

Oracle® Enterprise Manager

Bundle Patch 1 Application Guide

12c Release 1 (12.1.0.1)

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Preface

This guide describes how to apply Bundle Patch 1 (BP1) to your existing Oracle Enterprise Manager 12c Release 1 installation.

The preface covers the following:

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

Audience

This document is intended for cloud administrators who want to apply Bundle Patch 1 (BP1) to an existing Oracle Enterprise Manager 12c Release 1 installation.

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

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

For more information, see the following documents in the Enterprise Manager documentation set:

- *Oracle Enterprise Manager Cloud Control Introduction*
- *Oracle Enterprise Manager Cloud Control Basic Installation Guide*
- *Oracle Enterprise Manager Cloud Control Advanced Installation and Configuration Guide*

For the latest releases of these and other Oracle documentation, check the Oracle Technology Network at:

<http://www.oracle.com/technetwork/documentation/index.html#em>

Oracle Enterprise Manager also provides extensive Online Help. Click **Help** at the top of any Enterprise Manager page to display the online help window.

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.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Overview of Bundle Patch 1

This chapter provides an introduction to Bundle Patch 1 (BP1) and the prerequisites for installation. It contains the following sections:

- [Overview](#)
- [Use Cases and Recommendations](#)
- [Bundle Patch 1 Compatibility Matrix](#)

1.1 Overview

This document provides step by step instructions for applying Bundle Patch 1 (BP1) in to your existing Enterprise Manager Cloud Control 12.1.0.1 installation. Note BP1 is not an Enterprise Manager patch set release, and therefore does not change the Enterprise Manager version to 12.1.0.2.

1.2 Use Cases and Recommendations

The following sections provide recommendations on how to use BP1 under different use case scenarios. The scenarios are detailed under the following headings:

- [General Use Case Recommendations](#)
- [Upgrading to the Current Release](#)
- [Performing an Additional OMS Installation](#)

1.2.1 General Use Case Recommendations

General use cases and recommendations on the installation of BP1 are outlined in [Table 1–1](#).

Table 1–1 General Use Case Recommendations

Use Case	Recommendation
If you are new to Enterprise Manager	You will need to retrieve the new Enterprise Manager 12c binaries from the Oracle Technology Network (OTN) and carry out a fresh install. The installation should include BP1 and the latest plug-in releases.

Table 1–1 (Cont.) General Use Case Recommendations

Use Case	Recommendation
Using Enterprise Manager Cloud Control 12.1.0.1 release in a non-production test or sandbox environment	You should analyze how much configuration setup you have done in Enterprise Manager and the number of Management Agents you have deployed. Based on this analysis, you should uninstall the existing Cloud Control and do a fresh installation if this is feasible This also means that you have to reinstall all your existing Management Agents. This is the simplest way to get to the benefits and features of the latest patched Cloud Control release, which includes BP1 and the latest plug-in releases. The Enterprise Manager uninstall instructions are available at the following location: http://docs.oracle.com/cd/E24628_01/install.121/e24089/part_deinstall_em.htm#sthref642 You can get the updated Enterprise Manager binaries with BP1 from the following location: http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html?origref=http://www.oracle.com/technetwork/index.html
If you have already downloaded and installed 12.1.0.1 release in a Production environment	If you have already downloaded and installed Enterprise Manager 12c Release 12.1.0.1 in a production environment, complete the following steps Skipping steps could result in potential issues. Oracle recommends that you open a proactive service request. 1. Back up your Oracle Inventory, Repository Database, Middleware Home, Instance Home, Software Library, and Management Agent. For more information on back up, refer to the backup instructions in the <i>Oracle® Enterprise Manager Cloud Control Administrator's Guide 12c Release 1 (12.1.0.1)</i>: http://docs.oracle.com/cd/E24628_01/doc.121/e24473/toc.htm 2. Apply BP1 on your Oracle Management Service (OMS) host. 3. Upgrade your plug-ins on OMS to the latest releases. 4. Apply BP1 on your Management Agents. 5. Upgrade your plug-ins on Management Agents to the latest releases. If you have additional OMS instances or a disaster recovery configuration, then follow the BP1 application instructions detailed in Section 2.1, "Applying Bundle Patch 1 on Oracle Management Service".

1.2.2 Upgrading to the Current Release

Use cases and recommendations related to upgrading from an Enterprise Manager Grid Control Release 10.2.0.5 or 11.1.0.1 are discussed in [Table 1–2](#).

Table 1–2 Upgrading to the Current Release

Use Case	Recommendation
Upgrading to the current release	You can upgrade directly from Enterprise Manager Grid Control 10.2.0.5 or 11.1.0.1 releases to the current release with BP1 included by completing the following: 1. Download the latest pre-upgrade console patch from OTN at the following location: http://www.oracle.com/technetwork/oem/grid-control/downloads/oem-upgrade-console-502238.html 2. Download the Management Agent and 12.1.0.2 plug-in binaries from OTN at the following location: http://www.oracle.com/technetwork/oem/grid-control/downloads/oem-upgrade-console-502238.html 3. Download the Enterprise Manager 12c binaries with BP1 included from OTN at the following location: http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html?origref=http://www.oracle.com/technetwork/index.html 4. Follow the upgrade instructions provided in the Upgrade Guide (part of the Enterprise Manager Cloud Control Documentation), which can be found at the following location: http://docs.oracle.com/cd/E24628_01/index.htm

Table 1–2 (Cont.) Upgrading to the Current Release

Use Case	Recommendation
If you have applied the pre-upgrade console patch, but have not upgraded Management Agent or OMS	If you have just applied the pre-upgrade console patch, but have not yet gone ahead with Management Agent or OMS upgrade, complete the following steps: 1. Get the new pre-upgrade console patch from OTN at the following location: http://www.oracle.com/technetwork/oem/grid-control/downloads/oem-upgrade-console-502238.html You can rollback the old patch or deploy the new patch on top of the existing one. You can also get the new pre-upgrade console patch from OTN (you can rollback the old patch, refer to the patch README file for rollback instructions). 2. Download the new Management Agent zip files from OTN at the following location: http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html?origref=http://www.oracle.com/technetwork/index.html 3. Get the new 12.1.0.2 plug-in binaries from OTN at the following location: http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html?origref=http://www.oracle.com/technetwork/index.html 4. Get the new Enterprise Manager 12c binaries with BP1 included from OTN. The new version of the pre-upgrade console patch will only work with EM12c binaries (with BP1 included) and Management Agent 12.1.0.1 binaries. To ensure that you get the latest patch from OTN, refer to the last updated date on the OTN download page. Follow the Instructions provided in the Upgrade Guide from here: http://docs.oracle.com/cd/E24628_01/index.htm
If you have applied the pre-upgrade console patch and upgraded the Management Agent or OMS	In this case you should finish your upgrade to Enterprise Manager 12c and complete the following instructions in the specified order : 1. Back up your Oracle Inventory, Repository Database, Middleware Home, Instance Home, Software Library, and Management Agent. For more information on back up, refer to the backup instructions in the <i>Oracle® Enterprise Manager Cloud Control Administrator's Guide 12c Release 1 (12.1.0.1)</i>: http://docs.oracle.com/cd/E24628_01/doc.121/e24473/toc.htm 2. Apply BP1 on your OMS. 3. Upgrade your plug-ins on OMS to the Enterprise Manager 12.1.0.2 releases. 4. Apply BP1 on your Management Agents. 5. Upgrade your plug-ins on Management Agents to the Enterprise Manager 12.1.0.2 releases.ok Oracle recommends that you open a proactive Service Request (SR) with Oracle Support.

1.2.3 Performing an Additional OMS Installation

Use cases and recommendations related to performing an additional OMS installation are discussed in [Table 1–3](#).

Table 1–3 Performing an Additional OMS Installation

Use Case	Recommendation
If your first OMS is deployed with new Enterprise Manager binaries with BP1 included or if you have applied the BP1 manually	You can proceed with the additional OMS installations. The deployment procedure will clone the first OMS, so there will be no need to apply BP1 on the second OMS once the install is done. As a part of the additional OMS installation, you will be required to deploy the Management Agent on the host where you plan to have the additional OMS. Get the latest Management Agent binaries from the Self Update feature, which have BP1 included for Management Agent deployment.
If your first OMS has not been updated with the new Enterprise Manager binaries, or if you have not applied the BP1 manually to the OMS	Select one of the following two options: Option 1: 1. Follow the BP1 application process on the first OMS and Management Agents. 2. Complete the additional OMS install. Option 2: 1. Complete the additional OMS install. 2. Follow the BP1 application process on the first OMS and additional OMS together.

1.3 Bundle Patch 1 Compatibility Matrix

Refer to [Table 1–4, "Bundle Patch 1 Compatibility Matrix"](#) to understand the valid patches and version combinations of OMS, plug-ins, and Management Agents.

Table 1–4 Bundle Patch 1 Compatibility Matrix

	Target Agent without Bundle Patch 1 applied and 12.1.0.1 plug-in on target Management Agent	Target Agent with BP1 and 12.1.0.1 plug-in on target Management Agent	Target Agent without BP1 and 12.1.0.2 plug-in on target Management Agent	Target Agent with BP1 applied and 12.1.0.2 plug-in on target Management Agent
12.1.0.1 OMS without BP1 applied	Yes	No	No	No
12.1.0.1 OMS with BP1 Applied and 12.1.0.1 plug-in on OMS (no plug-in upgrade)	Yes	Yes	No	No

Table 1–4 (Cont.) Bundle Patch 1 Compatibility Matrix

12.1.0.1 OMS with BP1 applied and 12.1.0.2 plug-in on OMS (plug-in upgrade done)	Yes ¹	Yes	No	Yes ²
--	------------------	-----	----	------------------

¹ An example for this use case is that you have Solaris Management Agents without BP1 applied, 12.1.0.1 plug-ins on agents pointing to Linux 32-bit OMS with BP1 applied, and 12.1.0.2 plug-ins on the OMS.

² This is a fresh install of Enterprise Manager 12c binaries with BP1 included.

1.4 Mandatory Pre-Requisites for installing Bundle Patch 1

The following are the mandatory prerequisites for installing BP1:

1. Software Library Configured.
2. All Enterprise Manager components backed up.
3. The Agent Patching Infrastructure set up correctly (differs for offline versus online modes).
4. The My Oracle Support (MOS) connection configured for Management Agent patching or the download of patches from MOS and upload to Enterprise Manager.

Make sure that you go through all of the prerequisites described in the following sections before applying Bundle Patch 1.

1.4.1 Oracle Software Library Configured

You need to verify whether you already have the Software Library configured. If not, complete the following:

1. From the **Enterprise** menu, select **Provisioning and Patching**, then click **Software Library**.
2. From the **Actions** list, select **Administration**, then select **Add** if nothing has yet been configured.
3. Select the **OMS Shared Filesystem** location.

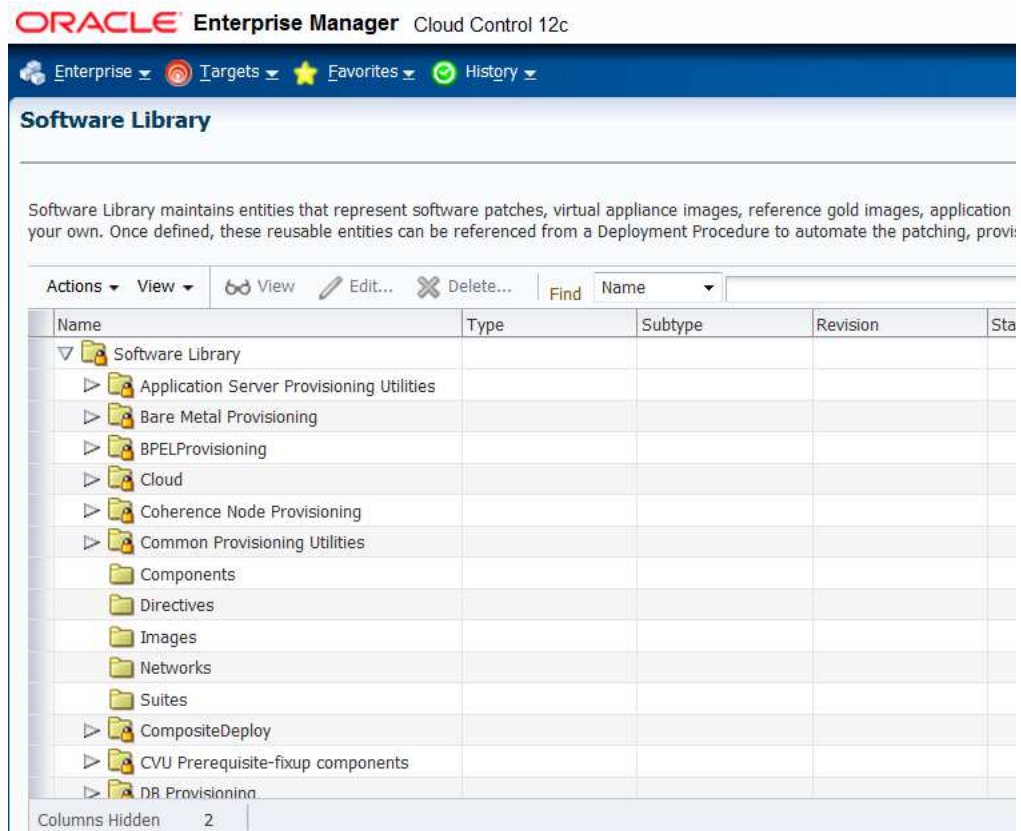
Figure 1–1 Add OMS Shared Filesystem Location

Note: This is a location on a shared filesystem that is visible to all OMS instances. For example, this could be an NFS mounted location and should have read/write access from all of the OMS instances.

Upon addition of the location, a job executes to configure the Software Library. Under this location, all required entities for Enterprise Manager, such as Provisioning, Patching, and Cloud Management, are populated.

Once the job is successful, you will see the components configured in the Software Library.

4. From the **Enterprise Manager** menu, select **Patching and Provisioning**, then click **Software Library** to view the Software Library.

Figure 1–2 Software Library

1.4.2 Backing Up Enterprise Manager Components

Before you apply BP1, be sure that you back up the following components:

- Oracle Inventory
- Management Repository Database
- Middleware Home and Enterprise Manager domains
- Instance Home where OMS is installed
- Default Management Agent with OMS
- Software Library

You must back up all components listed above. A failure during any stage of the BP1 process may make it necessary to restore one or more of these components.

For more information, see the Backing Up Enterprise Manager chapter in the *Oracle Enterprise Manager Cloud Control Administrator's Guide*. This can be found at the following location:

http://docs.oracle.com/cd/E24628_01/doc.121/e24473/ha_backup_recover.htm#BGBCCIJC

1.4.3 Using the Correct OPatch Version

Verify you have the right OPatch version under the OMS Oracle Home. **The OPatch version required to install BP1 is 11.1.0.9.4 or higher.**

Set ORACLE_HOME to OMS HOME and run the following command to verify the OPatch version:

```
$ opatch version
```

Figure 1–3 Verifying OPatch Version

```
[oms]$ bin/emctl status oms
Oracle Enterprise Manager Cloud Control 12c Release 12.1.0.1.0
Copyright (c) 1996, 2012 Oracle Corporation. All rights reserved.
WebTier is Up
Oracle Management Server is Up
[oms]$ cd OPatch/
[oms]$ opatch version
OPatch Version: 11.1.0.9.5

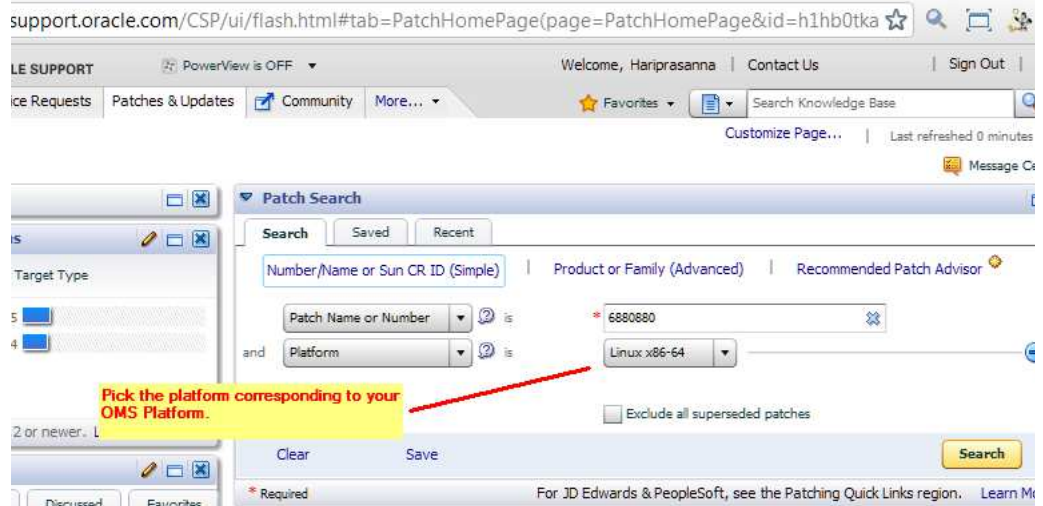
OPatch succeeded.
pud
/scratch/m1r29/jan/oms/OPatch
```

If the OPatch version is less than 11.1.0.9.4, complete the following:

1. Download the latest OPatch patch (6880880) under release 11.1.0.x series from My Oracle Support (<https://support.oracle.com>).

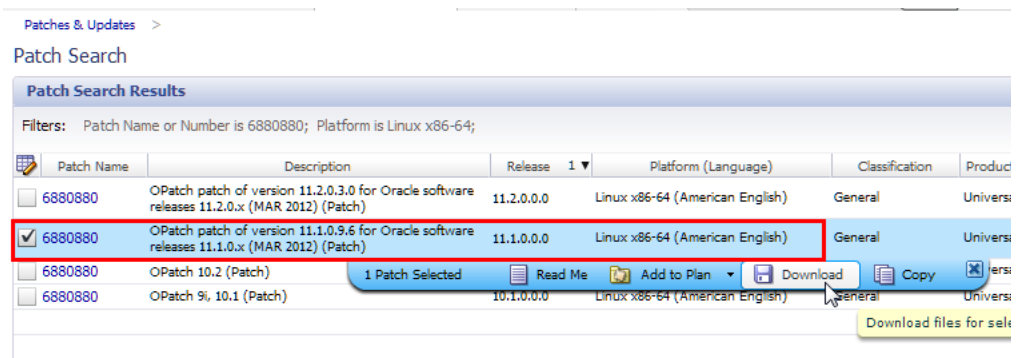
The Patch Number is 6880880. Select the platform that corresponds to your OMS platform.

Figure 1–4 Correct OPatch Version



2. Click **Search**.
3. Select the Opatch 11.1.0.0.0 version and click **Download**.

Figure 1–5 Click Download



Note: Do not select OPatch 11.2.0.x as this will result in failures during patch application.

4. Transfer the zip to the OMS Server.
5. Rename the existing OPatch folder under the OMS ORACLE HOME to OPatch_old_MMY
6. Unzip the new Opatch patch zip under the OMS ORACLE HOME.

This creates an Opatch directory with the latest Opatch.

1.5 Troubleshooting

To learn more about troubleshooting tips and a list of known issues while applying Bundle Patch 1, refer to My Oracle Support note 1395640.1 at the following location:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&doctype=REFERENCE&id=1395640.1>

Bundle Patch 1 for Linux x86 and Linux x86-64

The following sequence must be followed when applying BP1:

1. Apply Bundle Patch 1 on Oracle Management Service
2. Upgrade all deployed Plug-ins to the 12.1.0.2 releases on the OMS
3. Apply Bundle Patch 1 on all Management Agents
4. Upgrade all deployed Plug-ins to the 12.1.0.2 releases on the Agents

Important Notes

Read the following important notes before proceeding with the installation process:

- Verify that you have first applied the OMS Patch 13242773 on all OMS instances before applying this Bundle Patch on Management Agents. If the OMS patch is not applied before applying the Bundle Patch, then the metadata version will not be registered with the OMS and the OMS will block the patched Management Agents from uploading data.
- If you have configured Enterprise Manager for high availability by deploying one or more additional OMS and using a local Real Application Cluster or Data Guard database for the repository database, use the following patching sequence:
 - a. Stop each OMS.
 - b. Apply the patch to each OMS Oracle Home.
 - c. Run the post deploy steps.

There is no special consideration when using Data Guard because any changes to the repository that occur as part of the patching exercise are forwarded to the standby database repository as part of normal Data Guard operations.

- If you have configured Enterprise Manager for Disaster Recovery by deploying one or more standby OMS and a standby database (RAC or single instance) at another site, patching of the standby site should be performed after all patches and plug-in updates have been deployed on the primary site.

Once the primary site patches and updated plug-ins have been deployed, any changes to the repository made due to these updates will be forwarded to the standby database repository as part of normal Data Guard operations. Therefore, to patch the standby site use the following patching sequence:

- a. Apply the patches to the standby OMS Homes without performing the post deploy operations that update the repository.

- b. Deploying the updated plug-ins without updating the repository.

2.1 Applying Bundle Patch 1 on Oracle Management Service

In a multi-OMS environment, ensure that the following prerequisites are met on each OMS host:

1. Verify that you have the latest version of OPatch 11.1.

The minimum OPatch version required to install BP1 is 11.1.0.9.4. You must also check that the OPatch version is 11.1.0.9.4 or higher. Do not use OPatch 11.2.x.

You can determine the current version of OPatch by running the command `opatch version` from the OMS Home/OPatch. For more information, see [Section 1.4.3, "Using the Correct OPatch Version"](#).

To determine the latest version of OPatch, complete the following:

- a. Log in to My Oracle Support (<https://support.oracle.com>).
- b. Select **Patches & Updates**.
- c. Enter 6880880 in the search field and click **Search**.
- d. Select the latest OPatch version (11.1.0.9.4 or higher)

The selected OPatch has a README with instructions to upgrade the OPATCH and also a download button to download the zip.

2. Set the `ORACLE_HOME` environment variable to the OMS Home, which is `MIDDLEWARE_HOME/oms`.
3. Verify that `ORACLE_HOME/bin` and `ORACLE_HOME/OPatch` are included in the path.

Set the environment variable using the following command:

```
setenv PATH $ORACLE_HOME/bin:$ORACLE_HOME/OPatch:$PATH
```

Check if the PATH variable is set by running the following command:

```
echo $PATH
```

4. Verify the state of Oracle Inventory used by OPatch to install the patches by running the following command:

```
<MIDDLEWARE_HOME>/oms/patch lsinventory
```

Figure 2–1 OPatch Inventory

```

$ opatch lsinventory

Sample Output:-
[oracle@u01 ~]$ opatch lsinventory
Oracle Interim Patch Installer version 11.1.0.9.4
Copyright (c) 2011, Oracle Corporation. All rights reserved.

Oracle Home : /u01/app/Middleware12cfa/oms
Central Inventory : /u01/app/oraInventory
from : /u01/app/Middleware12cfa/oms/oraInst.loc
OPatch version : 11.1.0.9.4
OUI version : 11.1.0.9.0
Log file location : /u01/app/Middleware12cfa/oms/cfgtoollogs/patch/opatch/opatch2012-02-28_12-29-17

OPatch detects the Middleware Home as "/u01/app/Middleware12cfa"

Lsinventory Output file location : /u01/app/Middleware12cfa/oms/cfgtoollogs/patch/lsinv/lsinv
-----
Installed Top-level Products (1):

EM Platform (OMS) 12.1.0.1.0
There are 1 products installed in this Oracle Home.

There are no Interim patches installed in this Oracle Home.

-----

OPatch succeeded.

```

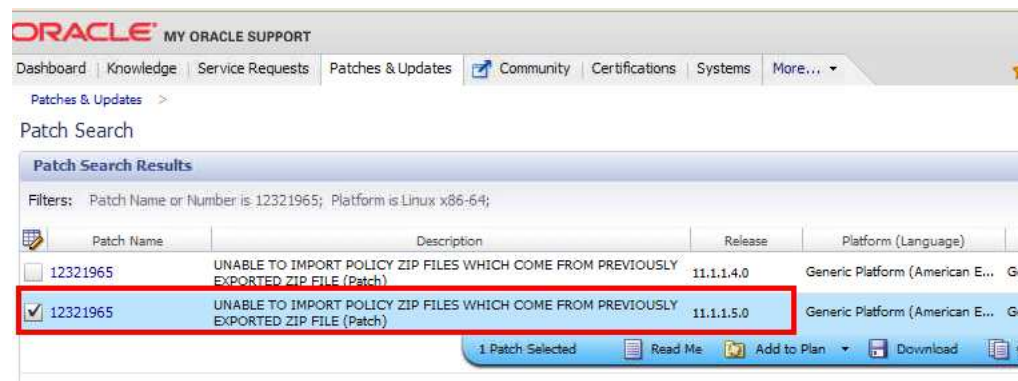
5. Check that the Oracle Database, which contains the Management Repository, and its listener are up and running.
6. Download OMS BP1 13242773 from My Oracle Support, as described earlier in step 1.

The zip files are stored under a location that will be referred to as *PATCH_TOP_DIR* in this document.

7. Download the JDeveloper (13470978) and Web Services Manager (12321965) patches from My Oracle Support.

You will be required to apply these patches after applying the 13242773 BP1 on the OMS.

Download the patch 12321965 for Release 11.1.1.5.0 version.

Figure 2–2 Patch 12321965

8. Select a location for storing the contents of the BP1 ZIP file.
9. Extract the contents of the BP1 ZIP file to the location you created in steps 6 and 7 by running the following command:

```
$ unzip -d PATCH_TOP_DIR p13242773_121010_<platform>.zip
```

Navigate to the `PATCH_TOP_DIR/13242773` directory by running the command:

```
$ cd PATCH_TOP_DIR/13242773
```

10. Shut down the OMS by running the following command:

```
ORACLE_HOME/bin/emctl stop oms -all
```

To verify that the OMS has completely stopped, run the following command:

```
emctl status oms
```

Note: In a multi-OMS environment, shut down all OMS instances.

11. Stop the following components if running within your Cloud Control domain before applying BP1 or updating any plug-in to the latest release:

- Application Dependency and Performance (ADP) Manager.
- JVM Diagnostics (JVMD) Manager.
- BI Publisher Managed Server named "BIP".

12. Install BP1 by running the following command:

```
<MIDDLEWARE_HOME>/oms/opath apply
```

Make sure to run this command on all OMS instances in a multi-OMS environment. Run `opath apply` in parallel for all OMS instances in this step OR complete the BP1 application process on the first OMS, then do the same for the other OMS instances.

Figure 2–3 Sample Output

```

$ opatch apply

Sample output :-
[oracle@rac1 ~]$ opatch apply
Oracle Interim Patch Installer version 11.1.0.9.4
Copyright (c) 2011, Oracle Corporation. All rights reserved.


Oracle Home : /u01/app/Middleware12cfa/oms
Central Inventory : /u01/app/oraInventory
from : /u01/app/Middleware12cfa/oms/oraInst.loc
OPatch version : 11.1.0.9.4
OUI version : 11.1.0.9.0
Log file location : /u01/app/Middleware12cfa/oms/cfgtoollogs/patch/13242773_Feb_28_2012_12_43

OPatch detects the Middleware Home as "/u01/app/Middleware12cfa"

OPatch will do the following:
[Oracle Home discovery] : Configure and Validate Oracle Home info.
[Prerequisite for apply] : Invoke prerequisites to see if patch can be applied.
[Patch conflict detection for apply patch] : Check if any conflict with already installed patches

Applying interim patch '13242773' to OH '/u01/app/Middleware12cfa/oms'
Verifying environment and performing prerequisite checks...
To continue, OPatch will do the following:
[Back up for restore] : Back up 787 files for Oracle Home restore in case of patching error.
[Back up for rollback] : Back up 786 files for future patch rollback.
[Patch Oracle Home for apply] : Copy 786 file(s) to Oracle Home.
[Update inventory for apply] : Modify the inventory to record patch [13242773].
[Post-script processing] : Execute post script for patch [13242773].

```

13. Select the appropriate script to automate the BP1 post installation process, depending on whether you have a [Single OMS Environment](#) or a [Multi-OMS Environment](#).

Note: Ensure that you are in the BP1 location *PATCH_TOP_DIR*. Also, keep the Repository host name, SID, Listener port, and SYSMAN password ready before running the *post_deploy.sh* script.

- **Single OMS Environment**

In a single OMS environment, run the following command from the BP1 directory:

```
$ PATCH_TOP_DIR/13242773/post_deploy.sh
```

The OMS will be started automatically after running the *post_deploy.sh* script.

Figure 2–4 post_deploy.sh Screen Output

```

$ ./post_deploy.sh

Sample output :-
[oracle@u01 13242773]$ ./post_deploy.sh

Please enter Patch Location: /u01/app/Middleware12cfa/oms/13242773
Please enter SYSMAN password:
Please enter EM repository host name: svarughegc.idc.oracle.com
Please enter EM repository port: 1525
Please enter EM repository SID: emrp12cf

The script will run the following command(s):

/u01/app/Middleware12cfa/oms/bin/emctl applypatch repos -patchHome /u01/app/Middleware12cfa/c
/u01/app/Middleware12cfa/oms/bin/emctl register oms metadata -service swlib -core -file_list
/u01/app/Middleware12cfa/oms/bin/emctl register oms metadata -core -service SelfUpdateEntity1
/u01/app/Middleware12cfa/oms/sysman/metadata/selfUpdateInst/851C756E23 D7E1FBF7FBE57A8807D99C
/u01/app/Middleware12cfa/oms/bin/emctl register oms metadata -service oobrules -file /u01/app
core - debug
/u01/app/Middleware12cfa/oms/bin/emctl register oms metadata -service derivedAssocs -file
/u01/app/Middleware12cfa/oms/sysman/metadata/derivedAssocs/target_installed_at_oracle_h ome.x
/u01/app/Middleware12cfa/oms/sysman/admin/emdrep/bin/RepManager svarughegc.idc.oracle.com 152
/u01 /app/Middleware12cfa/oms
/u01/app/Middleware12cfa/oms/perl/bin/perl /u01/app/Middleware12cfa/oms/13242773/apply1295905
/u01/app/Middleware12cfa/oms/perl/bin/perl /u01/app/Middleware12cfa/oms/13242773/apply1347944
/u01/app/Middleware12cfa/oms/bin/exec_13651296_patch
/u01/app/Middleware12cfa/oms/bin/emctl start oms

Please monitor log file "/u01/app/Middleware12cfa/oms/13242773/log/2012-02-28-12-55-55.log"

Script completed successfully.

```

- Multi-OMS Environment

Complete the following:

- Find the Administration Server by running the following command from \$ORACLE_HOME/bin:

```
./emctl status oms
```

Output similar to the following is displayed:

```
./emctl status oms
```

```

Oracle Enterprise Manager Cloud Control 12c Release 12.1.0.1.0
Copyright (c) 1996, 2012 Oracle Corporation. All rights reserved.
WebTier is Up
Oracle Management Server is Up

```

```
./emctl status oms -details
```

```

Oracle Enterprise Manager Cloud Control 12c Release 12.1.0.1.0
Copyright (c) 1996, 2012 Oracle Corporation. All rights reserved.
Enter Enterprise Manager Root (SYSMAN) Password :
Console Server Host : slc00tae.us.oracle.com
HTTP Console Port : 7789
HTTPS Console Port : 7801
HTTP Upload Port : 4890
HTTPS Upload Port : 4901
OMS is not configured with SLB or virtual hostname
Agent Upload is locked.

```

```
OMS Console is locked.
Active CA ID: 1
Console URL: https://xxx.us.oracle.com:7801/em
Upload URL: https://xxx.us.oracle.com:4901/empbs/upload
```

```
WLS Domain Information
Domain Name : GCDomain
Admin Server Host: xxx.us.oracle.com
```

```
Managed Server Information
Managed Server Instance Name: EMGC_OMS1
Managed Server Instance Host: xxx.us.oracle.com
```

- b.** Run the following command on the Primary OMS of a multi-OMS setup:

The Primary OMS is the one co-located with the Admin server.

```
$ ./PATCH_TOP_DIR/13242773/post_deploy.sh
```

- c.** Run the following command on the other OMS environments (non-Primary):

```
$ ./ PATCH_TOP_DIR/13242773/MultiOms_post_deploy.sh
```

You will be asked to enter the patch location. For example:

```
/scratch/xxx/PATCH_TOP_DIR/13242773
```

- 14.** Apply the JDeveloper and Web Services Manager patches 13470978 and 12321965 to OMS.

Note: This must be applied to all of the OMS instances in a multi-OMS environment. Also, there is no specific sequence to apply these two patches.

If you have Enterprise Manager installed using the Enterprise Manager binaries with BP1, then this JDeveloper patch is automatically installed with no further work required.

If you are applying the BP1 on your existing Enterprise Manager installation, then you must apply the JDeveloper patch as an extra step. There are a variety of fixes in the patch, including functional issues and Google Chrome and Microsoft Internet Explorer 9 browser support. The JDeveloper patch should be applied after BP1. For instructions, refer to the README of the respective patch.

Apply the patches following the instructions in the README of the corresponding patch. When you search for patch 12321965, you will find two releases of the patch, namely, 11.1.1.5.0 and 11.1.1.4.0. Make sure that you select and apply the 11.1.1.5.0 release of the patch. Verify that you apply both the patches in the oracle_common directory that resides in the Middleware Home (MW_HOME/oracle_common/). Set environment variable ORACLE_HOME to your [MW_HOME]/oracle_common directory before applying patches 13470978 and 12321965 to the OMS.

- 15.** Verify that BP1 was properly installed by running the following command to check that the patch is registered in the inventory:

```
<MIDDLEWARE_HOME>/oms/opatch lsinventory
```

Figure 2–5 lsinventory Sample Output

```

Sample output:-
[oracle@rac1 ~]$ opatch lsinventory
Oracle Interim Patch Installer version 11.1.0.9.4
Copyright (c) 2011, Oracle Corporation. All rights reserved.

Oracle Home : /u01/app/Middleware12ce/oms
Central Inventory : /u01/app/oraInventory
from : /u01/app/Middleware12ce/oms/oraInst.loc
OPatch version : 11.1.0.9.4
OUI version : 11.1.0.9.0
Log file location : /u01/app/Middleware12ce/oms/cfgtoollogs/patch/patch_1.log

OPatch detects the Middleware Home as "/u01/app/Middleware12ce"

Lsinventory Output file location : /u01/app/Middleware12ce/oms/cfgtoollogs/patch/patch_1.log

-----
Installed Top-level Products (1):

EM Platform (OMS) 12.1.0.1.0
There are 1 products installed in this Oracle Home.

Interim patches (1) :

Patch 13242773 : applied on Wed Feb 15 15:40:54 IST 2012
Created on 10 Feb 2012, 05:21:29 hrs PST8PDT
Bugs fixed:
13472263, 13106443, 13071823, 12989982, 13492366, 12957621, 13374975
13375992, 12957984, 12989821, 13016983, 13080770, 13370175, 13334194
13010282, 13055166, 13094371, 12920846, 13028935, 13062375, 13033378
13403327, 13335076, 12851038, 13358747, 12928995, 13100709, 13242773
13359763, 12865976, 13426571, 12957944, 13251841

```

To verify that all the patches are installed on the OMS, run the following commands:

- a. Set the following environment variable on the OMS host:

```
setenv ORACLE_HOME <MIDDLEWARE_HOME>/oms
```

- b. Run the following verification commands to ensure the patch has been applied to the OMS:

```

<MIDDLEWARE_HOME>/oms/patch lspatches -id 13242773 -verify
<MIDDLEWARE_HOME>/oms/patch lspatches -oh <MIDDLEWARE_HOME>/oracle_common
-id 12321965 -verify
<MIDDLEWARE_HOME>/oms/patch lspatches -oh <MIDDLEWARE_HOME>/oracle_common
-id 13470978 -verify

```

The results of the commands will show the patch number and its details if present in the OMS.

16. Apply BP1 patches and JDeveloper and Web Services Manager patches (13470978 and 12321965) to each standby OMS (if standby OMS instances have been deployed) by completing the following:
 - a. Shut down all standby OMS servers.
 - b. Using Opatch, apply the patches using the instructions provided here, but do not run the `post_deploy.sh` command (described in step 14).
 - c. Run the following for each standby OMS instance, where `ORACLE_HOME` is the Oracle Home of the OMS :

```
$ ORACLE_HOME/perl/bin/perl 13242773_PATCH_TOP_DIR/apply12959056.pl
$ ORACLE_HOME/perl/bin/perl 13242773_PATCH_TOP_DIR/apply13479448.pl
$ sh $ORACLE_HOME/bin/exec_13651296_patch
```

These scripts can be found under:

13242773_PATCH_TOP_DIR/custom/scripts/

2.2 Setting up the Infrastructure for Agent Patching before doing Plug-in Upgrade

For patching Management Agents, the patches can be automatically downloaded during the patching flow if Enterprise Manager is configured to connect to My Oracle Support. If a connection to My Oracle Support is not possible, you can upload the patches manually to Enterprise Manager.

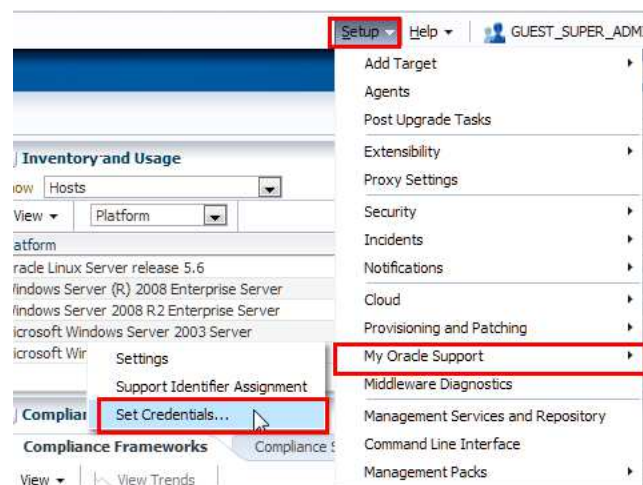
Based on your connectivity policy, complete the following to set up the necessary infrastructure in either online or offline mode.

2.2.1 Setting Up My Oracle Support Credentials

Complete the follow steps to set up the My Oracle Support credentials. If you have already set up your MOS credentials, then you can skip this section.

1. From the **Setup** menu, select **My Oracle Support**, then select **Set Credentials**.

Figure 2–6 Set Credentials



2. Supply your My Oracle Support credentials, click **Apply** to save this information, then click the **Refresh From My Oracle Support** link to see the job.

This also triggers jobs to update Opatch and refresh MOS. You should check that these jobs complete successfully before proceeding. However, if these jobs have run successfully during the last 24 hours, they will not be triggered and you can just proceed.

2.2.2 About Infrastructure Set Up in Online Mode

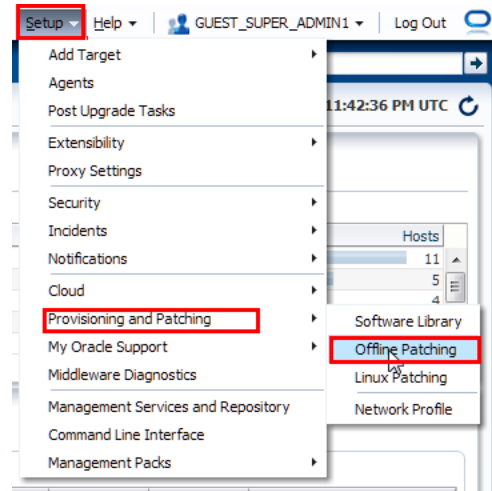
This section describes the steps involved in setting up the infrastructure when using Management Agent patching in online mode.

Complete the following to setup the infrastructure if you are using Management Agent patching in online mode:

1. Check that the connection to My Oracle Support is set to Online.

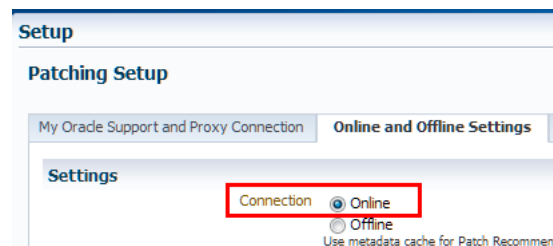
From the **Setup** menu, select **Provisioning and Patching**, then select **Offline Patching**.

Figure 2–7 Provisioning and Patching



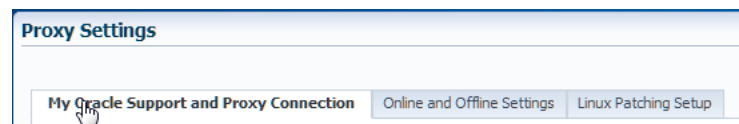
2. Set the connection setting to **Online** and click **Apply**.

Figure 2–8 Patching Setup



3. Select the **My Oracle Support and Proxy Connection** tab.

Figure 2–9 My Oracle Support and Proxy Connection



4. If needed, configure your Proxy Connection to connect to My Oracle Support (MOS). If you choose Manual Proxy Configuration, provide the required Proxy Server and Port and Realm details, then click **Apply**.

Figure 2–10 Manual Proxy Configuration

My Oracle Support

Patch Search URL

My Oracle Support Connection Setting

☐ No Proxy ☒ Manual proxy configuration

Protocol	Proxy Server Host	Port	Realm	Username	Password	Reset
HTTP						Reset
HTTPS						Reset

5. Click **Test** to check that the connectivity works correctly when the configuration is complete.

If connectivity is not working, you can switch to offline mode. For more information, see [Section 2.2.3, "Setting up the Infrastructure if you are using Agent Patching in Offline Mode"](#).

6. Click **Apply** to save the configuration following a successful test.

The error message shown is for information proposes only. You can use the included link to set up MOS credentials. For more information, see [Section 2.2.1, "Setting Up My Oracle Support Credentials"](#).

Figure 2–11 Proxy Settings Error

Proxy Settings

Information
https://updates.oracle.com was tested successfully using the Proxy.

Patch Search URL Error
My Oracle Support Credentials Not Set - You have not set the My Oracle Support credentials. Click the left link and supply the missing credentials.

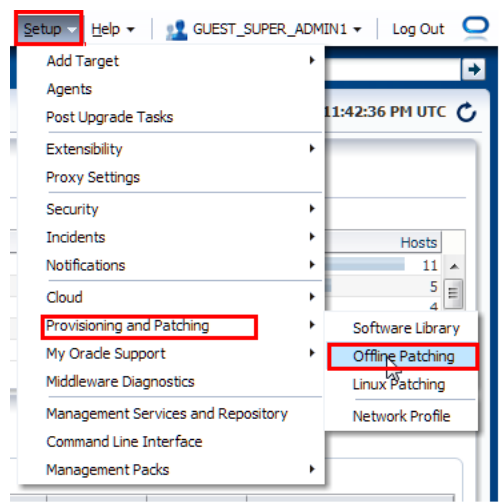
2.2.3 Setting up the Infrastructure if you are using Agent Patching in Offline Mode

If you cannot use the online mode and configure connectivity to MOS, then you must use the offline patching method. Follow the steps below to set up the infrastructure to patch your Management Agents with the Bundle Patch.

1. Verify that the connection to My Oracle Support is set to "Offline".

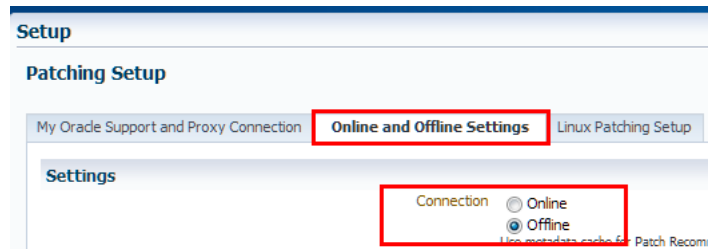
From the **Setup** menu, select **Provisioning and Patching**, then select **Offline Patching**.

Figure 2–12 Offline Patching



- 2. From the Patching Setup page, select **Online and Offline Settings**, then select **Offline** and click **Apply**.

Figure 2–13 Patching Setup



- 3. Update the Enterprise Manager metadata files by completing the following:
 - a. Download metadata files from My Oracle Support from the following location:

<https://support.oracle.com>

You can download all of the required XMLs using a wget script. Execute the script as instructed in the My Oracle Support note 1436338.1 at the following location:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&doctype=HOWTO&id=1436338.1>

You can also select and download the files manually. Table 2–1, "Metadata Files" provides a list of the files to be downloaded and their locations.

Table 2–1 Metadata Files

Metadata XML File	Download Location
aru_products.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_products

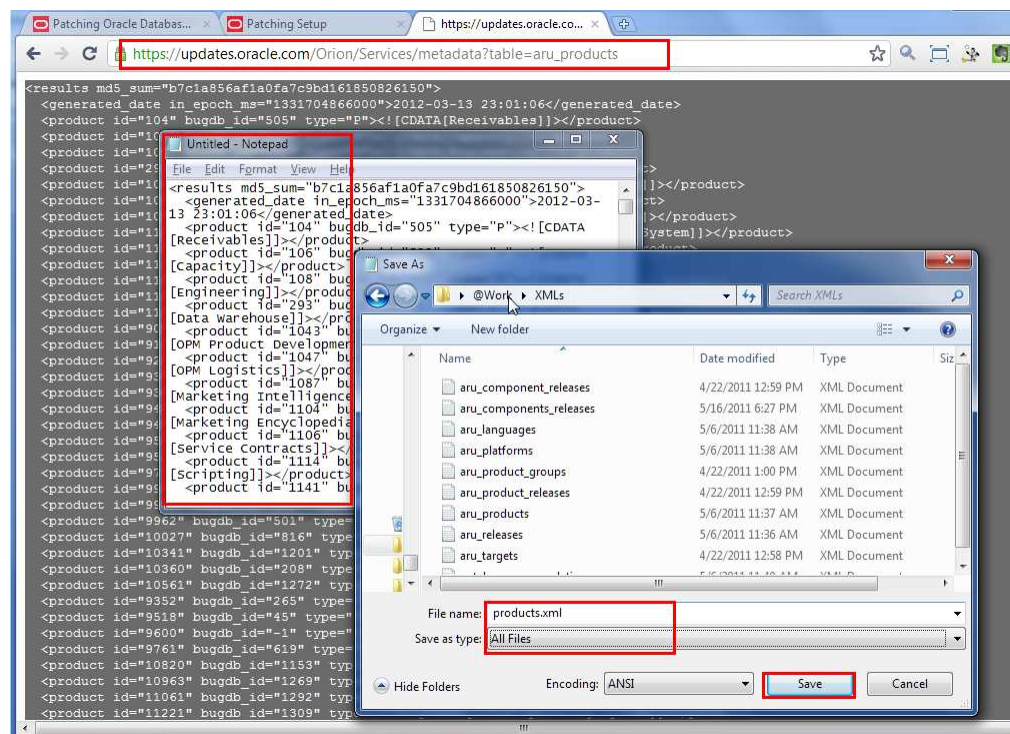
Table 2–1 (Cont.) Metadata Files

Metadata XML File	Download Location
aru_releases.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_releases
aru_platforms.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_platforms
aru_languages.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_languages
aru_product_groups.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_product_groups
aru_product_releases.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_product_releases
aru_component_releases.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_component_releases
aru_targets.xml	https://updates.oracle.com/Orion/Services/metadata?table=aru_targets
certifications.xml	https://updates.oracle.com/Orion/Services/components?ctype=product,release,platform,platform_version,wildcard-release,config-group,release-component,certification
patch_recommendations.xml	https://updates.oracle.com/Orion/Services/search?language_id=0&classification_group=recommended&patch_type=all&group_by=target_type&group_by=release&group_by=platform

- b. Download the URLs and store them in the local system.

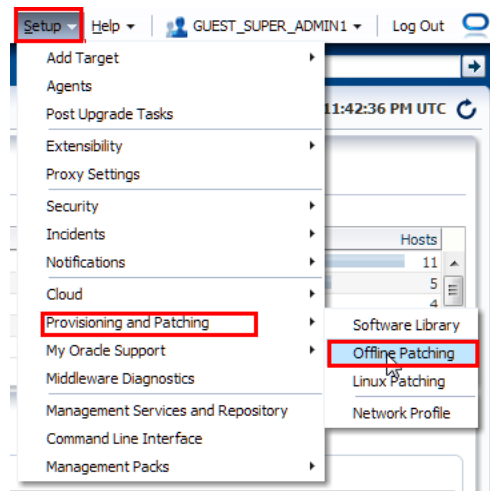
Copy and paste the contents of every URL into a separate text file and save it with the proper name and the .xml extension (for example, save the file as aru_products.xml).

The URL opens in the browser and the contents are copied into Notepad and the file is then saved as an XML.

Figure 2-14 Downloading Metadata Files

- c. Upload the metadata files to Enterprise Manager.

From the **Setup** menu, select **Provisioning and Patching**, then select **Offline Patching**.

Figure 2-15 Offline Patching

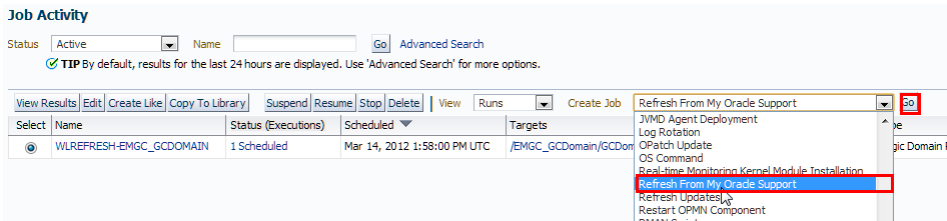
- d. Click **Browse** in the Metadata Cache section to select the xml metadata files.

- e. Click **Upload** to upload the metadata files

Following a successful upload, the Status column for the XML files will be Green. Other column information will also be updated.

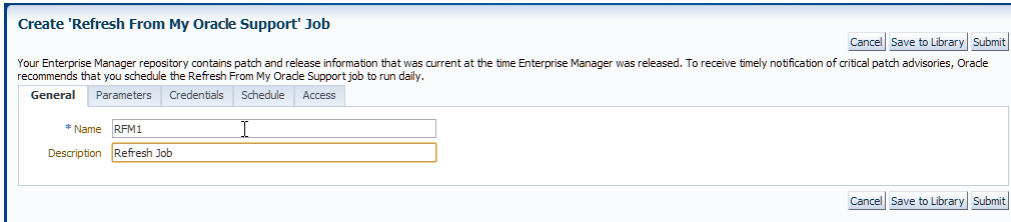
- f. From the **Enterprise** menu, select **Job**, then select **Activity**.
- g. Select **Refresh From My Oracle Support** from the Create Job list and click **Go**.

Figure 2–16 Refresh From My Oracle Support



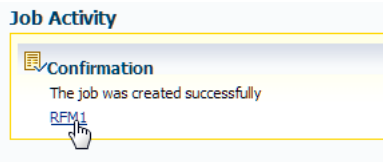
- h. Specify a name for the job and click **Submit**.

Figure 2–17 Specifying a Job Name



When the job is created and submitted, a confirmation screen is presented.

Figure 2–18 Confirmation Screen



- i. Click the link to track the status of the job.
- Ensure that the job succeeds. You might have to refresh the page or set up the refresh to be every 30 seconds.
- Note: If the job fails, refer to the trouble shooting section at the end of the document or call Oracle Support.

Figure 2–19 Job Activity Status

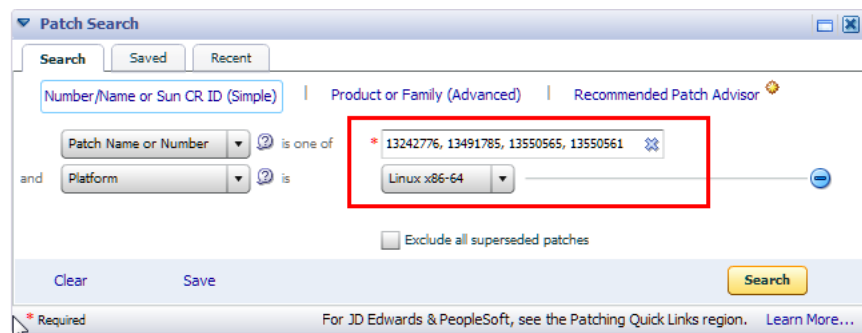


4. Download the required Management Agent patches and OPatch patches from My Oracle Support (<https://support.oracle.com>) by completing the following:

- a. Download the Management Agent patches by specifying the four patch numbers 13242776, 13491785, 13550565, and 13550561 as comma-separated entries in the Patch Search region of the Patches & Updates page, then click **Search**.

Make sure you select the right platform, for example, Linux x86-64.

Figure 2–20 Patch Search Screen



- b. Click **Search**.

Figure 2–21 Patch Search Results

i1; Platform is Linux x86-64;

Description	Release	Platform (Language)	Classification
M - AGENT 12.1.0.1.0 BP1	12.1.0.1.0	Linux x86-64 (American English)	Other Recommendation
M - AGENT 12.1.0.1.0 BP1 (PORT)	12.1.0.1.0	Linux x86-64 (American English)	Other Recommendation
n : Patch			
M - AGENT 12.1.0.1.0 BP1 (Discovery)	12.1.0.1.0	Generic Platform (American English)	Other Recommendation
n : Patch			
M - AGENT 12.1.0.1.0 BP1 (Monitoring)	12.1.0.1.0	Generic Platform (American English)	Other Recommendation

4 Patches selected

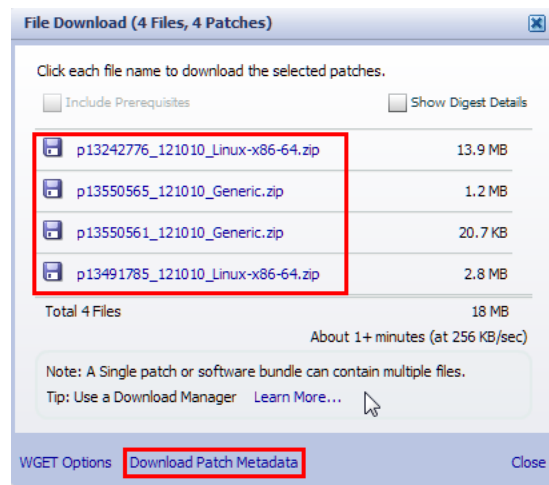
to Software Library
to Desktop

- c. Download the patch zip files and the patch metadata files for the patches.

To download the patch metadata, click **Download Patch Metadata**, then click **Download**.

Click the patch zip file to download the zip file.

Note: Make sure you download both.

Figure 2–22 ZIP File Download**Figure 2–23 Download Patch Metadata**

- d. Download the required OPatch patches from My Oracle Support (<https://support.oracle.com>).

Search for patch "6880880" for the appropriate platform for the Management Agent target. For example, if your target is Linux x86-64, pick platform Linux x86-64.

Figure 2–24 Patch Search

The screenshot shows the 'Patch Search' interface. Under the 'Number/Name or Sun CR ID (Simple)' tab, the search criteria are: Patch Name or Number is 6880880 and Platform is Linux x86-64. There is an unchecked checkbox for 'Exclude all superseded patches'. At the bottom, there are 'Clear', 'Save', and 'Search' buttons. The 'Search' button is highlighted with a red rectangle.

- e. Click Search.

Download the patch for the version 11.1.0.0.0 series only.

Figure 2–25 Patch Search Results

Patch Search

Patch Search Results

Filters: Patch Name or Number is 6880880; Platform is Linux x86-64;

Patch Name	Description	Release	Platform (Language)	Classification	Prod
☐ 6880880	OPatch patch of version 11.2.0.1.9 for Oracle software releases 11.2.0.x (NOV 2011) (Patch)	11.2.0.0.0	Linux x86-64 (American English)	General	Univ
☒ 6880880	OPatch patch of version 11.1.0.9.4 for Oracle software releases 11.1.0.x (DEC 2011) (Patch)	11.1.0.0.0	Linux x86-64 (American English)	General	Univ
☐ 6880880	OPatch 10.2 (Patch)				
☐ 6880880	OPatch 9% 10.1 (Patch)	10.1.0.0.0	Linux x86-64 (American English)	General	Univ

1 Patch Selected

Read Me Add to Plan Download Copy

- f. Download both the patch zip file and the patch metadata.

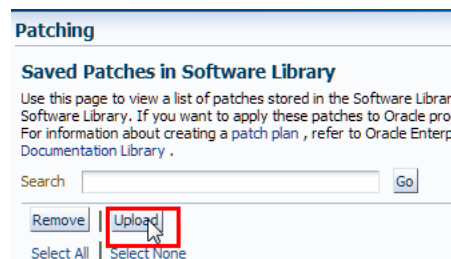
To download the patch metadata file, click **Download Patch Metadata**, then click **Download**.

Figure 2–26 File Download

The screenshot shows the 'File Download (1 File, 1 Patch)' dialog box. It contains a table with one file: 'p6880880_111000_Linux-x86-64.zip' (30.4 MB). Below the table, it says 'Total 1 File' and 'About 2+ minutes (at 256 KB/sec)'. There is a note: 'Note: A Single patch or software bundle can contain multiple files.' and a tip: 'Tip: Use a Download Manager Learn More...'. At the bottom, there are 'WGET Options', 'Download Patch Metadata' (highlighted with a red box), and 'Close' buttons.

Figure 2–27 Download Patch Metadata

5. Upload the Management Agent patches to the Software Library.
 - a. From the **Enterprise** menu, select **Provisioning and Patching**, then select **Saved Patches**.

Figure 2–28 Saved Patches**Figure 2–29 Patching**

- b. Click **Upload** to open the Upload Patches to Software Library page.

Figure 2–30 Upload Patches to Software Library

Patching

Upload Patches to Software Library
Manually download the patches from My Oracle Support and upload to software library. The successful upload, a corresponding Software Library component will be created in the Software Library.

Basic Information

Product Family: Oracle System Management Products

Product: Enterprise Manager Base Platform

Select Type of Patch: Patch

Of the four patches for Management Agents, two are for "Base platform" (13242776 and 13491785) and the other two are for "Oracle Home plug-in" (13550561 and 13550565).

- c. Set the Basic Information as shown.
- d. For patches 13242776 and 13491785, select the patch metadata file and patch zip file from the local directory on the system and click **Upload**.

Figure 2–31 Patch Information

Patch Metadata	Select Patch Zip File	Part Number	Release
Choose File No file chosen	Choose File No file chosen	1	Cloud Control (Agent) 12.1.0.1.0
Choose Patch Metadata No file chosen	Choose File No file chosen	1	Cloud Control (Agent) 12.1.0.1.0

- e. Upload patches 13550561 and 13550565 by selecting their patch metadata and the patch zip file.
- f. Reset the Basic Information attributes as shown.

Figure 2–32 Basic Information

Basic Information

Product Family: Oracle System Management Products

Product: Enterprise Manager for OracleHome Plugin

Select Type of Patch: Patch

- g. Select the patch metadata and the patch zip file and click **Upload**.
6. To upload OPatch 6880880 to the Software Library, specify the Basic Information attributes.

Select the patch metadata and patch zip file for the OPatch patch 6880880 and upload it. Ensure that you fill in all attributes required in the page:

- Release: Choose version as "11.1.0.0.0".
- Created On: Use today's date
- Description: OPatch for version 11.1.0.x
- Platform: Select the platform for which you downloaded the patch (for example, Linux x86-64)

- Language: Select 'American English'

7. Click Upload.

Upon successful upload, all the patches will be visible in the Saved Patches page.

Figure 2–33 Saved Patches in Software Library

Patching

Saved Patches in Software Library

Use this page to view a list of patches stored in the Software Library, search patches of your interest, upload new patches to the Software Library, and remove patches from the Software Library. If you want to apply these patches to Oracle products monitored in Enterprise Manager, create a patch plan. For information about creating a patch plan, refer to Oracle Enterprise Manager Administrator's Guide for Software and Server Provisioning and Patching available in the Oracle Enterprise Manager Documentation Library.

Search 6880880 Go

Remove | Upload

Select All | Select None

Select	Patch Number	Created On	Type	Release	Platform	Product	Description	Metadata Available
☐	6880880	Nov 14, 2011	Patch	11.2.0.0.0	Linux x86-64	Universal Installer	OPatch patch of version 11.2.0.1.9 for Oracle software releases 11.2.0.x (NOV 2011)	Y

At the end of this process, all of the Agent patches and the Opatch patch should be listed in the Saved Patches in Software Library page.

2.3 Upgrading All Deployed Plug-ins to the 12.1.0.2 Releases on OMS

The following sections describe in detail the steps required to upgrade deployed plug-ins to their Enterprise Manager 12.1.0.2 releases. The following topics are addressed:

- [Prerequisites for Deploying Plug-ins](#)
- [Deploying Plug-ins in Online Mode on OMS](#)
- [Deploying Plug-ins in Offline Mode on OMS](#)

2.3.1 Prerequisites for Deploying Plug-ins

Make sure that you upgrade all of your version 12.1.0.1 plug-ins to the 12.1.0.2 releases (with out revision) where available. Update all plug-ins on an OMS instance one after the other until all have been upgraded (plug-ins can only be updated one at a time).

To verify that your plug-ins are upgraded to the latest 12.1.0.2 release, complete the following:

1. Back up your Oracle Inventory, Repository Database, Middleware Home, Instance Home, Software Library, Management Agent. You can refer to the back up instruction from Enterprise Manager Cloud Control Administrator's Guide available here:

http://docs.oracle.com/cd/E24628_01/index.htm

2. Log in to your repository database as SYSMAN and recompile invalid objects using the following command:

```
EXEC EMD_MAINT_UTIL.recompile_invalid_objects
SQL> EXEC
EMD_MAINT_UTIL.recompile_invalid_objects
```

PL/SQL procedure successfully completed.

Make sure that you do not have any invalid objects in your repository. To check any invalid object, log in to the repository as a system user and run the following command:

```
SELECT object_name, object_type FROM ALL_OBJECTS WHERE owner='SYSMAN' and
status <> 'VALID' ;
```

```
SQL> SELECT object_name, object_type
FROM ALL_OBJECTS
WHERE owner='SYSMAN' and status <> 'VALID' ;
```

no rows selected

If you find any invalid objects, run the first SQL again:

```
EXEC EMD_MAINT_UTIL.recompile_invalid_objects
```

3. Verify that DBMS jobs are running.

If they are not running, run the following package as sysman user:

```
EXEC EMD_MAINTENANCE.submit_em_dbms_jobs
```

To check if jobs are running, open the Enterprise Manager console and from the **Setup** menu, select **Management Services and Repository**, then select **Repository Operations**.

Figure 2–34 Repository Operations

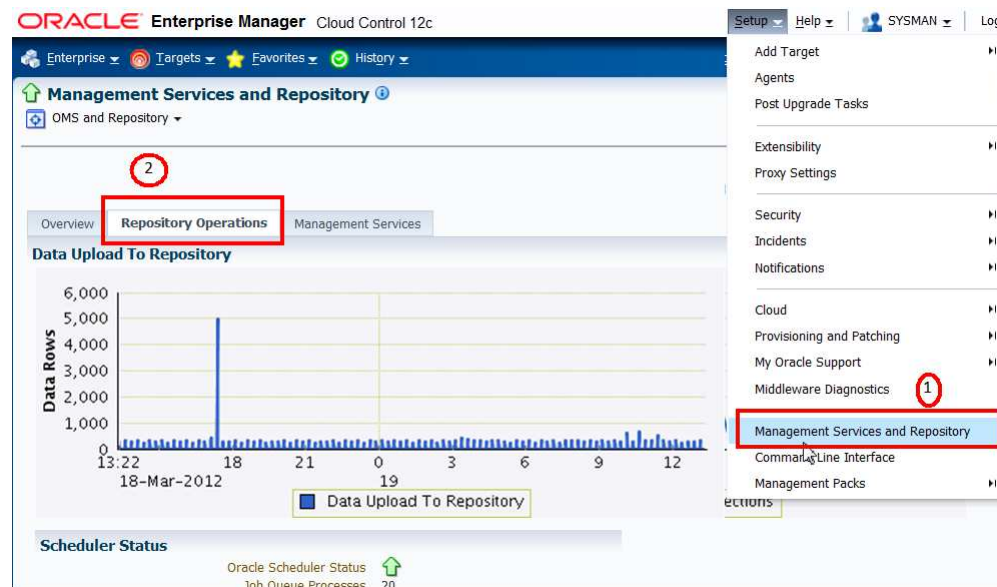


Figure 2–35 Repository Scheduler Job Status

Management Services and Repository ⓘ

OMS and Repository ▾

DBMS Job Name ▲	Status	Throughput	
Agent Ping		0.00	
Beacon Availability Computation		1.50	
Composite Target Availability Computation		0.00	
Compute Metric Baseline Statistics		0.00	
Daily Maintenance		0.00	
EM Audit Externalization Service		0.00	
Job Purge		0.00	
Job Step Scheduler		0.00	
Job Step Scheduler Monitor		0.00	
Optimizer Statistics Gathering		0.00	
Purge Policies		0.00	
Repository Metrics 1		1.89	
Repository Metrics 2		0.00	
Repository Metrics 3		0.00	
Resubmit Failed Collection Task		0.00	
Rollup		0.00	
Root Cause Analysis Purge		0.00	
Service Level Calendar Update		0.00	
Service Level Computation		0.00	
Set Adaptive Metric Thresholds		0.00	

TIP Throughput is averaged over the last hour, with 10-minute samplings. Processing Time is the amount of time that the job has run over the last hour, with 10-minute sampling

4. Stop and start your Database and OMS before your start the plug-in upgrade.
Do this on all the OMS instances of an multi-OMS environment.
5. Verify that the Target Management Agent (where you will be upgrading your plug-in) is up and running.
6. Follow the instructions in [Section 2.7, "Upgrading ADP and JVMD \(Optional\)"](#) if you are updating to the 12.1.0.2 release of the Oracle Fusion Middleware Plug-in and you already have Application Dependency and Performance (ADP) or JVM Diagnostics (JVMD) installed.
7. Stop the following components if they are running within your Cloud Control domain before updating any plug-in to the latest release:
 - Application Dependency and Performance (ADP) Manager
 - JVM Diagnostics (JVMD) Manager

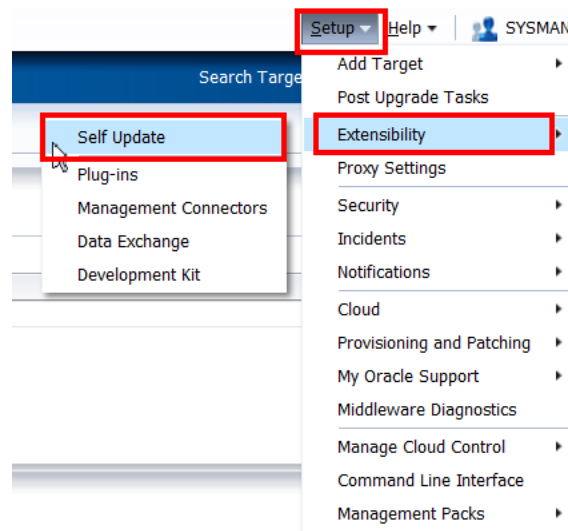
Note: Upgrade all your 12.1.0.1 version plug-ins to 12.1.0.2 releases one after the other until all have been upgraded. This means downloading one 12.1.0.2.0 plug-in, deploying that plug-in, then downloading another 12.1.0.2.0 plug-in and deploying that one, and so on.

2.3.2 Deploying Plug-ins in Online Mode on OMS

To deploy plug-ins in an online mode, complete the following:

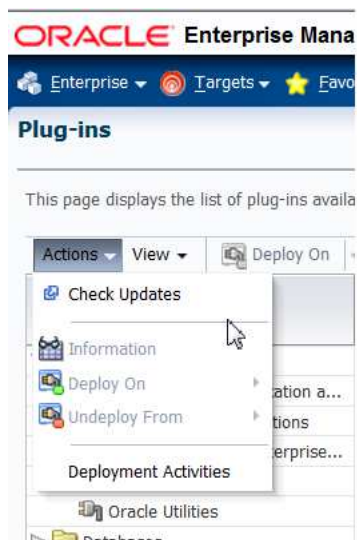
1. From the **Setup** menu, select **Extensibility**, then select **Self Update** to get the complete list of available updates.

Figure 2–36 Self Update

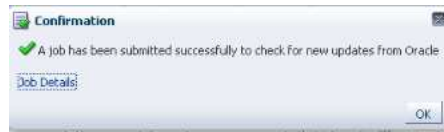


2. From the Plug-ins home page, select **Actions**, then select **Check Updates**.

Figure 2–37 Check Updates



A job gets triggered and updates the Available Update column. A confirmation screen is displayed when a job is successfully submitted.

Figure 2–38 Confirmation Screen

3. Select **Open** from the **Actions** menu.

Figure 2–39 Entity Type

ORACLE Enterprise Manager Cloud Control 12c

Enterprise ▾ Targets ▾ Favorites ▾ History ▾

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update home allows manual check can be made at any time.

Status

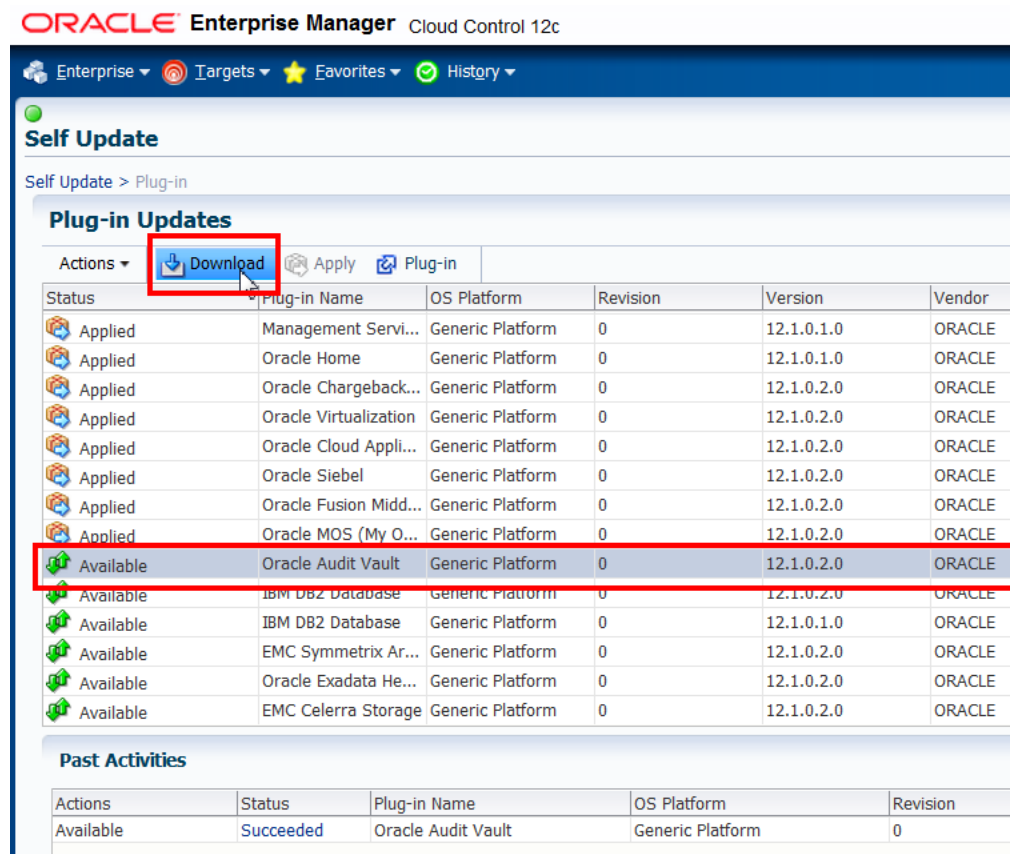
Connection Mode **Online** Last Download Time Mar 2, 2012
 Most Recent Refresh Time **✓** Mar 7, 2012 12:09:42 PM PST Last Download Type Plug-in

Actions ▾ Open Check Updates Agent Software

Type	Available Updates	Downloaded Updates	Applied Updates	Description
Agent Software	7	0	0	Agent softw
Compliance Content	0	0	0	Compliance
Diagnostic Checks	0	0	0	Target side
EM Deployment Prerequisite Resources	0	0	0	EM Deployrn
Exadata Configuration Template	0	0	0	Configuratic
Management Connector	8	0	1	Managemer
Middleware Profiles and Gold Images	0	0	0	A collection
Monitoring Templates	0	0	0	Monitoring
Oracle Database Provisioning Profiles an	0	0	0	A collection
Oracle Virtual Product Mapping	0	0	0	Pre-defined
Oracle VM Templates and Oracle Virtual	0	0	0	Preinstalled
Plug-in	13	0	13	Plug-in exte
Provisioning Bundle	0	0	1	Provisioning patching of

4. Select an update from the list of available updates and click **Download**.

The Schedule Download dialog appears. In the example shown below, the Oracle Audit Vault plug-in is selected.

Figure 2–40 Schedule Download

5. Select when you want to download the update (immediately or at some later specified time).

Note that multiple downloads can be scheduled simultaneously.

Figure 2–41 Schedule Download

6. Click **Select**.

An Enterprise Manager job is created to download the update to the Software Library. Enterprise Manager starts downloading the archive from the Oracle Enterprise Manager store.

Note: The page is not refreshed automatically. Click **Refresh** to view the updated download status.

Once an entity has been downloaded to the Software Library, it is ready to be applied to your installation.

7. Select an update from the list with a status of Downloaded, then click **Apply**.

Figure 2–42 Plug-in Updates

The screenshot shows the 'Self Update' page in Oracle Management Cloud. The breadcrumb trail is 'Self Update > Plug-in'. The main section is 'Plug-in Updates', which includes a table of available updates. The 'Downloaded' status is highlighted with a red box. Below the table is a 'Past Activities' section showing a log of recent actions.

Status	Plug-in Name	OS Platform	Revision	Version	Vendor
Applied	Management Servi...	Generic Platform	0	12.1.0.1.0	ORACLE
Applied	Oracle Home	Generic Platform	0	12.1.0.1.0	ORACLE
Applied	Oracle Chargeback...	Generic Platform	0	12.1.0.2.0	ORACLE
Applied	Oracle Virtualization	Generic Platform	0	12.1.0.2.0	ORACLE
Applied	Oracle Cloud Appli...	Generic Platform	0	12.1.0.2.0	ORACLE
Applied	Oracle Siebel	Generic Platform	0	12.1.0.2.0	ORACLE
Applied	Oracle Fusion Midd...	Generic Platform	0	12.1.0.2.0	ORACLE
Applied	Oracle MOS (My O...	Generic Platform	0	12.1.0.2.0	ORACLE
Downloaded	Oracle Audit Vault	Generic Platform	0	12.1.0.2.0	ORACLE
Available	IBM DB2 Database	Generic Platform	0	12.1.0.2.0	ORACLE
Available	IBM DB2 Database	Generic Platform	0	12.1.0.1.0	ORACLE
Available	EMC Symmetrix Ar...	Generic Platform	0	12.1.0.2.0	ORACLE
Available	Oracle Exadata He...	Generic Platform	0	12.1.0.2.0	ORACLE
Available	EMC Celerra Storage	Generic Platform	0	12.1.0.2.0	ORACLE

Actions	Status	Plug-in Name	OS Platform	Revision
Apply	Succeeded	Oracle Database	Generic Platform	0
Available	Succeeded	Oracle Database	Generic Platform	0
Download	Succeeded	Oracle Database	Generic Platform	0

You are then redirected to the plug-in deployment page.

Figure 2–43 Plug-ins

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Plug-ins

This page displays the list of plug-ins available, downloaded and deployed in the Enterprise Manager environment. Plug-in lifecycle

Actions View Deploy On Undeploy From

Name	Version			M
	Latest Available	Latest Downloaded	On Management Server	
Applications				
Oracle Fusion Applications	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
Oracle Jdedwards EnterpriseOne	12.1.0.1.0			
Oracle Siebel	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
Databases				
Oracle Fusion Middleware	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
Servers, Storage and Network				
Exalogic Elastic Cloud Infrastructure	12.1.0.1.0			
Oracle Audit Vault	12.1.0.2.0	12.1.0.2.0		
Oracle Beacon	12.1.0.1.0	12.1.0.1.0	12.1.0.1.0	
Oracle Chargeback and Capacity Pl	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	

Oracle Audit Vault

General Recent Deployment Activities

Plug-in ID oracle.em.soav

Latest Available Version 12.1.0.2.0

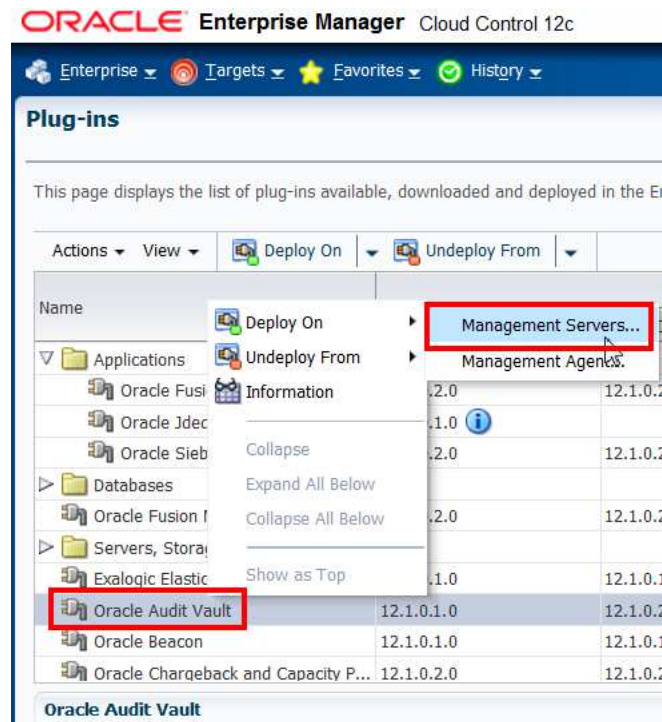
Vendor oracle

Versions Downloaded 12.1.0.2.0

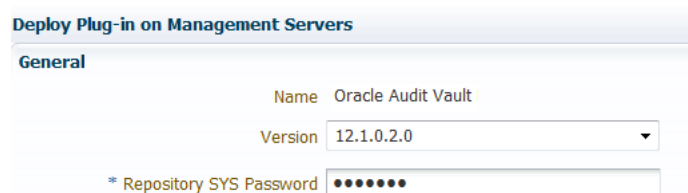
Version on Management Server None

Description Oracle Audit Vault Plugin provides monitoring and

8. Select the plug-in and deploy it on OMS.
- Right click the plug-in name, select **Deploy On**, then select **Management Servers**.

Figure 2–44 Plug-in Deploy On Management Servers

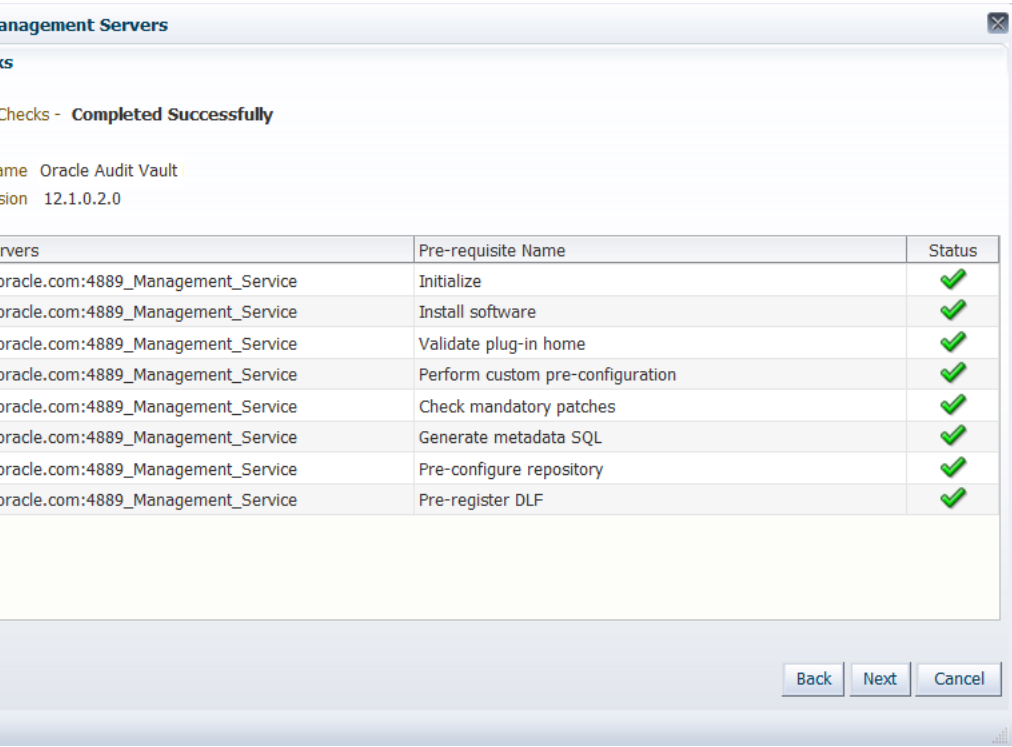
9. Provide the Repository SYS Password and click **Continue**.

Figure 2–45 Deploy Plug-in on Management Servers

Plug-in upgrade prerequisites checks are executed.

Figure 2–46 Pre-requisite Checks

Figure 2-47 Pre-requisite Checks Completed Successfully



- 10. Click **Next**.
- 11. Click **Deploy** when the prerequisite checks have completed successfully.

Figure 2-48 Deploy Review Screen

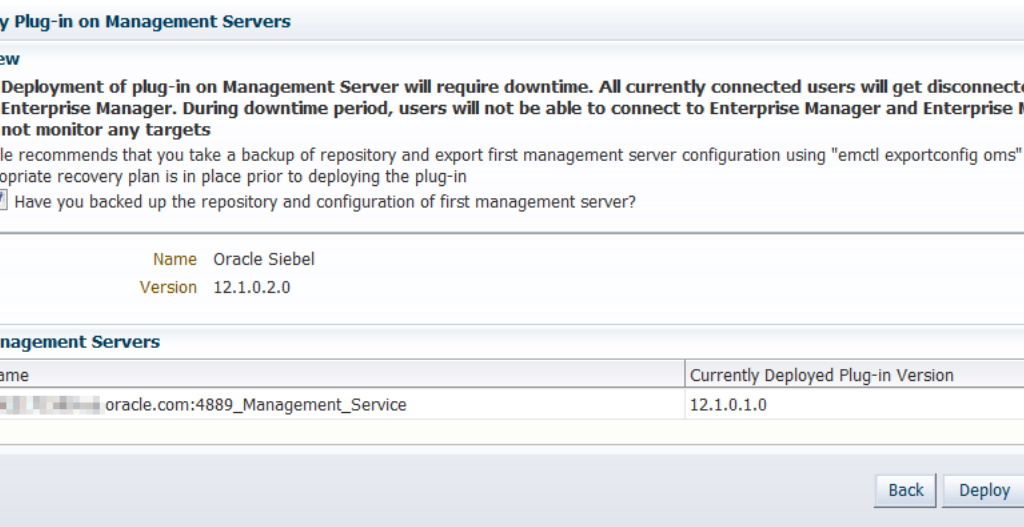
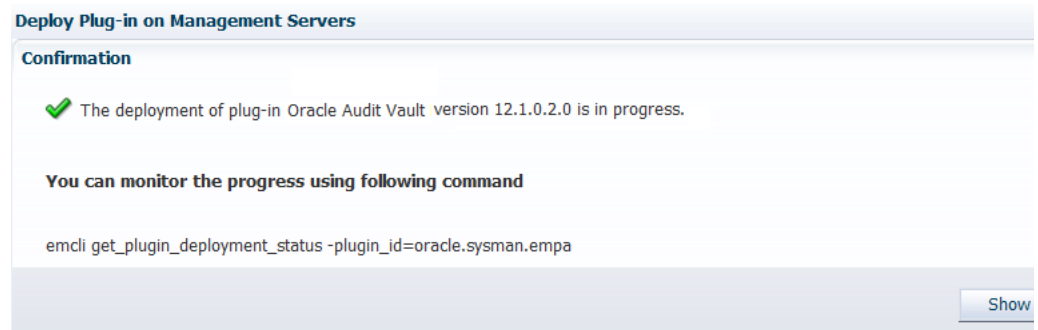


Figure 2–49 Deploy Confirmation Screen

The OMS will be bounced automatically, So it is better to use `$ emctl status oms -details` to check for the plug-in deployment status.

12. From the **Setup** menu, select **Extensibility**, then select **Plug-ins**.

The plug-in version on OMS is now 12.1.0.2.0, as shown in the **On Management Server** column.

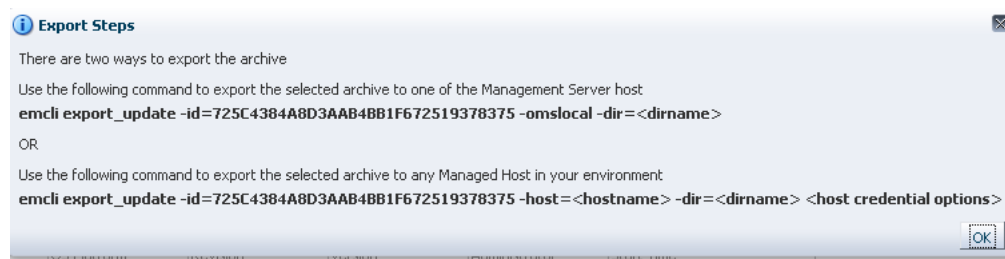
Figure 2–50 Plug-in Version

Name	Version			Manag Age
	Latest Available	Latest Downloaded	On Management Server	
▼ Applications				
Oracle Fusion Applications	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
Oracle Jdedwards EnterpriseOne	12.1.0.1.0 ⓘ			
Oracle Siebel	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
► Databases				
Oracle Fusion Middleware	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
► Servers, Storage and Network				
Exalogic Elastic Cloud Infrastructure	12.1.0.1.0	12.1.0.1.0	12.1.0.1.0	
Oracle Audit Vault	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	
Oracle Beacon	12.1.0.1.0	12.1.0.1.0	12.1.0.1.0	
Oracle Chargeback and Capacity Pl	12.1.0.2.0	12.1.0.2.0	12.1.0.2.0	

13. To deploy each updated plug-in on each Standby OMS, complete the following:

- a. Go to the Self Update page, click **Plug-in**, then select the required plug-in.
- b. From the **Actions** menu, select **Export**.

A pop-up window showing two possible export steps opens. Note the value of the `-id` parameter displayed in the pop-up window. You will need this value for the next step.

Figure 2-51 Export Steps

- c. Before proceeding with the export steps, log in to OMS Home (OMSHOME/bin) and run the sync command, as shown below:

```
./emcli sync
```

The "Synchronized successfully" message should be displayed.

Run the following EM CLI command on one of the primary site OMS servers:

```
emcli export_update -id=<update id> -deep -host=<standby OMS host>
-dir=<directory to export archives> <host credential options>
```

For example:

```
$ emcli export_update -id=725C4384A8D3AAB4BB1F672519378375 -deep
-host=adc1140458.us.oracle.com -dir=/scratch/aime/plugins -credential_
name=BDC -credential_owner=sysman
```

The command syntax contains the following options:

The `-id` option is taken from the pop up window.

The `-deep` option is required. In a multiple OMS setup, the request can be processed by any OMS. Therefore, the directory should be a valid path (ideally shared) for each OMS that can process the request.

The `-host` option identifies the target host to export the plug-in to.

The `-dir` option identifies the directory on the target host to export the plug-in to.

`<host credential options>` specifies the host credentials and can be one of the following:

`credential_set_name`: The set name of the preferred credential stored in the repository for the host target. For example, `HostCredsNormal` (the default unprivileged credential set) or `HostCredsPriv` (the privileged credential set).

`credential_name`: The name of a named credential stored in the repository. You must specify this option along with the `credential_owner` option.

`credential_owner`: The owner of a named credential stored in the repository. You must specify this option along with the `credential_name` option.

The command generates multiple zip files in the specified directory on the standby OMS host. The zip file with the name of the form *version_OMS_platform_revision.zip*, is the one to be used in the following steps. If you have multiple standby OMS hosts, copy this file to each host.

- d. Start the Standby Administration Server, if it is down, using the following command:

```
$ emctl start oms -admin_only
```

- e. Install the OMS archive on the First Standby OMS Oracle Home using the following command:

```
$ pluginia -archives path to plugin archive
```

- f. Configure the plug-in on the First Standby OMS Oracle Home using the following command:

```
pluginca -action deploy -isFirstOMS true -plugins plugin-list -oracleHome oms oracle home -middlewareHome wls middleware home
```

where *plugin-list* is the plug-in name in the format *plugin-id=plugin-version*.

- g. Copy the plug-in archive file to each Standby additional OMS.
- h. Run the following commands from each Standby additional OMS Oracle Home:

```
$ pluginia -archives path to plugin archive
```

```
$ pluginca -action deploy -isFirstOMS false -plugins plugin-list -oracleHome oms oracle home -middlewareHome wls middleware home
```

- i. This completes the plug-in deployment on Standby site. Validate the plug-ins by going to the Self Update page.

Select a plug-in and view its information. All OMS servers should be listed.

2.3.3 Deploying Plug-ins in Offline Mode on OMS

To deploy plug-ins in an offline mode, complete the following:

1. From the **Setup** menu, select **Extensibility**, then select **Self Update**.

Figure 2–52 Self Update Menu

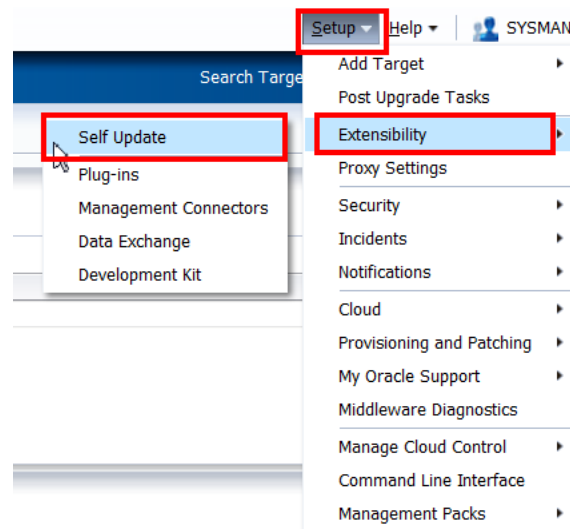


Figure 2–53 Self Update Page

Oracle Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update home allows automatic updates, a manual check can be made at any time.

Status

Connection Mode: **Offline** Last Download Time: 07-Mar-2012 04:58:44 PDT
 Most Recent Refresh Time: 21-Mar-2012 04:58:44 PDT Last Download Type: Plug-in
 Last Successful Refresh Time: N/A

Actions Open Check Updates Agent Software

Type	Available Updates	Downloaded Updates	Applied Updates	Description
Agent Software	0	0	1	Agent Software
Compliance Content	0	0	0	Compliance Content
Diagnostic Checks	0	0	0	Diagnostic Checks
EM Deployment Prerequisite Resources	0	0	0	EM Deployment Prerequisite Resources
Management Connector	0	0	1	Management Connector
Middleware Profiles and Gold Images	0	0	0	Middleware Profiles and Gold Images
Oracle Database Provisioning Profiles and Gold Images	0	0	0	Oracle Database Provisioning Profiles and Gold Images
Plug-in	0	8	8	Plug-in
Provisioning Bundle	0	0	0	Provisioning Bundle

2. Click **Check Updates**.

The following message appears

Figure 2–54 Check Updates in Offline Mode

Check Updates in Offline Mode

Use the following link to download the latest updates catalog
https://updates.oracle.com/Orion/Download/download_patch/p9348486_112000_Generic.zip

Once catalog is downloaded, it can be imported to Enterprise Manager in one of the following two ways:

Transfer the catalog to the Management Server host and run following command to import to Enterprise Manager
emcli import_update_catalog -file=<catalog file name with full path> -omslocal

Transfer the catalog to any Managed Host in your environment and run following command to import to Enterprise Manager
emcli import_update_catalog -file=<catalog file name with full path> -host=<host name> <host credential options>

You must download the latest updates catalog using the link provided in the message.

https://updates.oracle.com/Orion/Download/download_patch/p9348486_112000_Generic.zip

Note: Do not unzip the file.

Make sure that you have this ZIP file on the OMS host. The following examples use a directory called "plugupdate " on the OMS host to store this catalog ZIP file.

Figure 2–55 plugupdate Directory

```
[asheorangelc@lmt /scratch]$ cd pluginupdate/
[asheorangelc@lmt pluginupdate]$ ls
p9348486_112000_Generic.zip
[asheorangelc@lmt pluginupdate]$ ls -ltr
total 40
-rw-r--r-- 1 asheoran dba 40288 Mar 21 14:12 p9348486_112000_Generic.zip
[asheorangelc@lmt pluginupdate]$
```

3. Go to the <OMS home>/bin directory and log in into the EM CLI by running the following command as the install user:

```
./emcli login -username=sysman
```

Figure 2–56 Login Screen

```
[asheorangelc@lmt bin]$ pwd
/scratch/mwhome/oms/bin
[asheorangelc@lmt bin]$ ./emcli login -username=sysman
Enter password

Login successful
[asheorangelc@lmt bin]$
```

4. Execute `emcli synchronize` (mandatory) using the following command, as shown in the figure below:

```
$OMS_OracleHome/emcli sync
```

Figure 2–57 Synchronizing

```
[asheorangelc@lmt bin]$ ./emcli sync
Synchronized successfully
[asheorangelc@lmt bin]$
```

5. Import the catalog file by executing the following command:

```
$OMS_OracleHome/emcli import_update_catalog -omslocal -file=<absolute location of the zip file>
```

For example:

```
$OMS_OracleHome/emcli import_update_catalog -omslocal
-file=/scratch/pluginupdate/p9348486_112000_Generic.zip
```

Note: Run the above command on all of the other additional OMS servers incase of an multi-OMS environment.

Figure 2–58 Importing the Catalog File

```
[ashwaram@olc91mvt bin]$
[ashwaram@olc91mvt bin]$ ./emcli import_update_catalog -omslocal -f
/pluginupdate/p9348486_112000_Generic.zip
Processing catalog for Provisioning Bundle
Processing update: Provisioning Bundle - Update for Enterprise Manage
lability Deployment Procedures
Processing catalog for Plug-in
Processing update: Plug-in - Oracle Exadata plugin provides comprehe
ment for Oracle Exadata and related targets such as Database Machine
Processing update: Plug-in - Oracle Exadata plugin provides comprehe
ment for Oracle Exadata and related targets such as Database Machine
Processing update: Plug-in - Oracle Exadata plugin provides comprehe
ment for Oracle Exadata and related targets such as Database Machine
Processing update: Plug-in - Plug-in to enable Oracle VM virtualizati
nt capabilities in Oracle Enterprise Manager.
Processing update: Plug-in - Plug-in to enable cloud self service fra
portal in Oracle Enterprise Manager.
Processing update: Plug-in - Plug-in to enable cloud self service fra
portal in Oracle Enterprise Manager.
Processing update: Plug-in - Oracle MOS plugin provides support for M
pport features such as Knowledge, Service Requests and Patching and U
```

Figure 2–59 Importing the Catalog File (cont'd)

```
Processing update: Management Connector -
Microsoft SCOM preR2 Connector - 12.1.0.2.0

Processing update: Management Connector - BMC Remedy Change Manage
- 12.1.0.1.0
Processing update: Management Connector -
HP Service Manager 7.1 Connector - 12.1.0.2.0

Processing update: Management Connector -
HP Service Manager 7.0 Connector - 12.1.0.2.0

Processing update: Management Connector -
HP Operations Manager UNIX Connector - 12.1.0.2.0

Processing update: Management Connector -
CA Service Desk Connector - 12.1.0.2.0

Processing catalog for Informational
Processing update: Informational - Oracle Enterprise Manager Cloud C
e now available for Apple iPhone

Operation completed successfully. Self Update catalog has been uploa
prise Manager. Please use the Self Update Home to view and manage up
[ashwaram@olc91mvt bin]$
```

6. Return to the Self Update page and refresh the page.
You will see the Available Updates count updated.

Figure 2–60 Count of New Updates

ORACLE® Enterprise Manager Cloud Control 12c

Enterprise ▾ Targets ▾ Favorites ▾ History ▾

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update home allows you to check for updates automatically, or manually at any time.

Status

Connection Mode: **Offline** Last Download Time: 07-Mar-2012 14:20:52 PDT
 Most Recent Refresh Time: **✓** 21-Mar-2012 14:20:52 PDT Last Download Type: Plug-in

Actions ▾ Open Check Updates Agent Software

Type	Available Updates	Downloaded Updates	Applied Updates	Description
Agent Software	6	0	1	Agent Software
Compliance Content	0	0	0	Compliance Content
Diagnostic Checks	0	0	0	Diagnostic Checks
EM Deployment Prerequisite Resources	0	0	0	EM Deployment Prerequisite Resources
Management Connector	8	0	1	Management Connector
Middleware Profiles and Gold Images	0	0	0	Middleware Profiles and Gold Images
Oracle Database Provisioning Profiles and Gold Images	0	0	0	Oracle Database Provisioning Profiles and Gold Images
Plug-in	28	8	8	Plug-in
Provisioning Bundle	1	0	0	Provisioning Bundle

7. Select the Plug-in folder to see a list of the available new plug-ins.

Figure 2–61 List of Available New Plug-ins

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

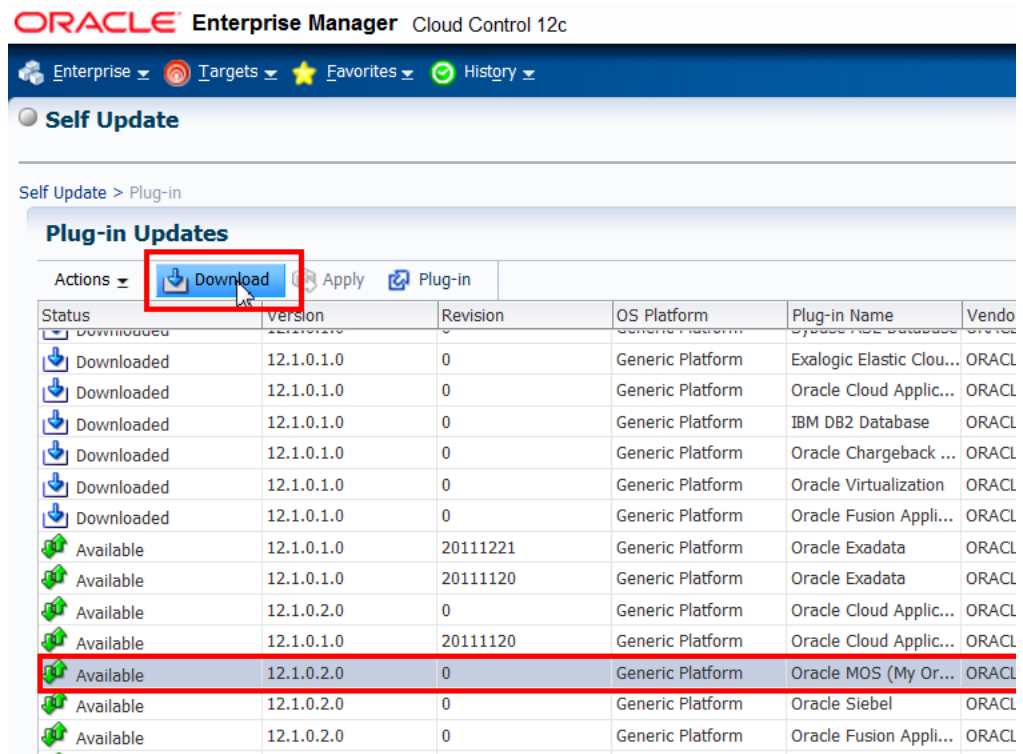
Self Update > Plug-in

Plug-in Updates

Actions Download Apply Plug-in

Status	Version	Revision	OS Platform	Plug-in Name	Vendor
Downloaded	12.1.0.1.0	0	Generic Platform	Exalogic Elastic Clou...	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Cloud Applic...	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	IBM DB2 Database	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Chargeback ...	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Virtualization	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Fusion Appli...	ORACL
Available	12.1.0.1.0	20111221	Generic Platform	Oracle Exadata	ORACL
Available	12.1.0.1.0	20111120	Generic Platform	Oracle Exadata	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Cloud Applic...	ORACL
Available	12.1.0.1.0	20111120	Generic Platform	Oracle Cloud Applic...	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle MOS (My Or...	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Siebel	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Fusion Appli...	ORACL

8. Select the plug-in and click **Download**.

Figure 2–62 Plug-in Download**Figure 2–63 Download Steps in Offline Mode Message**

Download Steps in Offline Mode

Use the following URL(s) on a server with connection to My Oracle Support to download and follow the instructions

https://updates.oracle.com/Orion/Services/download/p13789099_112000_Generic.zip?aru=14624371&patch_file=p13789099_112000_Generic.zip

Once update is downloaded, it can be imported into Enterprise Manager in one of the following two ways:

Transfer the downloaded file to the Management Server host and run following command to import into Enterprise Manager

```
emcli import_update -omslocal -file=p13789099_112000_Generic.zip
```

Transfer the downloaded file to any Managed Host in your environment and run following command to import into Enterprise Manager

```
emcli import_update -host=<hostname> -file=p13789099_112000_Generic.zip <host credential options>
```

- Follow the instructions provided in the message.

Download the update file for the selected plug-in and make sure that it is on the OMS host.

Note: Do not unzip the file. You must download the update file for all the plug-ins separately, one after the other.

- Go to the <OMS home>/bin directory and import the update file you downloaded in the previous step by executing the following command:

```
./emcli import_update -omslocal -file=<absolute location of the zip file>
```

For example:

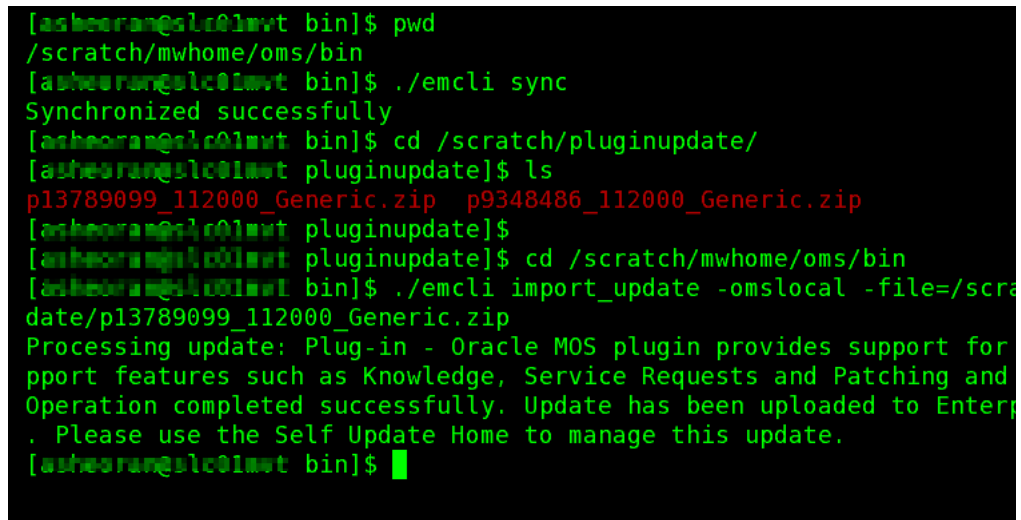
```
./emcli import_update -omslocal -file=/scratch/pluginupdate/p13789099_112000_
Generic.zip
```

Note: If your session has expired, you might be prompted to log in again. You can do this using the following command:

```
$ORACLE_HOME/bin/emcli login -username=sysman
```

This command will make the update show up in "Downloaded" state in the Self Update Home page and can be "Applied" from the user interface.

Figure 2–64 Import Update



```
[asheorangelc01mwt bin]$ pwd
/scratch/mwhome/oms/bin
[asheorangelc01mwt bin]$ ./emcli sync
Synchronized successfully
[asheorangelc01mwt bin]$ cd /scratch/pluginupdate/
[asheorangelc01mwt pluginupdate]$ ls
p13789099_112000_Generic.zip  p9348486_112000_Generic.zip
[asheorangelc01mwt pluginupdate]$
[asheorangelc01mwt pluginupdate]$ cd /scratch/mwhome/oms/bin
[asheorangelc01mwt bin]$ ./emcli import_update -omslocal -file=/scratch/
pluginupdate/p13789099_112000_Generic.zip
Processing update: Plug-in - Oracle MOS plugin provides support for
pport features such as Knowledge, Service Requests and Patching and
Operation completed successfully. Update has been uploaded to Enterp
. Please use the Self Update Home to manage this update.
[asheorangelc01mwt bin]$ █
```

11. Select Plug-in on the Self Update page.

You will see the status has changed for the MOS plug-in from *Available* to *Downloaded*.

Figure 2–65 Plug-in Updates

Self Update > Plug-in

Plug-in Updates

Actions ▾ Download Apply Plug-in

Status	Version	Revision	OS Platform	Plug-in Name	Vendo
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Cloud Applic...	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	IBM DB2 Database	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Chargeback ...	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Virtualization	ORACL
Downloaded	12.1.0.1.0	0	Generic Platform	Oracle Fusion Appli...	ORACL
Available	12.1.0.1.0	20111221	Generic Platform	Oracle Exadata	ORACL
Available	12.1.0.1.0	20111120	Generic Platform	Oracle Exadata	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Cloud Applic...	ORACL
Available	12.1.0.1.0	20111120	Generic Platform	Oracle Cloud Applic...	ORACL
Downloaded	12.1.0.2.0	0	Generic Platform	Oracle MOS (My Or...	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Siebel	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Fusion Appli...	ORACL
Available	12.1.0.1.0	20111120	Generic Platform	Oracle Fusion Appli...	ORACL
Available	12.1.0.2.0	0	Generic Platform	Oracle Chargeback ...	ORACL

Note: You must download the update files for the remaining plug-ins one after the other (repeat steps 9 to 12 for each plug-in update) and then run the command to change the status from *Available* to *Downloaded*.

12. Select the plug-in and click **Apply**.
13. Repeat steps 4 to 8 in [Section 2.3.2, "Deploying Plug-ins in Online Mode on OMS"](#) to deploy the plug-in on OMS

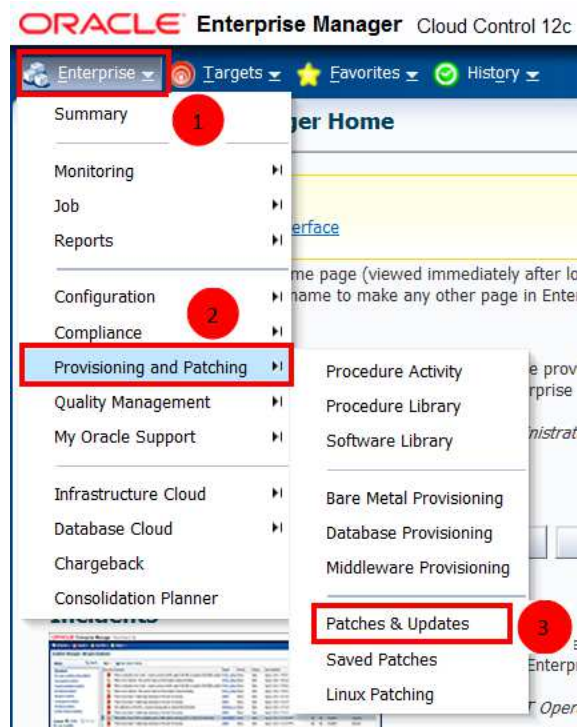
2.4 Applying Bundle Patch 1 on Management Agents

This following section describes in detail the steps required to apply BP1 on Management Agents.

1. Ensure that the OMS patches are applied before starting to patch the Management Agents.
2. Ensure that all plug-ins have been upgraded to the 12.1.0.2 releases.

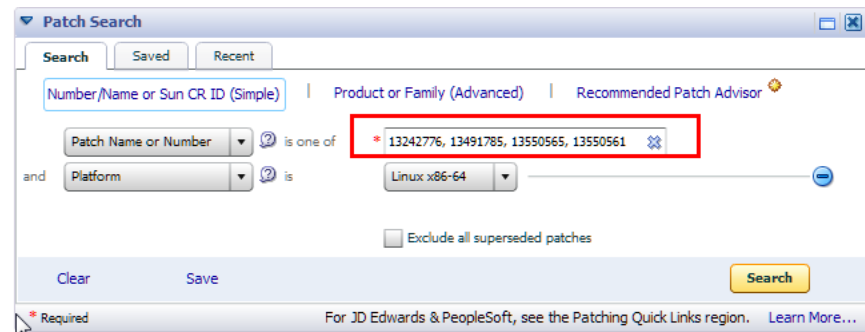
Note: You can also refer to My Oracle Support note 1359221.1 for details on how to apply patches on 12c Management Agents using the Cloud Control console.

3. From the **Enterprise** Menu, select **Provisioning and Patching**, then select **Patches & Updates** as shown in the following image.

Figure 2–66 Patches & Updates Menu

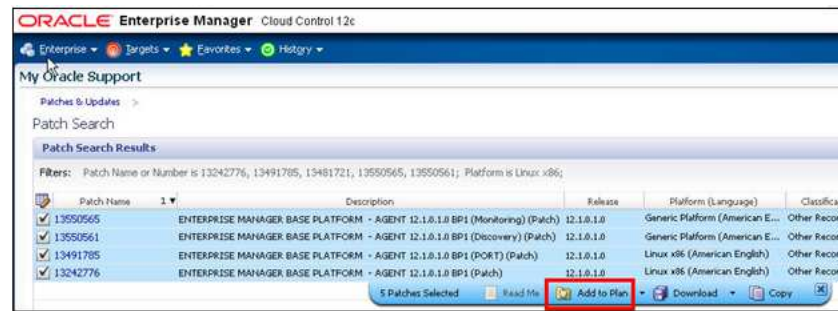
4. In the Patch Search Region of the Patches & Updates page, enter the Patch numbers 13242776, 13491785, 13550565, and 13550561, choose the platform, then click **Search**.

If Enterprise Manager is in offline patching mode, you will need to specify one patch at a time in the search field rather than a comma separated list (for example, 13242776 individually rather than all in a list 13242776, 13491785, 13550565, 13550561).

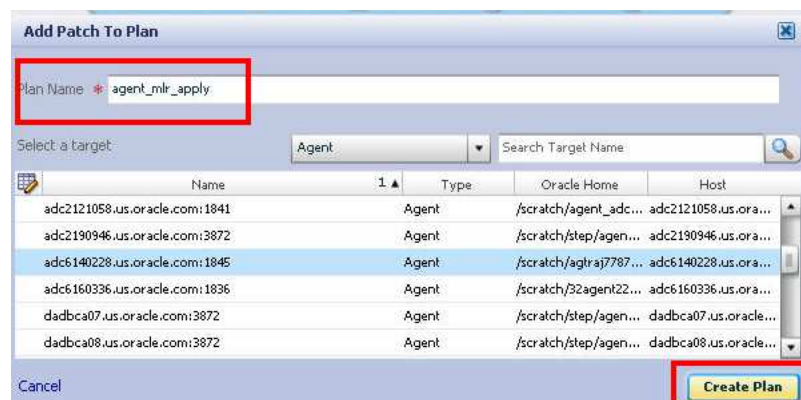
Figure 2–67 Patch Search

5. Select all the patches, click **Add to Plan**, then select **Add to New**, as shown below.

Based on the connectivity setting to My Oracle Support, the patch will be either searched directly from My Oracle Support or from the pre-staged Software Library list.

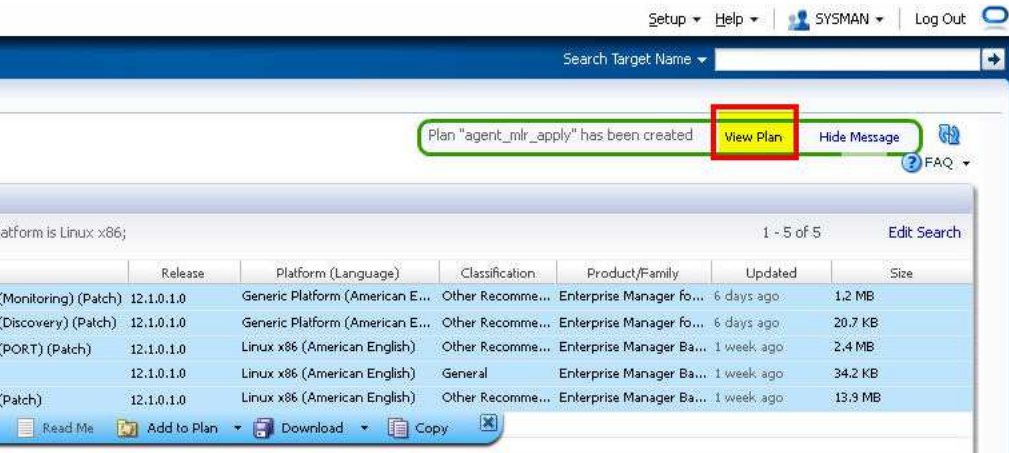
Figure 2–68 Add to Plan

6. Specify a name for the plan in the **Plan Name** field.
7. Set the target type to "Agent".
8. Click **Search** and select the agents you want to patch.
You can also search for agents by specifying the Group name, if you have any created.
9. Click **Create Plan**.

Figure 2–69 Add Patch to Plan

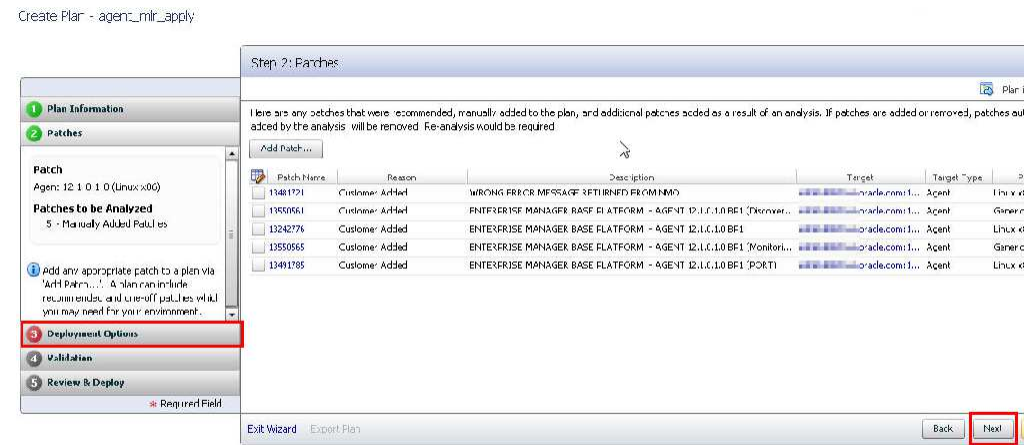
10. Click **View Plan** at the top of the page to view the newly created patch plan.

Figure 2-70 View Plan



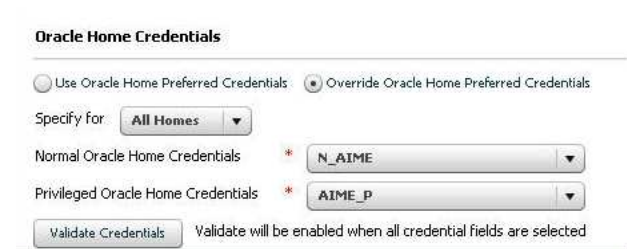
11. Click Next or click Deployment Options, as shown below.

Figure 2-71 Deployment Options



12. From the Deployment Options, specify the credentials of the target Management Agents, as shown below.

Figure 2-72 Oracle Home Credentials



If Oracle Home Preferred Credentials are not set, select **Overwrite Oracle Home Preferred Credentials** for the Agent Oracle Home and use Normal Oracle Home Credentials/Privilege Oracle Home Credentials.

Note: If you do not have direct access to 'ORACLE' credentials and have to setup Privilege credentials as 'root', configure Enterprise Manager to use SUDO or PBRUN.

Follow the instructions provided in the chapter "Setting up Credentials in the Lifecycle Management Guide", which can be found at the following location:

http://docs.oracle.com/cd/E24628_01/em.121/e27046/infrastructure_setup.htm#BABGGJB

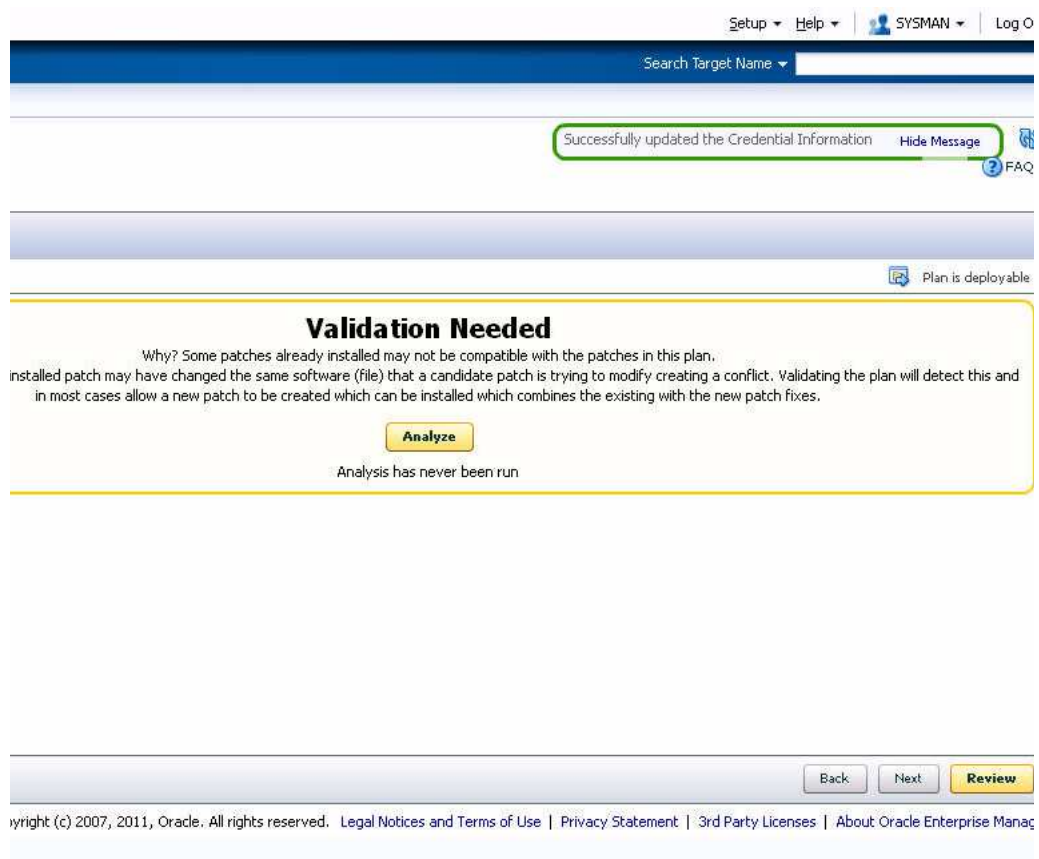
13. Click **Next** or **Validation** on the left-hand panel, as shown below.

Figure 2–73 Validation



14. Click **Analyze** on the Validation page as shown below.

The analysis process runs prerequisite checks and also checks for patch conflicts. The analysis process takes close to 10 minutes to complete.

Figure 2–74 Validation Needed

15. Click **Next** on successful completion of the analysis.

16. Click **Deploy** on the Review page.

Figure 2–75 Ready for Deployment

Setup Help SYSMAN Log Out

Search Target Name

Successfully updated the Credential Information Hide Message

FAQ

Plan is deployable

Ready for Deployment

Validation is completed. All patches listed below can be applied without conflict.

[Show Detailed Results](#)

[Re-Analyze](#)

Plan last validated Today

Name agent_mlr_apply

Created Date Not Set [Edit Date](#)

Description

Created By SYSMAN

What In Place Patching - Deploy (Shut down, apply patches, startup, apply SQL (if needed), downtime required)

Credentials Override Preferred Credentials (Agent)

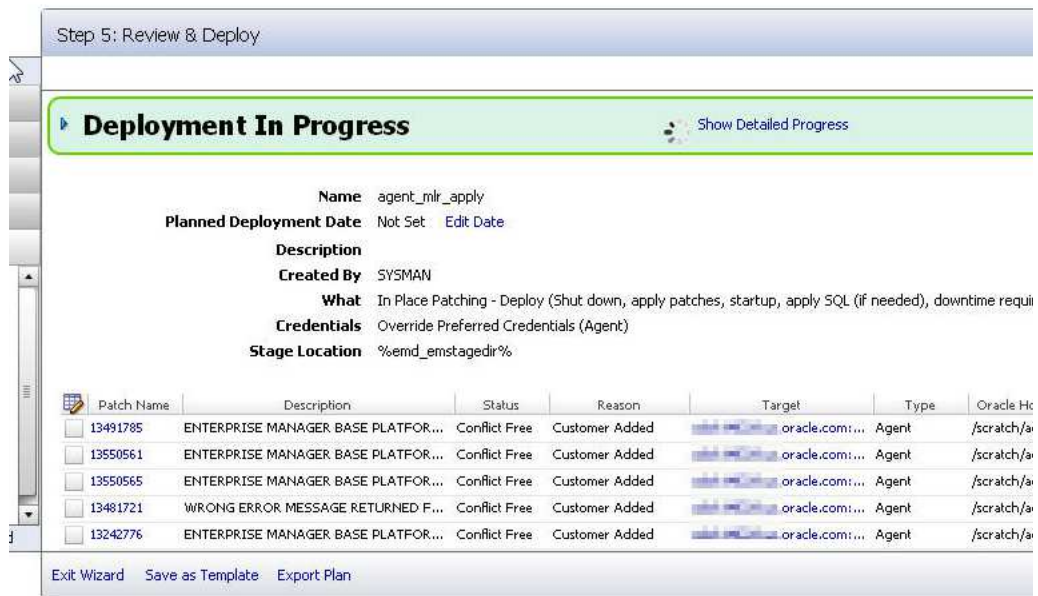
Location %emd_emstagedir%

Description	Status	Reason	Target	Type	Oracle Home	Host
Export Plan						

[Back](#) [Next](#) [Deploy](#)

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This process takes time to complete (based on the number of agents being patched), but it can be tracked using the **Show Detailed Progress** link, as shown below.

Figure 2–76 Show Detailed Progress

2.5 Upgrading All Downloaded Plug-ins to the 12.1.0.2 Releases on Management Agent

This section explains the steps involved in upgrading all the downloaded plug-ins to the 12.1.0.2 releases on a Management Agent. The following topics are covered:

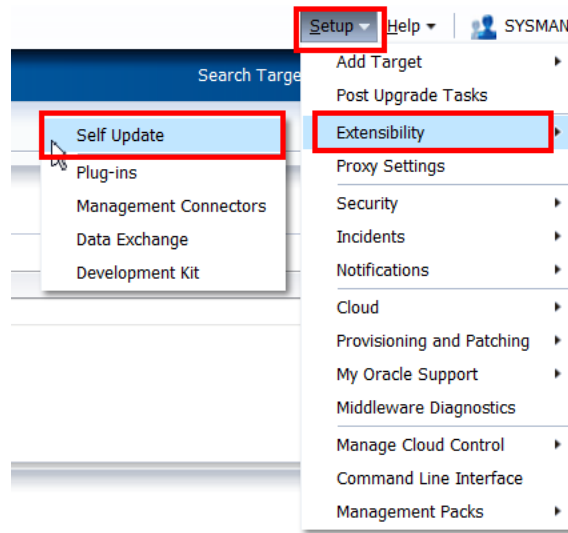
- [Deploying a Plug-in in Online Mode on a Management Agent](#)
- [Deploying a Plug-in in Offline Mode on a Management Agent](#)

2.5.1 Deploying a Plug-in in Online Mode on a Management Agent

Next you will select plug-ins that were already upgraded on Oracle Management Service and upgrade the plug-ins on existing Management Agents. To deploy a plug-in in online mode on a Management Agent, complete the following:

1. From the **Setup** menu, select **Extensibility**, then select **Self Update**.

Figure 2-77 Self Update Menu



2. Select **Plug-in** and from the **Actions** menu, select **Open**.

Figure 2-78 Self Update

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update home allows manual check can be made at any time.

Status

Connection Mode **Online** Last Download Time Mar 2, 2012
Most Recent Refresh Time **✓** Mar 7, 2012 12:09:42 PM PST Last Download Type Plug-in

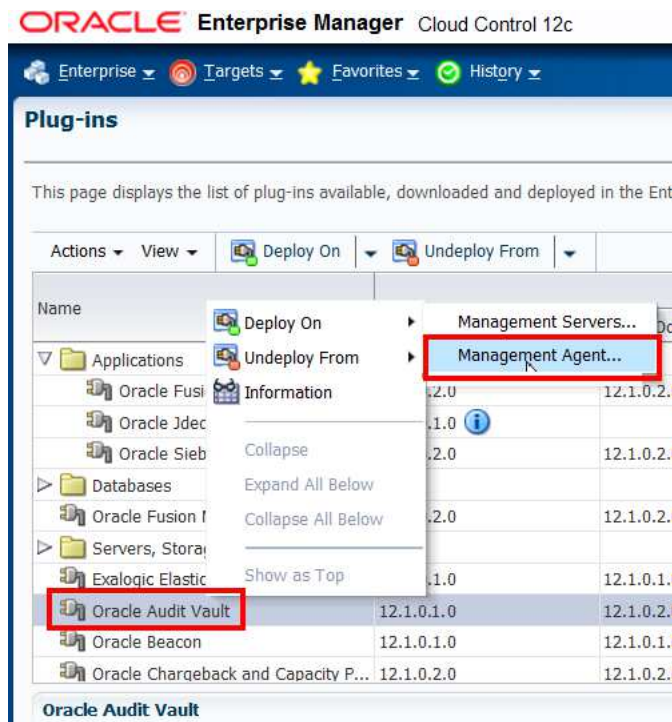
Actions Open Check Updates Agent Software

Type	Available Updates	Downloaded Updates	Applied Updates	Description
Agent Software	7	0	0	Agent softw
Compliance Content	0	0	0	Compliance
Diagnostic Checks	0	0	0	Target side
EM Deployment Prerequisite Resources	0	0	0	EM Deployrn
Exadata Configuration Template	0	0	0	Configuratic
Management Connector	8	0	1	Managemer
Middleware Profiles and Gold Images	0	0	0	A collection
Monitoring Templates	0	0	0	Monitoring
Oracle Database Provisioning Profiles an	0	0	0	A collection
Oracle Virtual Product Mapping	0	0	0	Pre-defined
Oracle VM Templates and Oracle Virtual	0	0	0	Preinstalled
Plug-in	13	0	13	Plug-in exte
Provisioning Bundle	0	0	1	Provisioning patching of

3. Click the **Plug-in** link.

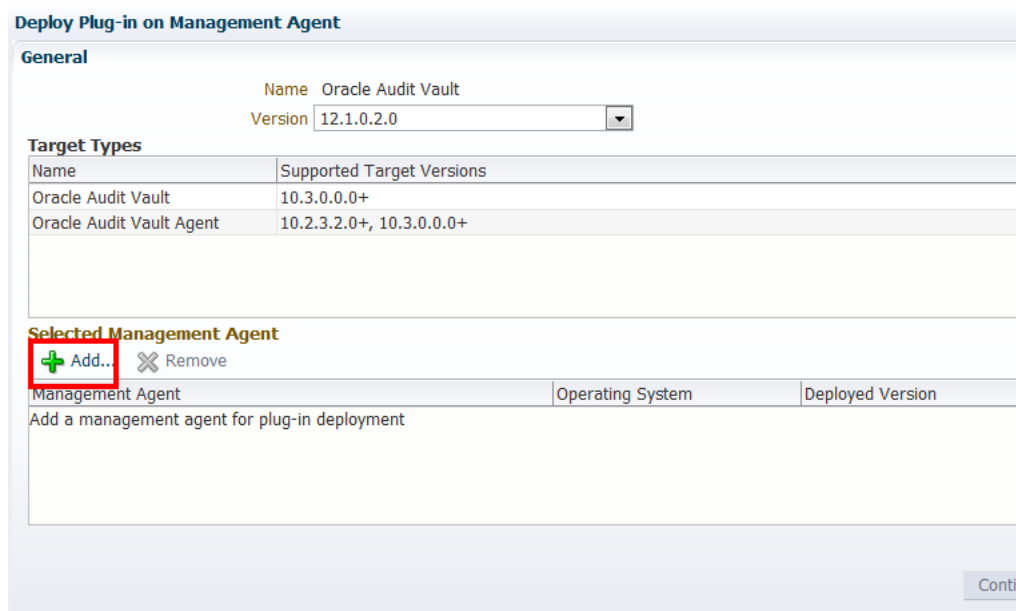
- Right-click the plug-in, select **Deploy On**, then select **Management Agent**, as shown below.

Figure 2–79 Deploy On Management Agent



- Click **Add** to add the Management Agent where the plug-in will be deployed, as shown below.

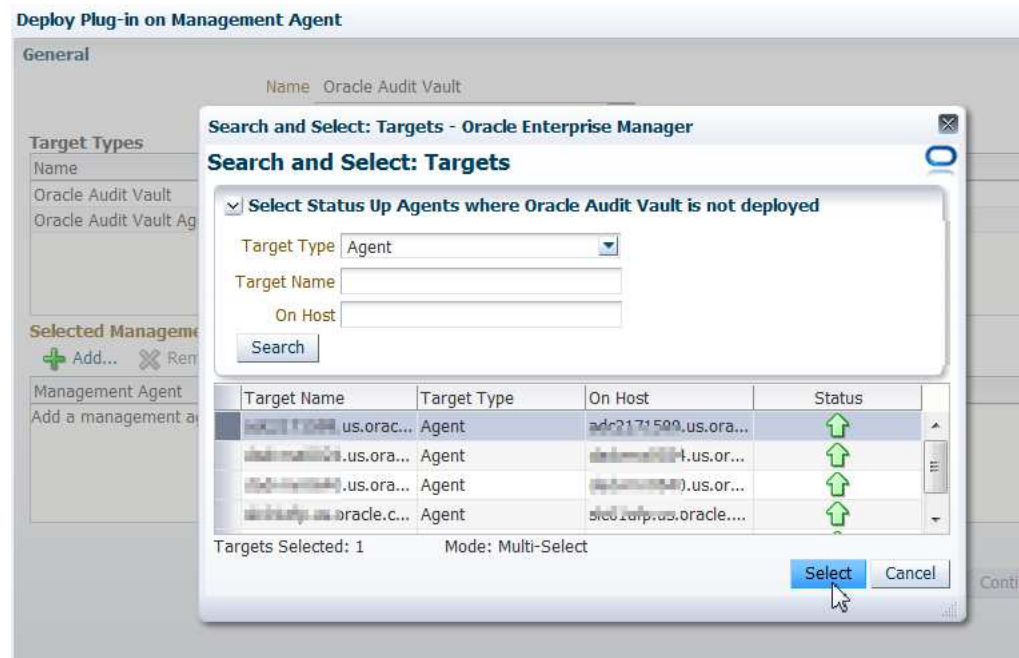
Figure 2–80 Add the Management Agent



6. Choose the required agent and click **Select**.

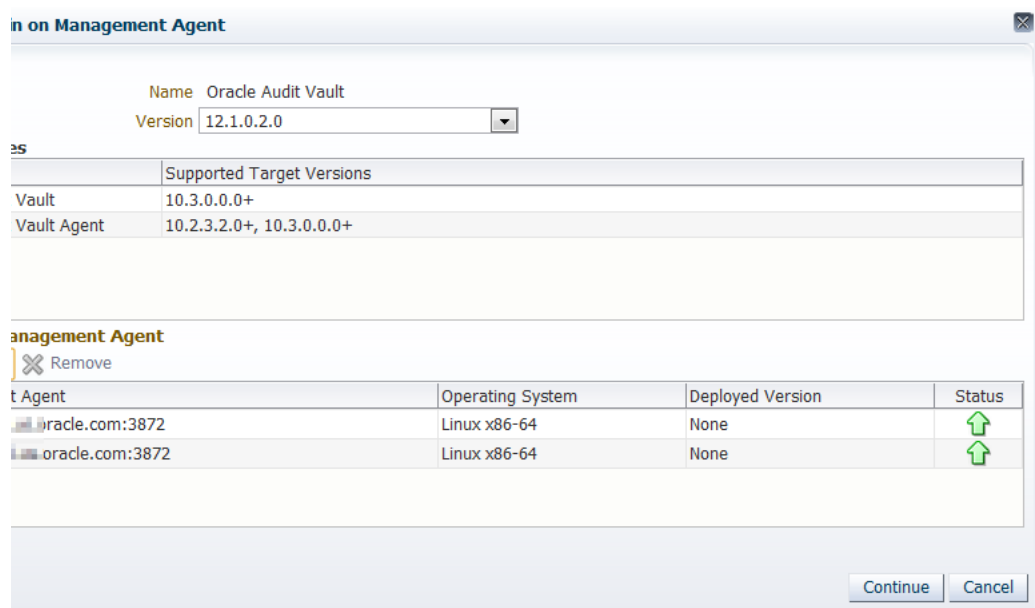
You can select multiple agents in a single window.

Figure 2–81 Search and Select: Targets

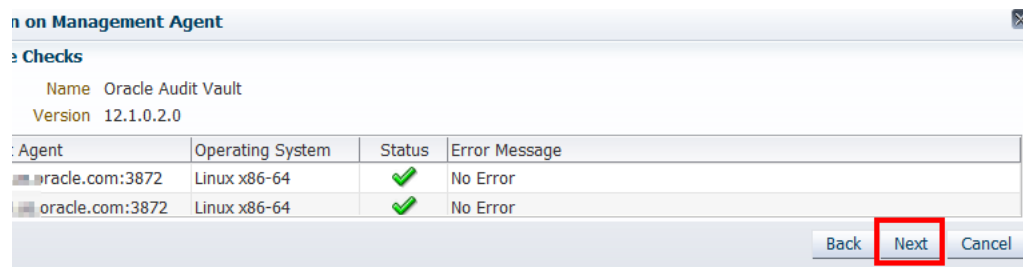


7. Click **Continue**, as shown below.

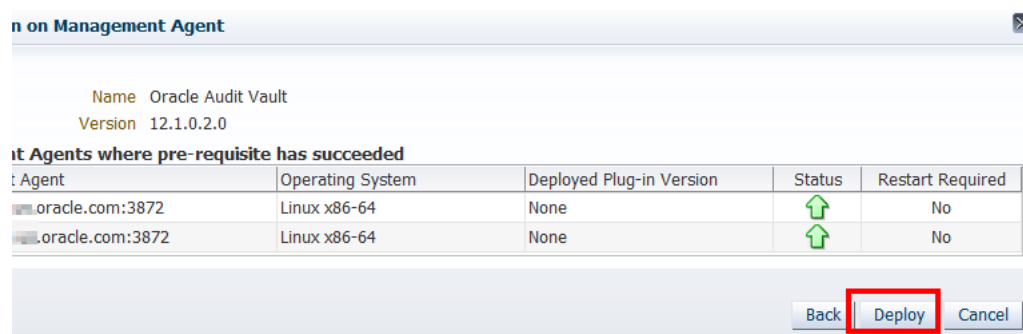
Figure 2–82 Click Continue



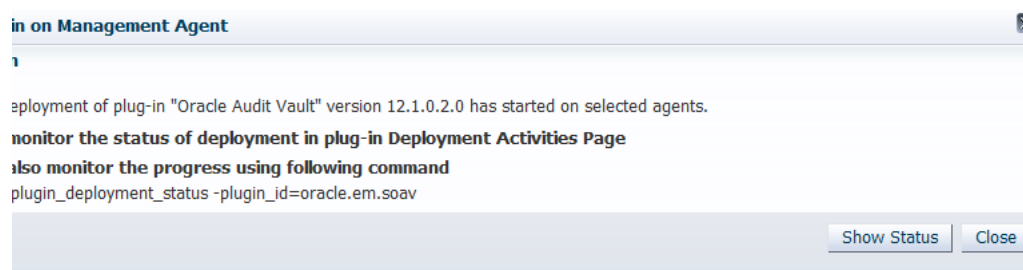
8. Run the plug-in upgrade prerequisites checks and click **Next**, as shown below.

Figure 2–83 Click Next

- Click **Deploy** on the Review page to deploy the plug-in on the Agents.

Figure 2–84 Click Deploy

You can monitor the plug-in deployment by clicking **Show Status**.

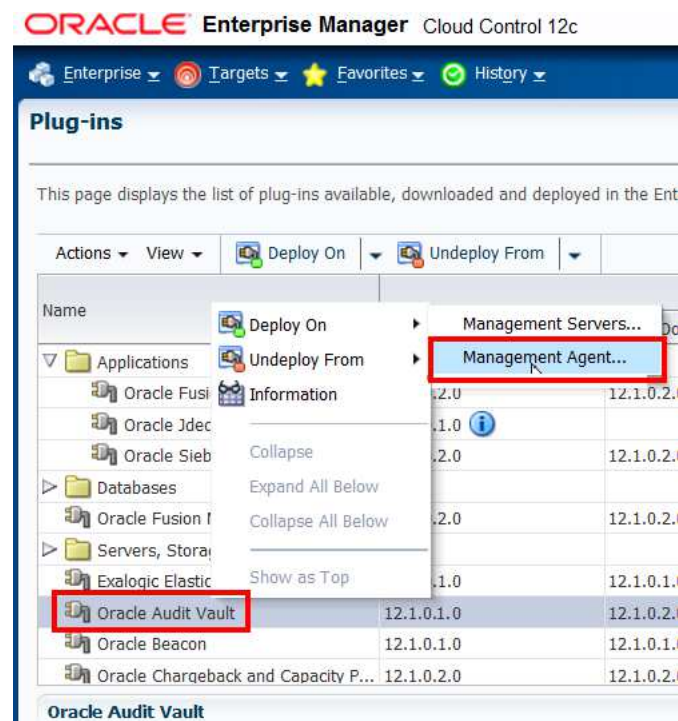
Figure 2–85 Show Status

Make sure that the plug-ins are deployed successfully before moving forward.

2.5.2 Deploying a Plug-in in Offline Mode on a Management Agent

As plug-ins are readily available from the plug-in deployment to OMS, you can directly deploy the plug-ins to the agents. To deploy a plug-in in offline mode on a management agent, complete the following:

- From the **Setup** menu, select **Extensibility**, then select **Plug-ins**
- Right-click the plug-in, select **Deploy On**, then select **Management Agent** to deploy the plug-in on the Management Agent.

Figure 2–86 Deploy On Management Agent

3. Complete the remaining steps as described in [Section 2.5.1, "Deploying a Plug-in in Online Mode on a Management Agent"](#).

2.6 Upgrading BI Publisher Reports Shipped with the Plug-ins

This section provides detailed information on the steps needed to upgrade the Oracle Business Intelligence Publisher (BI Publisher) reports that shipped with the plug-ins. However, you should only run these steps if BI Publisher was previously installed and configured to work with Oracle Enterprise Manager Cloud Control 12c.

If BI Publisher is not installed and configured, this step will occur automatically when BI Publisher is configured at a later time.

To upgrade the BI Publisher reports, complete the following:

1. Start the BI Publisher Managed Server named "BIP".
2. Navigate to <MIDDLEWARE_HOME>/oms/bin
3. Run the following commands at the command line of the account that owns the Middleware Home:

```
emcli login -username=sysman
```

Enter the SYSMAN password at the prompt (the prompt will not echo).

```
emcli sync
```

```
emcli deploy_bipublisher_reports -force
```

It is very important that you use the "-force" option, otherwise the reports will not be updated.

You should receive confirmation of success. The message, which will be in your native language, will translate to the following in English:

The Enterprise Manager Oracle-provided Reports have been deployed to the Enterprise Manager Shared folder "Enterprise Manager Cloud Control" on the previously registered BI Publisher "http[s]://{biphost}:{biport}/xmlpserver".

2.7 Upgrading ADP and JVMD (Optional)

This section provide detailed instructions on upgrading Application Dependency and Performance (ADP) and JVM Diagnostics (JVMD). The instructions provided are valid for the following conditions only:

- You already have ADP or JVMD installed.
- You have updated both Oracle Management Service and Management Agent on the target servers to the 12.1.0.2 release of the Oracle Fusion Middleware Plug-in.

Note: The following instructions supersede any other instructions on ADP or JVMD patching contained in the OMS Patch (13242773) README document.

2.7.1 Upgrading Application Dependency and Performance

To upgrade ADP, complete the following:

1. Unzip the `ADPManager.zip` archive, which is in the following location:

```
$MIDDLEWARE_HOME/plugins/oracle.sysman.emas.oms.plugin_12.1.0.2.0/archives/ocamm/
```

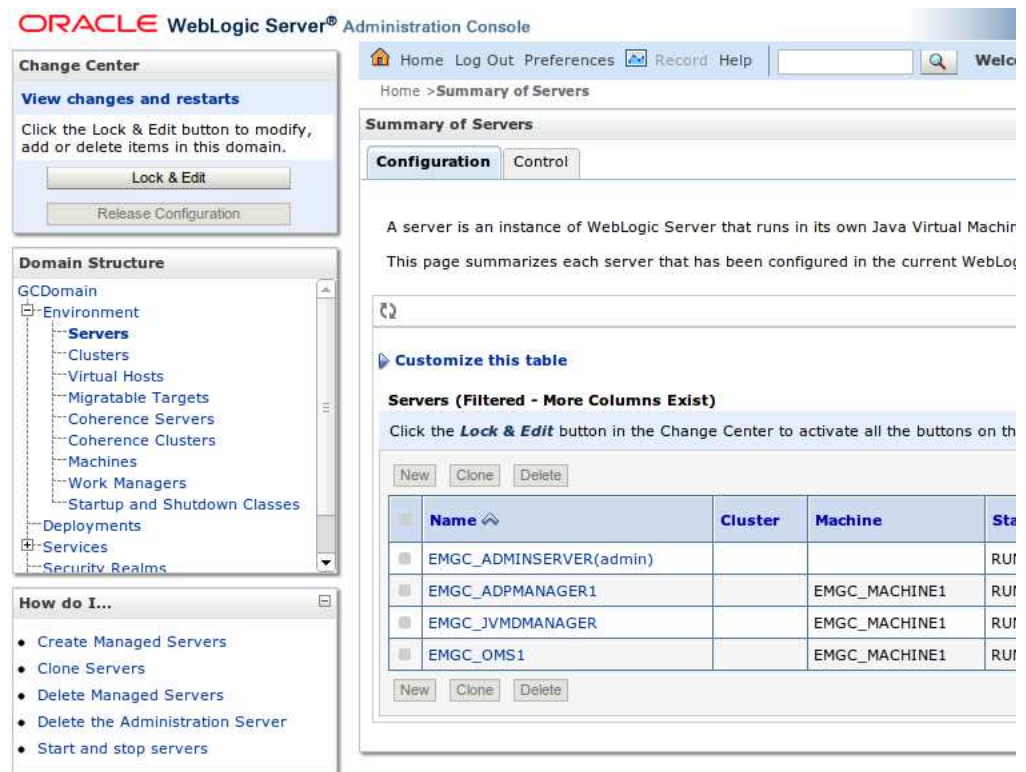
This will create a folder called `ADPManager.ear` within the same directory.

2. Log in to the Oracle WebLogic Server Administration Console of the EMGC Domain and click **Servers**.
3. Locate all deployed ADP Managers.

These will be managed servers that contain "EMGC_ADPMANAGER" in the server name. For example, "EMGC_ADPMANAGER1". Perform the steps below for each ADP Manager. For illustration purposes, the server name "EMGC_ADPMANAGER1" is used.

4. Shut down EMGC_ADPMANAGER1 using the Oracle WebLogic Server Administration Console.

Figure 2–87 Oracle WebLogic Server Administration Console



5. Use the `mv` command to rename the existing `ADPManager.ear` folder in the `EMGC_ADPMANAGER1` directory to `ADPManager.ear_12cc01978`:

```
mv $MIDDLEWARE_HOME/gc_inst/user_projects/domains/GCDomain/EMGC_
ADPMANAGER1/ADPManager.ear
$MIDDLEWARE_HOME/gc_inst/user_projects/domains/GCDomain/EMGC_
ADPMANAGER1/ADPManager.ear_12cc01978
```

6. Use the `mv` command to move the `ADPManager.ear` folder you created to `EMGC_ADPMANAGER1`:

```
mv $MIDDLEWARE_HOME/plugins/oracle.sysman.emas.oms.plugin_
12.1.0.2.0/archives/ocamm/ADPManager.ear
$MIDDLEWARE_HOME/gc_inst/user_projects/domains/GCDomain/EMGC_ADPMANAGER1/
```

7. Change directory to the config directory under the `ADPManager.ear_12cc01978` folder using the following command:

```
cd $MIDDLEWARE_HOME/gc_inst/user_projects/domains/GCDomain/EMGC_
ADPMANAGER1/ADPManager.ear_12cc01978/ADPManager.war/config/
```

8. Copy the `Acsera.properties` file as shown in the following command:

Note: If you have previously installed but never started the ADP manager, then the listed configuration files will not exist. In this case, you can safely skip steps 8 and 9.

```
cp -f configuration.xml Acsera.properties key
$MIDDLEWARE_HOME/gc_inst/user_projects/domains/GCDomain/EMGC_
```

ADPMANAGER1/ADPManager.ear/ADPManager.war/config/

9. Add the following properties at the end of the `Acsera.properties` files you just copied:

```
JMXContainer.DisableComputeClassPaths = true
DeployerClient.CoreJAgentJars=lib/bcel.jar;
lib/com.oracle.diagnostics.instrumentor_1.8.0.0-try-03.jar; lib/jManagement
Agent1.5.jar
DeployerClient.WLDFJar=com.oracle.diagnostics.instrumentor_1.8.0.0-try-03.jar
```

10. Start ADP Manager using the Oracle WebLogic Server Administration Console.
11. Redeploy all ADP Agents on the previously configured target servers.

Note that you will essentially redeploy the Management Agents on top of the original Management Agents. For instructions, see the following:

http://docs.oracle.com/cd/E24628_01/install.121/e22624/adp_installation.htm#CJHFFADD

12. Restart the target servers.

2.7.2 Upgrading JVM Diagnostics

Note: Before you begin upgrading JVM Diagnostics, ensure that you delete the existing JVM pool targets. To do so, log in to Enterprise Manager Cloud Console, and from **Targets** menu, select **Middleware**. On the Middleware page, select all the targets of type **Java Virtual Machine Pool** one by one, and click **Remove**.

To upgrade JVMD, complete the following:

1. Unzip the `jvmd.zip` archive, which is in the following location:

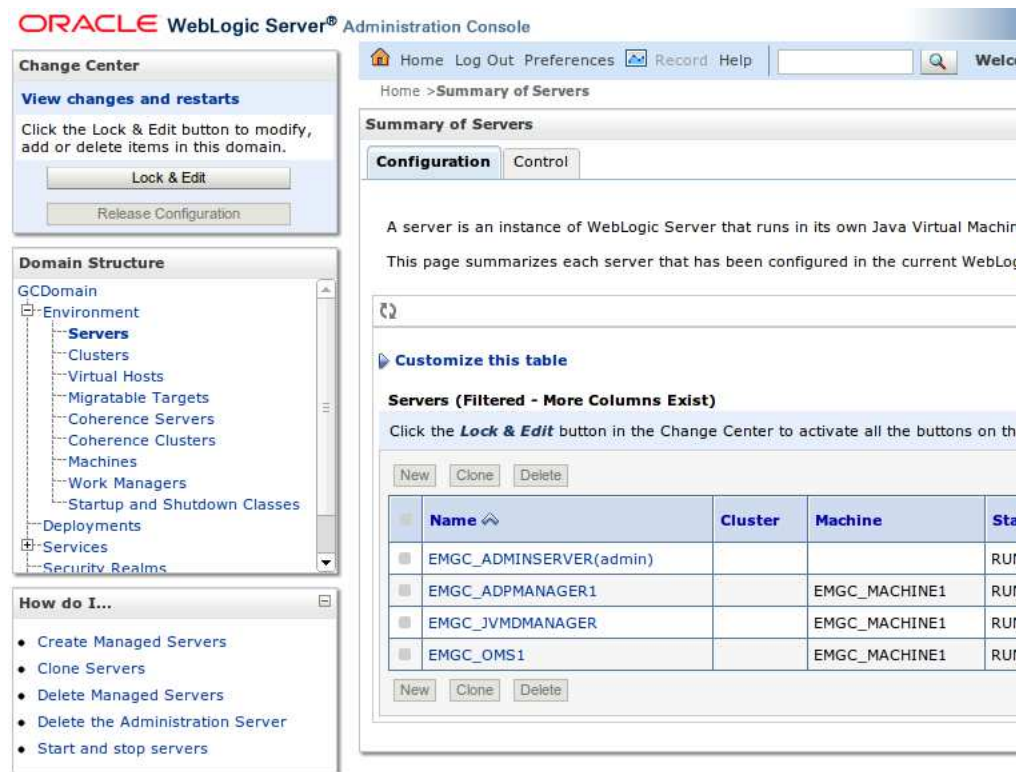
```
$MIDDLEWARE_HOME/plugins/oracle.sysman.emas.oms.plugin_
12.1.0.2.0/archives/jvmd/
```

This will create a set of files in the same directory, including `jammanager.ear`.

2. Log in to the Oracle WebLogic Server Administration Console of the EMGC Domain and click **Servers**.
3. Locate all deployed JVMD Managers.

These will be managed servers that contain "EMGC_JVMDMANAGER" in the server name, such as "EMGC_JVMDMANAGER1". For each JVMD Manager, perform the steps below. For illustration purposes, the server name "EMGC_JVMDMANAGER1" will be used.

4. Start EMGC_JVMDMANAGER1, if it is not already running.
5. Click **Lock & Edit** in the Change Center on the Oracle WebLogic Server Administration Console.

Figure 2–88 Oracle WebLogic Server Administration Console Lock & Edit Button

6. Select **Deployments**, then click the checkbox for **Enterprise Application for a JVMD Manager**.

For example: **jammanagerEMGC_JVMDMANAGER1**

7. Click **Update**.

8. Note the source path to the existing **jammanager.ear**.

For example:

```
$MIDDLEWARE_HOME/gc_inst/user_projects/domains/GCDomain/servers/EMGC_ADMINSERVER/upload/jammanagerEMGC_JVMDMANAGER1/app/jammanager.ear
```

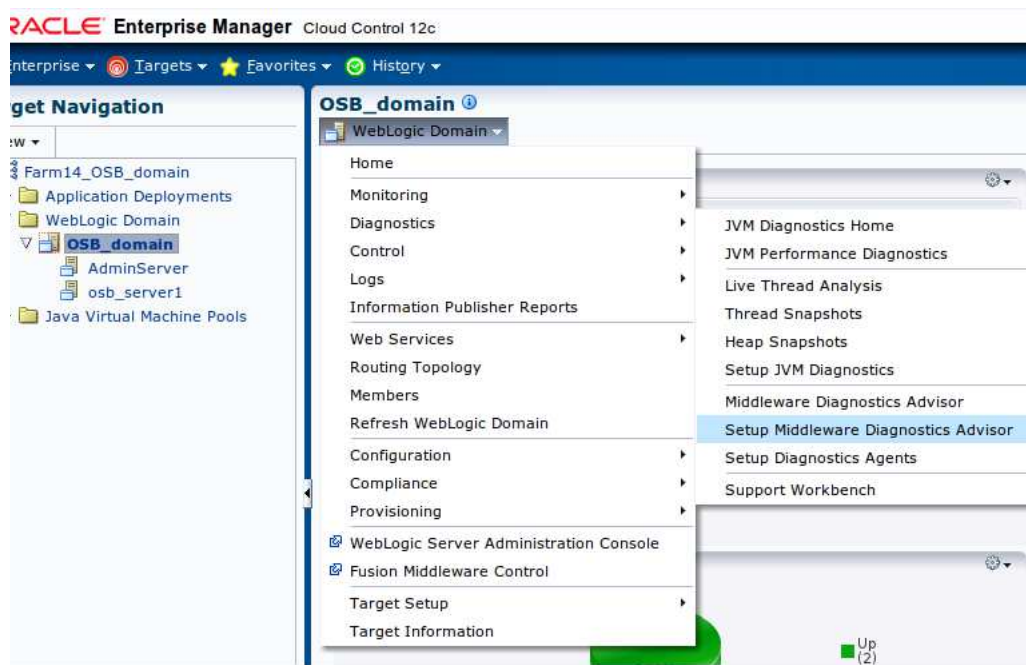
9. At the source path you noted in the previous step replace the existing **jammanager.ear** with the **jammanager.ear** from the following location:

```
$MIDDLEWARE_HOME/plugins/oracle.sysman.emas.oms.plugin_12.1.0.2.0/archives/jvmd/
```

10. Click **Next** to complete the update.

11. If you have Middleware Diagnostics Advisor (MDA) enabled, complete the following to disable it for every Oracle WebLogic Domain and Oracle WebLogic Server target it has been enabled for:

- a. In Cloud Control, navigate to the target home page for a WebLogic Server domain.
- b. From the **WebLogic Domain** menu, select **Diagnostics**, then select **Setup Middleware Diagnostics Advisor**.

Figure 2–89 Setup Middleware Diagnostics Advisor

- c. Select each target that MDA has been enabled for, then click **Disable**, as shown below.

Figure 2–90 MDA Configuration (Enable / Disable)

12. Undeploy existing JVMMD Management Agents from the target server.
Management Agents will usually have names such as `javadiagnosticManagementAgent_ServerName`.
13. Remove the corresponding Java Virtual Machine targets using Enterprise Manager Cloud Control:
 - a. From the **Targets** menu, select **Middleware**.
 - b. Locate the Java Virtual Machine targets that correspond to the JVMMD Management Agents you undeployed.

- c. Select each Java Virtual Machine target in the table, then click **Remove**.
14. Redeploy all JVMD Management Agents.

For more information, see the following:

http://docs.oracle.com/cd/E24628_01/install.121/e22624/jvmd_installation.htm#CHDCFFGC
15. After all JVMD Management Agents have been redeployed, return to the Middleware Diagnostics Advisor Configuration page and re-enable MDA for each target it was previously enabled for.

Update Existing Agent Image to Agent Image with BP1 included

This chapter describes how to update the existing downloaded Management Agent image in your environment to a Management Agent image with BP1 included. Once you update your image, you will not be required to apply any BP1 patches to the Management Agents that will be installed using this updated image.

At present, updated images with BP1 included are available for Linux32 and Linux 64 bit platforms only. When Management Agent binaries with BP1 included are released for other platforms, you just repeat the steps described in the following sections to update them.

The version of Management Agent binaries with BP1 included is the same as the earlier 12.1.0.1. release. The following topics are discussed:

- [OMS and Target Management Agent Hosts are on the Same Platform](#)
- [OMS and Target Management Agent Hosts are on Different Platforms](#)

3.1 OMS and Target Management Agent Hosts are on the Same Platform

When OMS and target Management Agent hosts are on the same platform, complete the following:

1. Download the Management Agent zip file from the Oracle Technology Network (OTN) at the following location:

<http://www.oracle.com/technetwork/oem/grid-control/downloads/oem-upgrade-console-502238.html>

2. Copy this file into the OMS_HOME/sysman/agent directory.

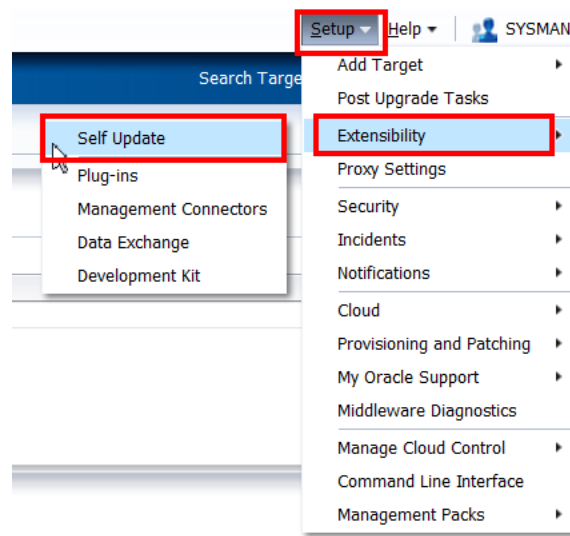
For multi OMS cases, copy the file into the Oracle Homes of all OMS instances.

3.2 OMS and Target Management Agent Hosts are on Different Platforms

When OMS and target Management Agent hosts are on different platforms, complete the following:

1. Log into the Cloud Control console.
2. From the **Setup** menu, select **Extensibility**, then select **Self Update**.

Figure 3–1 Self Update Page



3. Select the Agent Software entity and click **Open**.

Figure 3–2 Agent Software Entity

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update home all automatically, a manual check can be made at any time.

Status

Connection Mode **Online** Last Download Time 26-M
 Most Recent Refresh Time 25-Mar-2012 23:46:09 PDT Last Download Type Agen
 Last Successful Refresh Time 12-Mar-2012 23:46:10 PDT

Actions Open Check Updates Agent Software

Type	Available Updates	Downloaded Updates	Applied Updates	Descr
Agent Software	5	0	2	Agent
Compliance Content	0	0	0	Comp
Diagnostic Checks	0	0	0	Target
EM Deployment Prerequisite Resources	0	0	0	EM D Plugir
Exadata Configuration Template	0	0	0	Config
Management Connector	8	0	1	Mana

This allows you to view the Agent Software Updates page, which shows the status of the Management Agent platform binaries.

Figure 3–3 Agent Software Updates Status

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Self Update > Agent Software

Agent Software Updates

Actions Download Apply Agent Software

Status	OS Platform	Version	Vendor	Description
Applied	Microsoft Windows ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	HP-UX PA-RISC (64...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Oracle Solaris on x8...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Oracle Solaris on S...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	Linux x86-64	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Download failed	IBM AIX on POWER ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	HP-UX Itanium	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Linux x86	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f

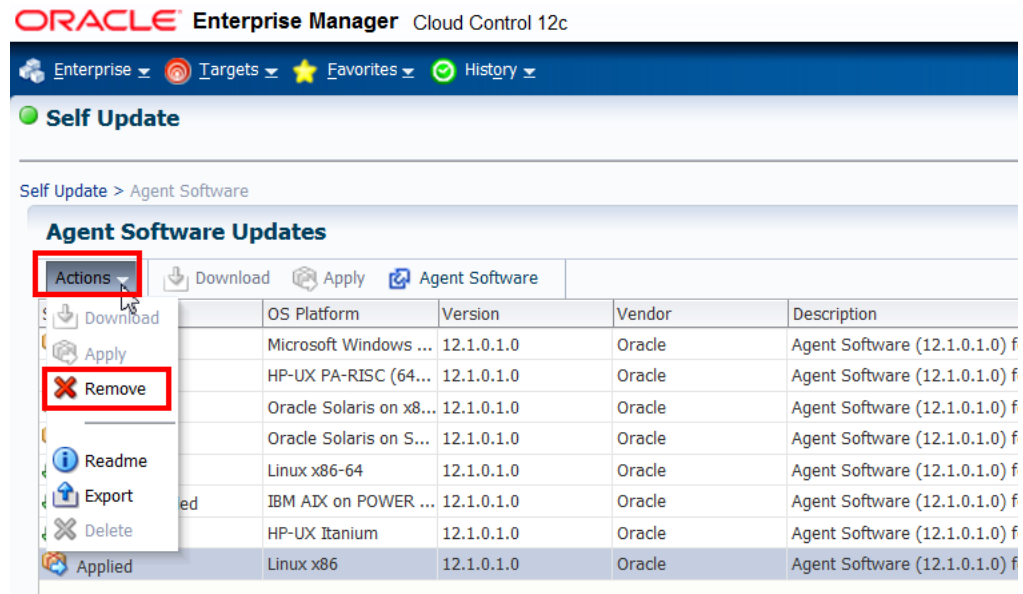
4. Select the platform on which the binaries are to be updated.

For the purposes of this example, Linux x86 binaries are selected. Linux x86 Management Agent binaries with Bundle Patch 1 included are now available and

you want to update the existing Linux x86 Management Agent binaries with these new versions.

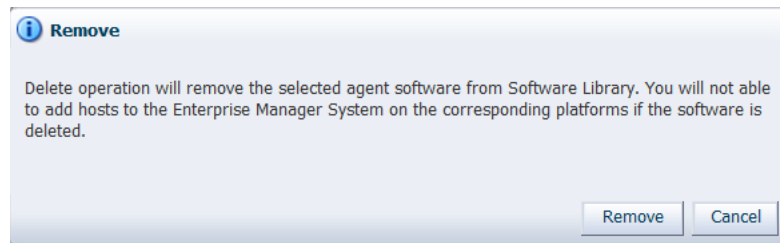
5. From the **Actions** list select **Remove**.

Figure 3–4 Agent Software Updates Remove Icon



6. Click **Remove** on the confirmation message.

Figure 3–5 Remove Confirmation Message



A job is triggered to remove the Management Agent binaries from the library. The figure below shows the confirmation message when this has been successfully completed.

Figure 3–6 Job Submitted Successfully Message



Once the job is done, the page is refreshed and the Management Agent binaries status is changed to Downloaded. The figure below shows that the Linux x86 binaries status is now changed to **Downloaded**.

Figure 3–7 Status Changed to Downloaded

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Self Update > Agent Software

Agent Software Updates

Actions Download Apply Agent Software

Status	OS Platform	Version	Vendor	Description
Applied	Microsoft Windows ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	HP-UX PA-RISC (64...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Oracle Solaris on x8...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Oracle Solaris on S...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	Linux x86-64	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Download failed	IBM AIX on POWER ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	HP-UX Itanium	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Downloaded	Linux x86	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f

7. Select the row with the status Downloaded and from the **Actions** list click **Delete**.

Figure 3–8 Delete Row

ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Self Update > Agent Software

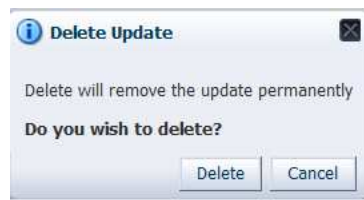
Agent Software Updates

Actions Download Apply Agent Software

Status	OS Platform	Version	Vendor	Description
Applied	Microsoft Windows ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	HP-UX PA-RISC (64...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Oracle Solaris on x8...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Applied	Oracle Solaris on S...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	Linux x86-64	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Download failed	IBM AIX on POWER ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Available	HP-UX Itanium	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f
Downloaded	Linux x86	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) f

Actions dropdown menu options: Download, Apply, Remove, Readme, Export, Delete (highlighted).

8. Click **Delete** on the confirmation message.

Figure 3–9 Delete Update Confirmation Message

This generates the message shown below.

Figure 3–10 Delete Confirmation

9. Refresh the page to verify that the selected Management Agent binaries are no longer in the library.
10. To delete Management Agent binaries in *Available* status, select the row and from the **Actions** list click **Delete**.

For the purposes of this example, Linux x86 Management Agent binaries are selected.

Figure 3–11 Agent Software Updates

ORACLE Enterprise Manager Cloud Control 12c

Enterprise ▾ Targets ▾ Favorites ▾ History ▾

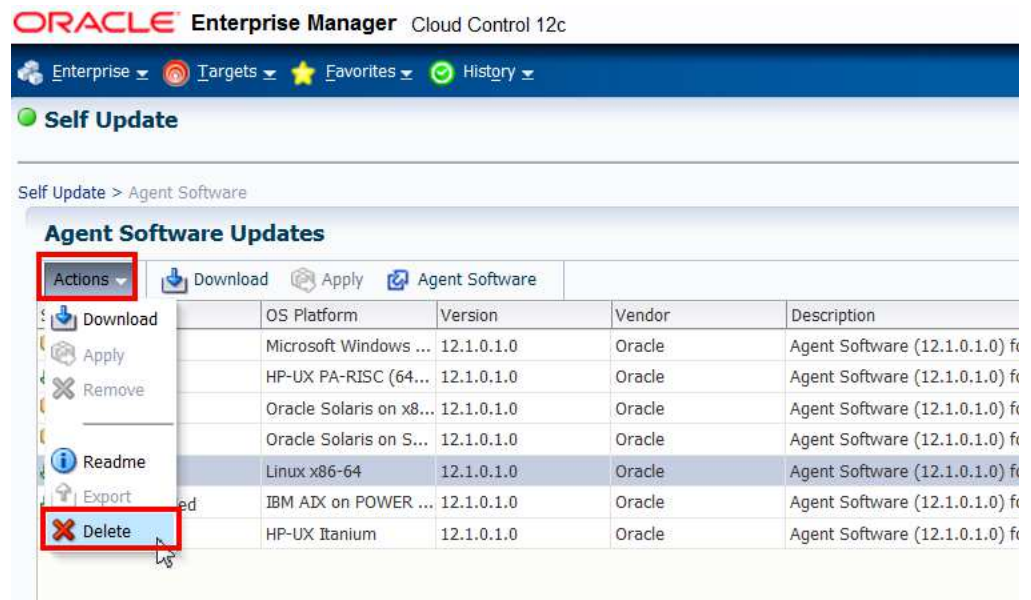
Self Update

Self Update > Agent Software

Agent Software Updates

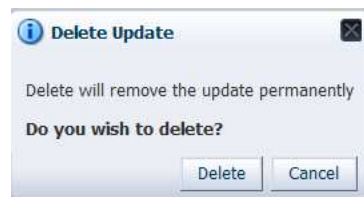
Status	OS Platform	Version	Vendor	Description
Applied	Microsoft Windows ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓
Available	HP-UX PA-RISC (64...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓
Applied	Oracle Solaris on x8...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓
Applied	Oracle Solaris on S...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓
Available	Linux x86-64	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓
Download failed	IBM AIX on POWER ...	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓
Available	HP-UX Itanium	12.1.0.1.0	Oracle	Agent Software (12.1.0.1.0) ↓

Figure 3–12 Delete Agent Binaries



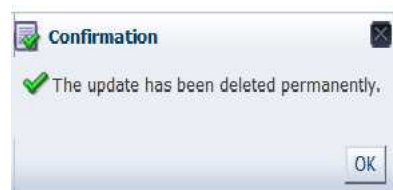
11. Click **Delete** on the confirmation message.

Figure 3–13 Delete Update Confirmation Message



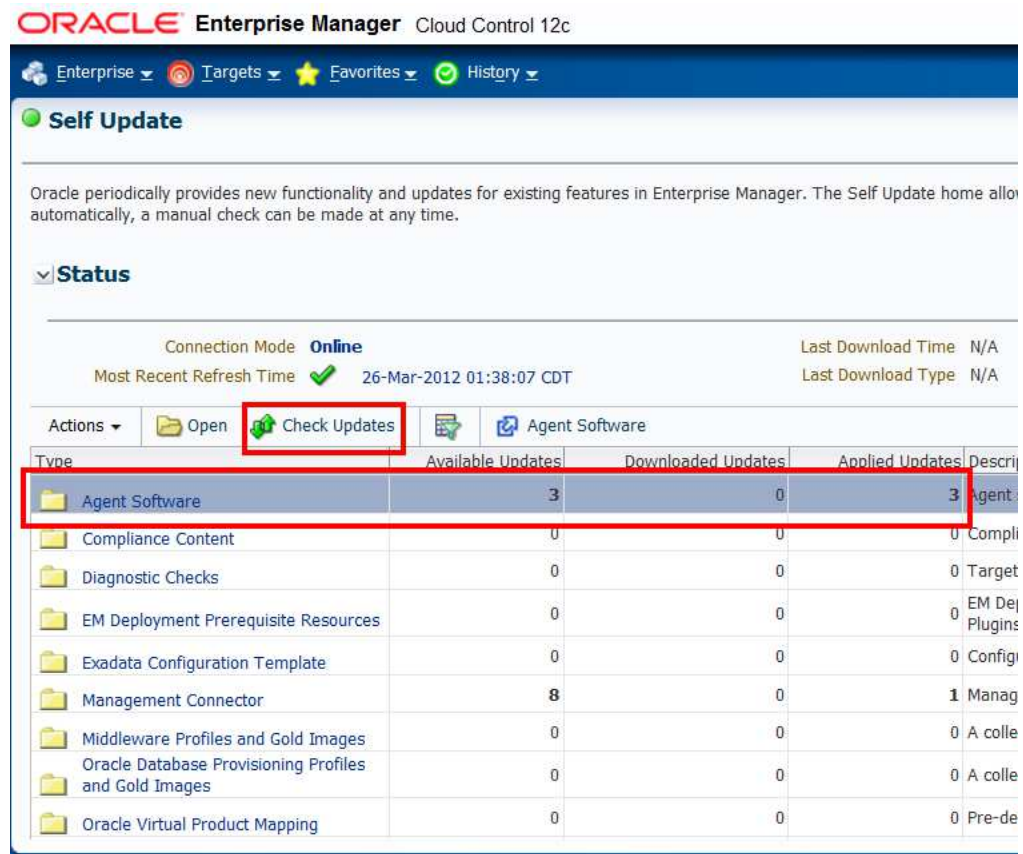
This generates the message shown below.

Figure 3–14 Delete Confirmation



12. Refresh the page to verify that the selected Management Agent binaries are no longer in the library.
13. From the Self Update page, select the **Agent Software** entity, then click **Check Updates** to get the latest agent binaries.

Figure 3–15 Latest Agent Binaries



ORACLE Enterprise Manager Cloud Control 12c

Enterprise Targets Favorites History

Self Update

Oracle periodically provides new functionality and updates for existing features in Enterprise Manager. The Self Update home allows you to check for updates automatically, or a manual check can be made at any time.

Status

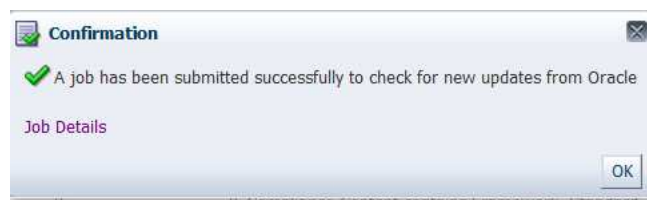
Connection Mode: **Online** Last Download Time: N/A
 Most Recent Refresh Time: **26-Mar-2012 01:38:07 CDT** Last Download Type: N/A

Actions: Open **Check Updates** Agent Software

Type	Available Updates	Downloaded Updates	Applied Updates	Description
Agent Software	3	0	3	Agent Software
Compliance Content	0	0	0	Compliance Content
Diagnostic Checks	0	0	0	Diagnostic Checks
EM Deployment Prerequisite Resources	0	0	0	EM Deployment Prerequisite Resources
Exadata Configuration Template	0	0	0	Exadata Configuration Template
Management Connector	8	0	1	Management Connector
Middleware Profiles and Gold Images	0	0	0	Middleware Profiles and Gold Images
Oracle Database Provisioning Profiles and Gold Images	0	0	0	Oracle Database Provisioning Profiles and Gold Images
Oracle Virtual Product Mapping	0	0	0	Oracle Virtual Product Mapping

A job is triggered and once it is done, you will see that the Available Updates column has been updated. A confirmation message is also displayed.

Figure 3–16 Confirmation Message



Bundle Patch 1 for Windows and zLinux Management Agents

This chapter describes various usecases for Bundle Patch 1 for Windows 64 bit OMS and Management Agent, Windows 32 bit Management Agent only, and zLinux Management Agent only. The following scenarios are discussed:

- [Installing Enterprise Manager Cloud Control 12c on Windows \(64-bit\)](#)
- [Managing Windows or zLinux Hosts from OMS on Linux with BP1](#)
- [Managing Windows or zLinux Hosts from OMS without BP1](#)

4.1 Installing Enterprise Manager Cloud Control 12c on Windows (64-bit)

To install Enterprise Manager Cloud Control 12c on Windows, download the binaries from Oracle Technology Network. You can get the 12.1.0.1 installation software from the product DVD or from Oracle Technology Network (OTN) at:

<http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html>

For more information, refer to the Procuring Software section of the *Oracle® Enterprise Manager Cloud Control Advanced Installation and Configuration Guide 12c Release 1 (12.1.0.1)*, which can be found at the following location:

http://docs.oracle.com/cd/E24628_01/install.121/e24089/getstrtd_proc_sw.htm#BACFDBCA

On the download page, select the Windows (64-bit) (With Bundle Patch 1) release.

The Bundle Patch 1 binaries will be installed by default. Enterprise Manager binaries will have BP1 patches included by default. You do not need to follow the BP1 patch instructions outlined in this document.

The 12.1.0.2 versions of the Oracle Database and Oracle Fusion Middleware plug-ins will also be installed by default as part of the Windows installation process. You will have the option of installing additional available plug-ins, such as the Fusion Applications plug-in, during installation. Oracle recommends that you also install all the plug-ins that you think you may need.

When you invoke the Enterprise Manager Cloud Control Installation Wizard, you will be given a choice between two Install Types: Simple and Advanced. To install the additional plug-ins, you must perform an Advanced installation.

For more information, see "Installing with Advanced Configuration" in the *Oracle® Enterprise Manager Cloud Control Basic Installation Guide 12c Release 1 (12.1.0.1)*, available at the following link:

http://docs.oracle.com/cd/E24628_01/install.121/e22624/install_em_exist_db.htm#CHDECIFI

You can also find more installation information in the *Oracle® Enterprise Manager Cloud Control Advanced Installation and Configuration Guide 12c Release 1 (12.1.0.1)*, available at the following location:

http://docs.oracle.com/cd/E24628_01/install.121/e24089/toc.htm

4.2 Managing Windows or zLinux Hosts from OMS on Linux with BP1

This section discusses the management of Windows (32-bit or 64-bit) or zLinux Hosts from Oracle Management Service on Linux (32-bit or 64-bit) with BP1. The following assumes that you have an Oracle Management Service 12.1.0.1 instance running on a Linux host with BP1 applied, or a fresh installation that includes the BP1 binaries, and want to monitor Windows and/or zLinux host machines. The Oracle Management Service 12.1.0.1 instance must either be a fresh installation, as noted in the section above, or must be patched with BP1.

See [Section 2.1, "Applying Bundle Patch 1 on Oracle Management Service"](#) for instructions on applying BP1 on a Linux 32-bit or 64-bit Oracle Management Service host.

Note: A Linux OMS should have BP1 applied or included. This is a mandatory requirement for monitoring the Windows or zLinux agents.

Once these prerequisites have been met, you must complete the steps outlined in the following sections in the order specified:

- [Applying Patch 14040891 on Oracle Management Service \(Required\)](#)
- [Patching Database, Fusion Middleware, and Fusion Application Plug-ins](#)
- [Downloading the Management Agent Software](#)
- [Downloading and Upgrading Plug-ins to Windows-specific Revisions](#)
- [Deploying Management Agents to Windows or zLinux Host Targets](#)
- [Adding Targets to Monitor](#)

The processes described in the following sections are identical for Windows 32-bit, Windows 64-bit and zLinux Management Agents.

4.2.1 Applying Patch 14040891 on Oracle Management Service (Required)

You **must** apply patch 14040891 on your Oracle Management Service 12.1.0.1 on Linux 32-bit or 64-bit. To install the patch, complete the following:

Note: In the case of a multi-OMS environment, once you have performed these steps on the first OMS host, repeat the same steps for each of the other OMS hosts, except for steps (8), (9), (14), and (15).

1. Back up the following before beginning this process:
 - Oracle Inventory

- Management Repository database
- Middleware Home
- Instance Home
- Software Library
- Management Agent

For instructions, see "Backing Up Enterprise Manager" in the Enterprise Manager Cloud Control Administrator's Guide available here:

http://docs.oracle.com/cd/E24628_01/doc.121/e24473/ha_backup_recover.htm#BGBCCIJC

2. Verify that the correct OPatch version is installed under the OMS Home. The OPatch version required for installing the Bundle Patch 1 is 11.1.0.9.4 or higher. **Do not** use OPatch 11.2.0.x. For more information on OPatch version, see [Section 1.4.3, "Using the Correct OPatch Version"](#).
3. Ensure that the Management Repository database and its listener are up and running.
4. Ensure that you set the ORACLE_HOME environment variable to the OMS Home, which is:

```
<%MIDDLEWARE_HOME%>/oms
```

This is the top-level directory of the Oracle Management Server installation.

5. Ensure that you set the PATH environment variable to include the location of the unzip executable, the *ORACLE_HOME/bin*, and the *ORACLE_HOME/OPatch* directories present in the Oracle home of the OMS with the following command:

```
setenv PATH $ORACLE_HOME/bin:$ORACLE_HOME/OPatch:$PATH
```

Run the following command to verify that the PATH variable is set:

```
echo $PATH
```

6. Download patch 14040891 from My Oracle Support (<https://support.oracle.com>)
7. Verify the Oracle Inventory by running the following command:

```
$ opatch lsinventory
```

This verification is needed because OPatch accesses the Oracle Inventory. If the command displays any errors, contact Oracle Support to resolve the issue.

8. Identify a location for storing the contents of the patch ZIP file.

In the rest of this section, this location (absolute path) is referred to as *PATCH_TOP_DIR*.

9. Run the following command to extract the contents of the patch ZIP file to the location you created in the previous step:

```
$ unzip -d PATCH_TOP_DIR p14040891_121010_Generic.zip
```

10. Run the following command from the patch directory to ensure that patch 14040891 does not conflict with existing one-off patches on the Linux OMS:

```
$PATCH_TOP_DIR/opatch prereq CheckConflictAgainstOHWithDetail  
-phBaseDir ./14040891
```

Figure 4–1 Patch 14040891

```

[aim@winbp1]$ pwd
/scratch/winbp1
[aim@winbp1]$ ls
14040891 13707704.zip 13713877.zip 13715926.zip 13719833.zip
[aim@winbp1]$ opatch prereq CheckConflictAgainstOHWithDetail -phBaseDir ./14040891
Oracle Interim Patch Installer version 11.1.0.9.6
Copyright (c) 2012, Oracle Corporation. All rights reserved.

PREREQ session

Oracle Home      : /scratch/aim/work/midlwre6465/oms
Central Inventory : /scratch/aim/work/midlwre6465/oracle/work/DB11107/oraInventory
   from           : /scratch/aim/work/midlwre6465/oms/oraInst.loc
OPatch version    : 11.1.0.9.6
OUI version       : 11.1.0.9.0
Log file location : /scratch/aim/work/midlwre6465/oms/cfgtoollogs/patch/patch2012-04-26_06-13-45
AM_1.log

OPatch detects the Middleware Home as "/scratch/aim/work/midlwre6465"

Invoking prereq "checkconflictagainsthwithdetail"

Prereq "checkConflictAgainstOHWithDetail" passed.

OPatch succeeded.
[aim@winbp1]$

```

The command will generate a report that lists all conflicting patches. If you do not see any conflicting patches, then proceed with installing the patch.

If you see one or more conflicting patches, then follow these steps:

- Submit a request for Merge patches from Oracle Support.
- Download the Merge one-off patches from My Oracle Support.
- Manually deinstall the conflicting patches by following the instructions in the README file for each conflicting patch. Refer to My Oracle Support note 965556.1 for additional information.
- Apply patch 14040891 on the Linux OMS.
- Apply the Merge one-off patches.

11. Invoke the following command to ensure that the OMS is not running:

```
<OMS_ORACLE_HOME>/bin emctl stop oms -all
```

Run the following command to verify that the OMS has completely stopped:

```
<OMS_ORACLE_HOME>/bin emctl status oms
```

Ideally, the OMS and its associated services will be down. Note: In a multi-OMS environment, these commands should be run on all OMS instances.

12. Use the following command to navigate to the *PATCH_TOP_DIR*/14040891 directory:

```
$ cd PATCH_TOP_DIR/14040891
```

13. Run the following command to apply the patch:

This command should be run on each OMS instance in a multi-OMS environment.

```
$ opatch napply
```

The following messages may appear on screen:

- Do you want to proceed? [y|n]: (yes)

Note: If you have any patches applied in your environment that are a superset of 13638422, you will get a message to rollback the existing patches. This is expected behavior and enter Y to proceed.

The following is an example of this message:

```
Conflicts/Supersets for each patch are:
Patch : 13824700
Bug Superset of 13638422
Super set bugs are:13638422
Patches [ 13638422 ] will be rolled back.
```

```
Do you want to proceed? [y|n]"
```

- Oracle Support Email address/User Name: (provide your details or press Enter to continue)
- Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]: (y)

Figure 4–2 Apply the Patch

```
[aime@winbp1 14040891]$ pwd
/scratch/winbp1/14040891
[aime@winbp1 14040891]$ opatch napply
Oracle Interim Patch Installer version 11.1.0.9.6
Copyright (c) 2012, Oracle Corporation. All rights reserved.

Oracle Home      : /scratch/aime/work/midlwre6465/oms
Central Inventory : /ade/aime_dte7186/oracle/work/DB11107/oraInventory
   from           : /scratch/aime/work/midlwre6465/oms/oraInst.loc
OPatch version   : 11.1.0.9.6
OUI version      : 11.1.0.9.0
Log file location: /scratch/aime/work/midlwre6465/oms/cfgtoollogs/patch/patch2012-04-26_06-33-09
AM_1.log

OPatch detects the Middleware Home as "/scratch/aime/work/midlwre6465"

Verifying environment and performing prerequisite checks...
OPatch continues with these patches: 13601669 13626367 13644440 13651813 13653571 14040891
13717908 13772774 13780971 13785995 13787027 13793831 13811012 13824044 13824700 13824730
13827938 13831721 13838155 13849724 13850180 13857278 13867770 13870924 13874613 13895257
13988923 13910654 13921309 13958487 13962917 13988371

Do you want to proceed? [y|n]
yes
User Responded with: Y
All checks passed.
Provide your email address to be informed of security issues, install and
initiate Oracle Configuration Manager. Easier for you if you use your My
Oracle Support Email address/User Name.
Visit http://www.oracle.com/support/policies.html for details.
Email address/User Name:

You have not provided an email address for notification of security issues.
Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]: yes

Patching component oracle.sysman.oms.core, 12.1.0.1.0...

Verifying the update...
Applying interim patch '14040891' to OH '/scratch/aime/work/midlwre6465/oms'

Patching component oracle.sysman.oms.core, 12.1.0.1.0...

Verifying the update...
Patches 13601669,13626367,13644440,13651813,13653571,14040891,13717908,13772774,13780971,13785995,1
3787027,13793831,13811012,13824044,13824700,13824730,13827938,13831721,13838155,13849724,13850180,1
3857278,13867770,13870924,13874613,13895257,13988923,13910654,13921309,13958487,13962917,13988371 s
uccessfully applied.
Log file location: /scratch/aime/work/midlwre6465/oms/cfgtoollogs/patch/patch2012-04-26_06-33-09A
M_1.log

OPatch succeeded.
```

14. Run the following command on the first OMS only (you will be prompted for the SYSMAN password):

```
$ ORACLE_HOME/bin/emctl applypatch repos -patchHome $PATCH_TOP_
DIR/14040891/13653571
```

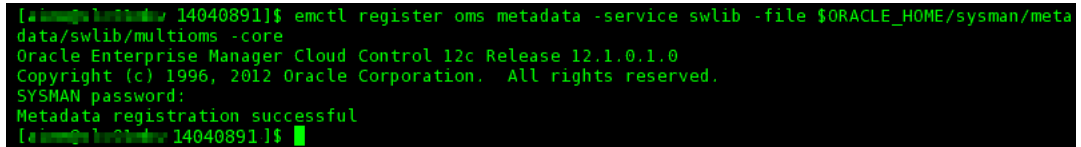
If the command succeeds, the following message is displayed:

```
PATCH APPLICATION HAS SUCCEEDED
```

15. Run the following commands on the first OMS only (you will be prompted for the SYSMAN password):

```
<command prompt> emctl register oms metadata -service swlib -file $ORACLE_
HOME/sysman/metadata/swlib/multioms -core
```

Figure 4–3 Register OMS Data



```
[oracle@rac1 ~]$ emctl register oms metadata -service swlib -file $ORACLE_HOME/sysman/metadata/swlib/multioms -core
Oracle Enterprise Manager Cloud Control 12c Release 12.1.0.1.0
Copyright (c) 1996, 2012 Oracle Corporation. All rights reserved.
SYSMAN password:
Metadata registration successful
[oracle@rac1 ~]$
```

```
<command prompt> emctl register oms metadata -service procedures -file $ORACLE_
HOME/sysman/metadata/procedures/multioms/MultiOMS.xml -core
```

If the command succeeds, the following message is displayed:

```
Metadata registration successful
```

```
<command prompt> emctl register oms metadata -service derivedAssocs -file
$ORACLE_HOME/sysman/metadata/derivedAssocs/emSystemAssocRules.xml -core
```

If the command succeeds, the following message is displayed:

```
Metadata registration successful
```

16. Start the OMS by running the following command on each OMS instance:

```
ORACLE_HOME/bin/emctl start oms
```

4.2.2 Patching Database, Fusion Middleware, and Fusion Application Plug-ins

Patches must be applied to the version 12.1.0.2 Oracle Database, Oracle Fusion Middleware, and Oracle Fusion Applications plug-ins deployed on the OMS host. A separate patch must be applied to the Oracle Home for each individual plug-in.

Installation instructions are provided for the following patches:

- [Applying Oracle Database Plug-in Patch 13713877](#)
- [Applying Oracle Fusion Middleware Plug-in Patch 13715926](#)
- [Applying Oracle Fusion Applications Patch 13719833](#)

To patch the plug-ins on OMS, download and apply the patches listed in [Table 4–1](#) on the OMS host (one patch at a time in the order specified) in the respective plug-in Homes. The patches are available from My Oracle Support (<https://support.oracle.com>).

Note: You can reduce the downtime by stopping the OMS before applying the three patches listed below to the respective Oracle Homes, then re-starting once all patches have been successfully applied.

Table 4–1 Plug-In Patches for Microsoft Windows

Plug-In Name	Plug-In ID	Patch	Oracle Home to be Patched
Oracle Database	oracle.sysman.db	13713877	%MIDDLEWARE_HOME%/plugins/oracle.sysman.db.oms.plugin_12.1.0.2.0
Oracle Fusion Middleware	oracle.sysman.emas	13715926	%MIDDLEWARE_HOME%/plugins/oracle.sysman.emas.oms.plugin_12.1.0.2.0
Oracle Fusion Applications	oracle.sysman.emfa	13719833	%MIDDLEWARE_HOME%/plugins/oracle.sysman.emfa.oms.plugin_12.1.0.2.0

4.2.2.1 Applying Oracle Database Plug-in Patch 13713877

Apply Oracle Database Plug-in patch 13713877 on your Oracle Management Service. To apply the patch, ensure that all the prerequisites specified in the README are met and complete the following:

1. Shut down the OMS by running the following command:

```
<ORACLE_HOME>/bin emctl stop oms
```

Make sure to shut down all OMS instances in a multi-OMS environment.

2. Set the environment variable PLUGIN_HOME to:

```
<%MIDDLEWARE_HOME%>/plugins/oracle.sysman.db.oms.plugin_12.1.0.2.0
```

For example:

```
setenv PLUGIN_HOME
/example/work/midlwre6465/plugins/oracle.sysman.db.oms.plugin_
12.1.0.2.0
```

3. Maintain a location for storing the contents of the patch ZIP file.

In the rest of this section, this location (absolute path) is referred to as *PATCH_TOP_DIR*.

4. Run the following command to extract the contents of the patch ZIP file to the location you created in the previous step:

```
$ unzip -d PATCH_TOP_DIR p13713877_121010_Generic.zip
```

5. Use the following command to navigate to the *PATCH_TOP_DIR/13713877* directory:

```
$ cd PATCH_TOP_DIR/13713877
```

6. Run the following command on each OMS instance (in a multi-OMS environment) to apply the patch:

```
$ opatch napply -oh $PLUGIN_HOME
```

The following messages may appear on screen:

- Do you want to proceed? [y|n]: (yes)
- Oracle Support Email address/User Name: (provide your details or press Enter to continue)
- Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]: (y)

If the patch is applied successfully, the following message is displayed:

```
OPatch succeeded
```

7. Run the following four commands on the first OMS only (you will be prompted for the SYSMAN password):

If the commands succeed, the following message is displayed:

```
Metadata registration successful
```

Note: In the following commands, <command prompt> is OMS_ORACLE_HOME/bin.

- a. <command prompt> emctl register oms metadata -service swlib -file \$PLUGIN_HOME/metadata/swlib -pluginId oracle.sysman.db
- b. <command prompt> emctl register oms metadata -service procedures -file \$PLUGIN_HOME/metadata/procedures/ExtendClusterNG.xml -pluginId oracle.sysman.db
- c. <command prompt> emctl register oms metadata -service procedures -file \$PLUGIN_HOME/metadata/procedures/provsidb.xml -pluginId oracle.sysman.db
- d. <command prompt> emctl register oms metadata -service preNGProcedures -file \$PLUGIN_HOME/metadata/preNGProcedures/RACProvisionWIN.xml -pluginId oracle.sysman.db

8. Start the OMS instance:

```
<ORACLE_HOME>/bin emctl start oms
```

4.2.2.2 Applying Oracle Fusion Middleware Plug-in Patch 13715926

This section describes how to apply the Oracle Fusion Middleware Plug-in patch 13715926 on your Oracle Management Service. To apply the patch, ensure that all the prerequisites specified in the README are met and then complete the following:

1. Shut down the OMS by running the following command:

```
<ORACLE_HOME>/bin emctl stop oms
```

Make sure to shut down all OMS instances in a multi-OMS environment.

2. Set the environment variable PLUGIN_HOME to:

```
<%MIDDLEWARE_HOME%>/plugins/oracle.sysman.emas.oms.plugin_12.1.0.2.0
```

For example:

```
setenv PLUGIN_HOME
/example/work/midlwre6465/plugins/oracle.sysman.emas.oms.plugin_
12.1.0.2.0
```

3. Maintain a location for storing the contents of the patch ZIP file.

In the rest of this section, this location (absolute path) is referred to as *PATCH_TOP_DIR*.

4. Run the following command to extract the contents of the patch ZIP file to the location you created in the previous step:

```
$ unzip -d PATCH_TOP_DIR p13715926_121010_Generic.zip
```

5. Use the following command to navigate to the *PATCH_TOP_DIR/13715926* directory:

```
$ cd PATCH_TOP_DIR/13715926
```

6. Run the following command on each OMS (in a multi-OMS environment) to apply the patch:

```
$ opatch napply -oh $PLUGIN_HOME
```

The following messages may appear on screen:

- Do you want to proceed? [y | n]: (yes)
 - Oracle Support Email address/User Name: (provide your details or press Enter to continue)
 - Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]: (y)
7. Run the following eight commands on the first OMS only to register the job type. Enter the SYSMAN Password for each command when prompted.

If the commands succeed, the following message is displayed:

```
Metadata registration successful
```

Note: In the following commands, <command prompt> is OMS_ORACLE_HOME/bin.

- a. <command prompt> emctl register oms metadata -service swlib -file \$PLUGIN_HOME/metadata/swlib/coherenceprov -pluginId oracle.sysman.emas
- b. <command prompt> emctl register oms metadata -service swlib -pluginId oracle.sysman.emas -file \$PLUGIN_HOME/metadata/swlib
- c. <command prompt> emctl register oms metadata -pluginId oracle.sysman.emas -service procedures -file \$PLUGIN_HOME/metadata/procedures/FMWPROV.xml
- d. <command prompt> emctl register oms metadata -pluginId oracle.sysman.emas -service procedures -file \$PLUGIN_HOME/metadata/procedures/DomainScaleUp.xml
- e. <command prompt> emctl register oms metadata -pluginId oracle.sysman.emas -service jobTypes -file \$PLUGIN_HOME/metadata/jobTypes/CreateFMWBundle.xml

- f. <command prompt> emctl register oms metadata -pluginId oracle.sysman.emas -service jobTypes -file \$PLUGIN_HOME/metadata/jobTypes/CreateFMWGoldImage.xml
 - g. <command prompt> emctl register oms metadata -service procedures -file \$PLUGIN_HOME/metadata/procedures/WholeServerMigration.xml -pluginId oracle.sysman.emas
 - h. <command prompt> emctl register oms metadata -service swlib -file \$PLUGIN_HOME/metadata/swlib/patch -pluginId oracle.sysman.emas
8. Start the OMS instance:
- ```
<ORACLE_HOME>/bin emctl start oms
```

#### 4.2.2.3 Applying Oracle Fusion Applications Patch 13719833

This section describes how to apply the Oracle Fusion Applications patch 13719833 on your Oracle Management Service. To apply the patch, ensure that all the prerequisites specified in the README are met and complete the following:

---

**Note:** Do not perform these steps if you do not have a Fusion Application plug-in in your environment.

---

1. Shut down the OMS by running the following command:

```
<ORACLE_HOME>/bin emctl stop oms
```

Make sure to shut down all OMS instances in a multi-OMS environment.

2. Set the environment variable PLUGIN\_HOME to:

```
<%MIDDLEWARE_HOME%>/plugins/oracle.sysman.emfa.oms.plugin_12.1.0.2.0
```

For example:

```
setenv PLUGIN_HOME
/example/work/midlwre6465/plugins/oracle.sysman.emfa.oms.plugin_
12.1.0.2.0
```

3. Maintain a location for storing the contents of the patch ZIP file.

In the rest of this section, this location (absolute path) is referred to as *PATCH\_TOP\_DIR*.

4. Run the following command to extract the contents of the patch ZIP file to the location you created in the previous step:

```
$ unzip -d PATCH_TOP_DIR p13719833_121010_Generic.zip
```

5. Use the following command to navigate to the *PATCH\_TOP\_DIR*/13719833 directory:

```
$ cd PATCH_TOP_DIR/13719833
```

6. Run the following command to apply the patch:

```
$ opatch napply -oh $PLUGIN_HOME
```

The following messages may appear on screen:

- Do you want to proceed? [y|n]: (yes)

- Oracle Support Email address/User Name: (provide your details or press Enter to continue)
- Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]: (y)

After the patch is applied, the following message is displayed:

```
OPatch succeeded
```

#### 7. Start the OMS instance:

```
<ORACLE_HOME>/bin emctl start oms
```

### 4.2.3 Downloading the Management Agent Software

Management Agent software for the various platforms (operating systems) supported by Enterprise Manager Cloud Control can be downloaded to the Software Library using the Self Update console. Once an Agent is persisted to the Software Library, it can be installed on host machines that you want to bring under Cloud Control management using the Management Agent installation wizard.

Once the Management Agent has been downloaded, it will appear in the Self Update interface as shown below. To view this page, log in to the Cloud Control console and from the **Setup** menu, select **Extensibility**, then select **Self Update**, and then click **Agent Software**.

**Figure 4–4 Self Update**

The screenshot shows the Oracle Enterprise Manager Cloud Control 12c interface. The top navigation bar includes 'Enterprise', 'Targets', 'Favorites', and 'History'. The 'Self Update' section is active, and the 'Agent Software' tab is selected. Below the navigation bar, the 'Agent Software Updates' table is displayed. The table has columns for Status, OS Platform, Version, Vendor, and Description. The table shows one 'Applied' entry for Linux x86-64 and seven 'Available' entries for various OS platforms, all with version 12.1.0.1.0 and vendor Oracle. A 'Downloaded' entry for Microsoft Windows x64 (64-bit) is also visible at the bottom.

| Status     | OS Platform                       | Version    | Vendor | Description                    |
|------------|-----------------------------------|------------|--------|--------------------------------|
| Applied    | Linux x86-64                      | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Available  | HP-UX PA-RISC (64-bit)            | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Available  | Linux x86                         | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Available  | Oracle Solaris on x86-64 (64-bit) | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Available  | Oracle Solaris on SPARC (64-bit)  | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Available  | IBM AIX on POWER Systems (64-bit) | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Available  | HP-UX Itanium                     | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |
| Downloaded | Microsoft Windows x64 (64-bit)    | 12.1.0.1.0 | Oracle | Agent Software (12.1.0.1.0) fc |

Steps for obtaining Agent software in both online and offline modes are discussed below.

- [Acquiring Management Agent Software in Online Mode](#)
- [Acquiring Management Agent Software in Offline Mode](#)

#### 4.2.3.1 Acquiring Management Agent Software in Online Mode

Using Self Update in online mode requires Enterprise Manager to have access to My Oracle Support, which can be found at the following location:

<https://support.oracle.com>

1. From the **Setup** menu, choose **Extensibility**, then choose **Self Update**.
2. Select the entity type *Agent Software* and click **Check Updates**.

---

**Note:** Make sure that you have first set your My Oracle Support credentials. For more information see, [Section 2.2.1, "Setting Up My Oracle Support Credentials"](#).

---

3. Choose **Open** from the **Action** menu. The entity type page appears to show agent software for different platforms.
4. Select an update from the list of available updates.
5. Select the software that needs to be downloaded from the available list and click **Download**. The Schedule Download dialog opens.
6. Select when to download the update. The following options are available:
  - Immediately
  - Later (specified time)
  - Whether or not to send a notification when the download is complete
7. Click **Select**. An Enterprise Manager job is created to download the Agent software to the Software Library.

Enterprise Manager starts downloading the archive from the Oracle Enterprise Manager store. Wait for the download to complete.

When the job is submitted, Enterprise Manager displays the Confirmation page and the downloaded plug-in is shown in the local Oracle Enterprise Manager Store.

8. Once the download is complete, select the Agent, then click **Apply**. This step will stage the Agent software in the Software Library and make it available to the Add Targets wizard, which you will use to install the Agent on host machines.
9. Click **Agent Software** to launch the Add Targets/Agent Installation wizard.

For more information, see [Section 4.2.5, "Deploying Management Agents to Windows or zLinux Host Targets"](#).

#### 4.2.3.2 Acquiring Management Agent Software in Offline Mode

Follow this Self Update process only when Enterprise Manager is in offline mode.

1. Ensure Cloud Control is set to offline mode. From the **Setup** menu, select **Provisioning and Patching**, then select **Offline Patching** and click **Apply**.
2. Run the following command:

```
$ <OMS_ORACLE_HOME>/emcli login -username=sysman
```

Provide the password and you should see the following confirmation message:

```
Login successful
```

3. Run the following command:

```
./emcli sync
```

The following confirmation message is displayed:

```
Synchronized successfully
```

4. From the **Setup** menu, select **Extensibility**, then select **Self Update**.
5. Click **Check Updates** on Self Update home page. A message is displayed that contains the URL to be accessed to download a catalog of all updates.
6. From an Internet-enabled computer, download the catalog file using the aforementioned URL mentioned in the message window.
7. Copy the downloaded file to either of the following:
  - To any host that has a Management Agent and EM CLI installed
  - To the Oracle Management Service host
8. Once the catalog is downloaded, it can be imported to Enterprise Manager in one of the following two ways:
  - a. Transfer the catalog to the management server host and run the following command to import to Enterprise Manager:

```
$ emcli import_update_catalog -file=<catalog file name with full path> -omslocal
```
  - b. Transfer the catalog to any managed host in your environment and run the following command to import to Enterprise Manager:

```
$ emcli import_update_catalog -file=<catalog file name with full path> -host=<host name> <host credential options>
```
9. Select the entity type *Agent Software* and choose **Open** from the **Actions** menu. The entity type page appears displaying agent software for different platforms.
10. Select an update from the list of available updates.
11. Click **Download**. A message is displayed with a URL and instructions.
12. From an Internet-enabled computer, download the file from the URL displayed in the message window. Do one of the following:
  - Copy the file to a Management Agent.
  - Copy the file to Oracle Management Service.

Go to the 12.1 OMS home/bin directory and import the update file that you download in the previous step by executing the following command:

```
$ OMS_ORACLE_HOME/emcli import_update -omslocal -file=<absolute location of the zip file>
```

---

**Note:** if your session has expired, you might be prompted to log in again. Do so by running the following command:

```
$ emcli login -username=sysman
```

---

At this stage, the update will show up in downloaded state in the Self Update home page.

13. Once the download is complete, select the entity management agent, then click **Apply**. This step will stage the entity management agent software in the Software Library and make it available to the Add Targets wizard, which you will use to install the agent on host machines.

14. Click **Agent Software** to launch the Add Targets/Agent installation wizard.

For more information, see [Section 4.2.5, "Deploying Management Agents to Windows or zLinux Host Targets"](#).

## 4.2.4 Downloading and Upgrading Plug-ins to Windows-specific Revisions

Ensure that you obtain the Windows specific version- 12.1.0.2, and revision- 120427 of Oracle Database, Oracle Fusion Middleware, and Oracle Fusion Application plug-ins using the Self Update feature in either online or offline mode. The steps are similar to those outlined in [Section 2.3, "Upgrading All Deployed Plug-ins to the 12.1.0.2 Releases on OMS"](#).

To view the available revisions for the Oracle Database, Oracle Fusion Middleware, and Oracle Fusion Applications plug-ins, log in to the Cloud Control console and from the **Setup** menu, select **Extensibility**, then select **Plug-ins**.

## 4.2.5 Deploying Management Agents to Windows or zLinux Host Targets

After the plug-ins have been updated to their respective Windows revisions, you will deploy Management Agents to Microsoft Windows hosts or zLinux machines using Cloud Control.

1. Acquire the Management Agent binaries for the host target (Windows or zLinux).
2. From the **Setup** menu, select **Add Target**, and then, click **Add Targets Manually**. On the Add Targets Manually page, select **Add Host Targets** and click **Add Host**.

For more information, refer to the Add Host Wizard section in the Install Guide, which can be found at the following location:

[http://docs.oracle.com/cd/E24628\\_01/install.121/e22624/install\\_agent.htm#CACJEFJI](http://docs.oracle.com/cd/E24628_01/install.121/e22624/install_agent.htm#CACJEFJI)

## 4.2.6 Adding Targets to Monitor

Once plug-in revisions are deployed on a Windows or zLinux host, you are ready to discover Oracle Database, Oracle Fusion Middleware and Oracle Fusion Applications targets running on the host.

When a target is discovered on the Windows host, the required plug-in code needed to monitor the target types will be deployed to the Management Agent installed on the host. For example, if you discover an Oracle Database target, the required Oracle Database plug-in code will be pushed to the Management Agent installed on the database host machine.

Enterprise Manager offers two options for target discovery:

- Automatic target discovery: This feature scans host machines for Oracle components that can be managed and monitored by Enterprise Manager Cloud Control.

For instructions on configuring automatic discovery, see:

[http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/discovery.htm#CBACIHEJ](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/discovery.htm#CBACIHEJ)

- Manual target discovery: This feature guides you through the process of manually discovering targets on the Windows host.

For instructions on manually discovering targets, see:

[http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/discovery.htm#CBAEIBCC](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/discovery.htm#CBAEIBCC)

## 4.3 Managing Windows or zLinux Hosts from OMS without BP1

If you are planning to monitor a Windows 32 or 64 bit host or zLinux host from an OMS that does not have BP1 included or applied, this usecase is not supported. You need to wait until BP1 is released for the respective platform. Refer to the BP1 release schedule contained in My Oracle Support note 1395505.1 at the following location:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&doctype=ANNOUNCEMENT&id=1395505.1>



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## Bundle Patch 1 for Solaris (SPARC), Solaris (x86-64), and IBM AIX (64-bit)

This chapter describes various usecases to apply Bundle Patch 1 on Solaris (SPARC), Solaris (x86-64), and IBM AIX (64-bit) OMS and Management Agents. This chapter contains the following sections:

- [Before You Begin](#)
- [Installing Enterprise Manager Cloud Control 12c on Solaris \(SPARC\), Solaris \(x86-64\), or IBM AIX \(64-bit\)](#)
- [Applying Bundle Patch 1 on Solaris SPARC, Solaris \(x86-64\), or IBM AIX](#)
- [Managing New Management Agents Deployed on Solaris SPARC, Solaris \(x86-64\), IBM AIX, HP-UX, or HP-UX Itanium Hosts from OMS on Linux with BP1 or from OMS on Windows with Bundle Patch 1](#)
- [Managing Existing Management Agents Running on Solaris SPARC, Solaris \(x86-64\), IBM AIX, HP-UX, or HP-UX Itanium Hosts from OMS on Linux with BP1 or from OMS on Windows with Bundle Patch 1](#)

### 5.1 Before You Begin

Read the following important notes before proceeding with the installation process:

- If you have configured Enterprise Manager for high availability by deploying one or more additional OMS and using a local Real Application Cluster or Data Guard database for the repository database, use the following patching sequence:
  - a. Stop each OMS.
  - b. Apply the patch to each OMS home.
  - c. Run the post deploy steps.

There is no special consideration when using Data Guard because any changes to the repository that occur as part of the patching exercise are forwarded to the standby database repository as part of normal Data Guard operations.

- If you have configured Enterprise Manager for Disaster Recovery by deploying one or more standby OMS and a standby database (Oracle RAC or single instance) at another site, patching of the standby site should be performed after all patches and plug-in updates have been deployed on the primary site.

Once the primary site patches and updated plug-ins have been deployed, any changes to the repository made due to these updates will be forwarded to the

standby database repository as part of normal Data Guard operations. Therefore, to patch the standby site use the following patching sequence:

- a. Apply the patches to the standby OMS Homes without performing the post deploy operations that update the repository.
- b. Deploying the updated plug-ins without updating the repository.

## 5.2 Installing Enterprise Manager Cloud Control 12c on Solaris (SPARC), Solaris (x86-64), or IBM AIX (64-bit)

To install Enterprise Manager Cloud Control 12c on Solaris (SPARC), Solaris (x86-64), or, IBM AIX (64-bit) download the binaries from Oracle Technology Network. You can get the 12.1.0.1 installation software from the product DVD or from Oracle Technology Network (OTN) at:

<http://www.oracle.com/technetwork/oem/enterprise-manager/downloads/index.html>

For more information, refer to the Procuring Software section of the *Oracle® Enterprise Manager Cloud Control Advanced Installation and Configuration Guide 12c Release 1 (12.1.0.1)*, which can be found at the following location:

[http://docs.oracle.com/cd/E24628\\_01/install.121/e24089/getstrtd\\_proc\\_sw.htm#BACFDBCA](http://docs.oracle.com/cd/E24628_01/install.121/e24089/getstrtd_proc_sw.htm#BACFDBCA)

On the download page, select the Solaris (SPARC), or Solaris (x86-64), or IBM AIX (64-bit) (With Bundle Patch 1) release.

The Bundle Patch 1 binaries will be installed by default. Enterprise Manager binaries will have BP1 patches included by default. You do not need to follow the BP1 patch instructions outlined in this document.

The 12.1.0.2 versions of the Oracle Database, Oracle Fusion Middleware, My Oracle Support, and Exadata plug-ins will also be installed by default as part of the Solaris (SPARC), Solaris (x86-64), or, IBM AIX (64-bit) installation process. You will have the option of installing additional available plug-ins, such as the Fusion Applications plug-in, during installation. Oracle recommends that you also install all the plug-ins that you think you may need.

When you invoke the Enterprise Manager Cloud Control Installation Wizard, you will be given a choice between two Install Types: Simple and Advanced. To install the additional plug-ins, you must perform an Advanced installation.

For more information, see "Installing with Advanced Configuration" in the *Oracle® Enterprise Manager Cloud Control Basic Installation Guide 12c Release 1 (12.1.0.1)*, available at the following link:

[http://docs.oracle.com/cd/E24628\\_01/install.121/e22624/install\\_em\\_exist\\_db.htm#CHDECIFI](http://docs.oracle.com/cd/E24628_01/install.121/e22624/install_em_exist_db.htm#CHDECIFI)

You can also find more installation information in the *Oracle® Enterprise Manager Cloud Control Advanced Installation and Configuration Guide 12c Release 1 (12.1.0.1)*, available at the following location:

[http://docs.oracle.com/cd/E24628\\_01/install.121/e24089/toc.htm](http://docs.oracle.com/cd/E24628_01/install.121/e24089/toc.htm)

## 5.3 Applying Bundle Patch 1 on Solaris SPARC, Solaris (x86-64), or IBM AIX

To apply Bundle Patch 1 on Solaris SPARC or 64 bit or AIX, follow these steps:

- [Step 1: Applying Bundle Patch 1 on Oracle Management Service](#)
- [Step 2: Setting Up Infrastructure for Patching Management Agents](#)
- [Step 3: Downloading and Deploying Plug-ins on Oracle Management Service](#)
- [Step 4: Applying Patch 14158696 on Solaris x86-64 Management Agents Only](#)
- [Step 5: Applying Patches 13242776, 14041708, 13491785 on Management Agents](#)
- [Step 6: Deploying Plug-ins on Management Agents](#)
- [Step 7: Upgrading BI Publisher Reports Shipped with the Plug-ins](#)
- [Step 8: Upgrading ADP and JVM Diagnostics](#)
- [Step 9: Updating the Existing Agent Image to the Latest Agent Image with Bundle Patch 1](#)

### 5.3.1 Step 1: Applying Bundle Patch 1 on Oracle Management Service

To apply Bundle Patch 1 on Solaris (SPARC), Solaris (x86-64), or, IBM AIX (64-bit) Oracle Management Service, follow these steps:

1. Ensure that the Oracle Management Service (OMS) on which you are installing the patch or from which you are rolling back the patch is Oracle Management Service 12c Release 1 (12.1.0.1.0).
2. Ensure that you have the latest version of OPatch. If you do not have the latest version, then follow the instructions outlined in the My Oracle Support note 224346.1 available at:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=224346.1>

3. Ensure that you set the ORACLE\_HOME environment variable to OMS core home, which is <%MIDDLEWARE\_HOME%/oms.

Where <%MIDDLEWARE\_HOME%> refers to the location where Enterprise Manager Cloud Control is installed. For example, /u01/app/Oracle/Middleware.

4. Ensure that you set the PATH environment variable to include the location of the unzip executable, and the <ORACLE\_HOME>/bin and the <ORACLE\_HOME>/OPatch directories present in the Oracle home of the OMS.
  5. Verify the Oracle Inventory because OPatch accesses it to install the patches. To verify the inventory, run the following command. If the command displays some errors, then contact Oracle Support and resolve the issue.
- ```
$ opatch lsinventory
```
6. Check that the Oracle Database, which contains the Management Repository, and its listener are up and running.
 7. Download OMS BP1 13242773 from My Oracle Support, and extract its contents to an accessible location, which is referred to as <PATCH_TOP_DIR> in this section.
 8. Download the JDeveloper and Web Services Manager patches 13470978 and 12321965, respectively, from My Oracle Support. You will be required to apply

these patches after applying the 13242773 BP1 on the OMS. Download the patch 12321965 for Release 11.1.1.5.0 version.

9. Stop the OMS:

```
$ emctl stop oms
```

To verify that the OMS has stopped, run the following command:

```
$ emctl status oms
```

Note: In a multi-OMS environment, shut down all OMS instances.

10. Stop the following components if running within your Cloud Control domain before applying BP1 or updating any plug-in to the latest release:

- Application Dependency and Performance (ADP) Manager.
- JVM Diagnostics (JVMD) Manager.
- BI Publisher Managed Server named "BIP".

11. Install OMS BP1 13242773 by running the following command:

```
$ cd PATCH_TOP_DIR/13242773
```

```
$ opatch apply
```

Note: In a multi-OMS environment, run this command on all OMS instances. Run `opatch apply` in parallel for all OMS instances in this step OR complete the BP1 application process on the first OMS, then do the same for the other OMS instances.

12. Select the appropriate script to automate the BP1 postinstallation process, depending on whether you have a single-OMS environment or a multi-OMS environment.

Note: Ensure that you are in the BP1 location `PATCH_TOP_DIR`. Also, keep the Repository host name, SID, Listener port, and SYSMAN password ready before running the `post_deploy.sh` script.

■ **Single OMS Environment**

In a single-OMS environment, run the following command from the Bundle Patch 1 directory:

```
$ PATCH_TOP_DIR/13242773/post_deploy.sh
```

The `post_deploy.sh` script prompts for the following details: SYSMAN password, Enterprise Manager Repository Host, Enterprise Manager Repository Port, Enterprise Manager Repository SID, and the patch location.

The OMS will be started automatically after running the `post_deploy.sh` script.

■ **Multi-OMS Environment**

In a multi-OMS environment, do the following:

- a. Find the Administration Server by running the following command from OMS home:

```
$ORACLE_HOME/bin/emctl status oms -details
```

Output similar to the following is displayed:

```
Oracle Enterprise Manager Cloud Control 12c Release 12.1.0.2.0
Copyright (c) 1996, 2012 Oracle Corporation. All rights reserved
Enter Enterprise Manager Root (SYSMAN) Password :
Console Server Host : myhost.example.com
HTTP Console Port : 7788
HTTPS Console Port : 7799
HTTP Upload Port : 4889
HTTPS Upload Port : 4900
EM Instance Home : /scratch/userid/work/insthme914/em/EMGC_OMS1
OMS Log Directory Location : /scratch/userid/work/insthme914/em/EMGC_
OMS1/sysman/log
OMS is not configured with SLB or virtual hostname
Agent Upload is locked.
OMS Console is locked.
Active CA ID: 1
Console URL: https://myhost.example.com:7799/em
Upload URL: https://myhost.example.com:4900/empbs/upload

WLS Domain Information
Domain Name : GCDomain
Admin Server Host: myhost.example.com

Managed Server Information
Managed Server Instance Name: EMGC_OMS1
Managed Server Instance Host: myhost.example.com
WebTier is Down
Oracle Management Server is Down
```

- b. Run the following command on the Primary OMS of a multi-OMS setup:

The Primary OMS is the one co-located with the Admin server.

```
$ ./PATCH_TOP_DIR/13242773/post_deploy.sh
```

- c. Run the following command on the other OMS environments (non-Primary):

```
$ ./ PATCH_TOP_DIR/13242773/MultiOms_post_deploy.sh
```

You will be asked to enter the patch location. For example:

```
/scratch/xxx/PATCH_TOP_DIR/13242773
```

13. Apply the JDeveloper and Web Services Manager patches 13470978 and 12321965 to OMS.

Note: This must be applied to all of the OMS instances in a multi-OMS environment. Also, there is no specific sequence to apply these two patches.

If you have Enterprise Manager installed using the Enterprise Manager binaries with BP1, then this JDeveloper patch is automatically installed with no further work required.

If you are applying the BP1 on your existing Enterprise Manager installation, then you must apply the JDeveloper patch as an extra step. There are a variety of fixes in the patch, including functional issues and Google Chrome and Microsoft Internet Explorer 9 browser support. The JDeveloper patch should be applied after BP1. For instructions, refer to the README of the respective patch.

Apply the patches following the instructions in the README of the corresponding patch. When you search for patch 12321965, you will find two releases of the patch, namely, 11.1.1.5.0 and 11.1.1.4.0. Make sure that you select and apply the 11.1.1.5.0 release of the patch. Verify that you apply both the patches in the oracle_common directory that resides in the Middleware Home (MW_HOME/oracle_common/). Set environment variable ORACLE_HOME to your [MW_HOME]/oracle_common directory before applying patches 13470978 and 12321965 to the OMS.

14. Verify that BP1 was properly installed by running the following command to check that the patch is registered in the inventory:

```
$<MIDDLEWARE_HOME>/oms/OPatch/opatch lsinventory
```

To verify that all the patches are installed on the OMS, run the following commands:

- a. Set the following environment variable on the OMS host:

```
setenv ORACLE_HOME <MIDDLEWARE_HOME>/oms
```

- b. Run the following verification commands to ensure the patch has been applied to the OMS:

```
$<MIDDLEWARE_HOME>/oms/OPatch/opatch lspatches -id 13242773 -verify
```

```
$<MIDDLEWARE_HOME>/oms/OPatch/opatch lspatches -oh <MIDDLEWARE_HOME>/oracle_common -id 12321965 -verify
```

```
$<MIDDLEWARE_HOME>/oms/OPatch/opatch lspatches -oh /<MIDDLEWARE_HOME>/oracle_common -id 13470978 -verify
```

The results of the commands will show the patch number and its details if present in the OMS.

15. Download OMS BP1 14040891 from My Oracle Support, and extract its contents to an accessible location, which is referred to as <PATCH_TOP_DIR2> in the rest of this section.

16. If the OMS is running, stop it. Otherwise, skip this step.

```
$ emctl stop oms
```

To verify that the OMS has stopped, run the following command:

```
emctl status oms
```

Note: In a multi-OMS environment, shut down all OMS instances.

17. Install OMS BP1 14040891:

```
$ cd <PATCH_TOP_DIR2>/14040891
```

```
$ opatch napply
```

Note: In a multi-OMS environment, run this command on all OMS instances. Run `opatch napply` in parallel for all OMS instances in this step OR complete the BP1 application process on the first OMS, then do the same for the other OMS instances.

18. Run the following command:

```
$ emctl applypatch repos -patchHome <PATCH_TOP_DIR2>/14040891/13653571
```

If the command succeeds, the following message is displayed:

```
PATCH APPLICATION HAS SUCCEEDED
```

19. Run the following command:

```
$ emctl register oms metadata -service swlib -file $ORACLE_
HOME/sysman/metadata/swlib/multioms -core
```

```
$ emctl register oms metadata -service procedures -file $ORACLE_
HOME/sysman/metadata/procedures/multioms/MultiOMS.xml -core
```

```
$ emctl register oms metadata -service derivedAssocs -file $ORACLE_
HOME/sysman/metadata/derivedAssocs/emSystemAssocRules.xml -core
```

20. Start the OMS by running the following command:

```
$ emctl start oms
```

Note: If you have a standby site, then follow these steps:

1. On each standby OMS, follow Step (1) to Step (11), then Step (13) and Step (14).

Note: DO NOT run the `post_deploy.sh` command as described in Step (12).

2. Then, run the following for each standby OMS instance, where `ORACLE_HOME` is the OMS home:

```
$ ORACLE_HOME/perl/bin/perl 13242773_PATCH_TOP_
DIR/apply12959056.pl
```

```
$ ORACLE_HOME/perl/bin/perl 13242773_PATCH_TOP_
DIR/apply13479448.pl
```

```
$ sh $ORACLE_HOME/bin/exec_13651296_patch
```

These scripts can be found under:

```
13242773_PATCH_TOP_DIR/custom/scripts/
```

3. And then, follow Step (15) to Step (19).

For instructions to set up a standby OMS, refer to [Setting Up High Availability](#).

5.3.2 Step 2: Setting Up Infrastructure for Patching Management Agents

Follow the steps outlined in this section for setting up the infrastructure for patching Management Agents:

1. For setting up My Oracle Support Credentials, refer to [Section 2.2.1](#).
2. For setting up infrastructure in Online Mode, refer to [Section 2.2.2](#).

3. For setting up infrastructure in Offline Mode, follow these steps:
 - a. Verify that the connection to My Oracle Support is set to "Offline".
From the **Setup** menu, select **Provisioning and Patching**, then select **Offline Patching**.
 - b. From the Patching Setup page, select **Online and Offline Settings**, then select **Offline** and click **Apply**.
 - c. Log in to another host with **internet connectivity**, and perform the following steps:
 - Download Management Agent patches 13242776, 14041708, and 13491785, and OPatch patch 6880880 from My Oracle Support.
 - Upload these patches to Software Library.
 - d. Go back to your infrastructure in the Offline mode, and perform the following steps:
 - a. Download the Management Agent patches by specifying the patch numbers 13242776, 14041708, and 13491785 as comma-separated entries In the Patch Search region of the Patches & Updates page, then click **Search**.
Make sure you select the right platform, for example, Solaris SPARC.
 - b. Click **Search**.
 - c. Download the patch zip files and the patch metadata files for the patches.
To download the patch metadata, click **Download Patch Metadata**, then click **Download**.
Click the patch zip file to download the zip file.

Note: Make sure you download both.

- d. Download the required OPatch patches from My Oracle Support (<https://support.oracle.com>).
Search for patch "6880880" for the appropriate platform for the Management Agent target. For example, if your target is Linux x86-64, pick platform Linux x86-64.
- e. Click **Search**.
Download the patch for the version 11.1.0.0.0 series only.
- f. Download both the patch zip file and the patch metadata.
To download the patch metadata file, click **Download Patch Metadata**, then click **Download**.
- e. Upload the Management Agent patches to the Software Library.
 - a. From the **Enterprise** menu, select **Provisioning and Patching**, then select **Saved Patches**.
 - b. Click **Upload** to open the Upload Patches to Software Library page.
 - c. On the Upload Patches to Software Library page, in the Basic Information section, do the following:

- From the **Product Family** list, select the product family for which you are uploading the patch. For example, for patches 13242776, 13491785, and 14041708 select **Oracle System Management Products**.
- From the **Product** list, select the product for which you are uploading the patch. For example, for patches 13242776, 13491785, and 14041708 select **Enterprise Manager Base Platform**.
- From the **Select Type of Patch**, select either **Patch** or **Patch Set** depending on the type of patch you are uploading. For example, for patches 13242776, 13491785, and 14041708 select **Patch** from the menu.
- d. For patches 13242776, 14041708, and 13491785, select the patch metadata file and patch zip file from the local directory on the system and click **Upload**.
- e. Upload patches 13242776, 14041708, and 13491785 by selecting their patch metadata and the patch zip file.
- f. Reset the Basic Information attributes as shown.
- g. Select the patch metadata and the patch zip file and click **Upload**.
- f. To upload OPatch 6880880 to the Software Library, specify the Basic Information attributes.

Select the patch metadata and patch zip file for the Opatch patch 6880880 and upload it. Ensure that you fill in all attributes required in the page:

- Product Family: Oracle Systems Management Products
- Product: Universal Installer
- Release: Choose version as "11.1.0.0.0".
- Created On: Use today's date
- Description: Opatch for version 11.1.0.x
- Platform: Select the platform for which you downloaded the patch (for example, Solaris SPARC)
- Language: Select 'American English'

g. Click Upload.

Upon successful upload, all the patches will be visible in the Saved Patches page.

At the end of this process, all of the Agent patches and the Opatch patch should be listed in the Saved Patches in Software Library page.

5.3.3 Step 3: Downloading and Deploying Plug-ins on Oracle Management Service

To download and deploy the plug-ins on the OMS in graphical mode, refer to [Section 2.3.1](#) and [Section 2.3.2](#).

To download the plug-ins in graphical mode, and to deploy them on the OMS, particularly multiple plug-ins at a time, in silent mode, follow these steps:

1. Meet the prerequisites in [Section 2.3.1](#). Then, download the plug-ins following Step (1) to Step (6) in [Section 2.3.2](#).
2. Log in to EM CLI as follows:

```
cd $ORACLE_HOME/bin/emcli login -username=sysman
```

3. Run the following command:

```
$ORACLE_HOME/emcli sync
```

4. To deploy the plug-ins on the OMS, run the following command:

```
emcli deploy_plugin_on_server  
-plugin="plug-in_id"[: "version"]  
[-sys_password="sys_password"]  
[-prereq_check]
```

For example,

```
emcli deploy_plugin_on_server  
-plugin="oracle.sysman.db:12.1.0.2.0;oracle.sysman.emas:12.1.0.2.0"
```

5.3.4 Step 4: Applying Patch 14158696 on Solaris x86-64 Management Agents Only

To apply patch 14158696 on Management Agents, refer to [Section 2.4](#).

Note: Ensure that you add the patch number 14158696 to the patch plan instead of the patches mentioned in [Section 2.4](#). The instructions outlined in [Section 2.4](#) is specific to Linux, consider that only an example and follow the instructions outlined in the section to apply 14158696 patch.

Do NOT add any other patch to this patch plan. This patch plan must have only this 14158696 patch.

5.3.5 Step 5: Applying Patches 13242776, 14041708, 13491785 on Management Agents

Note: If the Management Agents are running on a HP-PA RISC host or a HP-Itanium host, then ensure that you use the latest OPatch version 11.1.0.9.7. To upload the new OPatch 11.1.0.9.7 version to Software Library, perform the following steps:

1. Run the following steps to delete the current OPatch version as follows:
 - Log in to Enterprise Manager Cloud Control.
 - From **Enterprise menu**, select **Provisioning and Patching**, and click **Saved Patches**.
 - On the Saved Patches in Software Library page, search for patch **6880880**.
 - Click **Remove**.
 2. To upload OPatch patches to Oracle Software Library, refer to Uploading OPatch Patches to Oracle Software Library.
-

To apply patches 13242776, 14041708, and 13491785 on Management Agents, refer to [Section 2.4](#).

Note: Ensure that you add the patch numbers 13242776, 14041708, and 13491785 to the patch plan instead of the patches mentioned in [Section 2.4](#). The instructions outlined in [Section 2.4](#) is specific to Linux, consider that only an example and follow the instructions outlined in the section to apply these patches.

5.3.6 Step 6: Deploying Plug-ins on Management Agents

For deploying plug-ins on Management Agents, refer to [Section 2.5](#).

5.3.7 Step 7: Upgrading BI Publisher Reports Shipped with the Plug-ins

To upgrade the Oracle Business Intelligence Publisher (BI Publisher) reports that are packaged with the plug-ins, refer to [Section 2.6](#).

Note: Upgrade the BI Publisher reports only if BI Publisher was previously installed and configured to work with Oracle Enterprise Manager Cloud Control 12c. If it was not already installed and configured, then this step will automatically occur when BI Publisher is configured at a later time.

5.3.8 Step 8: Upgrading ADP and JVM Diagnostics

To upgrade ADP and JVM Diagnostics, refer to [Section 2.7](#).

5.3.9 Step 9: Updating the Existing Agent Image to the Latest Agent Image with Bundle Patch 1

For updating the existing agent image present on your Oracle Management Service to the latest agent image with Bundle Patch 1, refer to [Chapter 3](#).

5.4 Managing New Management Agents Deployed on Solaris SPARC, Solaris (x86-64), IBM AIX, HP-UX, or HP-UX Itanium Hosts from OMS on Linux with BP1 or from OMS on Windows with Bundle Patch 1

If you are planning to monitor a newly deployed Management Agent on Solaris SPARC, Solaris 64 bit, AIX, HP-UX, or HP-UX Itanium host from Oracle Management Service on Linux (32-bit or 64-bit) with BP1 or Oracle Management Service on Windows with BP1, then follow these steps:

- [Step 1: Applying Patch 14040891 on Oracle Management Service](#)
- [Step 2: Applying Plug-In Patches on Plug-In Homes Deployed to Oracle Management Service](#)
- [Step 3: Downloading and Upgrading Plug-ins to 12.1.0.2 Release](#)
- [Step 4: Upgrading ADP and JVM Diagnostics](#)
- [Step 5: Updating the Existing Agent Image to the Latest Agent Image with Bundle Patch 1](#)
- [Step 6: Deploying Management Agents on Solaris SPARC, Solaris \(x86-64\), IBM AIX, HP-UX, and HP-UX Itanium](#)

5.4.1 Step1: Applying Patch 14040891 on Oracle Management Service

To apply patch 14040891 on Oracle Management Service, follow these steps:

1. Ensure that the Oracle Management Service (OMS) on which you are installing the patch or from which you are rolling back the patch is Oracle Management Service 12c Release 1 (12.1.0.1.0).
2. Ensure that you have the latest version of OPatch. If you do not have the latest version, then follow the instructions outlined in the My Oracle Support note 224346.1 available at:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=224346.1>

3. Ensure that you set the ORACLE_HOME environment variable to OMS core home, which is <%MIDDLEWARE_HOME%>/oms.

Where <%MIDDLEWARE_HOME%> refers to the location where Enterprise Manager Cloud Control is installed. For example, /u01/app/Oracle/Middleware.

4. Ensure that you set the PATH environment variable to include the location of the unzip executable, and the <ORACLE_HOME>/bin and the <ORACLE_HOME>/OPatch directories present in the Oracle home of the OMS.
5. Verify the Oracle Inventory because OPatch accesses it to install the patches. To verify the inventory, run the following command. If the command displays some errors, then contact Oracle Support and resolve the issue.

```
$ opatch lsinventory
```

6. Check that the Oracle Database, which contains the Management Repository, and its listener are up and running.
7. Stop the OMS:

```
$ emctl stop oms
```

To verify that the OMS has stopped, run the following command:

```
$ emctl status oms
```

Note: In a multi-OMS environment, shut down all OMS instances.

8. Stop the following components if running within your Cloud Control domain before applying BP1 or updating any plug-in to the latest release:
 - Application Dependency and Performance (ADP) Manager.
 - JVM Diagnostics (JVMD) Manager.
 - BI Publisher Managed Server named "BIP".
9. Download OMS BP1 14040891 from My Oracle Support, and extract its contents to an accessible location, which is referred to as <PATCH_TOP_DIR2> in the rest of this section.
10. Install OMS BP1 14040891:

```
$ cd <PATCH_TOP_DIR2>/14040891
```

```
$ opatch napply
```

Note: In a multi-OMS environment, run this command on all OMS instances. Run `opatch napply` in parallel for all OMS instances in this step OR complete the BP1 application process on the first OMS, then do the same for the other OMS instances.

11. Run the following command:

```
$ emctl applypatch repos -patchHome <PATCH_TOP_DIR2>/14040891/13653571
```

12. Run the following command:

```
$ emctl register oms metadata -service swlib -file $ORACLE_
HOME/sysman/metadata/swlib/multioms -core

$ emctl register oms metadata -service procedures -file $ORACLE_
HOME/sysman/metadata/procedures/multioms/MultiOMS.xml -core

$ emctl register oms metadata -service derivedAssocs -file $ORACLE_
HOME/sysman/metadata/derivedAssocs/emSystemAssocRules.xml -core
```

13. Start the OMS by running the following command:

```
$ emctl start oms
```

5.4.2 Step 2: Applying Plug-In Patches on Plug-In Homes Deployed to Oracle Management Service

The following sections describe the process of applying plug-in patches on plug-in homes deployed to Oracle Management Service:

- [Applying Oracle Database Plug-In Patch 14089634](#)
- [Applying Oracle Fusion Applications Patch 13719833](#)
- [Applying Oracle Fusion Middleware Plug-in Patch 13963029](#)

5.4.2.1 Applying Oracle Database Plug-In Patch 14089634

To apply Oracle Database Plug-in patch 14089634 on your Oracle Management, follow these steps:

1. Shut down the OMS by running the following command:

```
<ORACLE_HOME>/bin emctl stop oms
```

Make sure to shut down all OMS instances in a multi-OMS environment.

2. Set the environment variable `PLUGIN_HOME` to:

```
<%MIDDLEWARE_HOME%>/plugins/oracle.sysman.db.oms.plugin_12.1.0.2.0
```

For example:

```
setenv PLUGIN_HOME
/example/work/midlwre6465/plugins/oracle.sysman.db.oms.plugin_
12.1.0.2.0
```

3. Maintain a location for storing the contents of the patch ZIP file.

In the rest of this section, this location (absolute path) is referred to as `PATCH_TOP_DIR`.

4. Run the following command to extract the contents of the patch ZIP file to the location you created in the previous step:

```
$ unzip -d PATCH_TOP_DIR p14089634_121010_Generic.zip
```

5. Use the following command to navigate to the `PATCH_TOP_DIR/14089634` directory:

```
$ cd PATCH_TOP_DIR/14089634
```

6. Run the following command on each OMS instance (in a multi-OMS environment) to apply the patch:

```
$ opatch napply -oh $PLUGIN_HOME
```

The following messages appear on screen:

- Do you want to proceed? [y | n]: (yes)
- Oracle Support Email address/User Name: (provide your details or press Enter to continue)
- Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]: (y)

If the patch is applied successfully, the following message is displayed:

```
OPatch succeeded
```

7. Run the following four commands on the first OMS only (you will be prompted for the SYSMAN password):

If the commands succeed, the following message is displayed:

```
Metadata registration successful
```

Note: In the following commands, <command prompt> is ORACLE_HOME/bin.

- a. <command prompt> `emctl register oms metadata -service swlib -file $PLUGIN_HOME/metadata/swlib -pluginId oracle.sysman.db`
 - b. <command prompt> `emctl register oms metadata -service procedures -file $PLUGIN_HOME/metadata/procedures/ExtendClusterNG.xml -pluginId oracle.sysman.db`
 - c. <command prompt> `emctl register oms metadata -service procedures -file $PLUGIN_HOME/metadata/procedures/provsidb.xml -pluginId oracle.sysman.db`
 - d. <command prompt> `emctl register oms metadata -service preNGProcedures -file $PLUGIN_HOME/metadata/preNGProcedures/RACProvisionWIN.xml -pluginId oracle.sysman.db`
8. Start the OMS instance:
- ```
<ORACLE_HOME>/bin emctl start oms
```

#### 5.4.2.2 Applying Oracle Fusion Applications Patch 13719833

To apply Oracle Fusion Applications Patch 13719833, refer to [Section 4.2.2.3](#).

---

**Note:** If you have already applied this patch before, then you need not apply it again. For example, if you have applied Bundle Patch 1 on Linux hosts, and then installed Management Agents on Microsoft Windows hosts as described in [Section 4.2](#), then as part of the bundle patch application process, you would have already applied this Oracle Fusion Applications plug-in patch. In such cases, you need not apply this patch all over again.

---

### 5.4.2.3 Applying Oracle Fusion Middleware Plug-in Patch 13963029

To apply Oracle Fusion Middleware Plug-in patch 13963029, follow these steps:

1. Ensure that the Oracle Management Service (OMS) on which you are installing the patch or from which you are rolling back the patch is Oracle Management Service 12c Release 1 (12.1.0.1.0).
2. Ensure that you have the latest version of OPatch. If you do not have the latest version, then follow the instructions outlined in the My Oracle Support note 224346.1 available at:

<https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=224346.1>

3. Ensure that you set the ORACLE\_HOME environment variable to OMS Core home, which is <%MIDDLEWARE\_HOME%/oms.
4. Set the environment variable PLUGIN\_HOME to <%MIDDLEWARE\_HOME%/plugins/oracle.sysman.emas.oms.plugin\_12.1.0.2.0
5. Ensure that you set the PATH environment variable to include the location of the unzip executable, and the <ORACLE\_HOME>/bin and the <ORACLE\_HOME>/OPatch directories present in the Oracle home of the OMS.
6. Verify the Oracle Inventory because OPatch accesses it to install the patches. To verify the inventory, run the following command. If the command displays some errors, then contact Oracle Support and resolve the issue.

```
$ opatch lsinventory -oh $PLUGIN_HOME
```

7. Ensure that you shut down the OMS by running the following command:

```
$ emctl stop oms
```

---

**Note:** In case of a multi-OMS environment, shut down all the OMSes.

---

8. Ensure that the Oracle Database, which contains the Management Repository, and its listener are up and running.
9. Maintain a location for storing the contents of the patch ZIP file. In the rest of the document, this location (absolute path) is referred to as <PATCH\_TOP\_DIR>.
10. Extract the contents of the patch ZIP file to the location you created in Step (1). To do so, run the following command:

```
$ unzip -d <PATCH_TOP_DIR> p13963029_121020_Generic.zip
```

11. Navigate to the <PATCH\_TOP\_DIR>/13963029 directory:

```
$ cd <PATCH_TOP_DIR>/13963029
```

**12. Install the patch by running the following command:**

On Unix:

```
$ opatch napply -oh $PLUGIN_HOME
```

On Windows:

```
opatch napply -oh %PLUGIN_HOME%
```

**13. Register the JobType using the following command:**

Enter SYSMAN Password for each command when prompted.

```
$ emctl register oms metadata -service swlib -file $PLUGIN_HOME/metadata/swlib/coherenceprov -pluginId oracle.sysman.emas
```

```
$ emctl register oms metadata -service swlib -pluginId oracle.sysman.emas -file $PLUGIN_HOME/metadata/swlib
```

```
$ emctl register oms metadata -pluginId oracle.sysman.emas -service procedures -file $PLUGIN_HOME/metadata/procedures/FMWPROV.xml
```

```
$ emctl register oms metadata -pluginId oracle.sysman.emas -service procedures -file $PLUGIN_HOME/metadata/procedures/DomainScaleUp.xml
```

```
$ emctl register oms metadata -pluginId oracle.sysman.emas -service jobTypes -file $PLUGIN_HOME/metadata/jobTypes/CreateFMWBundle.xml
```

```
$ emctl register oms metadata -pluginId oracle.sysman.emas -service jobTypes -file $PLUGIN_HOME/metadata/jobTypes/CreateFMWGoldImage.xml
```

```
$ emctl register oms metadata -service procedures -file $PLUGIN_HOME/metadata/procedures/WholeServerMigration.xml -pluginId oracle.sysman.emas
```

```
$ emctl register oms metadata -service swlib -file $PLUGIN_HOME/metadata/swlib/patch -pluginId oracle.sysman.emas
```

**14. Start the OMS instance:**

```
<ORACLE_HOME>/bin emctl start oms
```

### 5.4.3 Step 3: Downloading and Upgrading Plug-ins to 12.1.0.2 Release

You need to obtain the Solaris SPARC, Solaris (x86-64), IBM AIX-specific revisions of the plug-ins using Self Update in either online or offline mode. The plug-ins have been revised are for Database, Fusion Middleware, and Exadata components. The steps are similar to those outlined in [Section 2.3](#).

To view the available revisions for the Oracle Database, Oracle Fusion Middleware, and Oracle Fusion Applications plug-ins, log in to the Cloud Control console and from the **Setup** menu, select **Extensibility**, then select **Plug-ins**.

### 5.4.4 Step 4: Upgrading ADP and JVM Diagnostics

To upgrade ADP and JVM Diagnostics, refer to [Section 2.7](#).

### 5.4.5 Step 5: Updating the Existing Agent Image to the Latest Agent Image with Bundle Patch 1

For updating the existing agent image present on your Oracle Management Service to the latest agent image with Bundle Patch 1, refer to [Chapter 3](#).

### 5.4.6 Step 6: Deploying Management Agents on Solaris SPARC, Solaris (x86-64), IBM AIX, HP-UX, and HP-UX Itanium

For deploying a fresh Management Agent on Solaris SPARC, Solaris 64 bit, AIX, HP-UX, or HP-UX Itanium, refer to "Installation Procedure" section in the *Oracle® Enterprise Manager Cloud Control Basic Installation Guide 12c Release 1 (12.1.0.1)*, available at the following link:

[http://docs.oracle.com/cd/E24628\\_01/install.121/e22624/install\\_agent.htm#BABIHIAG](http://docs.oracle.com/cd/E24628_01/install.121/e22624/install_agent.htm#BABIHIAG)

## 5.5 Managing Existing Management Agents Running on Solaris SPARC, Solaris (x86-64), IBM AIX, HP-UX, or HP-UX Itanium Hosts from OMS on Linux with BP1 or from OMS on Windows with Bundle Patch 1

If you are planning to monitor existing Management Agents running on Solaris SPARC, Solaris 64 bit, AIX, HP-UX, or HP-UX Itanium hosts from Oracle Management Service on Linux (32-bit or 64-bit) with BP1 or Oracle Management Service on Windows with BP1, then follow these steps:

- [Step 1: Applying Patch 14040891 on Oracle Management Service](#)
- [Step 2: Applying Plug-In Patches on Plug-In Homes Deployed to Oracle Management Service](#)
- [Step 3: Setting Up Infrastructure for Patching Management Agents Before Upgrading Plug-ins](#)
- [Step 4: Applying Patch 14158696 on Solaris x86-64 Management Agents Only](#)
- [Step 5: Applying Patches 13242776, 14041708, 13491785 on Management Agents](#)
- [Step 6: Upgrading ADP and JVM Diagnostics](#)
- [Step 7: Deploying Plug-ins on Management Agents](#)

### 5.5.1 Step 1: Applying Patch 14040891 on Oracle Management Service

For information about applying patch 14040891 on Oracle Management Service, refer to [Section 5.3.1](#).

### 5.5.2 Step 2: Applying Plug-In Patches on Plug-In Homes Deployed to Oracle Management Service

For information about applying Plug-in patches on Plug-in homes deployed to Oracle Management service, refer to [Section 5.4.2](#).

### 5.5.3 Step 3: Setting Up Infrastructure for Patching Management Agents Before Upgrading Plug-ins

For information about setting up infrastructure for patching Management Agents before upgrading plug-ins, refer to [Section 5.3.2](#).

### 5.5.4 Step 4: Applying Patch 14158696 on Solaris x86-64 Management Agents Only

To apply patch 14158696 on Management Agents, refer to [Section 2.4](#).

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**Note:** Ensure that you add the patch number 14158696 to the patch plan instead of the patches mentioned in [Section 2.4](#). The instructions outlined in [Section 2.4](#) is specific to Linux, consider that only an example and follow the instructions outlined in the section to apply 14158696 patch.

Do NOT add any other patch to this patch plan. This patch plan must have only this 14158696 patch.

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## 5.5.5 Step 5: Applying Patches 13242776, 14041708, 13491785 on Management Agents

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**Note:** If the Management Agents are running on a HP-PA RISC host or a HP-Itanium host, then ensure that you use the latest OPatch version 11.1.0.9.7. To upload the new OPatch 11.1.0.9.7 version to Software Library, perform the following steps:

1. Run the following steps to delete the current OPatch version as follows:
    - Log in to Enterprise Manager Cloud Control.
    - From **Enterprise** menu, select **Provisioning and Patching**, and click **Saved Patches**.
    - On the Saved Patches in Software Library page, search for patch **6880880**.
    - Click **Remove**.
  2. To upload OPatch patches to Oracle Software Library, refer to Uploading OPatch Patches to Oracle Software Library.
- 

To apply patches 13242776, 14041708, and 13491785 on Management Agents, refer to [Section 2.4](#).

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**Note:** Ensure that you add the patch numbers 13242776, 14041708, and 13491785 to the patch plan instead of the patches mentioned in [Section 2.4](#). The instructions outlined in [Section 2.4](#) is specific to Linux, consider that only an example and follow the instructions outlined in the section to apply these patches.

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## 5.5.6 Step 6: Upgrading ADP and JVM Diagnostics

To upgrade ADP and JVM Diagnostics, refer to [Section 2.7](#).

## 5.5.7 Step 7: Deploying Plug-ins on Management Agents

For deploying plug-ins on Management Agents, refer to [Section 2.5](#).

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