the upgraded Release 11.1.1.6.0, the Events task flow no longer displays multiple calendars; only the current Space calendar is displayed.

To work around this issue, you must enable the calendar overlaying feature for the Events task flow. Go to the page editor, find the Calendar Overlay Style parameter and select Full from the list of available options. For more information, see "Enabling Calendar Overlaying" in *Oracle Fusion Middleware User's Guide for Oracle WebCenter*.

5.3.5.5 Restoring Your OmniPortlet and WebClipping Customizations

After you have saved your customizations (Section 5.3.3.1, "Save Your OmniPortlet and WebClipping Customizations") and successfully patched your software, you must restore OmniPortlet and WebClipping configuration and customizations as follows:

1. Navigate to the following directories:

On UNIX operating systems:

- `path_to_war_directory/WEB-INF/providers/omniPortlet`
- `path_to_war_directory/WEB-INF/providers/webclipping/`

Where `path_to_war_directory` refers to `DOMAIN_HOME/servers/WLS_PORTAL/tmp/_WL_user/portalTools_version/randomly_generated_directory/war`

On Windows operating systems:

- `path_to_war_directory\WEB-INF\providers\omniPortlet`
- `path_to_war_directory\WEB-INF\providers\webclipping/`

Where `path_to_war_directory` refers to `DOMAIN_HOME\servers\WLS_PORTAL\tmp_WL_user\portalTools_version\randomly_generated_directory\war`

`DOMAIN_HOME` is the domain home locations for your Oracle Portal or Oracle WebCenter domain, as specified on the "Specify Domain Name and Location" screen in the Configuration Wizard.

Note: Since the Patch Set Installer re-deployed the OmniPortlet and WebClipping applications, the new path may be different than the path from where you backed up customizations.

2. Replace these directories with their backed up copies.

For example, to restore the `omniportlet` directory, you can use the following commands:

On a UNIX operating system:

```
cp -fr backup_location path_to_war_directory/WEB-INF/providers/omniPortlet
```

On a Windows operating system:

```
xcopy /y/e backup_location path_to_war_directory\WEB-INF\providers\omniPortlet
```


3. If applicable, in the Oracle Portal domain, restart the Managed Server WLS_PORTAL.
4. In the WebCenter domain, restart the Managed Server WC_Portlet.

5.3.5.6 Extending a Domain to Install Oracle WSM Policy Manager

When you upgrade Oracle WebCenter, existing WSM-PM applications and associated datasource are re-targeted to the WC_Collaboration managed server. If your upgraded WebCenter domain has discussions server installed, you must extend the domain to install Oracle WSM Policy Manager if not already installed.

To extend a WebCenter domain to install Oracle WSM Policy Manager:

1. Stop the Admin server and all managed servers.
2. Start the Configuration Wizard on the machine running the Admin server.
On UNIX, run `WebCenter_ORACLE_HOME/common/bin/config.sh`.
On Windows, run `WebCenter_ORACLE_HOME\common\bin\config.cmd`.
3. Select **Extend an existing WebLogic domain** and click **Next**.
4. Select your domain and click **Next**.
5. Select the checkbox for **Oracle WSM Policy Manager** and click **Next**.
6. Enter the connection details for **OWSM MDS Schema** and click **Next**.
7. Click **Next** on the remaining screens until you get the Configuration Summary screen, then click **Extend**.

For more information on extending a domain, see "Extending a WebLogic Domain in Graphical Mode" in *Oracle Fusion Middleware Creating Domains Using the Configuration Wizard*.

Note: If your domain is running on multiple machines, you must pack the domain on the machine running the Administration Server and unpack on the other machines. For information, see Section 5.3.4.2, "Updating Oracle WebCenter Using WLST Commands."

5.3.5.7 Remove `openusage` Properties in `setDomainEnv`

If you want to extend your WebCenter domain to install Oracle WebCenter Portal's Analytics Collector, you must remove the `openusage` properties:

1. Remove the `openusage` properties from `EXTRA_JAVA_PROPERTIES` in `DOMAIN_HOME/bin/setDomainEnv.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\setDomainEnv.cmd` (on Windows operating systems).

Specifically, the entries that need to be removed are:

```
EXTRA_JAVA_PROPERTIES="-Doracle.wc.openusage.clustername=localhost
-Doracle.wc.openusage.collectorport=port_number
-Doracle.wc.openusage.timeout=30
-Doracle.wc.openusage.unicast=true
-Doracle.wc.openusage.enabled=false
${EXTRA_JAVA_PROPERTIES}"
export EXTRA_JAVA_PROPERTIES
```

Note: These entries may appear multiple times in `setDomainEnv.sh` or `setDomainEnv.cmd`. So ensure that all the entries are removed.

If you extend your domain to add new products, you may need to repeat the task of removing the `openusage` properties from `setDomainEnv`.

2. Restart all the servers in the WebCenter domain.

5.3.5.8 Redeploying your Custom Applications to Upgraded Custom Managed Servers

If there are custom Managed Servers in your domain, they may not have the correct libraries targeted. Therefore you must upgrade them after patching WebCenter, and redeploy your custom applications.

To upgrade custom managed servers:

1. Remove the old custom Managed Servers.
2. Run the Configuration Wizard to extend your existing WebCenter domain and apply custom templates.
 - a. On the "Select Extension Source" screen, select **Extend my domain using an existing extension template**.
 - b. Navigate to the `WebCenter_ORACLE_HOME/common/templates/applications` (on UNIX operating systems) or `WebCenter_ORACLE_HOME\common\templates\applications` (on Windows operating systems) directory and locate the following templates:

`oracle.wc_custom_portal_template_11.1.1.jar` (for WebCenter custom applications/Framework applications)

`oracle.wc_custom_services_producer_template_11.1.1.jar` (for WebCenter Custom Producer/Portlet Producer applications)
 - c. Select the desired template and complete the domain extension process.
3. Re-deploy your custom applications using the new custom Managed Servers.

Note: Oracle recommends that you open your projects in Oracle JDeveloper and migrate your applications to the latest version before deploying to the new custom Managed Servers.

5.3.5.9 Remove the LD_LIBRARY_PATH Entry from the setDomainEnv Script

Before patching Oracle WebCenter, you must remove the following entry from the `setDomainEnv` script:

```
LD_LIBRARY_PATH="${WL_HOME}/server/native/linux/i686${CLASSPATHSEP}${LD_LIBRARY_PATH}"
export LD_LIBRARY_PATH
```

The `setDomainEnv` script is available at the following path:

- `DOMAIN_HOME/bin/setDomainEnv.sh` (on UNIX operating systems)
- `DOMAIN_HOME\bin\setDomainEnv.cmd` (on Windows operating systems)

Note: If you extend your domain to add new products, you may need to repeat this task.

5.3.5.10 Migrating WSRP Portlet Preferences

By default, all custom JSR286 portlets (created using Portlet Creation Wizard) use a file-based preference store. Post upgrade, you must move WSRP portlet preferences from:

```
$MW_HOME/Oracle_WC1/portal/portletdata
```

To:

```
$MW_HOME/oracle_common/portal/portletdata
```

Where, *MW_HOME* refers to Middleware Home, and *Oracle_WC1* refers to WebCenter Portal Oracle Home.

You can move WSRP portlet preferences manually or by using a migration utility. For more information, see "Portlet Preference Store Migration Utilities" in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

5.3.6 Performing Post-Patching Tasks for Oracle WebCenter Spaces

This section contains the following topics:

- Section 5.3.6.1, "Setting the Web Context Root on the UCM Connection"
- Section 5.3.6.2, "Configuring Group Space Workflows"
- Section 5.3.6.3, "Reconfiguring a Default Template Set for Group Spaces"
- Section 5.3.6.4, "Updating the Timezone Attribute in WebCenter Spaces"
- Section 5.3.6.5, "Updating the Group Spaces Display Mode"
- Section 5.3.6.6, "Choosing a Default Start (or Landing) Page"
- Section 5.3.6.7, "Migrating WebCenter Spaces Custom Library"
- Section 5.3.6.8, "Upgrading Process Spaces"

5.3.6.1 Setting the Web Context Root on the UCM Connection

If Universal Content Management (UCM) and WebCenter instances are configured for access through a common Oracle HTTP server, the Web Server Context Root property (`WebContextRoot`) on the existing UCM connection can be set to make UCM features available in the WebCenter application via an `iFrame`. The UCM connection can be set either through Fusion Middleware Control or WLST using the `setJCRContentServerConnection` command. For information, see "Setting Connection Properties for the Spaces Content Repository" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5.3.6.2 Configuring Group Space Workflows

If your WebCenter instance had Group Space Workflows configured, after upgrading to the latest release, you must redeploy `sca_CommunityWorkflows.jar` and `WebCenterWorklistDetailApp.ear`.

To configure Group Space Workflows:

1. Log in to Fusion Middleware Control.

2. Deploy `sca_CommunityWorkflows.jar` to the SOA managed server. This file is located at the following path in your Oracle SOA installation:

```
SOA_ORACLE_HOME/webcenter/modules/oracle.webcenter.sca_11.1.1/sca_
CommunityWorkflows.jar
```

Where, `SOA_ORACLE_HOME` refers to the Oracle SOA installation directory.

Note that version 11.1.1.6.0 is active in the console, and other older versions like 11.1.1.5.0 are inactive.

3. Undeploy `WebcenterWorklistDetailApp.ear`, and then redeploy it to the SOA managed server. You can find the application at the following location in your Oracle SOA installation:

```
SOA_ORACLE_HOME/webcenter/applications/WebCenterWorklistDetailApp.ear
```

Refer to "Deploying the Application to a WebLogic Managed Server" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* for instructions on how to deploy WebCenter applications.

5.3.6.3 Reconfiguring a Default Template Set for Group Spaces

In Release 11.1.1.2.0 and 11.1.1.3.0, the WebCenter Spaces administrator had the ability to set default page template for both personal spaces and group spaces. From Release 11.1.1.4.0 onward, the option of setting a default page for group spaces is no longer available.

To reconfigure a default page template for your upgraded group spaces:

1. As an administrator, export `webcenter-config.xml.xml`:
 - a. Start the WebLogic Scripting Tool (WLST).

On UNIX operating systems:

```
cd WebCenter_ORACLE_HOME/common/bin
./wlst.sh
```

On Windows operating systems:

```
cd WebCenter_ORACLE_HOME\common\bin
./wlst.cmd
```

For more information, see "Running Oracle WebLogic Scripting Tool (WLST) Commands" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

- b. Connect to the Administration Server for WebCenter Portal. For example:

```
connect(username='weblogic', password='mypassword',
url='myhost.example.com:7001')
```

- c. Run the `exportMetadata` WLST command to export application metadata:

```
exportMetadata(application, server, toLocation, docs, [restrictCustTo],
[excludeAllCust], [excludeBaseDocs], [excludeExtendedMetadata],
[fromLabel], [toLabel], [applicationVersion])
```

For example:

```
exportMetadata(application='webcenter', server='WC_Spaces',
toLocation='/tmp/myrepos',
docs='/oracle/webcenter/webcenterapp/metadata/mdssys/cust/site/webcenter/we
```

```
bcenter-config.xml.xml')
```

For more information see "exportMetadata" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

2. Navigate to the exported directory (for example, /tmp/repos on a UNIX operating system or C:\TEMP\repos on a Windows operating system). From webcenter-config.xml, remove the <defaultGSSiteTemplateId> parameter, and save the file.

If the defaultGSSiteTemplateId parameter was changed in your previous WebCenter installation, the parameter is available in

webcenter-config.xml.xml here:

```
oracle/webcenter/webcenterapp/metadata/mdssys/cust/site/webcenter/webcenter-config.xml.xml
```

If the defaultGSSiteTemplateId parameter was not changed, it will be commented out. You must uncomment the parameter in the file available here:

```
/oracle/webcenter/webcenterapp/metadata/webcenter-config.xml
```

3. As an administrator, import the document.

- a. Start WLST.
- b. Connect to the Administration Server for WebCenter Portal.
- c. Run the importMetadata WLST command:

```
importMetadata(application, server, fromLocation, docs, [restrictCustTo],
[excludeAllCust], [excludeBaseDocs], [excludeExtendedMetadata],
[cancelOnException], [applicationVersion])
```

For example:

```
importMetadata(application='webcenter', server='WC_Spaces',
fromLocation='/tmp/myrepos', docs='/**')
```

For more information see "importMetadata" in *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

4. Verify that 'system default' now appears for the Page Template setting in Space Administration.

Note: WebCenter Spaces 11.1.1.6.0 supports the built-in skins, Fusion FX and WebCenter Spaces FX. Prior to Release 11.1.1.4.0, WebCenter Spaces supported various other built-in skins such as Mist, DeepSea, and MistFX. You can still use the old skins with your upgraded personal spaces and group spaces by using the format #{'old family name'} in EL expressions. However, you cannot use the old skins with any new space or Home space created in Spaces release 11.1.1.6.0.

5.3.6.4 Updating the Timezone Attribute in WebCenter Spaces

In Release 11.1.1.2.0, the Timezone attribute in WebCenter Spaces is a free-form text field. From Release 11.1.1.4.0 onward, this attribute was changed to a drop-down list.

If you are upgrading WebCenter Spaces from Release 11.1.1.2.0, the Timezone attribute is not carried over, and you must manually select the appropriate timezone from the drop-down list.

5.3.6.5 Updating the Group Spaces Display Mode

If you are upgrading WebCenter Group Spaces from Release 11.1.1.2.0 or 11.1.1.3.0, you must update the metadata of your Group Spaces to ensure that they display correctly.

To update a Group Space to display correctly:

1. Export the group space. For information, see the "Exporting Spaces" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
2. At a command prompt, go to the directory where you saved the export archive.
3. Extract the metadata from the export archive.

For example, the following code extracts the export archive named `export.ear`, which contains `transport.mar`. The code further extracts `transport.mar` in a directory named `mar`.

- a. `jar xvf export.ear transport.mar`
- b. `mkdir mar`
- c. `cd mar`
- d. `jar xvf ../transport.mar`

The `transport.mar` file contains `space.xml` that you must edit to update the group space's display mode.

4. Open the `space.xml` file from the following path:

```
oracle/webcenter/space/metadata/spaces/spaceName/space.xml
```

Where, *spaceName* refers to the name of the group space whose display mode you are updating.

5. Delete the entire `<shell-chrome-type>` entry from `space.xml`.
6. Update the export archive.

For example, the following code updates the `space.xml` file in `transport.mar`, and then updates `transport.mar` in `export.ear`.

- a. `jar uvfM ../transport.mar
oracle/webcenter/space/metadata/spaces/spaceName/space.xml`
- b. `cd ..`
- c. `jar uvfM export.ear transport.mar`

7. Import the group space. For information, see the "Importing Spaces" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5.3.6.6 Choosing a Default Start (or Landing) Page

By default, when you log in to the Spaces application, the last accessed page is displayed. This behavior can be overridden by setting the `oracle.webcenter.spaces.disableLastAccessPageBehavior` system property to `false` in the `setDomainEnv` domain startup script. This script is available at `DOMAIN_HOME/bin/setDomainEnv.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\setDomainEnv.cmd` (on Windows operating systems).

If you had overridden the default behavior, you must re-apply this change after patching Oracle WebCenter.

5.3.6.7 Migrating WebCenter Spaces Custom Library

WebCenter Spaces can be customized, for example to deploy additional shared libraries that include custom code or some additional resources like task flows, page styles, and skins. If you deployed any custom page styles by extending Spaces through the custom library `custom.webcenter.spaces.war`, then after patching you must modify the entry for each page style in the custom library and redeploy `custom.webcenter.spaces.war`.

If you migrated your WebCenter Spaces customizations:

1. In JDeveloper, open `ExtendWebCenterSpaces.jws` (11.1.1.2.0 or 11.1.1.3.0).
2. For each and every deployed page style, find the following:

```
<af:pageTemplate
```

And replace it with the following:

```
<af:pageTemplate
value="#{bindings.shellTemplateBinding.templateModel}" id="T"
```

3. For each and every `pageDef`, find the following:

```
<page>
```

And replace it with the following:

```
<page
viewId="#{WCAppContext.application.siteTemplateManager.currentSiteTemplateViewI
d}" id="shellTemplateBinding" Refresh="ifNeeded" />
```

4. Redeploy the `custom.webcenter.spaces.war` shared library to your Spaces 11.1.1.6.0 managed server.

Note: Always use Oracle JDeveloper 11.1.1.2 or 11.1.1.3 to build and deploy extensions developed for this release. For detailed steps, see the links for white papers "Extending WebCenter Spaces (11.1.1.2.0)" or "Extending WebCenter Spaces (11.1.1.3.0)" on Oracle Technology Network:

<http://www.oracle.com/technetwork/middleware/webcenter/portal/overview/index.html>

5.3.6.8 Upgrading Process Spaces

Oracle Business Process Management (Oracle BPM) Process Spaces is a workspace built on top of Oracle WebCenter Spaces, and provides Spaces that are designed specifically for modeling and executing business processes. If you have Process Spaces installed, then after patching to WebCenter Portal 11.1.1.6.0, you must upgrade it by running the `install.xml` script. The installation script can be used for a single-server configuration as well as a cluster configuration.

For more information about the Process Spaces functionality, refer to "Understanding Oracle Business Process Management Process Spaces" in *Oracle BPEL Process Manager User's Guide*.

Note: The procedure described in this section applies only if you already have Process Spaces enabled on Webcenter Spaces and are upgrading your existing WebCenter installation to the latest release.

For information about enabling Process Spaces in a new WebCenter installation (or new domain), see "Extending a Domain to Enable Oracle BPM Process Spaces" in *Oracle Fusion Middleware Installation Guide for Oracle WebCenter*.

To upgrade Process Spaces installed in your upgraded WebCenter instance:

1. Take the Process Workspace and Modeling Space offline.
 - a. Log in to WebCenter Spaces.
 - b. Click the **Administration** link to open WebCenter administration pages.
 - c. Under the **Spaces** tab, select the **Modeling Space** row.
 - d. From the **Edit** menu, select **Offline for Maintenance**.
 - e. In the Bring Space Offline dialog, click **OK**.
 - f. Repeat this procedure to take **Process Workspace** offline.
2. Copy the `SOA_ORACLE_HOME/bpm/process_spaces` (on UNIX) or `SOA_ORACLE_HOME\bpm\process_spaces` (on Windows) folder from the SOA Oracle home directory to any location from where it can connect to the WebCenter installation.
3. Open the `process-portal-install.properties` file located in the `process_spaces` folder and specify the required Oracle BPM and WebCenter properties as listed in Table 5–6.

Note: For security purposes, you can skip specifying the passwords, and provide them later when prompted.

Table 5–6 Properties Specified in `process-portal-install.properties`

Property	Description
<code>extendSoa</code>	Specify the value as <code>true</code> if WebCenter and SOA are in the same domain, else <code>false</code> .
<code>promptForPasswords</code>	The flag to decide whether to prompt for passwords or read them from the <code>process-portal-install.properties</code> file while running the installer.
Oracle BPM Schema Details	
<code>bpmDBUser</code>	User name to connect to the database configured for Oracle BPM
<code>bpmDBPassword</code>	Password to connect to Oracle BPM's database
<code>bpmDBType</code>	Database type configured for Oracle BPM
<code>bpmDBDriver</code>	Driver used to connect to Oracle BPM's database
<code>bpmDBUrl</code>	URL of Oracle BPM's database, like <code>jdbc:oracle:thin:@adc2170307:1521</code>
Oracle BPM MDS Details	

Table 5–6 (Cont.) Properties Specified in process-portal-install.properties

Property	Description
bpmMDSUser	User name for the MDS schema used for Oracle BPM
bpmMDSPassword	Password for Oracle BPM's MDS schema
Oracle BPM Runtime Details	
bpmServerURL	<p>Oracle BPM server URL.</p> <p>For a single BPM server: <code>t3://<bpmHost>:<bpmRuntimePort></code></p> <p>For example: <code>t3://myHost:8001</code></p> <p>For BPM cluster, specify separated list of BPM server URLs for all servers in the cluster in the following format: <code>t3://host1:port1,host2:port2,...</code></p> <p>For example, <code>t3://myHost1:8001,myHost2:8002,myHost3:8003</code></p>
bpmAdminUser	Name of the user that has Administrator privileges on the Oracle BPM server
bpmAdminPassword	Password for the Oracle BPM Admin user
WebCenter Spaces Installation Details	
wcOracleHome	Path to the WebCenter Oracle home directory
wcDomainName	Name of the domain where WebCenter is installed. If <code>extendSoa</code> flag is set to <code>true</code> , point to the BPM domain.
wcSetDomainRealmPassword	<p>Flag to control whether to set the domain realm password; set the value to either <code>true</code> or <code>false</code>.</p> <p>Note: This property is for setting up Global Trust. It is recommended that you set Global Trust manually; so set this property to <code>false</code>.</p>
wcDomainRealmPassword	<p>Password to set up trusted domains. Same password must be set on Oracle BPM domain as well.</p> <p>Note: This property is for setting up Global Trust. It is recommended that you set Global Trust manually, and not by using this property.</p>
wc.server.port	Port on which <code>WC_Spaces</code> managed server is hosted
WebCenter's WebLogic Installation Details	
wcHost	Host name on which WebCenter's Administration server is running
wcAdminPort	Port number on which WebCenter's Administration server is running
wcAdminUser	Admin user for the WebCenter Administration server
wcAdminPwd	Password of the WebCenter Administration server
wcManagedServerName	<p>In a single-server environment, specify the name of the managed server where Spaces is deployed.</p> <p>In a clustered environment, specify the name of any one of the Spaces managed servers that is part of the cluster.</p>

Table 5–6 (Cont.) Properties Specified in process-portal-install.properties

Property	Description
wcConfigServices	Flag to configure the Oracle Content Server and Discussions Server to work with Oracle WebCenter. The Content Server and Discussion Server details listed later in this table must be specified only if wcConfigServices is set to true. Note: It is strongly recommended that instead of using the <code>install.xml</code> script, you manually configure Oracle Content Server and Discussions Server to work with Oracle WebCenter. For information, see the "Managing Content Repositories" and "Managing the Announcements and Discussions Services" chapters in <i>Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter</i> .
isWebcenterClusterConfig	Flag to specify whether WebCenter Portal installation is configured for a cluster. Set to true if it is a cluster configuration.
wcSpacesClusterName	Name of the Spaces application's cluster. Set this property only if isWebcenterClusterConfig is set to true.
Content Server Details	Set these properties if wcConfigServices is set to true.
wcContentServerName	Name of the Oracle Content Server configured for Oracle WebCenter
wcContentServerPort	Port on which Oracle Content Server is running.
wcContentSpacesRoot	Name of the Spaces root folder on Oracle Content Server
wcContentAdminUser	Name of the Admin user for Oracle Content Server
Discussions Server Details	Set these properties if wcConfigServices is set to true.
wcDiscussionServerUrl	Name of the Discussions Server configured for WebCenter
wcDiscussionAdminUser	Name of the Admin user for Discussions Server

4. Make sure you have ant and Java JDK installed.

Ant is shipped with Oracle BPM. You can find the installer under the path `SOA_ORACLE_HOME/modules/org.apache.ant_1.7.0`.

5. Ensure that the `PATH` and `CLASSPATH` environment variables are set for both ant and Java JDK.

6. Run the ant script `install.xml` located in the `process_spaces` folder:

```
ant -f install.xml -DpromptForPasswords=true
```

7. If `wcConfigServices` has been set to `true` in `process-portal-install.properties`:

a. Restart `WC_Spaces`.

b. Run the following ant command:

```
ant -f install.xml post-install -DpiArgs -importGSONly
```

8. If Oracle BPM and Oracle WebCenter have been configured in different domains, configure Trusted Domain Credentials in both the Oracle BPM and WebCenter domains.

For more information, see "Enabling Trust Between WebLogic Server Domains" in *Oracle Fusion Middleware Securing Oracle WebLogic Server*.

9. Start Oracle BPM. For information, see "Configuring Oracle SOA Suite and Oracle Business Process Management Suite" in *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite*.

Note: If you do not start Oracle BPM, you may face problems logging into WebCenter Spaces.

If required, bring the Process Workspace and Modeling Space online by selecting **Bring the Space(s) Online** from the **Edit** menu, as described in step 1.

10. In WebCenter Spaces, delete the old process spaces, templates, and resources, if required.

When you run the `install.xml` ant script, release 11.1.1.4.0 or 11.1.1.5.0 process spaces and related templates and resources are imported with '11.1.1.6.0' appended to their names. So, after the upgrade, there are two sets of process spaces and related templates and resources, for example 'Process Workspace 11.1.1.6.0' and 'Process Workspace'. If you do not want the old items, you can delete them manually. For information, see the following sections in *Oracle Fusion Middleware User's Guide for Oracle WebCenter*: Deleting a Space, Deleting a Space Template, and Deleting a Resource Catalog.

5.3.7 Performing Post-Patching Tasks for Oracle WebCenter Security

This section contains the following topics:

- Section 5.3.7.1, "Configuring Web Services Security for Discussions"
- Section 5.3.7.2, "Adding Oracle Single Sign-On Authentication Provider to the List of Authentication Providers"

5.3.7.1 Configuring Web Services Security for Discussions

In Release 11.1.1.6.0, discussions server is shipped with no message protection for Web Service interaction between discussions server and Spaces; this allows you to use discussions server without any further configuration. In your pre-patched Oracle WebCenter environment, if Oracle WebCenter Discussions was installed and the WebService call was protected with WS-Security, you must reapply this configuration after upgrading to the latest release.

To configure Web Services security for discussions server:

1. Configure the domain keystore.

For more information, see "Configuring WS-Security" in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

2. Setup WS-Security on the discussions server:

- a. Using the Enterprise Manager console, access the `owc_discussions` application and navigate to the WebServices section.
- b. Select the `OWCDiscussionsServiceAuthenticated` end point and attach the `oracle/wss11_saml_token_with_message_protection_service_policy` policy.
- c. Select the `OWCDiscussionsServicePublic` end point and attach the `oracle/wss11_message_protection_service_policy` policy.

- d. Restart the `WC_Collaboration Managed Server`.
3. Secure the Spaces ForumConnection:

Using WLST:

- a. Connect to the domain server.
- b. Set the policy and recipient key alias. For example:

```
setDiscussionForumConnection('webcenter', name='forum-con-name',
policyURIForAuthAccess='oracle/wss11_saml_token_with_message_protection_
client_policy',
policyURIForPublicAccess='oracle/ wss11_message_protection_client_policy',
recipientKeyAlias='orakey')
```

- c. Restart the `WC_Spaces Managed Server`.

If you want to do this using Enterprise Manager, locate the forum connection and specify the policy and recipient key aliases as defined above.

5.3.7.2 Adding Oracle Single Sign-On Authentication Provider to the List of Authentication Providers

In the upgraded WebCenter environment, Oracle Single Sign-on (OSSO) Identity Asserter does not appear in the list of authentication providers. If you continue to use OSSO 10g even after upgrading to WebCenter Portal 11.1.1.6.0, you must update the `setDomainEnv` script to add the authentication provider.

To add the OSSO authentication provider:

1. Search for the following entry in the `DOMAIN_HOME/bin/setDomainEnv.sh` (on UNIX operating systems) or `DOMAIN_HOME\bin\setDomainEnv.cmd` (on Windows operating systems) file:

```
ALT_TYPERES_DIR="${ORACLE_HOME}/modules/oracle.ossoiap_11.1.1,${ORACLE_HOME}/mod
ules/oracle.oamprovider_11.1.1
```

Replace the entry with:

```
ALT_TYPERES_DIR="${COMMON_COMPONENTS_HOME}/modules/oracle.ossoiap_
11.1.1,${COMMON_COMPONENTS_HOME}/modules/oracle.oamprovider_11.1.1
```

2. Restart the Administration Server.

5.3.8 Adding New Features to Oracle WebCenter

This section includes the following subsections:

- Section 5.3.8.1, "Installing Activity Graph, Analytics, Pagelet Producer, Personalization Server, and WebCenter Services Portlets"
- Section 5.3.8.2, "Upgrading WebCenter Custom Applications to Add Portal Framework Features"

5.3.8.1 Installing Activity Graph, Analytics, Pagelet Producer, Personalization Server, and WebCenter Services Portlets

Compared to release 11.1.1.2.0 or 11.1.1.3.0, Oracle WebCenter Portal 11.1.1.6.0 includes several new features, including:

- Activity Graph, which provides suggestions of people that a user may be interested in connecting with, based on existing connections and shared interaction with objects within an application
- Analytics, which allows you to track and analyze Spaces usage

Note: If you want to extend your WebCenter domain to install Oracle WebCenter Portal's Analytics Collector, you must remove the `openusage` properties. For information, see Section 5.3.5.7, "Remove `openusage` Properties in `setDomainEnv`."

- Pagelet Producer, which provides a collection of useful tools and features that facilitate dynamic pagelet development
- Personalization Server, which can deliver targeted content
- WebCenter Services Portlets, which enables you to expose WebCenter Portal service task flows in other applications as WSRP portlets or pagelets. You can consume WebCenter Services Portlets in the following applications: Oracle Portal, Oracle WebLogic Portal, and Oracle WebCenter Interaction.

For more information about these features as well as other WebCenter components, see "Getting Started with WebCenter Portal Components" in *Oracle Fusion Middleware Installation Guide for Oracle WebCenter* and see *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

To take advantage of these new features, you must extend your domain by installing the required WebCenter components.

To extend your domain to install these WebCenter components:

1. Decide on the products and topology for your environment.

To verify that your system meets the necessary minimum requirements, refer to the following documents:

- a. *Oracle Fusion Middleware System Requirements and Specifications:*

<http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-requirements-100147.html>

This document contains information related to hardware and software requirements, minimum disk space and memory requirements, database schema requirements, and required system libraries, packages, or patches.

- b. *Oracle Fusion Middleware Supported System Configurations:*

<http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html>

This page contains various certification documents for current and previous product releases. The *System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1* document contains certification information related to supported 32-bit and 64-bit operating systems, databases, web servers, LDAP servers, adapters, IPv6, JDKs, and third-party products.

- c. *Oracle Fusion Middleware Interoperability and Compatibility Guide*

This document covers the compatibility and interoperability issues that may arise when installing or upgrading Oracle Fusion Middleware 11g products.

2. Use Repository Creation Utility (RCU) to install any necessary schemas.

Analytics and Activity Graph require the `ACTIVITES` schema. WebCenter Services Portlets requires three additional schemas: `MDS`, `WEBCENTER`, and `PORTLET`. These schemas must be mapped to the data sources `mds-ServicesProducerDS`, `WC-ServicesProducerDS`, and `Portlet-ServicesProducerDS`, respectively. No additional schemas are required for Pagelet Producer or Personalization Server.

See "Oracle WebCenter Schemas" for information about required WebCenter schemas, and "Obtaining and Running Repository Creation Utility" for instructions on how to install the schemas with RCU. Both these topics are in *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

3. Run the Configuration Wizard.

See "Starting the Oracle Fusion Middleware Configuration Wizard" in *Oracle Fusion Middleware Installation Guide for Oracle WebCenter* for instructions.

4. Extend the domain by selecting the following products from the products Configuration Wizard: **Oracle WebCenter Analytics Collector, Oracle WebCenter ActivityGraph Engines, Oracle WebCenter Pagelet Producer, Oracle WebCenter Personalization, and Oracle WebCenter Services Portlets.**

For a simple topology, see "Extending an Existing Domain" in *Oracle Fusion Middleware Installation Guide for Oracle WebCenter* for instructions.

If you have cluster or distributed environment, refer to:

- Chapter "Extending the Domain for WebCenter Components" in *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle WebCenter*
- Chapter "Configuring High Availability for Oracle ADF and WebCenter Applications" in *Oracle Fusion Middleware High Availability Guide*

5.3.8.2 Upgrading WebCenter Custom Applications to Add Portal Framework Features

Oracle WebCenter Portal: Framework supports various new features such as page navigations and page hierarchies. You can manually add WebCenter Portal Frame file structures, components, and configurations to your custom WebCenter applications that have been migrated to 11.1.1.6.0.

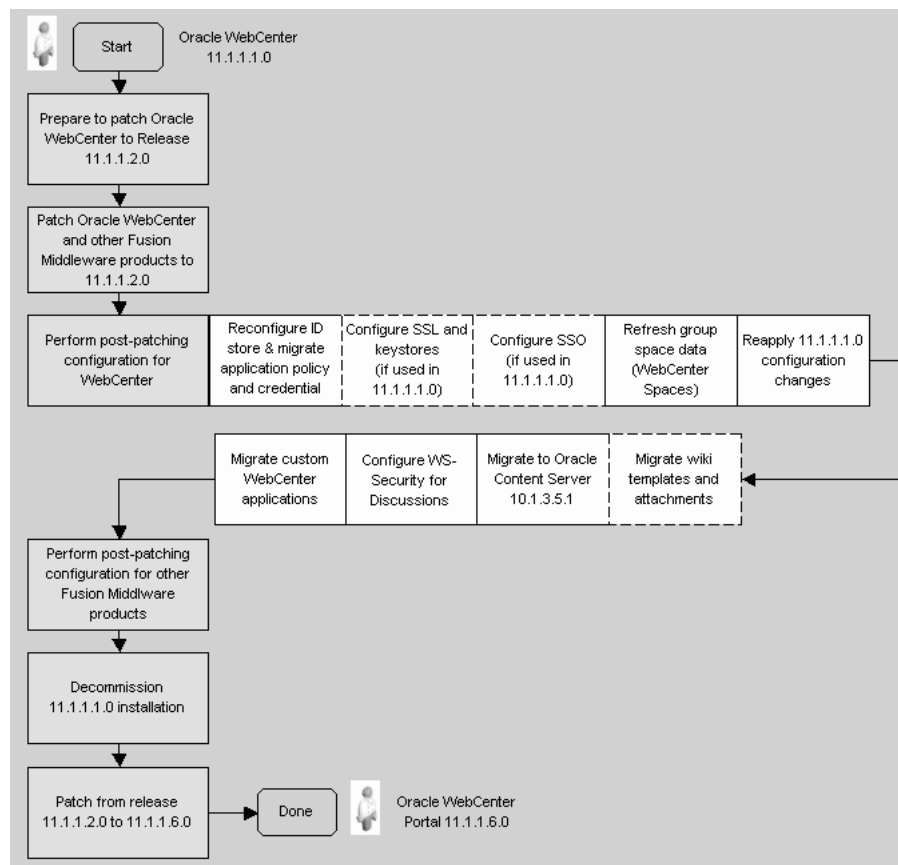
For information, see the "Manually Migrating a Framework Application" appendix in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter*.

5.4 Patching an Oracle WebCenter 11.1.1.1.0 Installation

If you are running Oracle WebCenter 11g (11.1.1.1.0), you must first update your Oracle Fusion Middleware environment to 11g Release 11.1.1.2.0, and then apply the Oracle WebCenter 11g (11.1.1.6.0) patch.

Figure 5–3 illustrates the steps required to update an Oracle WebCenter 11.1.1.1.0 installation to release 11.1.1.6.0. Click the steps in the flow chart to navigate to the information about each step. Alternatively, follow the instructions in Appendix C, "Using Patch Assistant to Migrate from 11g Release 1 (11.1.1.1.0) to Release 1 (11.1.1.2.0)"

Figure 5–3 Applying the Latest Patch to Oracle WebCenter 11.1.1.1.0



5.5 Troubleshooting Issues

This section provides information to help you troubleshoot problems you may encounter while patching or after patching Oracle WebCenter.

5.5.1 Troubleshooting Issues with Patching Oracle WebCenter

This section provides information to help you troubleshoot problems you may encounter while patching Oracle WebCenter.

Problem

While running the `upgrade.py` script, you may encounter the following error:

```
WLSTException: Error occured while performing nmConnect : Cannot connect to Node Manager. : Connection refused. Could not connect to NodeManager.
```

Solution

If you encounter this error, check that the Node Manager is running and that the user and server details provided to the script are correct. Then, re-run the `upgrade.py` script to complete patching your Oracle WebCenter instance.

5.5.2 Troubleshooting Post Patching Issues

This section provides information to help you troubleshoot issues you may encounter after patching Oracle WebCenter.

Problem

In Oracle WebCenter 11.1.1.4.0, your WebCenter Portal application contained a Document Viewer task flow, and the Initial Sidebar property was set to `relatedItems`. However in the patched instance, the Related Items tab is not in focus when you navigate to the task flow though the related items are visible.

Solution

In release 11.1.1.6.0, Related Items no longer exists as a tab. You can change the value of the Initial Sidebar property to target one of the new tabs: tags, links or recommendations.

Problem

In the spaces upgraded from Release 11.1.1.2.0 and 11.1.1.3.0, content is getting clipped and inner scrollbars appear on the components.

Solution

In Release 11.1.1.6.0, the default page template for Spaces is Top Navigation, which implements a flowing layout. All the page templates that implement a flowing layout have a fixed width. Most of the pages created before Release 11.1.1.4.0 were based on page templates that implemented a stretching layout that allows components to be stretched to maximize the usage of the viewable area. When you upgrade your Spaces instance, Top Navigation is set as the default template, and therefore space pages might not be rendered properly if they are based on a stretching layout page template.

After patching from release 11.1.1.2.0 or 11.1.1.3.0, configure your spaces, if required, to use a page template that allows the content to be stretched. In Release 11.1.1.6.0, the following out-of-the-box page templates support a stretching layout: Top Navigation (Stretch), Side Navigation (Stretch), Fusion Top Navigation, and Fusion Side Navigation.

Problem

In your patched Spaces application, you are unable to navigate to a specific page using the pretty URL.

Solution

In release 11.1.1.6.0, the pretty URLs to navigate to a specific page in a space have changed.

To go to a specific page in the Home Space, use:

`http://host:port/webcenter/spaces/profile/userName/page/escapedPageDisplayName`

The variable `userName` is your user name or the name of the user who owns the page in the Home Space. The variable `escapedPageDisplayName` indicates the use of an escaped version of the page display name. For example, when you create a page with the name My Page, the URL to this page ends with My+Page.

For example:

`http://host:port//webcenter/spaces/profile/weblogic/page/Page1`

Use the following syntax for UI URLs that target business role pages and system pages:

`/webcenter/spaces/system/page/pageName`

For example:

/webcenter/spaces/system/page/Documents

Problem

After patching to release 11.1.1.6.0, content queries do not get rendered in a navigation model.

Solution

If in earlier versions of WebCenter you have a content query, and post patching you do not find it in the navigation model, you must re-build the index collection on Content Server. For information, see "Rebuilding the Collection" in *Oracle WebCenter Content System Administrator's Guide for Content Server*.

Patching Oracle Identity and Access Management

The Oracle Fusion Middleware Identity and Access Management components are not available in Oracle Fusion Middleware 11g Release 1 (11.1.1.6.0).

To apply the latest patch set to the Identity and Access Management components, refer to the following sections in the *Oracle Fusion Middleware Patching Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.5.0) documentation library:

- Preparing to Patch
- Updating Oracle Identity Manager 11.1.1.3.0 to 11.1.1.5.0
- Updating Oracle Access Manager 11.1.1.3.0 to 11.1.1.5.0
- Updating Oracle Adaptive Access Manager 11.1.1.3.0 to 11.1.1.5.0
- Updating Oracle Identity Navigator 11.1.1.3.0 to 11.1.1.5.0
- Patching Oracle Identity and Access Management in a Clustered Environment

Patching an Oracle Identity Management High Availability Environment

This chapter describes how to patch your existing Oracle Identity Management high availability environment to the latest version. To do so, complete the following tasks:

See: Types of Oracle Identity Management Environments in the *Oracle Fusion Middleware Upgrade Guide for Oracle Identity Management* for information on the topologies.

- Task 1: Stopping Servers and System Components
- Task 2: Updating Oracle WebLogic Server to Version 10.3.5
- Task 3: Updating the Oracle Identity Management Oracle Home using the Oracle Identity Management Patch Set Installer
- Task 4: Updating the Oracle HTTP Server Oracle Home Using the Oracle Web Tier Patch Set Installer
- Task 5: Updating the Oracle Identity Management Repository using Patch Set Assistant
- Task 6: Starting System Components and Servers
- Task7: Updating the Version Number String Shown in Fusion Middleware Control

Note: Back up your Oracle software, inventory, schema, and domain before applying this patch set, or before making any other changes to your existing Oracle software. Refer to your product administrator's guide for instructions on backing up your Oracle software and inventory. For more information, see "Advanced Administration: Backup and Recovery" in the *Oracle Fusion Middleware Administrator's Guide*.

7.1 Task 1: Stopping Servers and System Components

Before updating Oracle Identity Management, you must stop the following servers and components:

- Stopping Managed Servers
- Stopping the Administration Server
- Stopping the Node Manager
- Stopping the Oracle Management Agent

- Stopping the System Components
- Special Consideration for Patching OID Replication Environments

7.1.1 Stopping Managed Servers

You must stop the `WLS_ODS1` and `WLS_ODS2` Managed Servers running on `IDMHOST1` and `IDMHOST2` by using the Oracle WebLogic Server Administration Console. For more information, see the "Starting and Stopping Oracle Fusion Middleware" section in the *Oracle Fusion Middleware Administrator's Guide*.

7.1.2 Stopping the Administration Server

You must stop the `IDMHOST1` Administration Server, for more information see the "Starting and Stopping Administration Servers" in the *Oracle Fusion Middleware Administrator's Guide*.

7.1.3 Stopping the Node Manager

Stop the Node Manager running on `IDMHOST1` and `IDMHOST2` by closing the command shell in which it is running or terminate the Node Manager Process. For example, run the following command on a UNIX operating system:

```
kill -9 pid
```

Replace `pid` with the process ID of the Node Manager process.

7.1.4 Stopping the Oracle Management Agent

To stop the Oracle Management Agent running on `IDMHOST1` and `IDMHOST2`, run the following command:

```
opmnctl stopall
```

7.1.5 Stopping the System Components

You must stop all system components and processes running on Oracle Internet Directory (running on `OIDHOST1` and `OIDHOST2`), Oracle Virtual Directory (running on `OVDHOST1` and `OVDHOST2`), and Oracle HTTP Server (running on `WEBHOST1` and `WEBHOST2`) by using the `opmnctl` command-line tool:

```
opmnctl stopall
```

7.1.6 Special Consideration for Patching OID Replication Environments

If you have configured OID replication in your environment:

1. Stop the replication server on all the nodes of Directory Replication Group (DRG).
2. Patch one node at a time to the latest version using the Patch Set Installer.
3. Restart the replication server after patching all the nodes of DRG.

7.2 Task 2: Updating Oracle WebLogic Server to Version 10.3.5

Your existing Oracle WebLogic Server must be updated to version 10.3.5 on `IDMHOST1`, `IDMHOST2`, `OIDHOST1`, `OIDHOST2`, `OVDHOST1` and `OVDHOST2`.

In order to update your WebLogic Server, you must use the upgrade installer, which requires a My Oracle Support account. For more information, see "Downloading an Upgrade Installer From My Oracle Support" in *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server*.

7.3 Task 3: Updating the Oracle Identity Management Oracle Home using the Oracle Identity Management Patch Set Installer

You must update your existing Oracle Identity Management `ORACLE_HOME` to the latest version on `IDMHOST1`, `IDMHOST2`, `OIDHOST1`, `OIDHOST2`, `OVDHOST1`, and `OVDHOST2` by using the Patch Set Installer for Oracle Identity Management.

For instructions, see Chapter 3, "Applying the Latest Oracle Fusion Middleware Patch Set".

After the installation is complete, the `oracleRoot.sh` confirmation dialog box is displayed. This dialog box advises you to run configuration scrip as root before the installation can proceed. Leaving the confirmation dialog box open, open another shell window, log in as root, and run the `oracleRoot.sh` script file.

After the script completes, click **OK** on the Confirmation Dialog box.

7.4 Task 4: Updating the Oracle HTTP Server Oracle Home Using the Oracle Web Tier Patch Set Installer

If Oracle HTTP Server is configured in the `ORACLE_INSTANCE`, then you must update the Oracle HTTP Server `ORACLE_HOME` to the latest version on `WEBHOST1` and `WEBHOST2` by using the Patch Set Installer for Oracle Web Tier.

For instructions, see Chapter 3, "Applying the Latest Oracle Fusion Middleware Patch Set".

7.5 Task 5: Updating the Oracle Identity Management Repository using Patch Set Assistant

You must run Patch Set Assistant to update the database schema for Oracle Internet Directory to the latest version. Patch Set Assistant performs an in-place schema update on your existing schemas.

For instructions, see Chapter 4, "Updating Your Schemas with Patch Set Assistant".

Note: You must update the schema once for the entire topology.

7.6 Task 6: Starting System Components and Servers

You must start the following:

- Starting System Components
- Starting Node Manager
- Starting the Oracle WebLogic Administration Server
- Starting the Managed Server
- Starting Oracle Management Agent

7.6.1 Starting System Components

You must start the following system components:

- Starting Oracle Internet Directory Processes
- Starting Oracle Virtual Directory Processes
- Starting Oracle HTTP Server

Note: If you have not started OPMN, then you must start OPMN by running the following command:

```
opmnctl start
```

7.6.1.1 Starting Oracle Internet Directory Processes

To start the Oracle Internet Directory processes, use the following OPMN command:

```
opmnctl startproc ias-component=oid_component_name
```

To verify that the Oracle Internet Directory Instances have started, run the following `opmnctl status` command:

```
opmnctl status
```

Example:

```
Processes in Instance: oid_inst1
```

ias-component	process-type	pid	status
oid1	oidldapd	31522	Alive
oid1	oidldapd	31520	Alive
oid1	oidmon	31449	Alive
EMAGENT	EMAGENT	31448	Alive

7.6.1.2 Starting Oracle Virtual Directory Processes

To start the Oracle Virtual Directory processes, use the following OPMN command:

```
opmnctl startproc ias-component=ovd_component_name
```

To verify that the Oracle Virtual Directory Instances have started, run the following `opmnctl status` command:

```
opmnctl status
```

Example:

```
$ ovd_instance_home/bin/opmnctl status
```

```
Processes in Instance: ovd_inst1
```

ias-component	process-type	pid	status
ovd1	OVD	31658	Alive
EMAGENT	EMAGENT	31657	Alive

7.6.1.3 Starting Oracle HTTP Server

If Oracle HTTP Server is configured in the `ORACLE_INSTANCE`, then start it using the following command:


```
opmnctl startproc ias-component=ohs_component_name
```

To verify that the Oracle HTTP Server instances have started, run the following OPMN command:

```
opmnctl status
```

Example:

```
[abcd@stajz13 Disk1]$ /u01/app/oracle/ps1/admin/ohs_inst1/bin/opmnctl status
```

```
Processes in Instance: ohs_inst1
```

ias-component	process-type	pid	status
ohs1	OHS	7144	Alive

7.6.2 Starting Node Manager

You must start Node Manager, running on IDMHOST1 and IDMHOST2, by using the `startNodeManager.sh` script (UNIX, located at `WL_HOME/server/bin` directory) or `startNodeManager.cmd` script (Windows, located at `WL_HOME\server\bin` directory) as follows:

On UNIX operating systems:

```
MW_HOME/wl_server_n/server/bin/startNodeManager.sh
```

On Windows operating systems:

```
MW_HOME\wl_server_n\server\bin\startNodeManager.cmd
```

7.6.3 Starting the Oracle WebLogic Administration Server

You must start the IDMHOST1 Administration Server by running the following command:

On UNIX operating systems:

```
DOMAIN_HOME/bin/startWebLogic.sh
-Dweblogic.management.username=weblogic
-Dweblogic.management.password=password
-Dweblogic.system.StoreBootIdentity=true
```

On Windows operating systems:

```
DOMAIN_HOME\bin\startWebLogic.cmd
-Dweblogic.management.username=weblogic
-Dweblogic.management.password=password
-Dweblogic.system.StoreBootIdentity=true
```

7.6.4 Starting the Managed Server

You must start Node Manager, running on IDMHOST1 and IDMHOST2. For more information see "Starting and Stopping Managed Servers Using Fusion Middleware Control" in *Oracle Fusion Middleware Administrator's Guide*.

7.6.5 Starting Oracle Management Agent

To start the Oracle Management Agent for the Oracle WebLogic Server running on IDMHOST1 and IDMHOST2, use the following OPMN command:

```
opmnctl startproc ias-component=EMAGENT
```

To verify that the Oracle Management Agent Instances have started, run the following `opmnctl status` command:

```
opmnctl status
```

Example:

```
Processes in Instance: wls_ods1
```

```
-----+-----+-----+-----  
ias-component      | process-type    | pid | status  
-----+-----+-----+-----  
EMAGENT           | EMAGENT        | 10971 | Alive
```

7.7 Task7: Updating the Version Number String Shown in Fusion Middleware Control

If you are using existing Oracle Internet Directory or Oracle Virtual Directory components and you have patched those components to the latest version, you must use the `opmnctl updatecomponentregistration` command to manually update the version number string that is shown in Fusion Middleware Control.

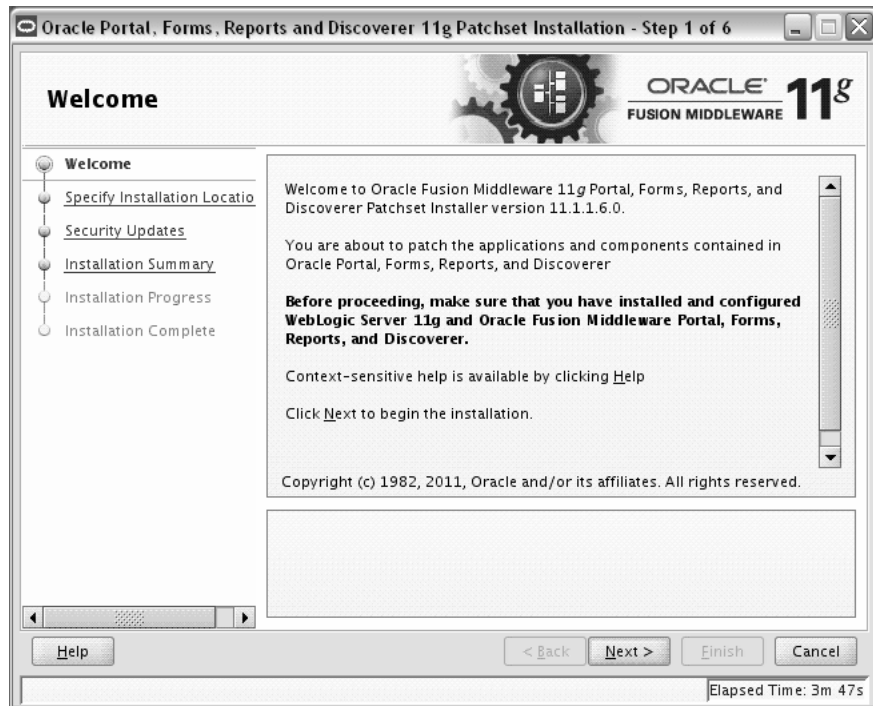
For instructions, see Section 3.9.5.1, "Upgrading System Components".

Oracle Portal, Forms, Reports and Discoverer Patch Set Installer Screens

This appendix contains screenshots and descriptions for the Oracle Portal, Forms, Reports and Discoverer Patch Set Installer screens:

- Welcome
- Specify Installation Location
- Specify Security Updates
- Installation Summary
- Installation Progress
- Installation Complete

A.1 Welcome

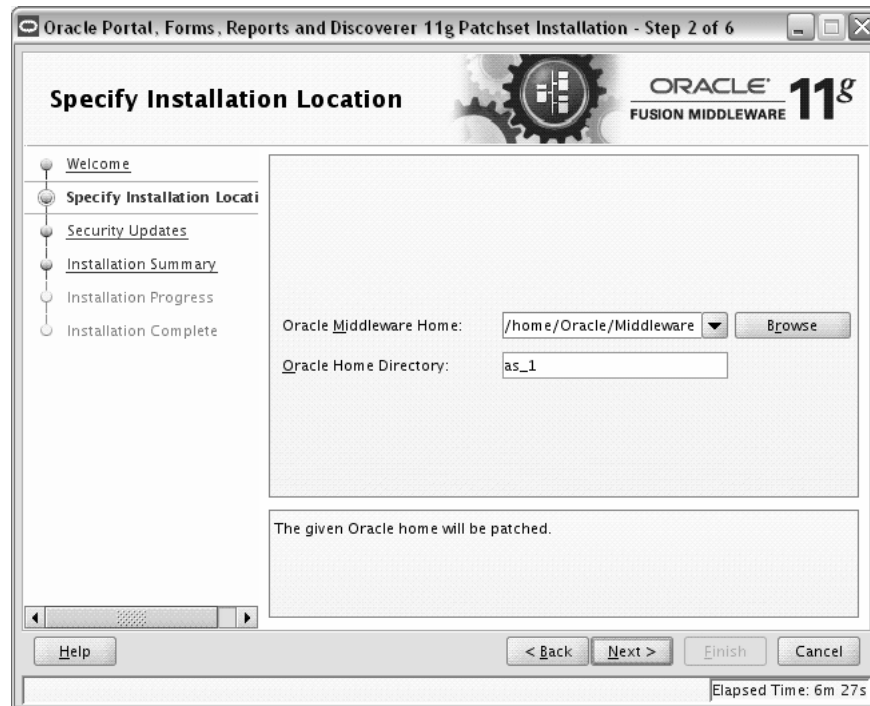


This page introduces you to the Oracle Fusion Middleware installer and provides two important pieces of information:

- A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.
- Information about any prerequisites you might need to perform before continuing with the installation.

Review the information on this screen carefully to be sure you have performed all the necessary prerequisites.

A.2 Specify Installation Location



Use this screen to identify the Oracle home directory you want to patch.

The following table describes the fields that appear on this page.

Field	Description
Oracle Middleware Home	Use this field to specify the absolute path to your existing Oracle Middleware home directory; this is the directory that was created when you installed Oracle WebLogic Server. If you do not know the full path to your Middleware home, you can click Browse to select an existing directory in your system.
Oracle Home Directory	Use this field to specify the existing product Oracle home directory inside the Oracle Middleware home. This is the directory that will be patched with this installation. NOTE: If you are performing an installation on a Windows operating system, be sure that your directory paths are valid and do not contain double backslashes (\\). NOTE: If you specify an Oracle home directory that has already been patched, then you will receive an error message and the installation will not continue. Re-patching an Oracle home is not supported.

A.3 Specify Security Updates

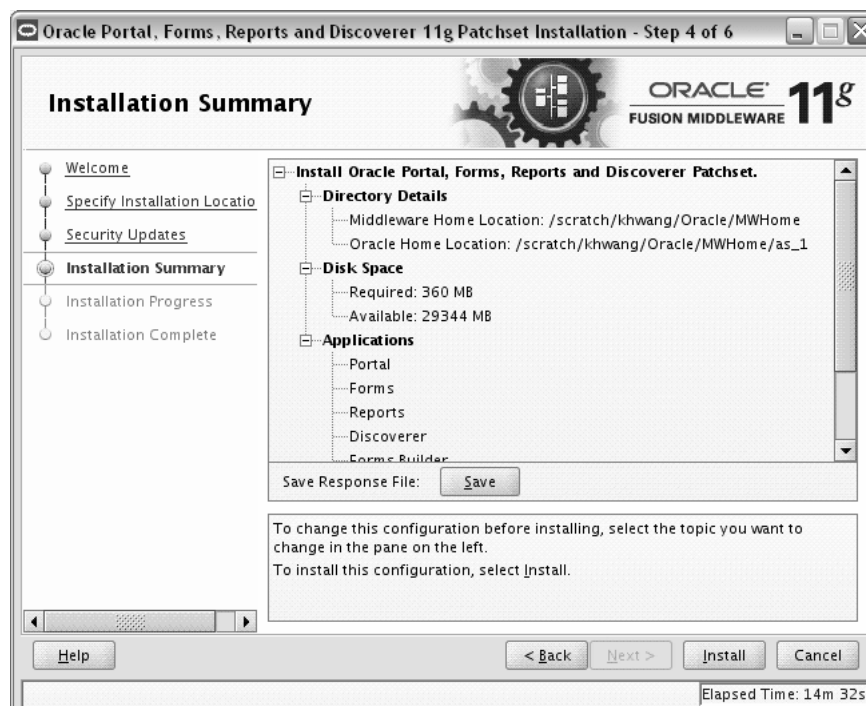
Use this screen to enter your My Oracle Support account information so you can receive the latest product information and security updates via your My Oracle Support account.

The following table describes the fields on this screen.

Element	Description
Email	Enter the email address you used to register with My Oracle support.
I wish to receive security updates via My Oracle Support	Select this check box to indicate that you have a My Oracle Support account and that you want to receive updates via My Oracle Support.
My Oracle Support Password	Enter the password for your My Oracle Support account.

If you do not want to register for security updates or if you do not have a My Oracle Support account, then leave all the fields on this screen empty. You will be prompted to confirm your selection; click **Yes** in the dialog box:

A.4 Installation Summary



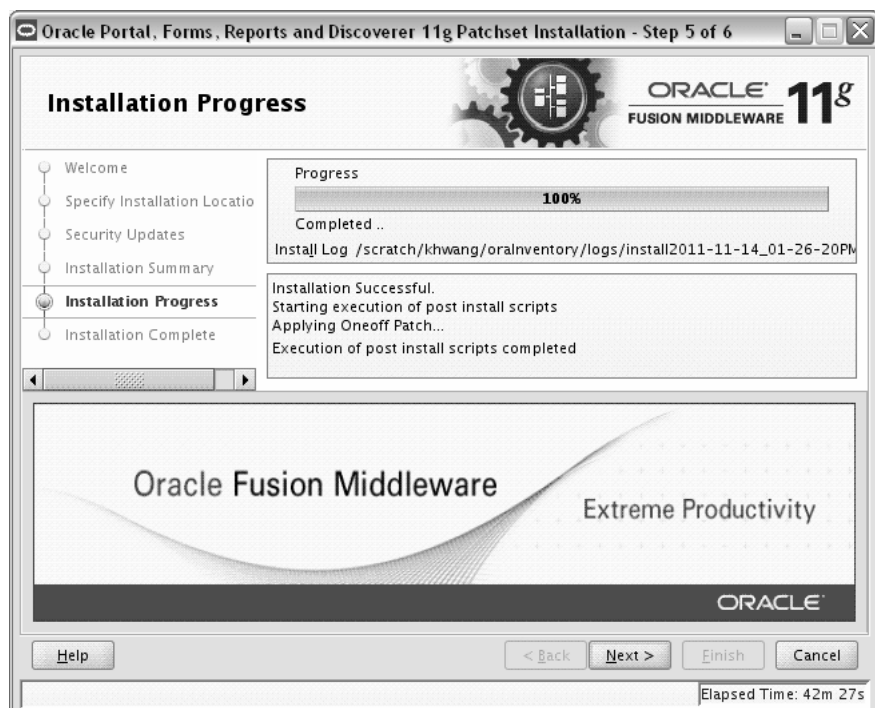
This screen summarizes the selections you have made during this session. It includes the following information:

- The location of the software that will be patched
- How much disk space will be used for the installation of the patch
- The applications that will be patched

Review information on this screen carefully, and take one of the following actions:

- If you want to make any changes to the configuration before starting the installation of the patch, use the navigation pane to select the Installer screen you want to return to and edit.
- If you are satisfied with the information, click **Install** to begin the installation procedure.
- If you want to save this configuration to a text file (called a response file), click **Save**. The resulting response file can be used later if you choose to perform the same installation from the command line.

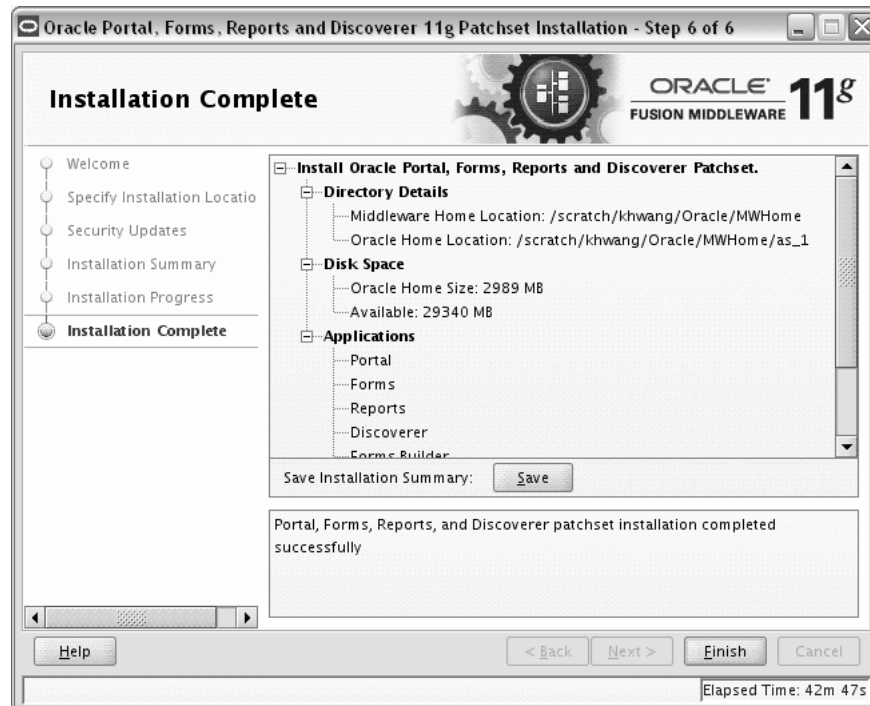
A.5 Installation Progress



This screen shows you the progress of the installation.

If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.

A.6 Installation Complete



This screen summarizes the installation that was just completed.

If you want to save this summary information to a text file for future reference, click **Save**.

Click **Finish** to dismiss the screen.

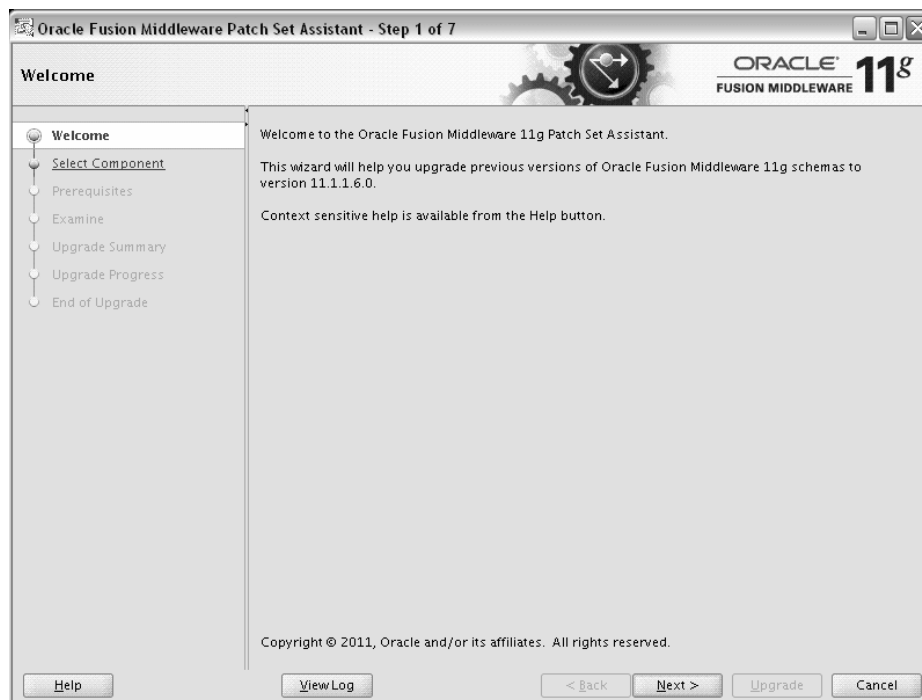
B

Patch Set Assistant Screens

This appendix contains screenshots and descriptions for the Patch Set Assistant screens:

- Welcome
- Select Component
- Prerequisites
- Schema
- Examine
- Upgrade Summary
- Upgrade Progress
- Upgrade Success

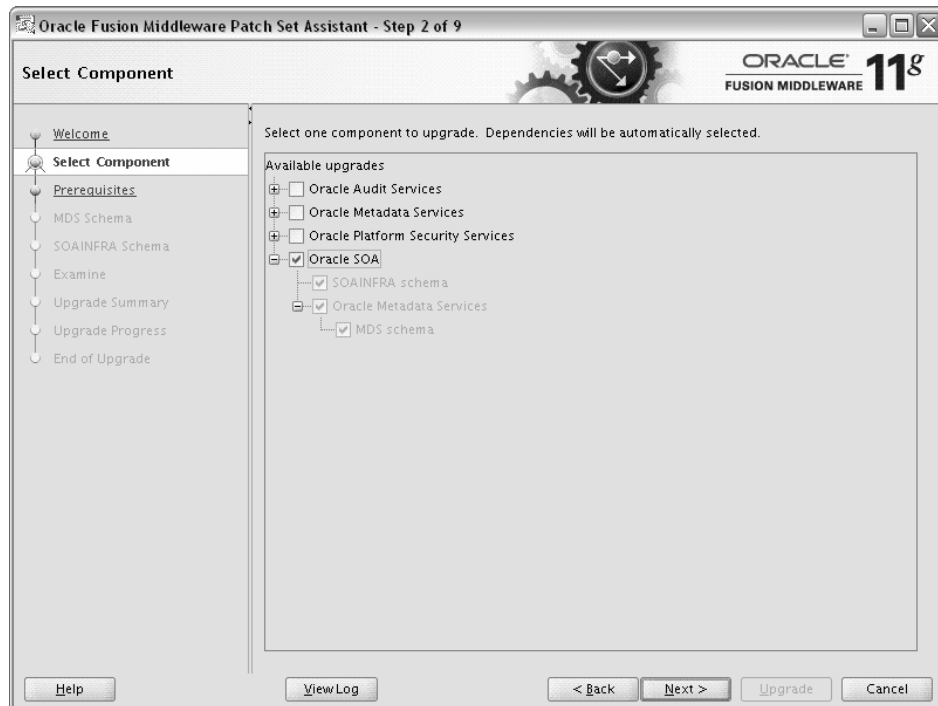
B.1 Welcome



The Welcome screen is displayed each time you start the installer.

You can click **View Log** at any time during the schema upgrade process to view the log file. A separate window (Log File Viewer) is displayed that contains the messages being written to the log file. The top of the Log File Viewer contains the location and name of the log file. You can click **Refresh** to see the most recent messages being logged.

B.2 Select Component



Use this screen to select the component schema you want to update.

The Patch Set Installer lists all components that are found in the Middleware home. For example, if you started the Patch Set Installer from the `/home/Oracle/Middleware/Oracle_SOA1/bin` directory (on UNIX operating systems) or `c:\Products\Oracle\Middleware\Oracle_SOA1\bin` directory (on Windows operating systems), the Patch Set Installer will list all components found in `/home/Oracle/Middleware` directory (on UNIX operating systems) or `c:\Products\Oracle\Middleware` directory (on Windows operating systems).

You can only use Patch Set Assistant to update one top-level component at a time. In the figure above, notice that Oracle SOA is selected, which means Patch Set Assistant would update the SOAINFRA schema as well as the MDS schema, upon which the SOAINFRA schema is dependent. However, the top-level "Oracle Metadata Services" box is not selected even though that schema is going to be updated.

If you wanted to update either of the other two top-level schema found in this Middleware home (in this case, "Oracle Audit Services" or "Oracle Platform Security Services") you would have to restart the Patch Set Assistant and select those components separately.

Note: If you are upgrading from Release 11.1.1.2.0 or 11.1.1.3.0, the *prefix_ACTIVITIES* schema will not be available in your environment as this schema was not introduced until Release 11.1.1.4.0. Make sure you de-select this schema from the WebCenter Portal component; otherwise the Patch Set Assistant will ask for credentials for this schema.

B.3 Prerequisites

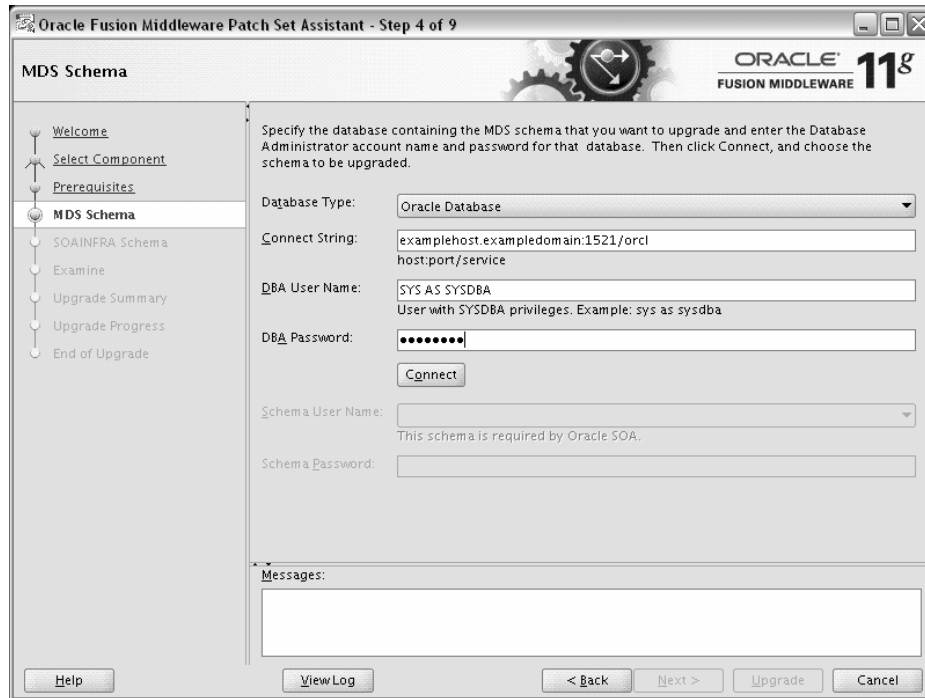


Use this screen to verify that you have satisfied the database prerequisites before you continue. You must check all the boxes acknowledging that all prerequisites for upgrade have been met, or else you will be unable to continue to the next screen.

Select **Database backup completed** to verify that you have backed up your database as described in Section 4.3.1, "Back Up Your Database and Database Schemas".

Select **Database version is certified by Oracle for Fusion Middleware upgrade** to verify that you have read the *System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1* document on the Oracle Fusion Middleware Supported System Configurations page, and that your database is certified for use with Oracle Fusion Middleware.

B.4 Schema



Use this screen to specify database connection credentials and schema information for upgrade. This screen appears once for each component schema that needs to be updated; each time after the first time the screen will have all the database credential values filled in for you. If you have schemas on different databases then you will need to alter your database connection information accordingly.

The following table describes the fields on this screen:

Field	Description
Database Type	<p>Select your database type from the drop-down list. Only database types that are valid for the schema are available in this list. Prior to Release 11.1.1.6.0, only the following database types were supported:</p> <ul style="list-style-type: none"> ■ Oracle Database ■ Microsoft SQL Server ■ IBM DB2 <p>In addition, Oracle Data Integrator also supports the following databases:</p> <ul style="list-style-type: none"> ■ Sybase Adaptive Server Enterprise ■ PostgreSQL ■ Hypersonic SQL ■ MySQL

Field	Description
Connect String	Specify the connection credentials to your database. <ul style="list-style-type: none"> For Oracle databases: <i>host:port/service_name</i> For Microsoft SQL Server and IBM DB2 databases: <i>host:port;DatabaseName=dbname</i>
DBA User Name	Specify the user name and role of the database administrator user. <ul style="list-style-type: none"> For Oracle databases, enter SYS or any user with DBA role (for example, <i>sys as sysdba</i> or any user with DBA privileges). For Microsoft SQL Server databases, enter <i>sa</i> or any user with <i>db_owner</i> role. For IBM DB2 databases, enter <i>db2admin</i> or any user with DBA role. For Hypersonic databases, enter <i>sa</i>. For Sybase databases, enter <i>sa</i>. For MySQL databases, enter <i>root</i>.
DBA Password	Enter the password for your database administrator user.

After these values are filled in, click **Connect** to connect to your database. After the connection succeeds, two additional fields will become active on the screen:

Field	Description
Schema User Name	This drop-down list contains all available product schemas in the database to which you are connected. Select the schema you want to update from the drop-down list. <p>NOTE: The Oracle WebCenter Content Server - Complete (<i>prefix_OCS</i>) and Oracle WebCenter Content: Records (<i>prefix_URMSERVER</i>) schemas will require you to manually enter the name of the schema; they will not appear in the drop-down list and the Connect button will not be active for these schemas.</p> <p>NOTE: If the drop-down list is empty, make sure you have connected to the database as a user with the required privileges.</p>
Schema Password	Specify the password for the selected schema.

B.5 Examine



This page displays the status of each component schema for upgrade. The meaning of the status indicators for the components is listed in the following table.

Status	Description
in progress	The Patch Set Assistant is examining whether or not the schema can be upgraded.
pending	The schema will be examined when the Patch Set Assistant is finished examining the preceding component.
already upgraded	The schema was previously successfully upgraded with the Patch Set Assistant or was created with the latest version of the Repository Creation Utility (RCU). No action will be taken on this schema.
failed	The schema can not be upgraded.
skipped	The examination of this schema was skipped. This is caused when the examination of a dependent schema fails.
succeeded	The examination of the schema was successful and the schema is ready to be upgraded.

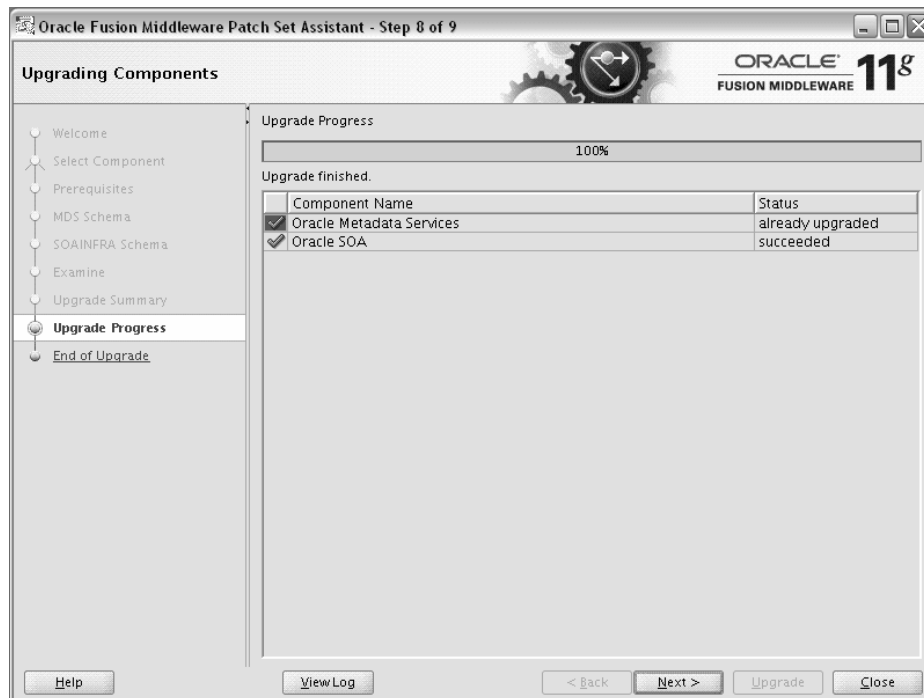
B.6 Upgrade Summary



Use this page to review a summary of the options you have selected and to start the upgrade process.

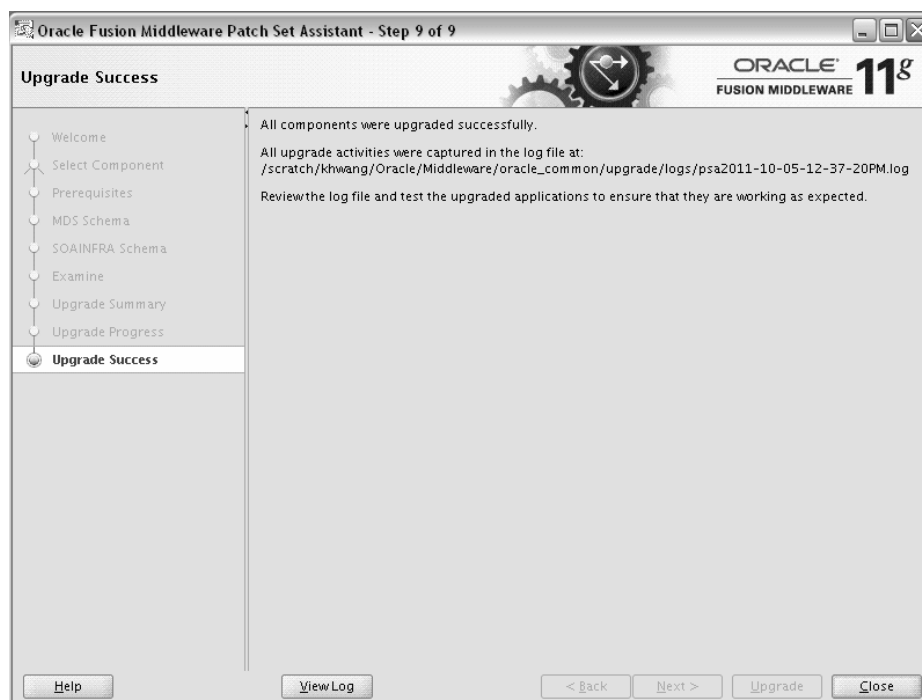
Click **Save Response File** to save this upgrade information to a response file. This file can be used later if you want to run the Patch Set Assistant from the command line. For more information, see Section 4.4.4, "Using the Patch Set Installer from the Command Line".

B.7 Upgrade Progress



This screen shows you the progress of your schema upgrade. The "Upgrade Progress" bar moves from 0% at the beginning to 100% when the upgrade is complete.

B.8 Upgrade Success



This screen indicates that the upgrade was successful.

Be sure to view the log file located in the `MW_HOME/oracle_common/upgrade/logs` (on UNIX operating systems) or `MW_HOME\oracle_common\upgrade\logs` (on Windows operating systems) directory for details about the upgrade. You can view the log file with any text editor, or you can click the **View Log** button.

Using Patch Assistant to Migrate from 11g Release 1 (11.1.1.1.0) to Release 1 (11.1.1.2.0)

This chapter contains the following sections:

- Overview of Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) Patch Assistant
- Migration Process
- Preparing to Migrate
- Migrating to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0)

Important Notes: The information and procedures in this chapter apply only to users who have installed and configured Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0). If you are currently running Release 1 (11.1.1.1.0), then you must use this chapter to update your Oracle Fusion Middleware environment to Release 1 (11.1.1.2.0) before you can patch your environment to Release 1 (11.1.1.4.0).

If you are already running Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) or a later patch set, then disregard this appendix.

The procedures in this chapter are for installing and configuring and migrating to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0). As a result, for all cross-references in this section, refer to the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.1 Overview of Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) Patch Assistant

Patch Assistant enables you to migrate your existing configuration of Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) components, used in conjunction with the 11.1.1.1.0 and 11.1.1.2.0 installations. Patch Assistant is not a complete software distribution. You must run this Patch Assistant over an existing Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) installation. Patch Assistant is designed to work with all Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) products. You may see messages that an Oracle product is not present in a domain or instance. This message is informational and does not indicate an error.

Refer to Table C-7 for the Oracle Fusion Middleware components supported by Patch Assistant.

Note: Patch Assistant is used only for updating Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) Domains and Oracle Instances. If you are not updating your existing 11.1.1.1.0 domains and instances, you are not required to use Patch Assistant.

Patch Assistant helps to migrate the following from Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0):

- Oracle Fusion Middleware Domains

Note: It is required that you migrate the entire Oracle WebLogic domain. When the domain is migrated, all components in the domain are also migrated.

- Oracle Instances
- Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) database schema created using Oracle Repository Creation Utility (RCU)

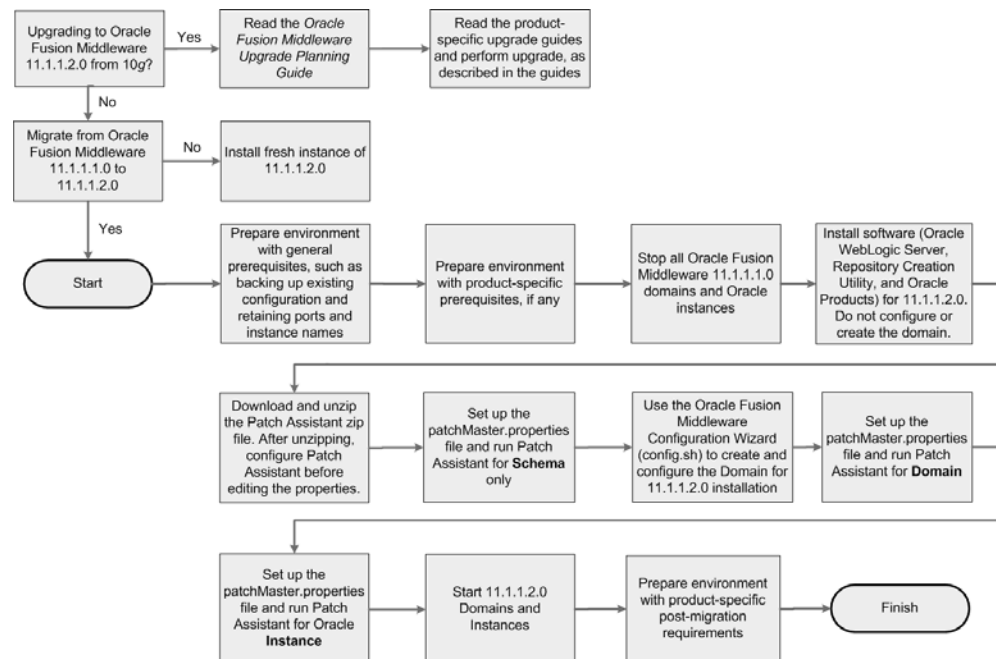
Note: You must migrate both the schema and the middle tier.

When you run Patch Assistant tool, the configuration files contained in the Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) domain and Instance directories are copied to the new directories in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) installation. The Middleware home is the full path of the Oracle directory that contains the Oracle Fusion Middleware installation, and *MW_HOME* will be used in this documentation to refer to the directory where the product is installed.

Note: *MW_HOME* must be replaced with the full path name of the installed Oracle Fusion Middleware instance.

C.2 Migration Process

Figure C-1 illustrates the migration process. Review this chart to get familiar with the steps you are required to take, based on your existing Oracle Fusion Middleware environment.

Figure C-1 Flow Chart of the Migration Process

C.3 Preparing to Migrate

This section contains important information you should read before you migrate.

C.3.1 Evaluating and Reviewing your Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) Environment

The first step in the migrating process is to evaluate your current Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) environment. During the migration process, the topology of the deployment must not change, the port configuration must be retained, and there must be minimal changes in namespaces. All the changes in the namespaces are encapsulated by the properties in the `patchMaster.properties` file, which is included in the `fmw11gR1ps1_patchassist.zip` file.

For a list of products included in this patch set, see Section C.4.7, "Oracle Fusion Middleware Components Supported by Patch Assistant".

C.3.2 Preparing to Migrate Your Configuration

This section discusses the following topics:

- Prerequisites
- Extracting the Contents of Patch Assistant
- Setting Up the Patch Assistant Environment
- Stopping Oracle Fusion Middleware
- Setting Logging Properties

C.3.2.1 Prerequisites

This section describes the general and product-specific prerequisites for running Patch Assistant.

This section discusses the following topics:

- General Prerequisites
- Product-Specific Prerequisites

C.3.2.1.1 General Prerequisites The following are the general prerequisites for running Patch Assistant:

- Ensure that Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) is installed and configured.
- Ensure that you install 11.1.1.2.0 on the same operating system used by the 11.1.1.1.0 installation.
- Ensure that the system configuration meets the recommended system configuration described in your product documentation. For more information, see http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html.
- Ensure that you have Apache Ant 1.7.0 and Java JDKs (Java SE 6 1.6.0_11 and jrockit_160_05_R27.6.2-20), which are packaged with Oracle WebLogic Server.

Note: If you are using Oracle Internet Directory, Oracle Virtual Directory, Oracle HTTP Server, or Oracle Web Cache as standalone Oracle Fusion Middleware installations, you must install and configure Apache Ant separately. For more information, see *Installing Ant* at <http://ant.apache.org/manual/installlist.html> and Section C.3.2.3, "Setting Up the Patch Assistant Environment".

- Make a detailed note of the topology used for the Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) installation.
- Ensure that you do not change the port configuration and instance names in your existing Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) installation.
- Ensure that the environment variables for `tmp` and `temp` directories for Microsoft Windows are set, as described in the *Oracle Fusion Middleware Administrator's Guide*.
- Back up your Oracle software, inventory, schema, and domain before applying this patch set, or before making any other changes to your existing Oracle software. Refer to your product administrator's guide for instructions on backing up your Oracle software and inventory. For more information, see the "Advanced Administration: Backup and Recovery" part in the *Oracle Fusion Middleware Administrator's Guide*.
- On Windows, it is recommended that you edit the `patchMaster.properties` file in a Notepad. If you are using any other text editor, such as Windows WordPad, then save the file as Text Document. Do not save the file in Rich Text Format.
- On Windows, you must delete the service name for Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) before installing Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) because both the installations use the same service name. To do so, run the following Ant task on the command line:

```
ant master-opmn-delete-service
```


Enter the required information when prompted by the Ant task.

Note: If you want to abort the migration and revert to the 11.1.1.1.0 deployment, run the following Ant task on the command line:

```
ant master-opmn-create-service
```

- Heterogeneous nodes in a Cluster (one in 11.1.1.2.0, other in 11.1.1.2.0) is not supported during the migration process. You must migrate all nodes to 11.1.1.2.0 before environment can be used.

C.3.2.1.2 Product-Specific Prerequisites Depending on your Oracle Fusion Middleware component, you may have to meet additional prerequisites as follows:

- Oracle Fusion Middleware Audit Framework
- Oracle Directory Integration Platform
- Oracle Internet Directory and Oracle Virtual Directory
- Oracle WebCenter
- Oracle Portal

Oracle Fusion Middleware Audit Framework

For Oracle Fusion Middleware Audit Framework, the audit policy is configured for Java components in Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0), you must export the configuration before running Patch Assistant, as follows:

1. Log in to Oracle Enterprise Manager 11g Fusion Middleware Control.
2. Expand WebLogic Domain on the left pane, and select your domain.
Your selected domain page is displayed.
3. From the WebLogic Domain, select **Security**, and then **Audit Policy**.
The **Audit Policy** page is displayed.
4. Select the Audit Policy, and click **Export**.
5. Save the `AuditConfiguration` file to your machine.

Oracle Directory Integration Platform

For the Oracle Directory Integration Platform, do the following:

1. Ensure that your Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) Oracle Internet Directory is up and running in SSL No-Auth mode.
2. Extend the Oracle WebLogic domain created during the Oracle Internet Directory 11g Release 1 (11.1.1.2.0) installation, by running the following command:

Windows

```
config.cmd (Located at: ORACLE_HOME\bin)
```

UNIX

```
config.sh (Located at: ORACLE_HOME/bin)
```

The Oracle Fusion Middleware Configuration Wizard appears. Enter the Oracle Internet Directory 11g Release 1 (11.1.1.2.0) connection details and credentials.

3. Stop the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) domain.

Oracle Internet Directory and Oracle Virtual Directory

Depending on your installation, complete the following prerequisites:

- If your 11.1.1.1.0 configuration has Oracle Internet Directory and Oracle Virtual Directory created with a new Oracle WebLogic domain, then choose the **Create a new WebLogic domain** option on the Welcome screen of the Oracle Fusion Middleware Configuration Wizard when configuring the 11.1.1.2.0 domain.

During the configuration of 11.1.1.2.0, if you select the Create a new WebLogic domain option, then you must deselect Oracle Internet Directory and Oracle Virtual Directory, and select Oracle Directory Services Manager.
- If your Oracle Internet Directory and Oracle Virtual Directory are not registered to any Oracle WebLogic domain in your 11.1.1.1.0 configuration, then 11.1.1.2.0 configuration is not required. You must set the property `patchMaster.Oracleinstancenewlist` in the `patchMaster.properties` file to a new directory for the instance. Ensure that you retain the same instance name used in 11.1.1.1.0.
- If your 11.1.1.1.0 configuration has Oracle Internet Directory and Oracle Virtual Directory registered to an existing Oracle WebLogic domain, then 11.1.1.2.0 configuration is not required. You must set the property `patchMaster.Oracleinstancenewlist` in the `patchMaster.properties` file to a new directory and register the instance with the existing 11.1.1.2.0 WebLogic domain using Ant target. Ensure that you retain the same instance name used in 11.1.1.1.0.

Oracle WebCenter

To migrate Oracle WebCenter, you may choose either of these approaches:

- Keep two parallel instances of Oracle WebCenter, that is 11.1.1.1.0 as well as 11.1.1.2.0. To do this, you must perform a complete installation of Oracle WebCenter 11.1.1.2.0. You can then migrate your Oracle WebCenter 11.1.1.1.0 data into the new WebCenter instance by using the export and import utilities. This approach enables you to use both instances of Oracle WebCenter, if required. For example, you may run the two instances in parallel to minimize downtime or to ensure that the 11.1.1.2.0 instance is set up to the same level as the 11.1.1.1.0 instance before you switch over to the 11.1.1.2.0 instance completely.

For information more informatio, refer to the following resources in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library on the Oracle Technology Network (OTN):

- Refer to the *Oracle Fusion Middleware Installation Guide for Oracle WebCenter* for information about how to install Oracle WebCenter 11g Release 1 (11.1.1.2.0).
- Refer to the "Managing Export, Import, Backup, and Recovery of WebCenter" in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* for information about export and import utilities for Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0).
- Migrate the Oracle WebCenter 11.1.1.1.0 repository and mid-tier completely to Oracle WebCenter 11.1.1.2.0. This approach preserves your Oracle WebCenter 11.1.1.1.0 repository data and enables you to reuse the repository.

This guide describes the tasks required to implement this migration approach for Oracle WebCenter.

Oracle Portal

Before updating, you should backup your OmniPortlet and WebClipping customizations. For more information, see Section 5.3.3.1, "Save Your OmniPortlet and WebClipping Customizations".

C.3.2.2 Extracting the Contents of Patch Assistant

You can download the **fmw11gR1ps1_patchassist.zip**, which is included in the Oracle Fusion Middleware 11g Release 1 Patch Set 1 Patch Scripts media. The zip file is available in the same media pack as Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) on Oracle Technology Network (OTN) at the following URL:
<http://oracle.com/technology>

After downloading this zip file, extract its contents to its own location, in your local machine, where the old and new Oracle Fusion Middleware components are installed. Ensure that the same operating system is used for the 11.1.1.1.0 and 11.1.1.2.0 installations. The zip file includes the following files:

- **README** – Describes the environment.
- **patchMaster.properties** - The user input file.
- **build.xml** – The master build file. Each Oracle Fusion Middleware component has its own `build.xml` file.

C.3.2.3 Setting Up the Patch Assistant Environment

To set up the Patch Assistant environment for Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0), you must set up `ANT_HOME`, add it to your `PATH`, set the `JAVA_HOME` and the `permgcn` size.

For example, on **Windows**:

```
set ANT_HOME=MW_HOME\modules\org.apache.ant_1.7.0
set PATH=%PATH%;%ANT_HOME%\bin
set JAVA_HOME=MW_HOME\jdk160_14_R27.6.4-18
set ANT_OPTS=-Xmx512M -XX:MaxPermSize=512m
```

For example, on **UNIX**:

```
setenv MW_HOME ##set mw home here##
setenv ANT_HOME $MW_HOME/modules/org.apache.ant_1.7.0
setenv PATH $ANT_HOME/bin:$PATH
setenv JAVA_HOME $MW_HOME/jdk160_14_R27.6.5-32
setenv ANT_OPTS "-Xmx512M -XX:MaxPermSize=512m"
```

C.3.2.4 Stopping Oracle Fusion Middleware

Before you run Patch Assistant, you must stop the following:

- Oracle WebLogic Server
- Administration Servers
- Managed Servers
- Oracle Management Agent
- Java EE Applications
- High Availability Environments

For more information, see the Starting and Stopping Oracle Fusion Middleware chapter in the *Oracle Fusion Middleware Administrator's Guide*.

C.3.2.5 Setting Logging Properties

You can use the log file to verify the migration or to detect any errors after running Patch Assistant. Patch Assistant creates a time stamp file in the Patch Assistant home. You can specify the following logging levels:

- info (This is the default setting)
- error
- warning
- verbose
- debug

Note: The debug and the verbose options may display sensitive information in the logs, and they are not recommended for typical use.

Before you use your log file, you must set the logging properties as follows:

Open the `patchMaster.properties` file in a text editor, and update the following properties:

```
# Description: Specifies the directory where the log files go
patchMaster.Logdir=${patchMaster.Dir}
```

Specifies the default location where the log file is saved.

```
# Description: Specifies the logging level to be recorded in the log file
patchMaster.Loglevel=info
```

Sets the logging level.

To override the default `patchMaster.properties` Log level, run the command as shown in the following example:

```
ant -DpatchMaster.Loglevel=error
```

Note: You can override the `patchMaster.properties` by setting properties on the command line. If the `debug` or `verbose` options are used on the command line, they override the logging level property set in the `patchMaster.properties` file. For more information, see Section C.4.6.1, "Overriding Properties Set in the `patchMaster.properties` File".

C.4 Migrating to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0)

This sections contains migration instructions. The following topics are covered:

- Migration Roadmap
- Migration Procedure
- Post-Migration Configuration for Oracle Fusion Middleware Components
- Installation Process

- Configuration Process
- Properties in the patchMaster.properties File
- Oracle Fusion Middleware Components Supported by Patch Assistant

C.4.1 Migration Roadmap

Table C–1 describes the high-level tasks for migrating from Oracle Fusion Middleware 11.1.1.1.0 to 11.1.1.2.0. The table also provides information on where to get more details on each task.

Table C–1 Tasks in the Migration Procedure

Task	Description	Documentation	Mandatory or Optional?
Task 1 - Prepare Environment with General Prerequisites, such as Backing Up Existing Configuration and Retaining Ports and Instance Names	Complete all general prerequisites for running Patch Assistant.	For more information, see Section C.3.2.1.1, "General Prerequisites".	Mandatory
Task 2- Prepare Environment with Product-Specific Prerequisites, if any	Complete all product-specific prerequisites for running Patch Assistant, as applicable.	For more information, see Section C.3.2.1.2, "Product-Specific Prerequisites".	Optional
Task 3 - Stop All Oracle Fusion Middleware 11.1.1.1.0 Domains and Instances	Ensure that you stop all Oracle Fusion Middleware 11.1.1.1.0 domains and instances.	For more information, see Section C.3.2.4, "Stopping Oracle Fusion Middleware" and Section C.4.2.1, "Stopping the Old Domain".	Mandatory
Task 4 - Install Software (Oracle WebLogic Server, Repository Creation Utility, and Oracle Products) for 11.1.1.2.0	<p>Install Oracle software, including Oracle WebLogic Server, Repository Creation Utility, and Oracle products for 11.1.1.2.0. Do not create or configure a WebLogic domain at this stage of the migration process.</p> <p>Install the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) and its components in a separate Middleware home on the same host as the Oracle Fusion Middleware 11g Release 1 (11.1.1) <i>MW_HOME</i>. Ensure that you stop the Oracle Fusion Middleware components for 11.1.1.1.0, before you begin the installation. This will enable the 11.1.1.2.0 installation to retain the same 11.1.1.1.0 port number, host name, and machine name.</p>	<p>For instructions about installing the Oracle WebLogic Server version required for Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0), refer to the <i>Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server</i> in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library on OTN.</p> <p>For system requirements information, go to: http://download.oracle.com/docs/html/E18558_01/fusion_requirements.htm</p> <p>For certification information, go to: http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html</p> <p>For information about installing Oracle products, refer to the product-specific installation guides.</p>	Mandatory

Table C-1 (Cont.) Tasks in the Migration Procedure

Task	Description	Documentation	Mandatory or Optional?
Task 5 - Download the Patch Assistant Zip File	Download the Patch Assistant zip file and extract its contents. After unzipping, configure Patch Assistant before editing the properties.	For more information, see Section C.4.2.3, "Downloading Patch Assistant".	Mandatory

Table C-1 (Cont.) Tasks in the Migration Procedure

Task	Description	Documentation	Mandatory or Optional?
Task 6 - Set Up the patchMaster.properties File and Run Patch Assistant for Schema Only	<p>Ensure that the Oracle database that contains the 11.1.1.1.0 schemas is up and running. This will allow access to the SCHEMA_VERSION_REPOSITORY table by Patch Assistant.</p> <p>Specify the schema-related properties in the patchMaster.properties file, and run the ant master-patch-schema command to migrate the schema only.</p> <p>Note: For Oracle Portal, you must complete the steps in Task 7, 8, and 9, and then follow the steps to migrate the schema. It is recommended that you refer to the following topics in the <i>Oracle Fusion Middleware Upgrade Guide for Oracle Portal, Forms, Reports, and Discoverer</i> before you run Patch Assistant to migrate the schema:</p> <ul style="list-style-type: none"> ■ Understanding the Impact of the Oracle Portal Schema Upgrade ■ Checking for Invalid Objects in the Database Where the Oracle Portal 10g Schema Resides ■ Backing Up the Database Where the Oracle Portal 10g Schema Resides ■ Verifying the Required Database Parameters for Oracle Portal 11g ■ Verifying That the Database and Oracle Internet Directory Are Running <p>Log files specific to Oracle Portal migration are generated in the upgrade.log and precheck.log files in the ORACLE_HOME/upgrade/logs directory (UNIX).</p> <p>If your Oracle Portal repository is not stored in the Oracle Metadata Repository, and is instead installed in a separate database, then do not use the procedures in this section. Instead, refer to "Upgrading an Oracle Portal Repository in a Customer Database" in <i>Oracle Fusion Middleware Upgrade Guide for Oracle Portal, Forms, Reports, and Discoverer</i>.</p>	For more information, see Section C.4.2.4, "Migrating the Schema".	Mandatory

Table C-1 (Cont.) Tasks in the Migration Procedure

Task	Description	Documentation	Mandatory or Optional?
Task 7 - Use the Oracle Fusion Middleware Configuration Wizard (<code>config.sh</code>) to Create and Configure a WebLogic Domain for 11.1.1.2.0	Create and configure a WebLogic administration domain for your 11.1.1.2.0 installation. Ensure that you configure the domain as it was in your 11.1.1.1.0 installation.	For more information, see Section C.4.2.5, "Creating a WebLogic Domain for 11.1.1.2.0" and the product-specific installation guides.	Mandatory
Task 8 - Set Up the <code>patchMaster.properties</code> File and Run Patch Assistant for Domain	Specify the domain-related properties in the <code>patchMaster.properties</code> file, and run the <code>ant master-patch-domain</code> command to migrate the WebLogic domain. You must patch all products in the domain being migrated.	For more information, see Section C.4.2.6, "Migrating the Domain".	Mandatory
Task 9 - Set Up the <code>patchMaster.properties</code> File and Run Patch Assistant for Oracle Instance	Specify the instance-related properties in the <code>patchMaster.properties</code> file, and run the <code>ant master-patch-oinstance</code> command to migrate the instances.	For more information, see Section C.4.2.7, "Migrating an Instance".	Optional
Task 10 - Run Patch Assistant for Registering Instance	After migrating the instances, run the <code>ant master-register-oinstance</code> command to register the instances.	For more information, see Section C.4.2.8, "Registering the Instance".	Mandatory
Task 11 - Start 11.1.1.2.0 Domains and Instances	Run the <code>ant master-start-domain-new</code> command to start the new 11.1.1.2.0 domain. In addition, start the new instances.	For more information, see Section C.4.2.9, "Starting or Stopping the 11.1.1.2.0 Domain".	Mandatory
Task 12 - Prepare Environment with Product-Specific Post-Migration Requirements	Perform any product-specific post-migration tasks.	For more information, see Section C.4.3, "Post-Migration Configuration for Oracle Fusion Middleware Components".	Mandatory if your Oracle product requires any post-migration configuration.
Task 13 - Decommission 11.1.1.1.0 Installation	Deinstall the 11.1.1.1.0 installation.	For more information, see Section C.4.2.11, "Decommissioning the 11.1.1.1.0 Installation".	Optional

C.4.2 Migration Procedure

Migrating your existing configuration from 11.1.1.1.0 to 11.1.1.2.0 involves the following tasks:

1. Stopping the Old Domain
2. Installing Oracle Software for 11.1.1.2.0
3. Downloading Patch Assistant
4. Migrating the Schema

5. Creating a WebLogic Domain for 11.1.1.2.0
6. Migrating the Domain
7. Migrating an Instance
8. Registering the Instance
9. Starting or Stopping the 11.1.1.2.0 Domain
10. Completing Post-Migration Tasks
11. Decommissioning the 11.1.1.1.0 Installation

C.4.2.1 Stopping the Old Domain

To stop the old 11.1.1.1.0 domain, complete the following steps:

Note: You can also use Fusion Middleware Control, Oracle WebLogic Server Administration Console, or WLST or OPMN commands to stop the Oracle Fusion Middleware components.

1. Open the `patchMaster.properties` file (Located in your `patchMaster` directory) in a text editor, and specify the following properties in the `patchMaster.properties` file, as applicable:

```
patchMaster.Oraclehomeold
patchMaster.Oracleinstanceoldlist
patchMaster.Domainadminhost
patchMaster.Domainadminport
```

If the `patchMaster.Domainadminhost` property is not specified, the default value `localhost` is used. If the `patchMaster.Domainadminport` property is not specified, the default value `7001` is used. After editing the properties, save the file and close. For more information about properties in the `patchMaster.properties` file, see Section C.4.6, "Properties in the `patchMaster.properties` File".

Note: If you have multiple Oracle products installed, then you must run Patch Assistant once for each product and setting the `patchMaster.Oraclehomeold` for each product.

2. Run the following command on the command line:


```
ant master-stop-domain-old
```
3. Enter the domain user name and password, when prompted.

C.4.2.2 Installing Oracle Software for 11.1.1.2.0

You must install Oracle WebLogic Server, Repository Creation Utility (RCU), and Oracle products for 11.1.1.2.0:

- Create a new Middleware home directory.
- Install Repository Creation Utility.
- Perform a software-only installation of the product bundle.

Ensure that your system environment meets the general installation requirements for Oracle Fusion Middleware. Some Oracle Fusion Middleware Components require schemas that must be installed in an Oracle database. It is recommended that you do not install any new schemas for your existing 11g R1 (11.1.1.1.0) products. However, in the same environment, you can add new products for which you may have to create the appropriate schemas. For such products, you can create and load the schemas in your database by using RCU. Ensure that you have a supported Oracle database up and running. See

http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html for more information.

Ensure that same instance name used in 11.1.1.1.0 and 11.1.1.2.0.

Note: When you migrate the mid-tier, you are installing a fresh mid-tier in your new 11.1.1.2.0 environment. Patch Assistant migrates the middle tier configuration to this new instance.

For information about the installation process, including Cluster scenarios, see Section C.4.4, "Installation Process".

C.4.2.3 Downloading Patch Assistant

For information about downloading Patch Assistant and extracting its contents, see Section C.3.2.2, "Extracting the Contents of Patch Assistant".

C.4.2.4 Migrating the Schema

Before you can update the repository, ensure that your 11.1.1.1.0 domain is configured and it includes tables populated from running the Repository Creation Utility (RCU).

Note: You can choose to install Oracle Content Server while installing Oracle WebCenter, or later by performing a standalone installation. In Oracle Fusion Middleware 11.1.1.1.0, if you performed a standalone installation of Oracle Content Server, then before you migrate the schemas, you must rename the Oracle Content Server's schema so that it contains the standard suffix, OCSERVER. For information, see Section C.4.2.4.1, "Renaming the Oracle Content Server Schema"

To migrate the schema, complete the following steps:

1. Open the `patchMaster.properties` file (Located in your `patchMaster` directory) in a text editor, and specify the following schema-related properties in the `patchMaster.properties` file:

```
patchMaster.Schemaurl
patchMaster.Schemauser
patchMaster.Schemaprefix
patchMaster.Mwhomew
patchMaster.Mwhomeold
patchMaster.Componentlist
```

Note: The `patchMaster.Componentlist` property is optional, if you are migrating the schema for a single component. For Oracle Portal, in addition to the above properties, you must specify the `patchMaster.Oraclehomenew` property.

In `patchMaster.Componentlist`, include Oracle Content Server as a component only if you created the server's schema using RCU. If you did not create the schema using RCU, then list the server in `patchMaster.Componentlist` only after completing the schema renaming process described in section Section C.4.2.4.1, "Renaming the Oracle Content Server Schema"

After editing the properties, save the file and close. For more information about properties in the `patchMaster.properties` file, see Section C.4.6, "Properties in the `patchMaster.properties` File".

2. Run the following command on the command line to migrate the database schema, and provide the required user name and password when prompted:

```
ant master-patch-schema
```

Patch Assistant can only migrate one set of component schemas that share the same prefix. If different components in your deployment have different prefixes and you have multiple schemas sharing a repository, then you must invoke Patch Assistant multiple times, once for each prefix.

Note: If you migrate the Metadata Services schema for one component, it also affects all the other components using the same Metadata Services schema. If you are using Oracle SOA, you must enter `ant -q master-patch-schema` on the command line to migrate the schema.

During the schema migration, exceptions may occur. Some of these exceptions can be ignored. The following example shows one such exception:

```
[java] SEVERE: Error while registering Oracle JDBC Diagnosability MBean.
[java] java.security.AccessControlException: access denied
(javax.management.MBeanTrustPermission register)
[java]     at
java.security.AccessControlContext.checkPermission(AccessControlContext.java:323)
```

Note: Patch Assistant ensures that all required properties are set for each of the operations.

Patch Assistant attempts to migrate all Oracle Fusion Middleware components. If a component is not installed or configured in the deployment, log messages indicating these attempts are generated.

Log files specific to Oracle Portal migration are generated in the `upgrade.log` and `precheck.log` files in the `ORACLE_HOME/upgrade/logs` directory (UNIX).

C.4.2.4.1 Renaming the Oracle Content Server Schema In Oracle Fusion Middleware 11.1.1.1.0, if you performed a standalone installation Oracle Content Server, then

before migrating the schemas, you must rename the Oracle Content Server's schema so that it contains the standard suffix, `OCSEVER`. You must also rebuild indexes on Oracle Content Server.

To rename the Oracle Content Server schema:

1. Create a new schema (for example, `DEV_OCSEVER`) using the RCU. Ensure that you use the same password as that of your existing Oracle Content Server schema.
2. Export the existing schema (for example, `IDC_IR10`).
3. Import data into the new schema you created (`DEV_OCSEVER`).

Note: Before you import data into the newly created schema, ensure that all the seeded database objects are removed from that schema.

4. Open the `config/config.cfg` file from the installation directory of your Oracle Content Server.
5. Change the Oracle Content Server schema name listed in the configuration file to the newly created schema. (for example, rename `IDC_IR10` to `DEV_OCSEVER`)
6. Access the Oracle Content Server administration console and ensure that the data exists.

After renaming the Oracle Content Server schema, you must migrate the schema, as described in the beginning of this section.

After migrating the schemas, you must rebuild the indexes on Oracle Content Server.

To re-create the index:

1. Log on to Oracle Content Server as a system administrator.
2. Access Repository Manager from the Admin Console by navigating to **Administration > Admin Applets > Repository Manager**.
3. Click the **Indexer** tab.
4. In the Collection Builder Cycle section, click **Start**. If the collection rebuild is already in progress, do not choose to restart the operation. First stop the collection rebuild operation, and then start the operation. Note that the collection rebuild operation is a time-consuming task.

C.4.2.5 Creating a WebLogic Domain for 11.1.1.2.0

Create a WebLogic domain for 11.1.1.2.0 as follows:

1. Run the `MW_Home/oracle_common/common/bin/config.sh` command (on UNIX) or the `MW_Home\oracle_common\common\bin\config.cmd` command (on Windows) on the command line. The Oracle Fusion Middleware Configuration Wizard appears.

For Oracle Portal, Oracle Forms, Oracle Reports, and Oracle Discoverer the `config.sh` command is located at `ORACLE_HOME/bin` (on UNIX) and the `config.cmd` is located at `ORACLE_HOME\bin` (on Windows).

2. On the Welcome screen, select the **Create a new WebLogic domain** option. Click **Next**. The Select Domain Source screen appears.
3. On the Select Domain Source screen ensure that the **Generate a domain configured automatically to support the following products:** option is selected. Select templates for the products that are included in your existing 11.1.1.1.0

installation. For example, if the domain in your 11.1.1.1.0 installation had SOA configured, you must configure the new domain with SOA in 11.1.1.2.0. Click **Next**. The Select Domain Name and Location screen appears.

4. Enter a name and a location for the domain to be created, and click **Next**. Ensure that the domain name is same as the 11.1.1.1.0 domain. Click **Next**. The Configure Administrator User Name and Password screen appears.
5. Configure a user name and a password for the administrator. The default user name is `weblogic`. Click **Next**.
6. Choose a JDK in the Configure Server Start Mode and JDK screen.
7. Configure JDBC Component Schemas and ensure that you retain the same 11.1.1.1.0 topology during this configuration.
8. On the Select Optional Configuration screen, select the **Administration Server** and **Managed Servers, Clusters, and Machines**, and **Deployments and Services** check boxes. Click **Next**.
9. Configure the Administration Server, Managed Servers, Clusters, Machines, as required. Ensure that you retain the same 11.1.1.1.0 topology during this configuration.
10. On the Configuration Summary screen, review the domain configuration, and click **Create** to start creating the domain.

The WebLogic domain with your configuration attributes is created.

Note: Patch Assistant ensures that all required properties are set for each of the operations.

Patch Assistant attempts to migrate all Oracle Fusion Middleware components. If a component is not installed or configured in the deployment, log messages indicating these attempts are generated.

For more information about the configuration process, including Cluster scenarios, see Section C.4.5, "Configuration Process".

C.4.2.6 Migrating the Domain

Before you can migrate the WebLogic domain, ensure that the database schemas are migrated, the new 11.1.1.2.0 products are installed, the new 11.1.1.2.0 domain is configured (as it was configured in the previous 11.1.1.1.0 installation), and all the WebLogic domains are shut down. When you migrate the 11.1.1.1.0 domain, the products configured in the domain are also migrated to the new 11.1.1.2.0 domain.

Note: If you have multiple Oracle products installed, then you must run Patch Assistant once for each product and setting the `patchMaster.Oraclehomeold` property for each product. You must patch all products in the domain being migrated.

To migrate the WebLogic domain, complete the following steps:

1. Open the `patchMaster.properties` file (Located in your `patchMaster` directory) in a text editor, and specify the following domain-related properties:

```
patchMaster.Domainhomenew
patchMaster.Domainapplicationshomenew
```

```
patchMaster.Domainhomeold  
patchMaster.Domainusername  
patchMaster.Oracleinstanceoldlist  
patchMaster.Oraclehomeold
```

After editing the properties, save the file and close. For more information about properties in the `patchMaster.properties` file, see Section C.4.6, "Properties in the `patchMaster.properties` File".

2. Run the following command on the command line to migrate the WebLogic domain:

```
ant master-patch-domain
```

Note: Patch Assistant ensures that all required properties are set for each of the operations.

Patch Assistant attempts to migrate all Oracle Fusion Middleware components. If a component is not installed or configured in the deployment, log messages indicating these attempts are generated.

For the Oracle Directory Integration Platform, you only need to enter the above target to complete the migration process. If you are using Oracle SOA, you must enter `ant -q master-patch-domain` on the command line to migrate the WebLogic domain.

If you are using a Cluster environment, ensure that the database schemas are migrated, the new 11.1.1.2.0 products are installed in a Cluster environment, the new 11.1.1.2.0 domain is configured (as it was configured in the previous 11.1.1.1.0 installation) in a Cluster environment, and all the WebLogic domains are shut down.

C.4.2.7 Migrating an Instance

Before you can migrate the Oracle Instances, ensure that the database schemas are migrated, the new 11.1.1.2.0 products are installed, the new 11.1.1.2.0 domain is configured (as it was configured in the previous 11.1.1.1.0 installation), the domain is migrated, and the Oracle Instances are shut down.

Note: For Oracle Business Intelligence Discoverer in a High Availability (clustered) environment with multiple Managed Servers, you can override the default value `WLS_DISCO` by specifying the following java properties on the command-line:

- `srcDiscoMgdServer`
- `destDiscoMgdServer`

For example:

```
ant -DsrcDiscoMgdServer=WLS_DISCO1 -DdestDiscoMgdServer=WLS_DISCO1  
master-patch-oinstance
```

To migrate an instance, complete the following steps:

1. Open the `patchMaster.properties` file (Located in your `patchMaster` directory) in a text editor, and specify the following properties related to your Oracle Instance homes:

```
patchMaster.Oracleinstanceoldlist
```

```
patchMaster.Oracleinstancenewlist
```

After editing the properties, save the file and close. For more information about properties in the `patchMaster.properties` file, see Section C.4.6, "Properties in the `patchMaster.properties` File".

2. Run the following command on the command line to migrate the Oracle Instances:

```
ant master-patch-oinstance
```

Note: Patch Assistant ensures that all required properties are set for each of the operations.

Patch Assistant attempts to migrate all Oracle Fusion Middleware components. If a component is not installed or configured in the deployment, log messages indicating these attempts are generated.

C.4.2.8 Registering the Instance

After migrating an instance, you must register the instance by completing the following steps:

Note: Before registering the instance, ensure that your Administration Server is up and running.

1. Open the `patchMaster.properties` file (Located in your `patchMaster` directory) in a text editor, and specify the following properties in the `patchMaster.properties` file, as applicable:

```
patchMaster.Oracleinstancenewlist
```

After editing the properties, save the file and close. For more information about properties in the `patchMaster.properties` file, see Section C.4.6, "Properties in the `patchMaster.properties` File".

2. Run the following command on the command line:

```
ant master-register-oinstance
```

3. Enter the domain user name and password, when prompted.

Note: Patch Assistant ensures that all required properties are set for each of the operations.

Patch Assistant attempts to migrate all Oracle Fusion Middleware components. If a component is not installed or configured in the deployment, log messages indicating these attempts are generated.

C.4.2.9 Starting or Stopping the 11.1.1.2.0 Domain

Starting or stopping the new 11.1.1.2.0 domain requires the `patchMaster.Domainhomenew` property to be specified in the `patchMaster.properties` file.

To start the new 11.1.1.2.0 domain, run the following command on the command line:

```
ant master-start-domain-new
```

To stop the new 11.1.1.2.0 domain, run the following command on the command line:

```
ant master-stop-domain-new
```

C.4.2.10 Completing Post-Migration Tasks

For information about post-migration tasks specific to your product, see Section C.4.3, "Post-Migration Configuration for Oracle Fusion Middleware Components".

Note: When the Oracle Portal, Forms, Reports, and Discoverer installation is performed on a Windows machine, the System PATH is updated so that the `ORACLE_HOME\bin` for that installation precedes PATH. You cannot run Oracle Forms from the first installation, by default. To access the 11.1.1.1.0 components, right-click on **My Computer** and then **Properties**, select the **Advanced** tab, and click the **Environment Variables** button. Edit the System variable PATH so that the `ORACLE_HOME\bin` that you want to use is the one that precedes PATH.

C.4.2.11 Decommissioning the 11.1.1.1.0 Installation

After migrating to 11.1.1.2.0, you can deinstall Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0). For more information, refer to the following:

- "Deinstalling Oracle Identity Management 11g Release 1 (11.1.1)" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle Identity Management*.
- "Deinstalling Oracle Portal, Forms, Reports and Discoverer" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle Portal, Forms, Reports and Discoverer*.
- "Deinstalling Oracle SOA Suite" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite*.
- "Deinstalling Oracle WebCenter" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle WebCenter*.
- "Deinstalling Oracle Web Tier" chapter in the *Oracle Fusion Middleware Installation Guide for Oracle Web Tier*.

Note: When you deinstall 11.1.1.1.0, the Installer removes the previously created 11.1.1.2.0 windows service. Use the Ant command-line utility to re-create that service for each instance as follows:

```
ant master-opmn-create-service
```

Enter the required information when prompted by the Ant task.

C.4.3 Post-Migration Configuration for Oracle Fusion Middleware Components

After running the Patch Assistant, you must manually configure some of the Oracle Fusion Middleware Components:

- Post-Migration Configuration for Oracle Fusion Middleware Audit Framework
- Post-Migration Configuration for Oracle Business Intelligence Discoverer
- Post-Migration Configuration for Oracle Directory Integration Platform

- Post-Migration Configuration for Oracle Identity Federation
- Post-Migration Configuration for Oracle Platform Security Services
- Post-Migration Configuration for Oracle Reports
- Post-Migration Configuration for Oracle SOA
- Post-Migration Configuration for Oracle User Messaging Service
- Post-Migration Configuration for Oracle WebCenter
- Post Migration Configuration for Oracle Web Services Manager

C.4.3.1 Post-Migration Configuration for Oracle Fusion Middleware Audit Framework

After running Patch Assistant for Oracle Fusion Middleware Audit Framework, you must complete the following tasks:

- Update the Translation Table in Audit Schema
- Migrating Audit Policy Configuration for Java Components
- Creating the Audit Data Source

C.4.3.1.1 Update the Translation Table in Audit Schema If the `IAU_DISP_NAMES_TL` audit event translation data is defined in the 11.1.1.1.0, then you can migrate them to the 11.1.1.2.0, by completing the following steps:

1. Run SQLPlus, and connect to the database as the system user. For example:

```
sqlplus sys as sysdba
```

2. Run SQL commands in the following order:

```
SQL> alter session set current_schema=<Name_of_Your_Audit_Schema>;
SQL> delete from iau_disp_names_tl;
SQL> @disp_names.sql;
```

`disp_names.sql` is located at `fmw11gR1ps1_patchassist\Audit` folder.

Note: To avoid scrambled characters, a Unicode-supported database is required to store the translation data. In addition, to ensure proper character set conversion between SQL*Plus and the database server, a compatible character set, such as UTF8 or AL32UTF8, needs to be set for the `NLS_LANG` environment variable before running `disp_names.sql`.

For the complete list of legal `NLS_LANG` values, see the Oracle Database Documentation Library at:

<http://www.oracle.com/technology/documentation/database.html>

C.4.3.1.2 Migrating Audit Policy Configuration for Java Components If the audit policy is configured for Java components in 11.1.1.1.0, you must import the configuration file after running Patch Assistant, as follows:

1. Log in to the Oracle Enterprise Manager 11g Fusion Middleware Control.
2. Expand the WebLogic Domain on the left pane, and select your domain.

Your selected domain page is displayed.

3. From the WebLogic Domain, select **Security**, and then **Audit Policy**.
The **Audit Policy** page is displayed.
4. Select the Audit Policy, and click **Import**.
5. Click **Browse**, and specify the path where your AuditConfiguration file is located.
6. Click **Ok**.

C.4.3.1.3 Creating the Audit Data Source If the audit data source is used in Oracle Fusion Middleware 11.1.1.1.0, then you must re-create the audit data store used in 11.1.1.2.0. To do so, perform the following steps:

1. Log in to the Oracle WebLogic Server administration console:

`http://host:7001/console`

2. Under **JDBC**, click the **Data Sources** link.
The **Summary of JDBC Data Sources** page is displayed.
3. Click **New** to create a new data source.
The **Create a New JDBC Data Source** page is displayed.
4. Enter the following details for the new data source:

- **Name:** Enter a name such as Audit Data Source-0
- **JNDI Name:** jdbc/AuditDB
- **Database Type:** Oracle
- **Database Driver:** Oracle's Driver (Thin XA) Versions: 9.0.1, 9.0.2, 10, 11

If deploying to a managed cluster server, check **AdminServer**. This selection ensures that the data source is listed in the audit store when switching from file to database store.

5. Click **Next**.
The **Transaction Options** page is displayed.
6. Click **Next**.
The **Connection Properties** page is displayed.
7. In the Connection Properties page, enter the following information:
 - **Database Name:** Enter the name of the database to which you will connect. This usually maps to the SID.
 - **Host Name:** Enter the hostname of the database.
 - **Port:** Enter the database port.
 - **Database User Name:** This is the name of the audit schema that you created in RCU. The suffix is always IAU for the audit schema. For example, if you gave the prefix as `test`, then the schema name is `test_iau`.
 - **Password:** This is the password for the audit schema that you created in RCU.Click **Next**.
8. The next page lists the JDBC driver class and database details. Accept the default values, and click **Test Configuration** to test the connection. If you see the message "Connection established Successfully", click **Next**. If it displays any error, go back and check the connection details.

9. In the Select Targets page, select the servers where this data source must be configured, and click **Finish**.

C.4.3.2 Post-Migration Configuration for Oracle Business Intelligence Discoverer

After running Patch Assistant, ensure that all your existing Oracle BI Discoverer Plus OLAP users have proper access privileges to the Oracle BI Discoverer 11g Release 1 (11.1.1.2.0) Discoverer Catalog. To set proper access privileges, perform the following tasks using the command-line utilities:

- Authorizing a New User to Access the Discoverer Catalog
- Updating the Privileges of an Existing Discoverer Catalog User

C.4.3.2.1 Authorizing a New User to Access the Discoverer Catalog Use the following commands to authorize one or more users so they can access the Discoverer Catalog:

```
java -classpath path_to_d4o_jar_file load . java -classpath path_to_d4o_jar_file
authorize -h hostname -po portname
        -sid database_SID -p d4osyspasswd -u user
```

For example, on **Windows**:

```
java -classpath C:\temp\d4o.jar load . java -classpath C:\temp\d4o.jar authorize
-h sys42.example.com -po 1521
        -sid disco_db1 -p nPword432 -u jones
```

For example, on **UNIX**:

```
java -classpath /home/abc/temp/d4o.jar load . java -classpath
/home/abc/temp/d4o.jar authorize -h sys42.example.com -po 1521
        -sid disco_db1 -p nPword432 -u jones
```

In this example, you must run the `load` command only once before authorizing any number of users. For example, if you want to authorize 10 users, run the `load` command once, and then run the `authorize` command once for each user.

C.4.3.2.2 Updating the Privileges of an Existing Discoverer Catalog User To update the user's privileges to access all private and shared folders, use the following command:

```
java -classpath path_to_d4o_jar_file updatePrivileges -h hostname -po portname
        -sid database_SID -p d4osyspasswd -u user
```

For example, on **Windows**:

```
java -classpath C:\temp\d4o.jar updatePrivileges -h sys42.example.com -po 1521
        -sid disco_db1 -p nPword432 -u jones
```

For example, on **UNIX**:

```
java -classpath /home/abc/d4o.jar updatePrivileges -h sys42.example.com -po 1521
        -sid disco_db1 -p nPword432 -u jones
```

In this example, if you specify the `-u` option, then the privileges are upgraded only for that user. If you do not specify the `-u` option, then the privileges are upgraded for all users.

C.4.3.3 Post-Migration Configuration for Oracle Directory Integration Platform

After running Patch Assistant, start your Oracle Directory Integration Platform 11g Release 1 (11.1.1.2.0) domain. For more information, see the "Starting and Stopping

Oracle Fusion Middleware " in the *Oracle Fusion Middleware Administrator's Guide* and, then complete the following steps:

1. Log in to Oracle Enterprise Manager Fusion Middleware Control.
2. In the Oracle Enterprise Manager home page, select **Farm**, and then **Agent-Monitored Targets**.
The **Agent-Monitored Targets** page is displayed.
3. From the **Targets** table, select the target used by the Oracle Directory Integration Platform, and click **Configure**.
The **Configure Target** page is displayed.
4. Click **Change Agent** and, then select the Oracle Internet Directory Agent URL from the drop-down box.
5. Click **Ok**.
6. Click **Apply**.
7. Log out of Oracle Enterprise Manager.
8. Log in to Oracle Enterprise Manager again.
9. Unregister the ASInstance created during Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) Directory Integration Platform configuration by running the following command:

Windows:

```
ORACLE_INSTANCE\bin\opmnctl unregisterinstance -adminHost -adminPort
-adminUserName
```

UNIX:

```
$ORACLE_IMSTANCE/bin/opmnctl unregisterinstance -adminHost -adminPort
-adminUserName
```

10. Delete the ASInstance created during Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) Directory Integration Platform Configuration by running the following command:

Windows:

```
ORACLE_HOME\opmn\bin\opmnctl deleteinstance -oracleInstance <Oracle instance
root directory>
```

UNIX:

```
$ORACLE_HOME/opmn/bin/opmnctl deleteinstance -oracleInstance <Oracle instance
root directory>
```

C.4.3.4 Post-Migration Configuration for Oracle Identity Federation

After running Patch Assistant, your Credential Store Framework (CSF) is not migrated to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0), if you are using an LDAP store. You must migrate the credentials manually from a source repository to a target repository by using the WLST command `migrateSecurityStore`.

For information, see "Migrating with the Script `migrateSecurityStore`" in *Oracle Fusion Middleware Security Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library on OTN.

C.4.3.5 Post-Migration Configuration for Oracle Platform Security Services

You must manually migrate your existing Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) policy store because the corresponding schema changes when you install Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0). During this migration, any existing 11.1.1.1.0 installation policies are updated to 11.1.1.2.0 policies. You will find the existing 11.1.1.1.0 data provisioned in the 11.1.1.2.0 LDAP store.

However, you must redeploy your applications after installing Oracle Fusion Middleware (11.1.1.2.0), but the provisioned policies are already in the migrated LDAP store.

Note: When redeploying your applications, you should not migrate the policies as they already exist in the policy store.

Note that Oracle WebLogic Server domains are containers of application policy data that is used by Oracle Platform Security Services. Typically, a domain is identified by its name, as in the following example:

```
Relative DN (RDN) cn=MyDomain,cn=JpsContext,cn=JpsTestNode
```

The Relative DN (RDN) `cn=MyDomain` is the node on the LDAP server that corresponds to a domain. All data under such a domain, including Credential Store and Policy Store data, is preserved.

Note: If you are using Oracle WebLogic Server LDAP, then you must re-create the user. For more information, see "Security Data Migration" section in *Oracle Fusion Middleware Developing Security Providers for Oracle WebLogic Server* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library

Migration Scenarios

If you are migrating Oracle Platform Security Services 11.1.1.1.0 Policy Store to 1.1.1.2.0 Policy Store, consider the following migration scenarios:

- Migrating File-Based Policy and Credential Store
- Migrating Oracle Internet Directory Policy and Credential Store and Reusing an Existing Oracle Internet Directory Server

C.4.3.5.1 Migrating File-Based Policy and Credential Store To migrate your existing file-based policy and credential store from 11.1.1.1.0 to 11.1.1.2.0, you must install Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0), which is configured to use the file-based policy (XML), credential (wallet) stores, and then migrate the credentials and application policies by using the WebLogic Scripting Tool (WLST) command `migrateSecurityStore`. For more information, see the "Migrating Credentials with the Command `migrateSecurityStore`" section in the *Oracle Fusion Middleware Security Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.4.3.5.2 Migrating Oracle Internet Directory Policy and Credential Store and Reusing an Existing Oracle Internet Directory Server To migrate your existing Oracle Internet Directory policy and credential store from Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0), start the servers in your Oracle Fusion Middleware domain and then complete the following steps:

Note: Ensure that your Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) installation has applications deployed on a single domain and configured with LDAP or credential store. In addition, make sure that you do not have any resource catalog information provisioned.

1. Reconfigure the LDAP authenticator to use the same LDAP server used in the 11.1.1.1.0 installation. For information, see the *Oracle Fusion Middleware Security Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

Note: For information on reconfiguring the LDAP authenticator to use the same LDAP server used in Oracle WebCenter 11.1.1.1.0 installation, see the "Reassociating the Identity Store with an External LDAP" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

2. Update the Java Platform Security (JPS) LDAP schema in the LDAP store by using the WLST `reassociateSecurityStore` command. The reassociation creates a temporary node under a pre-existing `jps` root node. The temporary data is the domain, you specified during reassociation. The domain needs to be a new temporary name and the `jpsroot` should have the same name that contains the domain you are migrating from 11.1.1.1.0.

For information, see "reassociateSecurityStore" in *Oracle Fusion Middleware Security Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

This command creates a temporary domain that will be deleted later. For example:

```
reassociateSecurityStore(domain="ps1_tmp_domain", admin="cn=orcladmin",
password="welcome1", ldapurl="ldap://example.com:3060", servertype="OID",
jpsroot="cn=jpsroot_r1_name")
```

Note: Set a temporary name for the domain, and ensure that the `jpsroot` has the same name as in 11.1.1.1.0.

3. Ensure that the Oracle WebLogic Administration Server is stopped to change the server configuration. To stop the server, run the following command:

Windows:

```
MW_HOME\user_projects\domains\\bin\stopWebLogic.cmd
username password admin_url
```

UNIX:

```
$ MW_HOME/user_projects/domains/<domain_name>/bin/stopWeblogic.sh
username password admin_url
```

4. Rebuild the Oracle Internet Directory catalog by running the following catalog commands from the Oracle Internet Directory machine:

Note: Before you start using the Oracle Identity Management command-line tools, you must configure your environment. This involves setting the appropriate environment variables as follows:

- `ORACLE_HOME` - The location of non-writable files in your LDAP-based identity store installation.
- `ORACLE_INSTANCE` - The location of writable files in your LDAP-based identity store installation.
- `TNS_ADMIN` - The location of `tnsnames.ora` file in your Oracle home.

Ensure that the `tnsnames.ora` file (Located at `ORACLE_HOME/network/admin`) contains the `conn_str` that will be used in the catalog command.

- `PATH` - Add the following directory locations to your `PATH`:

```
ORACLE_HOME/bin
ORACLE_HOME/ldap/bin
ORACLE_HOME/ldap/admin
```

Drop the catalog first before re-creating it as follows:

```
catalog connect="conn_str" delete=true attribute= createtimestamp
catalog connect="conn_str" delete=true attribute= modifytimestamp
catalog connect="conn_str" delete=true attribute= orclJpsResourceName
catalog connect="conn_str" delete=true attribute= orclJPSObjGUID
catalog connect="conn_str" delete=true attribute=
orclJpsResourceTypeActionNames
```

Then add the following:

```
catalog connect="conn_str" add=true attribute= createtimestamp
catalog connect="conn_str" add=true attribute= modifytimestamp
catalog connect="conn_str" add=true attribute= orclJpsResourceName
catalog connect="conn_str" add=true attribute= orclJPSObjGUID
catalog connect="conn_str" add=true attribute= orclJpsResourceTypeActionNames
```

For more information, see "Performing Bulk Operations" in *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

5. Delete the temporary domain, created in step 1, by performing the following:
 - a. Disable the Server Entry Cache. For more information, see "Tuning Recommendations for Server Entry Cache" in *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.
 - b. Stop Oracle Internet Directory by running the following command:

Windows

```
ORACLE_INSTANCE\bin\opmnctl stopall
```

UNIX

```
ORACLE_INSTANCE/bin/opmnctl stopall
```

- c. Run the following command:

```
bulkdelete connect="connect string" basedn="cn=ps1_tmp_
domain,cn=JPSContext,cn=jpsroot_r1_name"
```

Note: Do not use JXplorer or any other LDAP browser to delete the JPS root node.

For more information, see "Deleting Entries or Attributes of Entries by Using bulkdelete" in *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

- d. Start Oracle Internet Directory by running the following command:

Windows

```
ORACLE_INSTANCE\bin\opmnctl startall
```

UNIX

```
ORACLE_INSTANCE/bin/opmnctl startall
```

- e. Enable the Server Entry Cache. For more information, see the "Tuning Recommendations for Server Entry Cache" section and the "Attributes of the Instance-Specific Configuration Entry" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

- f. Stop and start Oracle Internet Directory by running the following commands:

Windows

```
ORACLE_INSTANCE\bin\opmnctl stopall
ORACLE_INSTANCE\bin\opmnctl startall
```

UNIX

```
ORACLE_INSTANCE/bin/opmnctl stopall
ORACLE_INSTANCE/bin/opmnctl startall
```

6. Open the `jps-config.xml` file (located in your `MW_HOME\user_projects\domains\\config\fmwconfig` directory) in a text editor and replace the 11.1.1.2.0 domain name with 11.1.1.1.0 domain name. For example, replace `cn=ps1_tmp_domain` with `cn=R1_domain_name`.
7. Migrate the default system policies from the XML store to the LDAP store by using the WLST Command `migrateSecurityStore`.

For more information, see the "Migrating Credentials with the Command `migrateSecurityStore`" section in the *Oracle Fusion Middleware Security Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

In the `jps-config.xml` file, add the entries to specify the source and the destination source JPS context. The source JPS context must be the one that uses the XML store as the policy store, and the destination JPS context must be the one that uses the LDAP store. For example, add the following entries in the `jps-config.xml` file:

```
<jpsContext name="filestore">
  <serviceInstanceRef ref="policystore.xml"/>
</jpsContext>
<jpsContext name="ldapstore">
```



```
<serviceInstanceRef ref="polycystore.ldap"/>
</jpsContext>
```

Ensure that the `polycystore.xml` service instance in `jps-config.xml` file refers to the shipped `system-jazn-data.xml` file (out-of-the-box), as in the following example:

```
<serviceInstance location="./system-jazn-data.xml"
provider="polycystore.xml.provider" name="polycystore.xml">
  <description>File Based Policy Store Service Instance</description>
</serviceInstance>
```

Migrate the system policies by using the WLST `migrateSecurityStore` command, as shown in the following example:

```
migrateSecurityStore(type="globalPolicies", configFile="<domain level
jpsconfig.xml file loc>", src="filestore" ,dst="ldapstore")
```

For more information about the migrating system policies, see "Migrating Policies to the Domain Policy Store" in *Oracle Fusion Middleware Security Guide* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

8. Ensure that the LDAP server contains the `Role Categories` entry under your application policy node.
 - a. Run the `ldapsearch` command to search for this `Role Categories` entry from the Oracle Internet Directory machine:

```
LDAP_OH/bin/ldapsearch -h <host> -p <port> -D "<Admin DN>" -w password -b
"cn=Role Categories,cn=<app name>,cn=<domain
name>,cn=JpsContext,cn=<jpsroot name>" -s base "(objectclass=*)"
```

Where `LDAP_OH/bin` is the `OID/IdM IDM_ORACLE_HOME/bin` directory.

Example:

```
LDAP_OH/bin/ldapsearch -h oid.example.com -p 3060 -D "cn=orcladmin" -w
password -b "cn=Role
Categories,cn=appname,cn=domainname,cn=JpsContext,cn=jpsroot" -s base
"(objectclass=*)"
```

For detailed syntax, see the "ldapsearch" topic in the *Oracle Fusion Middleware User Reference for Oracle Identity Management* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

Note: If the `Role Categories` entry is not available, the following message is displayed:

```
ldap_search: No such object
```

- b. If the `Role Categories` entry is not present, create an LDIF file named `rolecat.ldif` with the following content:

```
dn: cn=Role Categories,cn=<app name>,cn=<domain
name>,cn=JPSCContext,cn=<jpsroot name>
objectclass: top
objectclass: orclContainer
cn: Role Categories
```

Example:

```
dn: cn=Role Categories,cn=webcenter,cn= R1_domain_
name,cn=JPSCContext,cn=jpsroot_r1_name
objectclass: top
objectclass: orclContainer
cn: Role Categories
```

- c. Run the `ldapadd` command to add this node to the application policy store as follows:

```
LDAP_OH/bin/ldapadd -p <port> -h <host> -D "<Admin DN>" -w <password> -vf
rolecat.ldif
```

Where `LDAP_OH/bin` is the `OID/IdM IDM_ORACLE_HOME/bin` directory.

Example:

```
LDAP_OH/bin/ldapadd -p 3060 -h oid.example.com -D "cn=orcladmin" -w
password -vf rolecat.ldif
```

For detailed syntax, see the "ldapadd" topic in the *Oracle Fusion Middleware User Reference for Oracle Identity Management* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

Note: If the node exists, the output of the `ldapadd` command indicates that the object already exists.

Note: The `ldapadd` command for Role Categories must be run for every application that uses LDAP as policy store.

9. Start the Oracle WebLogic Administration Server, as shown in the following example:

```
MW_HOME/user_projects/domains/domain_name/bin/startWebLogic.sh
-Dweblogic.management.username=weblogic
-Dweblogic.management.password=password
```

For more information, see "Starting and Stopping Oracle Fusion Middleware" in *Oracle Fusion Middleware Administrator's Guide*.

10. Redeploy any user applications that were deployed in 11.1.1.1.0.

C.4.3.6 Post-Migration Configuration for Oracle Reports

After running Patch Assistant, your Oracle Internet Directory Policy and Credential Store (CSF) is not migrated to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0). For information about migrating the Oracle Internet Directory Policy and Credential Store (CSF), see Section C.4.3.5.2, "Migrating Oracle Internet Directory Policy and Credential Store and Reusing an Existing Oracle Internet Directory Server".

C.4.3.7 Post-Migration Configuration for Oracle SOA

After running Patch Assistant, you must perform the following:

Notes: Service Engine configuration has moved from file to the database in 11.1.1.2.0.

The procedures in this chapter are for installing and configuring Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0). As a result, for all cross-references in this section, refer to the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

1. Re-deploy your J2EE applications, including TaskDetail Application used in Human Workflow Applications. For more information, see "Deploying SOA Composite Applications" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*.
2. Reconfigure any changes made to configuration files (For example: `soa-infra-config`) and component-level configuration files in 11.1.1.1.0 must be reconfigured for 11.1.1.2.0 using the Oracle Enterprise Manager Fusion Middleware Control.
3. Reconfigure the log level settings using the Oracle Enterprise Manager Fusion Middleware Control. For more information, see "Configuring Logging" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*.
4. Re-create the seeding of the Workflow users.
5. Reconfigure the Secure Sockets Layer (SSL) for the SOA composite application. For more information, see "Securing SOA Composite Applications" in *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite*.
6. If you have configured the Oracle HTTP Server for 11.1.1.1.0, then you must reconfigure it for 11.1.1.2.0.
7. For composites involving BPEL Sensors with sensor action as JMS Queue, JMS Topic, JMS Adapter (remote JMS), re-create the JMS Queue, JMS topic, and the remote JMS set up.
8. Configure the identity and policy provider, as described in Section C.4.3.5.2, "Migrating Oracle Internet Directory Policy and Credential Store and Reusing an Existing Oracle Internet Directory Server".
9. Configure the SSO provider for 11.1.1.2.0.
10. Configure the adapters as follows:
 - Create the data source for the AQ adapter by following the steps described in the "Configuring the Data Sources in the Oracle WebLogic Server Administration Console" section in the *Oracle Fusion Middleware User's Guide for Technology Adapters*.
 - Configure AQ JMS in Oracle WebLogic Server Administration Console. For more information, see the *Oracle Fusion Middleware User's Guide for Technology Adapters*.
 - Create the foreign server for the AQJMS again and restart the server.
 - After migration, if the log was showing Queue Manager not available (with MQ reason code: 2059), you must modify the JNDI, which is used by the composite deployed to point to the Queue Manager, which was used for pre-upgrade. After making this change, you must restart SOA.
11. Migrate the B2B for 11.1.1.2.0 as follows:

- a. Import previously exported repository from 11.1.1.1.0 with the Replace Existing MetaData flag.
- b. Update the key store password and restart the B2B server.
- c. Select the certificate alias in delivery channel and save.
- d. Deploy the B2B agreements.

C.4.3.8 Post-Migration Configuration for Oracle User Messaging Service

After running Patch Assistant, you must perform the following:

- Migrating Configuration for Additional Custom-Deployed Drivers
- Migrating Configuration for User Messaging Service Worklist Driver

C.4.3.8.1 Migrating Configuration for Additional Custom-Deployed Drivers If your Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) domain has configuration files for additional User Messaging Service driver deployments beyond those provisioned at install time, then you must migrate them to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0). Run the following Ant command on the command-line:

```
ant -f UMS/build.xml patch-ums-driver-config -Ddriver.name=<driver_name>
```

Where <driver_name> is the deployment name of the custom driver. The build.xml file is located in your patchMaster directory.

Note: This command only migrates the configuration to Oracle Fusion Middleware (11.1.1.2.0) domain and will not deploy the driver.

C.4.3.8.2 Migrating Configuration for User Messaging Service Worklist Driver If your Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) domain has the User Messaging Service Worklist Driver installed and configured, then the configuration of the Worklist Driver is automatically migrated by the Patch Assistant. Patch Assistant does not install this additional driver. You must re-install the driver in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) domain.

For more information, see "Install the Worklist Driver" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.4.3.9 Post-Migration Configuration for Oracle WebCenter

This section describes the tasks involved in getting your Oracle WebCenter 11.1.1.2.0 up and running after you have migrated the mid-tier.

C.4.3.9.1 Overview of Tasks for Configuring Oracle WebCenter Post Mid-Tier Migration

Table C-2 describes the tasks involved in configuring Oracle WebCenter 11.1.1.2.0 after the Patch Assistant script has been executed. The table also specifies whether these tasks are optional or mandatory.

Table C-2 Post Mid-Tier Migration Tasks for Oracle WebCenter

Task	Description	Mandatory/Optional?
Reconfiguring Oracle WebCenter Identity Store and Migrating the Application Policy to the WebCenter Policy Store	Configure the identity store to use the same configuration as Oracle WebCenter 11.1.1.1.0. Also, run the <code>updateSpacesPolicy.py</code> script to update the application store to include appropriate security permissions for WebCenter Spaces. Note: You must run <code>updateSpacesPolicy.py</code> even if your Oracle WebCenter uses the embedded LDAP identity store.	Mandatory
Configuring Oracle WebCenter for Secure Sockets Layer (SSL)	Configure Oracle WebCenter 11.1.1.2.0 to use the same SSL configuration and keystore as Oracle WebCenter 11.1.1.1.0.	Mandatory if SSL is configured in Oracle WebCenter 11.1.1.1.0
Configuring Oracle WebCenter for Single Sign-On (SSO)	Configure your single sign-on (SSO) solution to use the same SSO configuration as Oracle WebCenter 11.1.1.1.0.	Mandatory if SSO is configured in Oracle WebCenter 11.1.1.1.0
Refreshing Group Space Data in WebCenter Spaces	Refresh the group space data and the data about group space members.	Mandatory
Reapplying Configuration Changes	Reapply any configuration changes made to Oracle WebCenter 11.1.1.1.0.	Mandatory
Importing Wiki Templates and Attachments	Migrate templates and attachments to the database repository of Oracle WebCenter Wiki and Blog Server.	Mandatory if Oracle WebCenter Wiki and Blog Server is configured for Oracle WebCenter 11.1.1.1.0
Migrating Oracle Content Server	Run the WebCenter configuration script <code>wc_contentserverconfig</code> to migrate to Oracle Content Server 10.1.3.5.1. Also, configure a JPS user provider in place of the existing LDAP user provider.	Mandatory if Oracle Content Server is configured for Oracle WebCenter 11.1.1.1.0
Configuring Oracle WebCenter Discussions for WebCenter Spaces	Configure Web Services Security (WS-Security) if you want to use Oracle WebCenter Discussions with Oracle WebCenter Spaces.	Mandatory
Migrating Custom WebCenter Applications	Migrate custom WebCenter applications to Oracle WebCenter 11.1.1.2.0.	Mandatory

C.4.3.9.2 Reconfiguring Oracle WebCenter Identity Store and Migrating the Application Policy to the WebCenter Policy Store You must migrate your existing identity store and credential store. Before doing so, be sure to start all the servers in your WebCenter domain.

If you are using the embedded LDAP based policy and credential store, for information about the tasks that you need to perform, see the "Exporting and Importing a File-based Policy Store" and "Exporting and Importing a File-based Credential Store" sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

When Oracle WebCenter 11.1.1.1.0 is configured to use an external LDAP-based identity store, then post mid-tier migration you must migrate your identity store and credential store to Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0). For information about how to migrate Oracle Internet Directory policy and credential store, see Section C.4.3.5.2, "Migrating Oracle Internet Directory Policy and Credential Store and Reusing an Existing Oracle Internet Directory Server."

After migrating the identity and credential store, you must run the `updateSpacesPolicy.py` script to update the WebCenter Spaces application policy to include appropriate security permissions. If you do not run this script, WebCenter Spaces users will not be able to access their profile information or the service tabs in group spaces.

Note: You must run the `updateSpacesPolicy.py` script even if your Oracle WebCenter uses the embedded LDAP identity store.

To execute `updateSpacesPolicy.py`:

1. Launch WLST with this command:

```
WC_ORACLE_HOME/common/bin/wlst.sh
```

Where `WC_ORACLE_HOME` refers to the Oracle WebCenter installation directory.

2. At the WLST command prompt, enter the following command to connect to the Administration Server:

```
wls:/offline> connect('user_name','password','host_name:port_number')
```

For example, use the following command:

```
connect('weblogic','weblogic','myhost.example.com:7001')
```

3. Use the following command to run the `updateSpacesPolicy.py` script:

```
wls:/weblogic/serverConfig> execfile('WC_ORACLE_
HOME/webcenter/scripts/updateSpacesPolicy.py')
```

4. Ensure that there are no errors logged on the console. If there are errors, use the error message as a guide and inspect the `updateSpacesPolicy.py` script to determine the `grant` command that failed. You must fix errors, if any, and run the `grant` command manually.
5. Restart the Administration Server and the `WLS_Spaces` Managed Server.

C.4.3.9.3 Configuring Oracle WebCenter for Secure Sockets Layer (SSL) Secure Sockets Layer (SSL) provides additional security for connections between WebCenter applications or components by providing an additional authentication layer, and by encrypting the data exchanged. During mid-tier migration, the SSL configuration does not get migrated. After running the Patch Assistant script, you must reconfigure SSL for Oracle WebCenter and, if required, for various WebCenter Services integrated into your WebCenter applications.

For information about how to configure SSL for WebCenter applications and WebCenter Services, see the "Configuring WebCenter Applications and Components to Use SSL" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

For example, in Oracle WebCenter 11.1.1.1.0, if secured portlets were used in WebCenter Spaces, then your keystore must have been set to the Custom Identity and Java Standard Trust keystore and you would have imported the required portlet certificates in the Java standard trust keystore (typically cacerts). Now, post mid-tier migration, you must configure the `WLS_Spaces` server, in your Oracle WebCenter 11.1.1.2.0 instance, to use the Custom Identity and Java Standard Trust keystore and other SSL-specific settings that were configured for Oracle WebCenter 11.1.1.1.0. Also, you must reimport all your portlet certificates into the trust keystore to access secured portlets in Oracle WebCenter 11.1.1.2.0.

C.4.3.9.4 Configuring Oracle WebCenter for Single Sign-On (SSO) For single sign-on (SSO) authentication, your Oracle WebCenter 11.1.1.1.0 may be configured to use Oracle Access Manager (OAM), Oracle Single Sign-on (OSSO), or a SAML-based single sign-on solution for WebCenter applications only. After mid-tier upgrade, you may need to perform the following configuration, depending on the SSO solution used.

For each of these cross-references, refer to the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library:

- **Configuring OAM:** Configure the authenticator and the OAM asserter to use the same configuration as used in Oracle WebCenter 11.1.1.1.0. For information, see the "Configuring Oracle Access Manager (OAM)" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
- **Configuring OSSO:** Configure the authenticator and the OSSO asserter to use the same configuration as used in Oracle WebCenter 11.1.1.1.0. For information, see the "Configuring Oracle Single Sign-On (OSSO)" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
- **Configuring SAML-based SSO:** You must set up your entire SAML-based SSO solution. For information, see the "Configuring SAML-based Single Sign-on" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

Note: If WebCenter is running with SSO, the OmniPortlet producer receives an authorization exception when it tries to store connection information in the Credential Store Framework (CSF) wallet. For information about how to resolve this issue, see the "OmniPortlet Producer Authorization Exception in SSO Environment" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

C.4.3.9.5 Refreshing Group Space Data in WebCenter Spaces After mid-tier migration, you must refresh the group space data. Also, refresh the member data for *each* group space individually.

To refresh the group space data:

1. Log on to WebCenter Spaces as an administrator.
2. Click the **Administration** link, and go to the **Group Spaces** tab.
3. Click the **Refresh** icon.

To refresh the member data for a group space:

1. Log on to WebCenter Spaces as an administrator.
2. Go to the desired group space, open the **Settings** tab, and then the **Members** tab.
3. Click the **Refresh** icon in the **Manage Group Space Members** section.

You must perform this procedure for each group space individually.

Note: In your migrated WebCenter instance if access is denied to a group space, ensure that the credential store has been migrated successfully and the group space data has been refreshed.

After you upgrade from Oracle WebCenter 11.1.1.1.0 to Oracle WebCenter 11.1.1.2.0, you may initially see a group space GUID in Activity Stream in lieu of a group space name in WebCenter Spaces. This can occur when you configure an Activity Stream task flow instance and select to display activity from a group space that was upgraded. You can work around this issue by generating some activity in that group space, like adding or removing a member. This refreshes the Activity Stream instance with the group space display name.

C.4.3.9.6 Reapplying Configuration Changes If you want the same configuration as defined in your Oracle WebCenter 11.1.1.1.0, then you must reapply the configuration changes in Oracle WebCenter 11.1.1.2.0. Configuration changes may relate to the any of the following. All references are to the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library:

- **WebCenter Portlet Producers:** Any changes made to the `provider.xml` file of a portlet producer, like changing a proxy server, require that post mid-tier migration you reconfigure those changes, redeploy the portlet producer EAR application, and restart `WLS_Portlet Managed Server`. For information about redeploying portlet producers, see the "Managing Portlet Producers" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
- **WebCenter Services:** While installing Oracle Fusion Middleware 11.1.1.2.0, if you changed the host and port number of the back-end servers on which your WebCenter Services rely, you must reconfigure the required service connections to use the new server configuration. For information about specific services, see the "Managing Services, Portlet Producers, and External Applications" part in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
- **WebCenter Wikis and Blogs:** Any configuration changes made to your Oracle WebCenter Wiki and Blog Server 11.1.1.1.0, such as changing the theme or setting the attachment size, require that you reapply those changes in Oracle WebCenter Wiki and Blog Server 11.1.1.2.0. To reconfigure settings, use Administration mode of your Oracle WebCenter Wiki and Blog Server. For information, see the "Oracle WebCenter Wiki and Blog Server - Configuration" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
- **WebCenter Spaces and Workflows:** The WebCenter Spaces workflows functionality requires `sca_CommunityWorkflows.jar` and `WebCenterWorklistDetailApp.ear` to be deployed to a SOA server. If WebCenter Spaces workflows were enabled in Oracle WebCenter 11.1.1.1.0, you must redeploy these applications to the SOA server post mid-tier migration. For information, see the "Back-End Requirements for WebCenter Spaces Workflows" section in the *Oracle Fusion Middleware Installation Guide for Oracle WebCenter*.
- **WebCenter Spaces profile settings:** In WebCenter Spaces, profile settings set on the WebCenter Administration > Services > Profile screen are not retained when you upgrade from Oracle WebCenter 11.1.1.1.0 to Oracle WebCenter 11.1.1.2.0. After the upgrade, you must reapply the required profile settings on the **WebCenter Administration > Services > People Connections > Profiles** screen.

C.4.3.9.7 Importing Wiki Templates and Attachments In Oracle WebCenter Wiki and Blog Server 11.1.1.1.0, regardless of the repository type configured for the server, templates and attachments are stored in a file-based repository. Oracle WebCenter Wiki and Blog Server 11.1.1.2.0 supports only a database repository; templates and attachments are also stored in the database repository.

If your Oracle WebCenter Wiki and Blog Server 11.1.1.1.0 used a database repository, then during migration templates and attachments are migrated to the database repository configured for Oracle WebCenter Wiki and Blog Server 11.1.1.2.0. If your Oracle WebCenter Wiki and Blog Server 11.1.1.1.0 used a file-based repository, then during migration wiki templates and attachments are migrated to a file-based repository. To make these templates and attachments available in Oracle WebCenter Wiki and Blog Server 11.1.1.2.0, you must manually migrate them to the database repository.

To import attachments for a wiki page, the user who owns that wiki page or you as an administrator must reupload the attachments on the wiki page. When you reupload an attachment, the attachment gets stored in the database repository. Note that attachments must be reuploaded for each wiki page individually.

To migrate templates:

1. Log on to Oracle WebCenter Wiki and Blog Server 11.1.1.2.0 as an administrator.
2. Click the **Administration** link to open Administration mode.
3. Click **Templates**.
4. Click **import**.
5. On the **Import Templates** page, in the **Folder** field, enter the path to templates. For example:

```
$APPLICATIONS_DIRECTORY/owc_wiki/templates.
```

Where, *\$APPLICATIONS_DIRECTORY* is the directory where you installed Oracle WebCenter Wiki and Blog Server 11.1.1.2.0. That is, *\$APPLICATIONS_DIRECTORY* = *MW_HOME/user_projects/applications/DOMAIN_NAME*.

6. Click **Import Templates**. The existing file-based templates are individually re-created in the wiki database repository.

C.4.3.9.8 Migrating Oracle Content Server Oracle WebCenter 11.1.1.2.0 is compatible with Oracle Content Server 10.1.3.5.1. To migrate your existing Oracle Content Server and prepare it to work with Oracle WebCenter 11.1.1.2.0, you must perform the following tasks. All references are to the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library:

- Run the WebCenter configuration script, *wc_contentserverconfig*. This script is available on the Universal Content Management (UCM) media shipped with Oracle WebCenter. For information about how to run the script, see the "Oracle Content Server - Installation" section in the *Oracle Fusion Middleware Installation Guide for Oracle WebCenter*.
- Reconfigure the identity store for Oracle Content Server. To connect to an LDAP-based identity store, Oracle Content Server 10.1.3.5.1 requires a JPS user provider, instead of an LDAP user provider. Therefore, you must configure a JPS user provider and ensure that the existing LDAP user provider for Oracle Content Server is disabled. For information, see the "Configuring the Identity Store" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

C.4.3.9.9 Configuring Oracle WebCenter Discussions for WebCenter Spaces When you migrate from Oracle Fusion Middleware 11.1.1.1.0 to Oracle Fusion Middleware 11.1.1.2.0, the patch assistant script migrates the database schema of your Oracle WebCenter Discussions server. Out-of-the-box, Oracle WebCenter Discussions 11.1.1.2.0 is configured to use the embedded LDAP identity store of Oracle WebLogic Server.

You must configure Web Services Security (WS-Security) if you want to use Oracle WebCenter Discussions with WebCenter Spaces.

To configure Oracle WebCenter Discussions:

1. Log on to the Oracle WebCenter Discussions 11.1.1.2.0 server as an administrator by using the following URL format:

```
http://host:port/owc_discussions/admin
```

Where *host:port* refer to the host name and port number of the system where Oracle WebCenter is installed.

2. To verify that Oracle WebCenter Discussions has been migrated successfully, in Jive Forums Admin Console, ensure that "Jive Forums Silver 5.5.20.2-oracle" is displayed in the top-right corner.
3. Configure WS-Security trusted authentication if you want to use Oracle WebCenter Discussions with WebCenter Spaces. For information about how to configure WS-Security, see "Configuring WS-Security" in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.
4. Reconfigure SSO for Oracle WebCenter Discussions, if required. For information, see the "Configuring a WebCenter Application to Use Single Sign-On" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.4.3.9.10 Migrating Custom WebCenter Applications To make your custom WebCenter applications available in Oracle WebCenter 11.1.1.2.0, you must migrate them from your Oracle WebCenter 11.1.1.1.0 instance. You do not need to migrate the metadata of these applications because Oracle WebCenter 11.1.1.2.0 schemas are an in-place patch of your Oracle WebCenter 11.1.1.1.0 schemas for MDS, PORTLET, and WEBCENTER.

All references in this section are to the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

To migrate a custom WebCenter application:

1. Open the application in Oracle JDeveloper 11.1.1.2.0.
This invokes the migration wizard that automatically migrates your application to Oracle WebCenter 11.1.1.2.0.
2. Save the application.
3. Create a WebLogic Managed Server instance and provision it with a required set of shared libraries. For information, see the "Creating and Provisioning a WebLogic Managed Server Instance" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.
4. Create and register the Metadata Service (MDS) repository for your application on the WebLogic Domain's Administration Server instance. For information, see the "Creating and Registering the Metadata Service Repository" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

5. Deploy the application to a Managed Server. For information, see the "Deploying the Application to a WebLogic Managed Server Instance" section and the "Deploying Portlet Producer Applications" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

Your custom WebCenter applications may have WebCenter Services integrated that rely on back-end servers. For example, Discussions and Search services rely on Oracle WebCenter Discussions and Oracle SES, respectively. While installing Oracle Fusion Middleware 11.1.1.2.0, if you changed the host or port number of your back-end servers, you must reconfigure the required WebCenter Services to use the new server configuration. For information about specific services, see the "Managing Services, Portlet Producers, and External Applications" part in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter*.

C.4.3.10 Post Migration Configuration for Oracle Web Services Manager

To migrate Oracle Web Services Manager (WSM), perform the following tasks:

- Purging the Policy Usage Analysis Information from the Metadata Services Repository
- Migrating the Oracle WSM Policies in the MDS Repository
- Migrating Custom Policy Accessor Properties

Note: Before you can migrate Oracle WSM, you must migrate components of the security environment, such as the identity store and key store configurations. For more information, see Section C.4.3.5, "Post-Migration Configuration for Oracle Platform Security Services".

C.4.3.10.1 Purging the Policy Usage Analysis Information from the Metadata Services Repository

In this release, the same Oracle Metadata Services (MDS) repository can be used to manage policies across multiple domains. In previous releases, an MDS repository could only be used by a single domain.

If you have analyzed policy usage using the Oracle Fusion Middleware 11g Release 1 (11.1.1.1.0) installation, you will need to purge the policy usage analysis information from the MDS repository to ensure that accurate usage results are reflected for the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) version.

To purge the policy usage analysis information from the MDS repository, use the `deleteMetadata` MDS command as follows:

```
deleteMetadata(application='wsm-pm', server='server_name',
               docs='/policyAttachments/**')
```

`server_name` specifies the name of the server on which the Oracle WSM policy manager is running.

After purging the policy usage analysis information, you must restart the server.

For more information about managing MDS repositories, see "Maintaining the MDS Repository" section in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.4.3.10.2 Migrating the Oracle WSM Policies in the MDS Repository In Oracle WSM 11g Release 1 (11.1.1), predefined and custom Oracle WSM policies are stored in the Oracle MDS repository. In this patch set, there are two new predefined policies available:

- oracle/wss_saml_or_username_token_over_ssl_service_policy
- oracle/wss11_saml_or_username_token_with_message_protection_service_policy

You can use Oracle WebLogic Scripting Tool (WLST) commands to upgrade the repository with the new predefined policies. You can also refresh the repository by deleting all Oracle WSM policies from the repository, including custom policies, and then repopulating it using the predefined policies provided in your installation. All of the policies in the repository are also revalidated when you upgrade the repository.

For more information, see "Upgrading the Oracle WSM Policies in the MDS Repository" in *Oracle Fusion Middleware Security and Administrator's Guide for Web Services* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.4.3.10.3 Migrating Custom Policy Accessor Properties If you have customized the policy accessor properties, you must re-apply the policy manager connection information once you have migrated your installation. For more information, see "Configuring Platform Policy Properties" in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services* in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library.

C.4.4 Installation Process

Table C-3 describes the 11.1.1.2.0 installation process that must be completed during the migration process.

Table C-3 Installation Process

Scenario	Description and Steps
Installing products in a new Middleware home	<p>Before you can install 11.1.1.2.0 products in a new Middleware home, ensure that the repository is updated and the 11.1.1.1.0 schema is migrated to the 11.1.1.2.0 schema.</p> <p>To install products, complete the following steps:</p> <ol style="list-style-type: none"> 1. Install Oracle WebLogic Server. This step is not required for Web tier. 2. Run product-specific Installers to install the new products. <p>For more information, see the <i>Oracle Fusion Middleware Installation Planning Guide</i> and the product installation guides in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library for the products you are installing and configuring.</p>

Table C-3 (Cont.) Installation Process

Scenario	Description and Steps
Installing products in a new Middleware home, on a second machine, in a Cluster environment	<p>Before you can install 11.1.1.2.0 products in a new Middleware home, ensure that the repository is updated and the 11.1.1.1.0 schema is migrated to the 11.1.1.2.0 schema.</p> <p>To install products in a Cluster environment, complete the following steps:</p> <ol style="list-style-type: none"> 1. Install Oracle WebLogic Server. This step is not required for Web tier. 2. Run product-specific Installers to install the new products. Ensure that Middleware home on the second machine must be at the same file path as the first machine. <p>For more information, see the <i>Oracle Fusion Middleware Installation Planning Guide</i> and the product installation guides in the Oracle Fusion Middleware 11g Release 1 (11.1.1.2.0) documentation library for the products you are installing and configuring.</p>

C.4.5 Configuration Process

Table C-4 describes the 11.1.1.2.0 configuration process that must be completed during the migration process.

Table C-4 Configuration Process

Scenario	Description and Steps
Configuring Oracle Instances in a new Middleware home	<p>Before you can configure Oracle Instances in a new Middleware home, ensure that the repository is updated, the 11.1.1.1.0 schema is migrated to the 11.1.1.2.0 schema, all 11.1.1.2.0 products are installed, and the WebLogic domain is migrated.</p> <p>To configure Oracle Instances, run the <code>ant master-patch-oinstance</code> command.</p>
Configuring Oracle Instances in a new Middleware home, on a second machine, in a Cluster environment	<p>Before you can configure Oracle Instances in a new Middleware home, ensure that the repository is updated, the 11.1.1.1.0 schema is migrated to the 11.1.1.2.0 schema, all 11.1.1.2.0 products are installed in the Cluster environment (on a second machine), and the WebLogic domain is migrated.</p> <p>To configure Oracle Instances, run the <code>ant master-patch-oinstance</code> command.</p>
Configuring products in a new WebLogic domain	<p>Before you can configure 11.1.1.2.0 products in a new WebLogic domain, ensure that the repository is updated, the 11.1.1.1.0 schema is migrated to the 11.1.1.2.0 schema, and the 11.1.1.2.0 products are installed in a new Middleware home.</p> <p>To configure products in a new WebLogic domain, complete the following steps:</p> <ol style="list-style-type: none"> 1. Start the Oracle Fusion Middleware Configuration Wizard from your new Middleware home. 2. Choose product templates to match components on the old 11.1.1.1.0 domain. 3. For the new domain, choose the same domain name as the old 11.1.1.1.0 domain. 4. Configure servers, machines, or clusters to match the old 11.1.1.1.0 topology. 5. Create domain. 6. Optional: Start Node Manager.

Table C-4 (Cont.) Configuration Process

Scenario	Description and Steps
Configuring products in a new WebLogic domain, on a second machine, in a Cluster environment	<p>Before you can configure 11.1.1.2.0 products in a new WebLogic domain, ensure that the repository is updated, the 11.1.1.1.0 schema is migrated to the 11.1.1.2.0 schema, and the 11.1.1.2.0 products are installed in a new Middleware home on a second machine in the Cluster environment.</p> <p>To configure products in a new WebLogic domain, complete the following steps:</p> <ol style="list-style-type: none"> 1. Start the Oracle Fusion Middleware Configuration Wizard from your new Middleware home. 2. Choose product templates to match components on the old 11.1.1.1.0 domain. 3. For the new domain, choose the same domain name as the old 11.1.1.1.0 domain. 4. Configure servers, machines, or clusters to match the old 11.1.1.1.0 topology. 5. Create domain. 6. Optional: Start Node Manager. 7. Run the <code>pack</code> command on the new domain on the first machine. 8. Run the <code>unpack</code> command on the second machine.

C.4.6 Properties in the `patchMaster.properties` File

Table C-5 describes the properties that you can set in the `patchMaster.properties` file. All the properties are not mandatory. For the list of properties that are required for specific components, see Table C-6.

Note: On Windows, you must use `/` as the delimiter to specify the property path. For example:

```
c:/my/path/file
```

Table C-5 Patch Master Properties

Properties	Description
<code>patchMaster.Componentlist</code>	<p>List the Fusion Middleware components, you want to patch from 11.1.1.1.0 to 11.1.1.2.0.</p> <p>Example:</p> <pre>patchMaster.Componentlist=Audit,BAM,DIP,Discoverer,Forms,JPS</pre>
<code>patchMaster.Schemaurl</code>	<p>Specify the connection string to a single repository being patched.</p> <p>Example:</p> <pre>patchMaster.Schemaurl=jdbc:oracle:thin:@localhost:1521:orcl</pre>
<code>patchMaster.Schemauser</code>	<p>Specify the system user for the repository specified by <code>patchMaster.Schemaurl</code>.</p> <p>Example:</p> <pre>patchMaster.Schemauser=SYS AS SYSDBA</pre>

Table C-5 (Cont.) Patch Master Properties

Properties	Description
<code>patchMaster.Schemaprefix</code>	Specify the repository schema metadata namespace. Example: <code>patchMaster.Schemaprefix=DEV</code> For Oracle Portal users, if you upgraded your Oracle Portal 10g to Oracle Portal 11g R1 (11.1.1.1.0), you must specify the schema prefix as <code>APPSERVER</code> . For Oracle Internet Directory, you must specify the schema prefix as <code>ODS</code> .
<code>patchMaster.Mwhomenew</code>	Specify the path where your 11.1.1.2.0 home is installed. Example: <code>patchMaster.Mwhomenew=/scratch/newhome</code>
<code>patchMaster.Mwhomeold</code>	Specify the path where your 11.1.1.1.0 home is installed. Example: <code>patchMaster.Mwhomeold=/scratch/oldhome</code>
<code>patchMaster.Domainhomenew</code>	Specify the Oracle WebLogic Server domain 11.1.1.2.0 home. Example: <code>patchMaster.Domainhomenew=/scratch/newhome/user_projects/domains/newDomain</code>
<code>patchMaster.Domainapplicationshomenew</code>	Specify the Oracle WebLogic Server domain applications; 11.1.1.2.0 home. Example: <code>patchMaster.Domainapplicationshomenew=/scratch/newhome/user_projects/applications/newDomain</code>
<code>patchMaster.Domainhomeold</code>	Specify the Oracle WebLogic Server domain 11.1.1.1.0 home. Example: <code>patchMaster.Domainhomeold=/scratch/oldhome/user_projects/domains/oldDomain</code>
<code>patchMaster.Domainusername</code>	Specify the Oracle WebLogic Server domain user name. Example: <code>patchMaster.Domainusername=currentuser</code>
<code>patchMaster.Syspassword</code>	Specify the password for the Oracle Weblogic domain. This property is not available, by default. You may add and set this property. If the property is not present, Patch Assistant prompts you to enter the password. Example: <code>patchMaster.Syspassword=welcome1</code>
<code>patchMaster.Oracleinstancenewlist</code>	List the paths to 11.1.1.2.0 Oracle instances. Example: <code>patchMaster.Oracleinstancenewlist=/scratch/newinst1,/scratch/newinst2</code>

Table C-5 (Cont.) Patch Master Properties

Properties	Description
<code>patchMaster.Oracleinstanceoldlist</code>	List the paths to 11.1.1.1.0), Oracle instances corresponding to 11.1.1.2.0, Oracle instance paths. Example: <code>patchMaster.Oracleinstanceoldlist=/scratch/oldinst1,/scratch/oldinst2</code>
<code>patchMaster.Oraclehomenew</code>	Specify the path of 11.1.1.2.0 Oracle home. Example: <code>patchMaster.Oraclehomenew=/scratch/myOhomenew</code>
<code>patchMaster.Oraclehomeold</code>	Specify the Path of 11.1.1.1.0 Oracle home. Example: <code>patchMaster.Oraclehomeold=/scratch/myOhome</code> Note: You can patch only one Oracle home at once. Do not specify multiple Oracle homes in the properties file for this entry.
<code>patchMaster.Logdir</code>	The default directory where the log file will be saved. Example: <code>patchMaster.Logdir=\${patchMaster.Dir}</code>
<code>patchMaster.Loglevel</code>	Specify the logging level to be recorded in the log file. The default log level is <code>info</code> . The other options are <code>error</code> , <code>warning</code> , <code>verbose</code> , and <code>debug</code> . Example: <code>patchMaster.Loglevel=info</code>
<code>patchMaster.Domainadminhost</code>	This is either the 11.1.1.1.0 or 11.1.1.2.0 Administration Server host depending on the operation. It is used for starting or stopping domain and instance registration. Example: <code>patchMaster.Domainadminhost=localhost</code>
<code>patchMaster.Domainadminport</code>	This is either the 11.1.1.1.0 or 11.1.1.2.0 Administration Server port depending on the operation. It is used for starting or stopping domain and instance registration. Example: <code>patchMaster.Domainadminport=7001</code>

Note: See Appendix D, "Sample Patch Master Properties File", for a sample `patchMaster.properties` file.

Product-Specific Properties Required in the `patchMaster.properties` File

Table C-6 lists the properties required by Oracle Fusion Middleware components in the `patchMaster.properties` file.

Note: Patch Assistant validates properties based on operations only. It does not validate properties at the individual product level.

Table C-6 Properties Required in patchMaster.properties File

Product	Required Properties
Oracle Fusion Middleware Audit Framework	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Schemaurl ▪ patchMaster.Schemauser ▪ patchMaster.Schemaprefix
Oracle Business Intelligence Discoverer	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Statusfile ▪ patchMaster.Failonerror
Oracle Directory Integration Platform	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Domainadminhost ▪ patchMaster.Domainadminport

Table C-6 (Cont.) Properties Required in patchMaster.properties File

Product	Required Properties
Oracle Internet Directory	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Schemaurl ▪ patchMaster.Schemauser ▪ patchMaster.Schemaprefix ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Failonerror
Oracle Virtual Directory	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Failonerror
Oracle Java Required Files	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold
Oracle Metadata Services	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Schemaurl ▪ patchMaster.Schemauser ▪ patchMaster.Schemaprefix ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Oraclehomenew

Table C-6 (Cont.) Properties Required in patchMaster.properties File

Product	Required Properties
Oracle Platform Security Services	<ul style="list-style-type: none"> ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainapplicationshomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Domainadminhost ▪ patchMaster.Domainadminport
Oracle Portal	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Schemaurl ▪ patchMaster.Schemauser ▪ patchMaster.Schemaprefix ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Statusfile ▪ patchMaster.Failonerror
Oracle Reports	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Failonerror

Table C-6 (Cont.) Properties Required in patchMaster.properties File

Product	Required Properties
Oracle User Messaging Service	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Schemaurl ▪ patchMaster.Schemauser ▪ patchMaster.Schemaprefix ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Statusfile ▪ patchMaster.Failonerror
Oracle Web Cache	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Mwhomenew ▪ patchMaster.Mwhomeold ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainusername ▪ patchMaster.Oracleinstancenewlist ▪ patchMaster.Oracleinstanceoldlist ▪ patchMaster.Oraclehomenew ▪ patchMaster.Oraclehomeold
Oracle WebCenter	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Schemaurl ▪ patchMaster.Schemauser ▪ patchMaster.Schemaprefix ▪ patchMaster.Domainhomeold ▪ patchMaster.Domainapplicationshomenew
Oracle Web Services Manager	<ul style="list-style-type: none"> ▪ patchMaster.Componentlist ▪ patchMaster.Domainhomenew ▪ patchMaster.Domainhomeold ▪ patchMaster.Logdir ▪ patchMaster.Loglevel ▪ patchMaster.Statusfile ▪ patchMaster.Failonerror

C.4.6.1 Overriding Properties Set in the patchMaster.properties File

You can use the Ant command-line utility to override the properties set in the `patchMaster.properties` file. You must specify the required property on the command line as follows:

```
ant -D<property>=<value>
```

For example, to select components to patch, enter the following command on the command line:

```
ant -DpatchMaster.Componentlist=SOA,UMS,WebCenter
master-patch-schema
```

Note that `master-patch-schema`, in the above example, is the command that uses the new values.

Refer to Table C-5 for complete information about properties that you can specify on the command line or in the `patchMaster.properties` file.

Note: When you override the `patchMaster.Schemauser` property to specify the system user by using the command-line utility, ensure that you use double quotation marks, as in the following example:

```
ant -DpatchMaster.Schemauser="SYS AS SYSDBA"
```

Do not enter the double quotation marks if you edit the `patchMaster.properties` file directly.

C.4.7 Oracle Fusion Middleware Components Supported by Patch Assistant

Table C-7 lists Oracle Fusion Middleware components that are supported by Patch Assistant.

Table C-7 Oracle Fusion Middleware Components Supported by Patch Assistant

Component Name	Release
Oracle Fusion Middleware Audit Framework	11.1.1.2.0
Oracle BPEL Process Manager	11.1.1.2.0
Oracle Business Rules	11.1.1.2.0
Oracle Business-to-Business Integration	11.1.1.2.0
Oracle Business Activity Monitoring	11.1.1.2.0
Oracle Business Intelligence Discoverer	11.1.1.2.0
Oracle Internet Directory	11.1.1.2.0
Oracle Directory Integration Platform	11.1.1.2.0
Oracle Identity Federation	11.1.1.2.0
Oracle Virtual Directory	11.1.1.2.0
Oracle Directory Services Manager	11.1.1.2.0
Oracle Forms	11.1.1.2.0
Oracle Platform Security Services	11.1.1.2.0
Oracle Java Required Files	11.1.1.2.0
Oracle Metadata Services	11.1.1.2.0
Oracle Access Manager	11.1.1.2.0

Table C-7 (Cont.) Oracle Fusion Middleware Components Supported by Patch Assistant

Component Name	Release
Oracle TopLink	11.1.1.2.0
Oracle Dynamic Monitoring System (DMS)	11.1.1.2.0
Oracle Java Object Cache	11.1.1.2.0
Oracle Enterprise Manager Fusion Middleware Control	11.1.1.2.0
Oracle HTTP Server	11.1.1.2.0
Oracle Reports	11.1.1.2.0
Oracle Portal	11.1.1.2.0
Oracle Portlet Producers	11.1.1.2.0
Oracle User Messaging Service	11.1.1.2.0
Oracle Web Cache	11.1.1.2.0
Oracle WebCenter Spaces	11.1.1.2.0
Oracle WebCenter Discussions	11.1.1.2.0
Oracle WebCenter Portlets	11.1.1.2.0
Oracle WebCenter Wiki and Blogs	11.1.1.2.0
Oracle Content Server	10.1.3.5.1
Oracle WebLogic Server	10.3.1.0
Oracle Wallet Manager	11.1.1.2.0
Oracle Web Services Manager	11.1.1.2.0

Sample Patch Master Properties File

This appendix shows a sample `patchMaster.properties` file.

```
# This is the property file for the 11gR1-11ps1 patchMaster.
# Set values for the properties below to the desired value.
# If a property is not needed, it must be commented out.

# Description: List of components to patch from 11gR1 to 11ps1
# Example:
patchMaster.Componentlist=Audit,BAM,DIP,Discoverer,Discussions,Forms,JPS,JRF,MDS,Modpsql,OAM,OCServer,ODL,ODSM,OHS,OID,OIF,Opmn,OVD,OWSM,Portal,Portlet,Reports,SOA,UMS,WebCenter,Webcache,Webservices,Wiki
patchMaster.Componentlist=Audit,BAM,DIP,Discoverer,Discussions,Forms,JPS,JRF,MDS,Modpsql,OAM,OCServer,ODL,ODSM,OHS,OID,OIF,Opmn,OVD,OWSM,Portal,Portlet,Reports,SOA,UMS,WebCenter,Webcache,Webservices,Wiki

# Description: Connection string to a single repository being patched.
# Example: patchMaster.Schemaurl=jdbc:oracle:thin:@localhost:1521:orcl
patchMaster.Schemaurl=jdbc:oracle:thin:@<host>:<port>:<sid>

# Description: A system user for the repository specified by patchMaster.Schemaurl
# Example: patchMaster.Schemauser=SYS AS SYSDBA
# patchMaster.Schemauser=<Value Unspecified>

# Description: The optional repository schema metadata namespace.
# Example: patchMaster.Schemaprefix=DEV
# patchMaster.Schemaprefix=<Value Unspecified>

# Description: Fusion Middleware 11ps1 home.
# Example: patchMaster.Mwhomenew=/scratch/newhome
# patchMaster.Mwhomenew=<Value Unspecified>

# Description: Fusion Middleware 11gR1 home.
# Example: patchMaster.Mwhomeold=/scratch/oldhome
# patchMaster.Mwhomeold=<Value Unspecified>

# Description: WLS domain 11ps1 home.
# Example: patchMaster.Domainhomenew=/scratch/newhome/user_projects/domains/newDomain
# patchMaster.Domainhomenew=<Value Unspecified>

# Description: WLS domain applications 11ps1 home.
# Example: patchMaster.Domainapplicationshomenew=/scratch/newhome/user_projects/applications/newDomain
# patchMaster.Domainapplicationshomenew=<Value Unspecified>

# Description: WLS domain 11gR1 home.
```

```
# Example: patchMaster.Domainhomeold=/scratch/oldhome/user_
projects/domains/oldDomain
# patchMaster.Domainhomeold=<Value Unspecified>

# Description: WLS domain username.
# Example: patchMaster.Domainusername=currentuser
# patchMaster.Domainusername=<Value Unspecified>

# Description: List paths to 11ps1 Oracle instances.
# Example: patchMaster.Oracleinstancenewlist=/scratch/newinst1,/scratch/newinst2
# patchMaster.Oracleinstancenewlist=<Value Unspecified>

# Description: List paths to 11gR1 Oracle instances corresponding to 11ps1 Oracle
instance paths.
# Example: patchMaster.Oracleinstanceoldlist=/scratch/oldinst1,/scratch/oldinst2
# patchMaster.Oracleinstanceoldlist=<Value Unspecified>

# Description: Path to 11ps1 Oracle home.
# Example: patchMaster.Oraclehomenew=/scratch/mynewOhome
# patchMaster.Oraclehomenew=<Value Unspecified>

# Description: Path to 11gR1 Oracle home.
# Example: patchMaster.Oraclehomeold=/scratch/myOhome
# patchMaster.Oraclehomeold=<Value Unspecified>

# Description: Specifies the directory where the log files go if a custom
# location is desired.
# Example: patchMaster.Logdir=/scratch/patchMasterDir
# patchMaster.Logdir=<Value Unspecified>

# Description: Specifies the logging level to be recorded in the log file
# Values={error|warning|info|verbose|debug} Default=info
patchMaster.Loglevel=info

# Description: WLS domain Adminserver hostname. This is *either* the R1 or PS1
Adminserver host
# depending the operation. Used for start/stop domain and instance registration.
# Example: patchMaster.Domainadminhost=localhost
# patchMaster.Domainadminhost=<Value Unspecified>

# Description: WLS domain Adminserver port number. This is *either* the R1 or PS1
Adminserver port
# depending the operation. Used for start/stop domain and instance registration.
# Example: patchMaster.Domainadminport=7001
# patchMaster.Domainadminport=<Value Unspecified>
```

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