

# Oracle® Enterprise Manager

Enterprise Manager for Oracle Utilities Application

Installation Guide

E27031-04

December 2014

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Enterprise Manager for Oracle Utilities Application extends Oracle Enterprise Manager Cloud Control to allow monitoring and management of Oracle Utilities Application Framework-based products on remote servers.

When Enterprise Manager for Oracle Utilities Application is deployed, the following features and capabilities are available:

- Product discovery
- Target monitoring
- Environment assessment
- Environment cloning
- Patch identification and installation
- Patch migration from one environment to another
- View product configuration files

This document describes the requirements and tasks related to deploying, configuring, and undeploying Enterprise Manager for Oracle Utilities Application.

NOTE: Prior versions of this product were released as Application Management Pack for Oracle Utilities. Please note that any references to Application Management Pack for Oracle Utilities that may occur within this document or in images within this document refer instead to the product's new name, Enterprise Manager for Oracle Utilities Application.

## Related Documentation and Resources

The **Help** menu provides links to **Enterprise Manager Help**, **Oracle Online Documentation**, **Oracle Online Forums**, and the **Oracle Technology Network (OTN)**, where the complete documentation for Oracle Enterprise Manager 12c is available.

This document and other Enterprise Manager for Oracle Utilities Application-specific documentation is available on the *Oracle Utilities* section of the **Oracle Technology Network (OTN)** documentation site.

Additional information on Oracle Enterprise Manager-specific features and functionality relating to this product is available in the *Enterprise Manager Cloud Control Documentation* (<http://docs.oracle.com/en/enterprise-manager/>).

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**NOTE:** The documentation that accompanies this product is subject to revision and updating. Additional information that may relate to the functionality and features in this product may be found on My Oracle Support (MOS) at <https://support.oracle.com> (sign-in required). To find all articles relating to this product, enter the search term "Enterprise Manager for Oracle Utilities Application" (or for related articles, search on the product's previous name, "Application Management Pack for Oracle Utilities").

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## Supported Product Versions

This release of Enterprise Manager for Oracle Utilities Application supports the following Oracle products:

**Table 1: Product Support**

Product	Version
Oracle Enterprise Manager	12.1.0.4.0
Oracle Utilities Application Framework	2.2.0, 4.0.2, 4.1.0.*, 4.2.0.*, 4.3*

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## Requirements

The following are the operating system and software requirements for the Enterprise Manager for Oracle Utilities Application plug-in.

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**IMPORTANT:** Ensure that the latest service packs are installed for all Oracle Utilities Application Framework-based products before installing Enterprise Manager for Oracle Utilities Application. Refer to the release notes for a list of patches that have to be applied to the Oracle Utilities Application Framework product.

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## Oracle Enterprise Manager Requirements with the Enterprise Manager for Oracle Utilities Plug-in

### Supported Operating Systems/OS Server Architecture

- Sun Solaris 10 and 11/SPARC 64-bit
- IBM AIX 6.1 and 7.1/POWER 64-bit
- Oracle Enterprise Linux 5 and 6/x86 64-bit

## EM Repository Database Server and Web Application Servers (Supported Combinations)

Oracle WebLogic Server 10.3.6 and OEM supported databases

- DB-10gR2 10.2.0.5
- DB-11gR1 11.1.0.7
- DB-11gR2 11.2.0.1, 11.2.0.2 (Note 1266977.1), 11.2.0.3, 11.2.0.4

## Supported Browsers

- Internet Explorer 10 and 11
- Firefox ESR 24

## Dependency on Specific EM Components

- This version of the plug-in is incompatible with previous releases of the Oracle Utilities Plugin. Please ensure that all previous versions are undeployed from all Agents and Oracle Management Servers (OMS), and is also deleted from the Software Library before deploying this version.
- Oracle Fusion Middleware plug-in is required.

## Oracle Utilities Application Framework 4.0.2, 4.1.0.\*, 4.2.0.\*, and 4.3.\* Requirements

The plug-in is designed to manage and monitor any combination of the following Oracle Utilities Application Framework-based product installations on any of the operating systems and server architectures listed in the OEM requirements table shown above.

- Oracle Utilities Customer Care and Billing, Release 2.4.0.\*
- Oracle Utilities Meter Data Management, Release 2.0.1.\*
- Oracle Mobile Workforce Management, Release 2.1.0.\*
- Oracle Utilities Smart Grid Gateway, Release 2.0.0.\*
- Oracle Operational Device Management, Release 2.0.0.\*

Platform requirements for each of the products listed above are contained in each product's *Installation Guide*.

## Oracle Utilities Application Framework 2.2.0 Requirements

Oracle Utilities Customer Care and Billing, Release 2.2.0 and 2.3.1.

# Downloading and Importing Enterprise Manager for Oracle Utilities Application

## Checking for Enterprise Manager for Oracle Utilities Application Availability

Enterprise Manager makes functional updates available by publishing them to the Enterprise Manager Store, an external site that is periodically checked by Cloud Control to obtain information about available updates. Through this facility, Enterprise Manager for Oracle Utilities Application may be available for immediate deployment on Enterprise Manager.

To check for the availability of Enterprise Manager for Oracle Utilities Application, follow the instructions in the "[Checking the Availability of Plug-ins](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGDBDGD)" topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/plugin\\_mngr.htm#CJGDBDGD](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGDBDGD)) in the *Enterprise Manager Cloud Control Administrator's Guide* documentation.

If present, Enterprise Manager for Oracle Utilities Application is already available for deployment, allowing you to bypass the installation procedures described in this section and immediately proceed to the deployment task described in [Deploying Enterprise Manager for Oracle Utilities Application on OMS](#).

After deploying Enterprise Manager for Oracle Utilities Application, target environment instances must be added for central monitoring and management.

## Installation Procedures If the Management Pack is Not Present

If Enterprise Manager for Oracle Utilities Application is not available for immediate deployment, it must be downloaded and imported using the instructions provided in the "[Downloading Plug-ins](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGBEAHJ)" topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/plugin\\_mngr.htm#CJGBEAHJ](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGBEAHJ)) in the *Enterprise Manager Cloud Control Administrator's Guide* documentation.

After downloading and importing Enterprise Manager for Oracle Utilities Application, the plug-in must be deployed on Management Servers and Management Agents.

After deploying Enterprise Manager for Oracle Utilities Application, target environment instances must be added for central monitoring and management.

## Positioning the Installation File

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**NOTE:** This procedure is not required if Enterprise Manager for Oracle Utilities Application is available for immediate deployment as described earlier in the topic, *Downloading and Importing Enterprise Manager for Oracle Utilities Application* .

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**NOTE:** To complete the final step in this procedure, Java JDK must be installed on the machine on which the Enterprise Manager for Oracle Utilities Application will be downloaded. Java packages may be downloaded from <http://www.oracle.com/technetwork/java/archive-139210.html>.

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The installation file for Enterprise Manager for Oracle Utilities Application (AMP-V12.1.0.1.0-MultiPlatform.jar) is available on the Oracle Software Delivery Cloud site. The jar can be installed using the Enterprise Manager Command Line (EMCLI) utility on either Linux/UNIX or Windows platforms.

To download and position Enterprise Manager for Oracle Utilities Application for installation:

1. Log in to the Oracle Software Delivery Cloud at <https://edelivery.oracle.com>, and click the boxes on the **Terms and Restrictions** page to access the **Media Pack Search** page.
2. Select **Oracle Utilities Applications** from the product drop-down list, a platform from the **Platform** list, and click **Go** to list downloadable media packs.
3. Locate and click the Enterprise Manager for Oracle Utilities Application item to advance to the **Download** page.
4. Click the **Download** button and save the file to a temporary location (e.g., `c:/mediapacks`).
5. Extract the `opar` files from the downloaded file (example download location shown below):

```
cd c:/tempdir
jar -xvf AMP-V12.1.0.1.0-MultiPlatform.jar
```

## Configuring the Software Library

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**NOTE:** This procedure is *not* required if you configured the software library during Enterprise Manager installation.

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To configure the software library, follow the instructions in the "[Configuring an OMS Shared Filesystem Location](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/softwarelib.htm#CHDJGAFB)" topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/softwarelib.htm#CHDJGAFB](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/softwarelib.htm#CHDJGAFB)) in the *Enterprise Manager Cloud Control Administrator's Guide* documentation.

## Setting Up the EMCLI Utility

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**NOTE:** This procedure is not required if Enterprise Manager for Oracle Utilities Application is available for immediate deployment as described earlier in the topic, *Downloading and Importing Enterprise Manager for Oracle Utilities Application*.

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The Enterprise Manager Command Line (EMCLI) utility is required to import the plug-in archive for deployment to Enterprise Manager.

To set up EMCLI for Enterprise Manager for Oracle Utilities Application, follow the instructions in the "[Setting Up the EM CLI Utility](http://docs.oracle.com/cd/E24628_01/doc.121/e25161/package.htm#CACFABCC)" topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e25161/package.htm#CACFABCC](http://docs.oracle.com/cd/E24628_01/doc.121/e25161/package.htm#CACFABCC)) in the *Enterprise Manager Cloud Control Extensibility Programmer's Reference* documentation.

# Importing Enterprise Manager for Oracle Utilities Application

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**NOTE:** This procedure is not required if Enterprise Manager for Oracle Utilities Application is available for immediate deployment as described earlier in the topic, *Downloading and Importing Enterprise Manager for Oracle Utilities Application*.

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Enterprise Manager for Oracle Utilities Application must be imported into Enterprise Manager Cloud Control using the `emcli import_update` command.

To perform the import for Enterprise Manager for Oracle Utilities Application, follow the instructions in the *"Importing the Plug-in Archive"* topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e25161/package.htm#CACGJFHA](http://docs.oracle.com/cd/E24628_01/doc.121/e25161/package.htm#CACGJFHA)) in the *Enterprise Manager Cloud Control Extensibility Programmer's Reference* documentation.

## Deploying Enterprise Manager for Oracle Utilities Application on OMS

Since this release is not compatible with previous releases, you must undeploy previous releases from OMS and from all agents. For details, see the instructions in *Section 16, Managing Plug-Ins, in the Enterprise Manager Cloud Control Administrator's Guide* ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/plugin\\_mngr.htm#CHDFDJAB](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CHDFDJAB)).

When undeployment is complete, delete the previous releases called Oracle Utilities from the Self Update Plugin Store ( **Setup** > **Extensibility** > **Self Update** > **Plug-in** ) before deploying this version.

As with other plugins, Enterprise Manager for Oracle Utilities Application must be deployed on Oracle Management Service (OMS) and Management Agents before it can be used to monitor targets.

To deploy Enterprise Manager for Oracle Utilities Application on the management servers Enterprise Manager for Oracle Utilities Application, follow the instructions in the *"Deploying Plug-ins to Oracle Management Service"* topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/plugin\\_mngr.htm#CJGCDHFG](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGCDHFG)) in the *Enterprise Manager Cloud Control Administrator's Guide* documentation.

## Important Notes Regarding Deployment and Undeployment

- To avoid permission issues, we recommend that the host agent be deployed using the same user name as the OUAF system user (`ciissys`). Alternatively, the agent user must have the same access rights as the OUAF system user of the Oracle Utilities Framework environments to be monitored.
- You can import multiple versions of the same plug-in. Versions can be selected from a list if you are using Cloud Control to deploy the plug-in, or can be specified on the command line if using EMCLI.
- However, only one version can be deployed on the Oracle Management Service (OMS) at any given time. If a later version has been deployed previously, it cannot

be downgraded to an earlier version. If you want to deploy a later version, the earlier version must be undeployed from all agents on which it has been deployed, as well as from OMS.

- Due to major differences in the target model in this release of the plug-in, the metrics collected previously do not translate to the new model. Thus, deploying this plug-in results in loss of historical data collected by the previous plug-in releases.
- It is required that OMS and the agent have the same version of the plug-in.
- Available updates are listed on the **Plug-ins** page.

## Adding Instances for Monitoring

After successfully deploying the plug-in, add target instances for central monitoring and management.

## Environment Discovery

In order for a target to be monitored, it must first be discovered and promoted. Discovery is the process of making a target instance known to OEM. Once this has been done, the target needs to be promoted from an unmanaged to a managed state. This process requires some prerequisite steps.

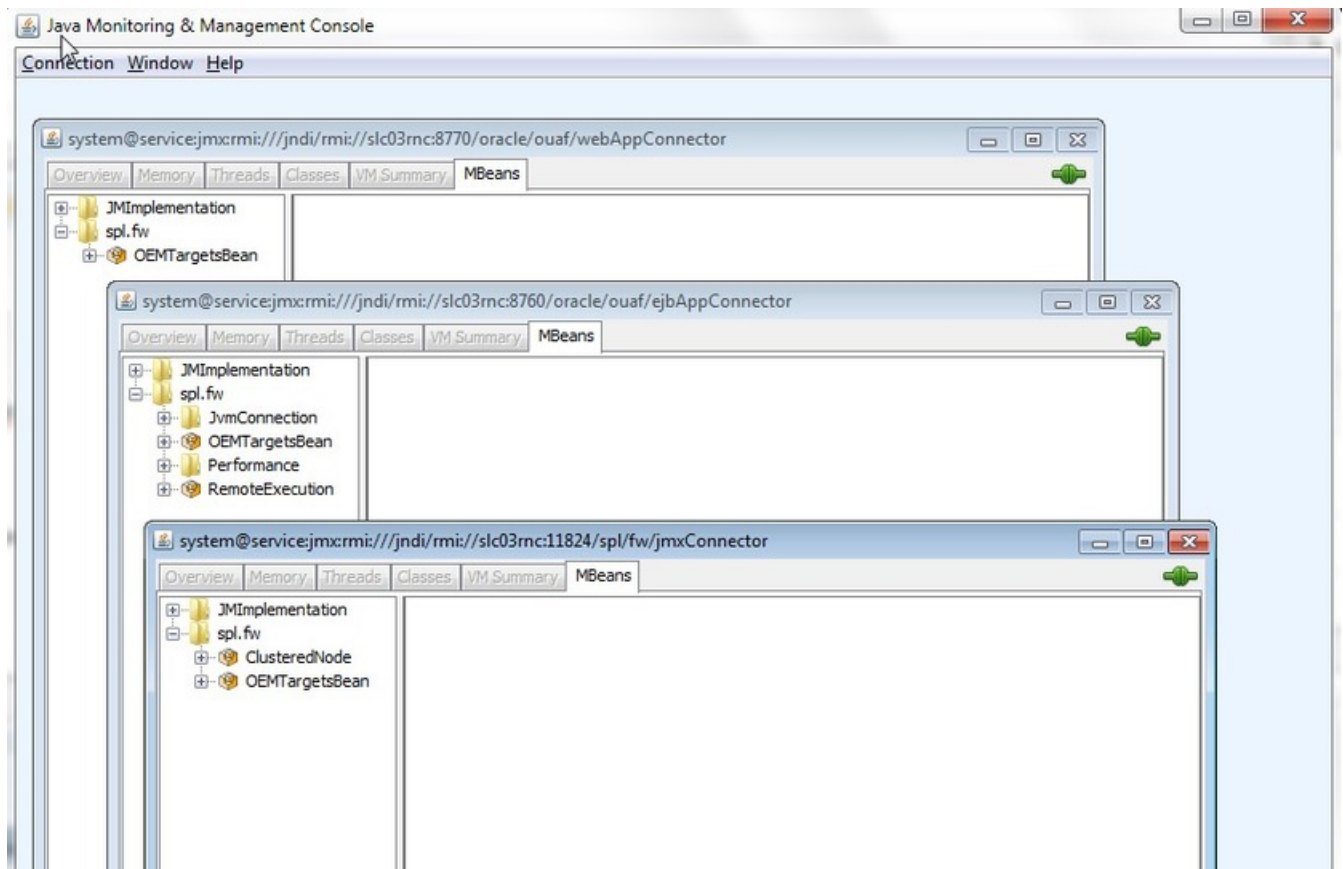
1. All components of the environment should be up, namely, the web application, the web service and batch servers.
2. JMX should be configured on the target environment. To test this, use jconsole and connect to the JMX servers using the JMX URLs. You can search the WebLogic log for the Web and EJB JMX URLs. Examples:

```
service:jmx:rmi:///jndi/rmi://{host}:{ejbJmxPort}/oracle/ouaf/  
ejbAppConnector  
service:jmx:rmi:///jndi/rmi://{host}:{webJmxPort}/oracle/ouaf/  
webAppConnector
```

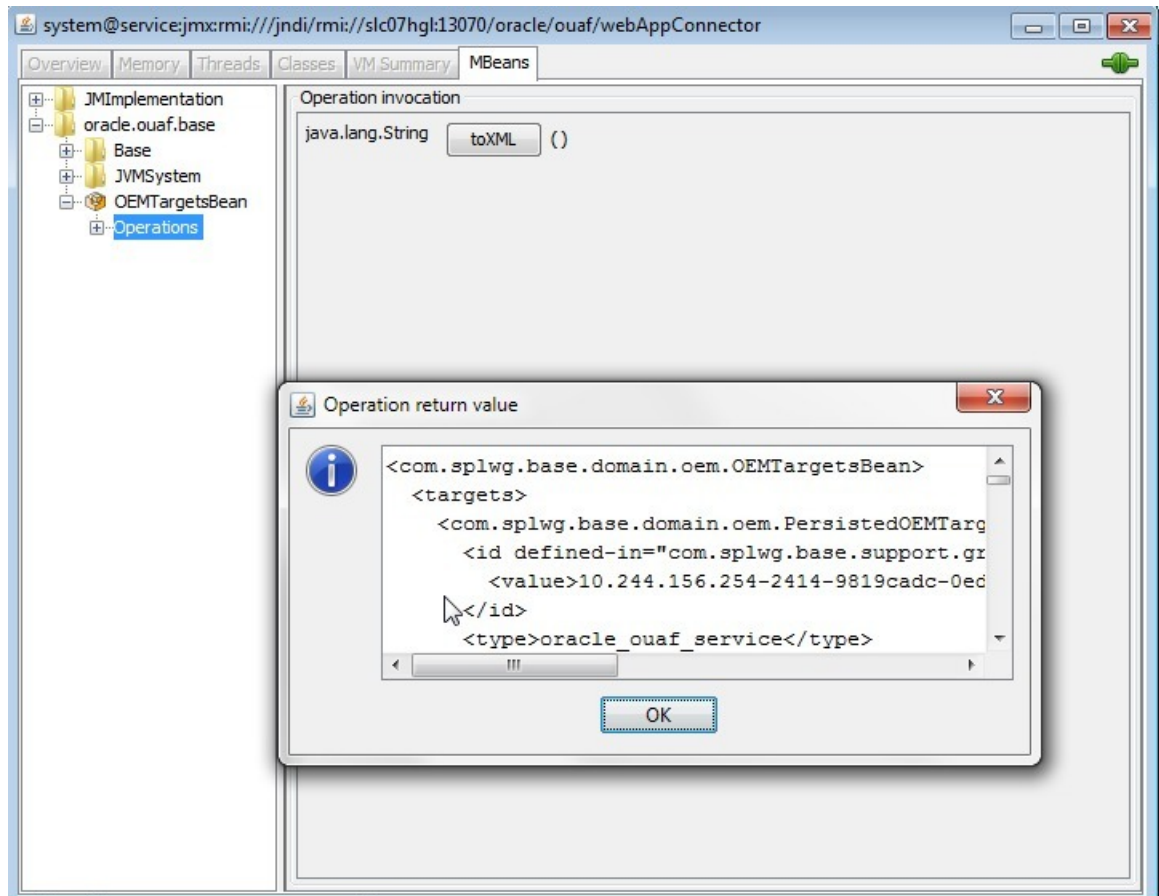
The threadpoolworker logs would have the batch JMX URLs. For example,  
service:jmx:rmi:///jndi/rmi://{host}:{batchJmxPort}/oracle/  
ouaf/batchConnector

In FW 2.2, this would be service:jmx:rmi:///jndi/rmi://{host}:  
{batchJmxPort}/spl/fw/jmxConnector

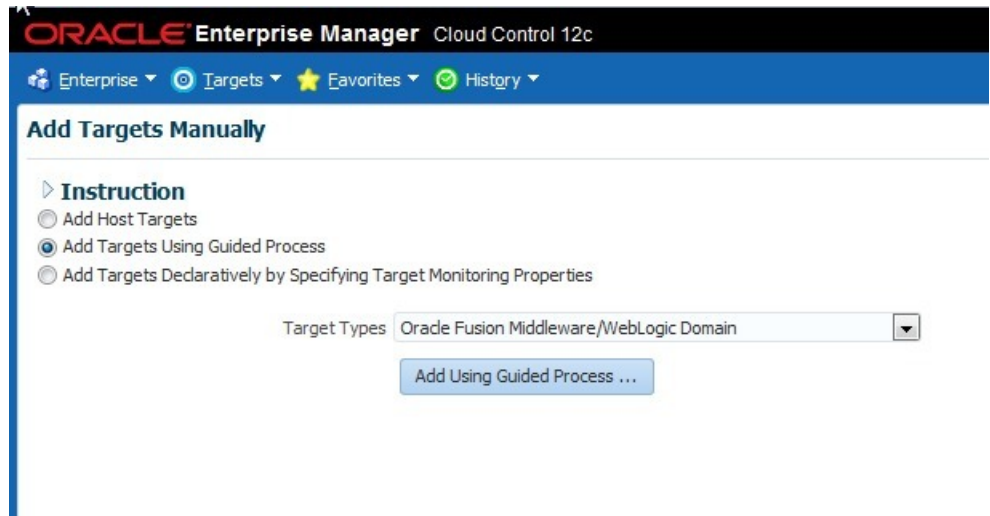
Make sure you can connect to the URLs and that the OEMTargetsBean is present, as illustrated in the following image:



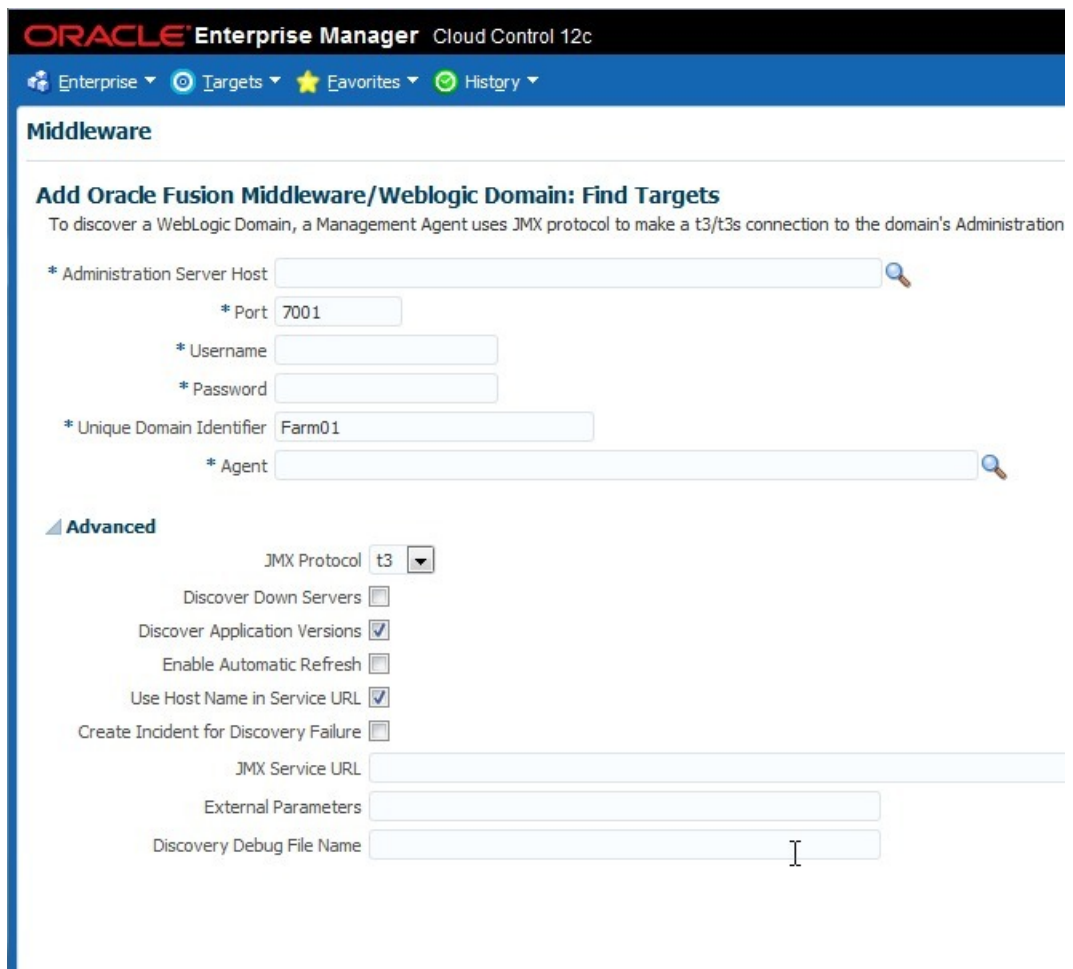
Expand the OEMTargetsBean, click **Operations**, then click the **toXML** button. A window should popup and return the XML of the targets that will be discovered. Do this for each JMX connection.



3. The WebLogic domain/Fusion middleware must be discovered. To do this, perform the following:
  - The WebLogic admin server must be started. Verify that it is by logging into the WebLogic console.
  - Discover the WebLogic domain and Fusion middleware using guided discovery. On the grid console, go to **Setup > Add Targets > Add Targets Manually** . Select the following options on the page:



- Click **Add Using Guided Process**, enter the entries for the WebLogic admin server, then continue until the WebLogic domain/Fusion middleware is discovered.



To discover OUAF target environments:

1. Log in to Enterprise Manager.

2. Choose **Setup > Add target > Configure Auto Discovery** .

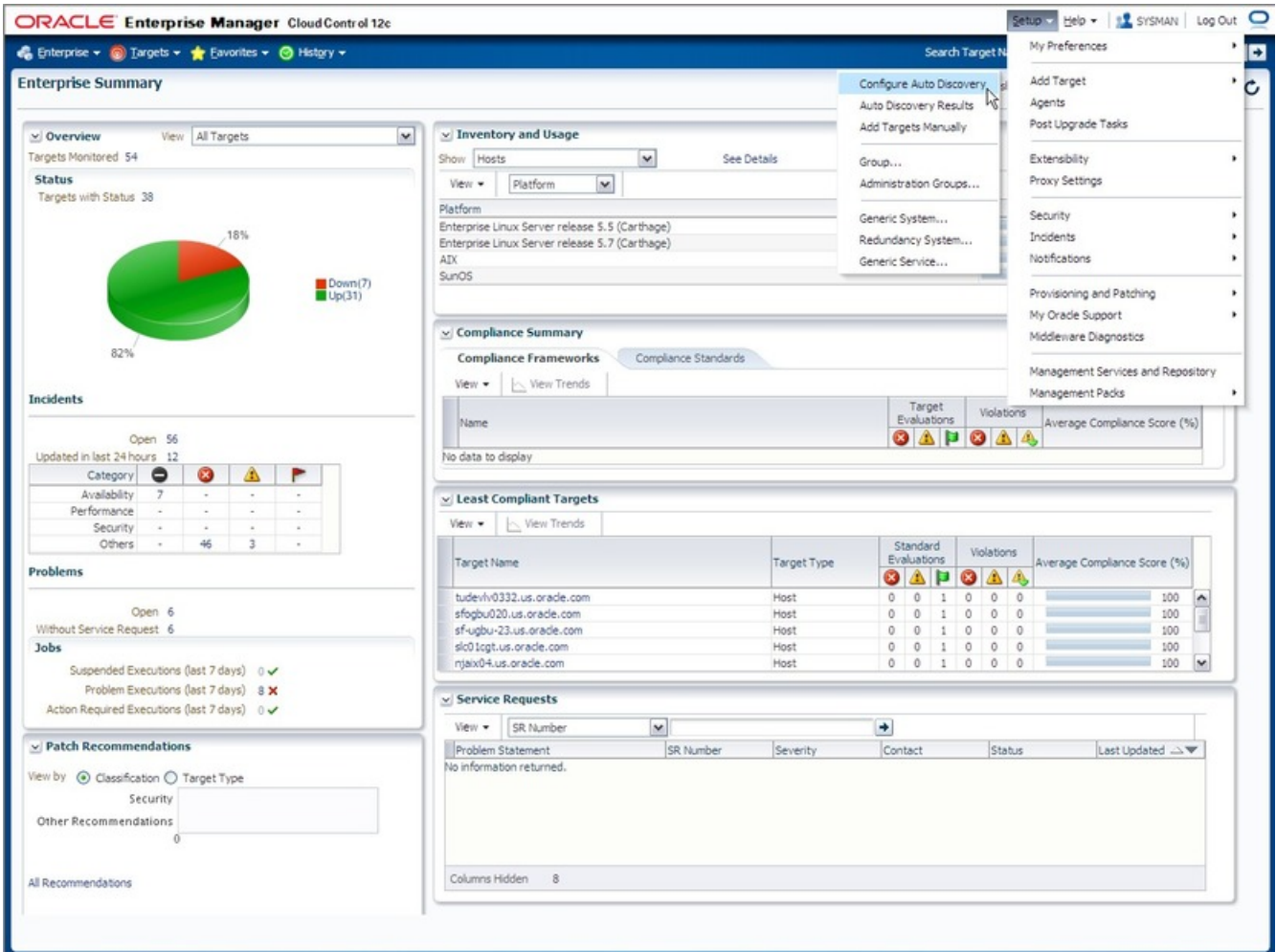


Figure 1: Selecting Auto Discovery

3. On the **Configure Auto Discovery** page, click the **Enterprise Manager for Oracle Utilities Application** module in the **Discovery Module** list, then click the item's **Configure** icon.

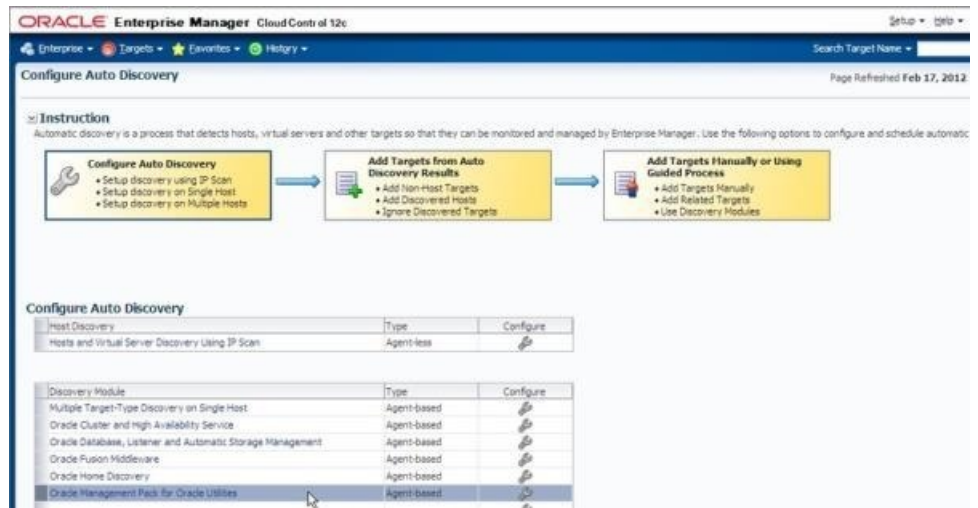


Figure 2: Configuring Auto Discovery

4. Ensure that the target host is on the list. If the target host is not on the list, add it by clicking the **Add Host** button and opening the **Add Host** dialog. Choose the host and click **OK**.



Figure 3: The Add Host dialog

5. Reopen the **Configure Auto Discovery** page, choose **Multiple Target-Type Discovery on Single Host**, and click the **Configure** button.

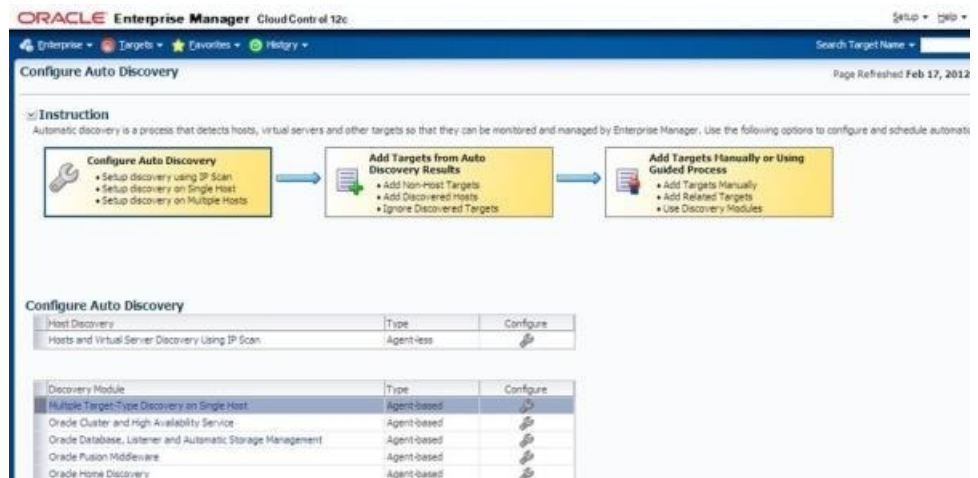


Figure 4: Choosing Multiple Target-Type Discovery on Single Host

The **Target Discovery (Agent Based)** window opens.

6. Choose the host to discover and click the **Run Discovery Now** button.

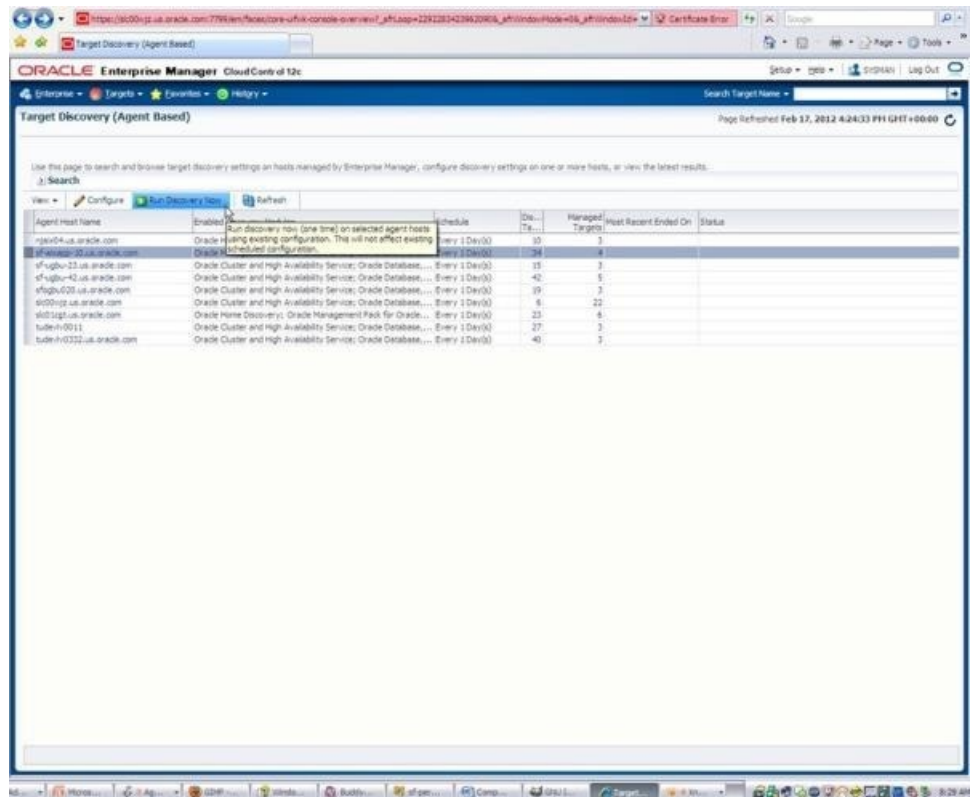


Figure 5: Choosing a host to discover

A confirmation dialog appears on successful discovery of the host.

7. Click **Close** to dismiss the confirmation dialog.

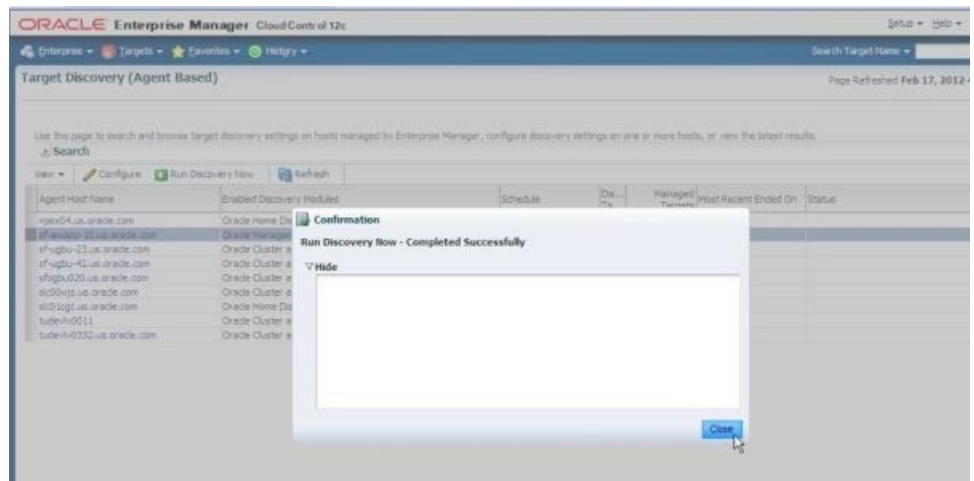


Figure 6: Host discovery confirmation dialog

# Promoting Targets

To promote targets so they can be managed:

1. Log in to Enterprise Manager.
2. Choose **Setup > Auto Discovery Results**.

The **Auto Discovery Results** window opens. Go to the **Targets on Hosts** tab.

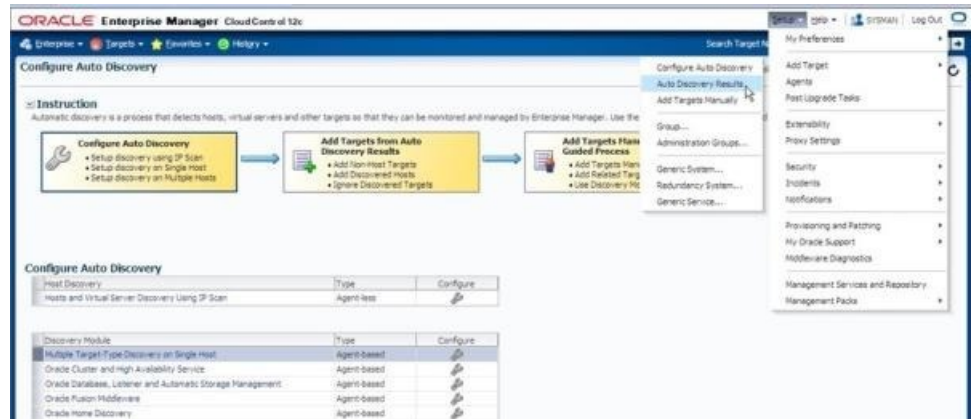


Figure 7: Auto Discovery Results window

3. Select from the list the target environment you want to promote from an *Unmanaged* to *Managed* state, then click the **Promote** button.
4. All related members of the target system are shown and promoted at the same time. Click the **Promote** button.

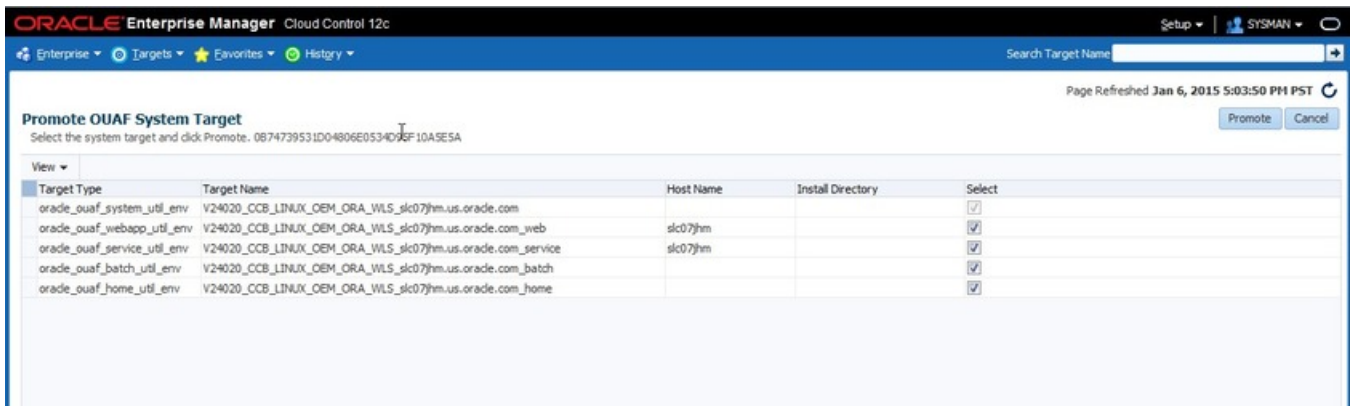


Figure 8: Unmanaged system targets

5. A confirmation dialog appears when the promotion is successful.



Figure 9: Confirmation dialog

6. Click **Close** to dismiss the confirmation dialog.
7. If any changes are made to the environment configuration using the command-line utilities (e.g., `configureEnv.sh/cmd`), the corresponding changes must also be made to the target properties. The quickest way to do this is to remove the target and perform the discovery and promotion process. You can also make changes by choosing **Target > Setup > Monitoring Configuration** and making the appropriate updates on the UI page.



Figure 10: Monitoring Configuration page

## Post-Promotion Tasks

The following tasks are required after a target is promoted.

1. **Configure monitoring credentials.** This task creates the monitoring credentials for the web application, web services, and batch server targets. It involves navigating to **Setup > Security > Monitoring Credentials** and enter the JMX credentials for all three target types. For example, the following steps configure the credentials for the batch server. Follow the same steps for the web application and web services targets.
  - a) Select the target type and click the **Manage Monitoring Credentials** button.

**ORACLE Enterprise Manager** Cloud Control 12c

Enterprise Targets Favorites History

### Security

#### Monitoring Credentials

Select target type and click Manage Monitoring Credentials to set/view monitoring credentials for target instances.

Target type  Search

[Manage Monitoring Credentials](#)

Target Type	Total Targets
Database Instance	3
Host	9
Listener	1
OMS and Repository	1
Orade HTTP Server	1
<b>Orade Utilities Batch Server</b>	<b>3</b>
Orade Utilities Web Application	6
Orade Utilities Web Services	6
Orade WebLogic Domain	13
Orade WebLogic Server	14

b) Select the target and click the **Set Credentials** button.

**ORACLE Enterprise Manager** Cloud Control 12c

Enterprise Targets Favorites History

### Security

Monitoring Credentials > Orade Utilities Batch Server

#### Oracle Utilities Batch Server Monitoring Credentials

Select row and click Set Credentials to edit credentials.  
Use the emcli create\_credential\_set verb with -monitoring option to create additional credential sets.

Target Name  Credential Set  Search

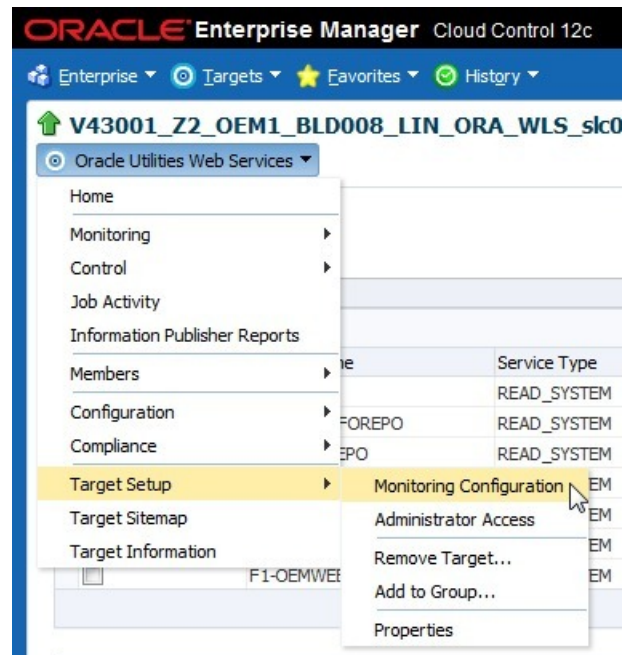
[Set Credentials](#) [Clear](#) [Test](#)

Target Name	Status	Credential Set
V2012_W2_DEMO_BLD2_LIN_ORA_WLS_slc03sat.us.oracle.com_batch	OK	OUAF JMX Credentials

c) Enter the JMX credentials. This should match the JMX credentials of the OUAF environment.



- d) Repeat for the web application and web services targets.
2. **Set up monitoring configuration.** For all Framework version 2.2.0-based environments, ensure that the target monitoring configuration contain the appropriate settings for Java Home and Oracle Home, Web Server Home and Web Server Java Home values. These are the environment variables that are set in the host before you run splenviro.cmd/sh. Note that Web Server Home is the location on which the WebLogic software is installed (e.g., /spl/middleware10.3.3./wlserver\_10.3). Web Server Java Home is the Java location that is used as JAVA\_HOME by the Web Server. For WebLogic servers on Linux, it is same value as JROCKIT\_HOME. Set up monitoring configuration for all target types.
- a) For example, to setup the monitoring configuration for the batch server, first click on the target dropdown on the upper left, then choose **Target Setup > Monitoring Configuration**.



- b) Then enter the appropriate information:

The screenshot displays the Oracle Enterprise Manager Cloud Control 12c interface. At the top, the navigation bar includes 'Enterprise', 'Targets', 'Favorites', and 'History'. The main content area shows the target 'V231\_CCB\_OEM\_LIN\_ORA\_WLS\_slc03rnc.us.oracle.com\_ba...' with 'Oracle Utilities Batch Server' selected. The 'Monitoring Configuration' section lists various parameters:

- \* Batch Mode: CLUSTERED
- \* Batch Daemon: false
- \* Coherence Cluster Address: 230.44.11.148
- \* Coherence Cluster Name: CLUST\_11824
- \* Coherence Cluster Port: 11825
- \* Component Install: false
- \* Environment ID: slc03rnc.us.oracle.com\_11824
- \* Environment Name: V231\_CCB\_OEM\_LIN\_ORA\_WLS
- \* Host Name: slc03rnc
- \* Installation Directory: /scratch/CCB231/V231\_CCB\_OEM\_
- \* Java Home: /scratch/CCB231/Software/Java/jd
- \* JMX URL: service:jmx:rmi:///jndi/rmi://slc03rn
- \* Oracle Home: /orasw/app/oracle/product/11.2.0/
- \* JMX Port: 11824

Below the configuration, a 'Monitoring' section states: 'Oracle has automatically enabled monitoring for this target's availability and performance, so no further monitoring configuration is necessary. You can edit the metric thresholds from the target's homepage.'

c) Repeat for the web application and web services targets.

## Undeploying Enterprise Manager for Oracle Utilities Application

To undeploy Enterprise Manager for Oracle Utilities Application, you must undeploy from both Management Agents and Management Servers.

To undeploy Enterprise Manager for Oracle Utilities Application from Management Agents, follow the instructions in the ["Undeploying Plug-ins from Oracle Management Agent"](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGEFADI) topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/plugin\\_mngr.htm#CJGEFADI](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGEFADI)) in the *Enterprise Manager Cloud Control Administrator's Guide* documentation.

To undeploy Enterprise Manager for Oracle Utilities Application from Management Servers, follow the instructions in the ["Undeploying Plug-ins from Oracle Management Service"](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGEIECI) topic ([http://docs.oracle.com/cd/E24628\\_01/doc.121/e24473/plugin\\_mngr.htm#CJGEIECI](http://docs.oracle.com/cd/E24628_01/doc.121/e24473/plugin_mngr.htm#CJGEIECI)) in the *Enterprise Manager Cloud Control Administrator's Guide* documentation.

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Enterprise Manager for Oracle Utilities Application

Installation Guide

Release 12.1.0.1.0

Part number E27031-04

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NOTE: Prior versions of this product were released as Application Management Pack for Oracle Utilities. Please note that any references to Application Management Pack for Oracle Utilities that may occur within this document or in images within this document refer instead to the product's new name, Enterprise Manager for Oracle Utilities Application.