## Oracle® Enterprise Manager

May 2012

Application Management Pack for Oracle Utilities Installation Guide E27031-02

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

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

- Product discovery
- 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 Application Management Pack for Oracle Utilities.

#### **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 12*c* is available.

This document and other Application Management Pack for Oracle Utilities-specific documentation is available in the **Oracle Utilities Applications** section of the Oracle Software Delivery Cloud at https://edelivery.oracle.com.

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/cd/E24628\_01/index.htm).

**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 in article number **1456097.1** on *My Oracle Support (MOS) https://support.oracle.com* (sign-in required).



## **Supported Product Versions**

This Application Management Pack supports the following Oracle products:

Table 1: Product Support

Product	Version
Oracle Enterprise Manager	12 <i>c</i>
Oracle Utilities Application Framework	2.2.0 and 4.1.0

## Requirements

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

Important: Ensure that the latest service packs are installed for all OUAF 2.2.0- or 4.1.0-based products before installing Application Management Pack for Oracle Utilities.

#### **Oracle Enterprise Manager Requirements**

#### **Supported Operating Systems/OS Server Architecture**

- Sun Solaris 10/SPARC 64-bit
- IBM AIX 6.1/POWER 64-bit
- Oracle Enterprise Linux 5.5/x86 64-bit

#### **Database Server and Web Application Servers (Supported Combinations)**

Oracle WebLogic Server 10.3.5 and OEM supported databases

- DB-10gR2 10.2.0.4, 10.2.0.5
- DB-11gR1 11.1.0.7
- DB-11gR2 11.2.0.1, 11.2.0.2 (Note 1266977.1)11.2.0.1, 11.2.0.2

#### **Supported Browsers**

- Internet Explorer 8.x
- Firefox 4.x

#### **Oracle Utilities Application Framework 4.1.0 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 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 Application Management Pack for Oracle Utilities**

#### **Checking for Application Management Pack 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, Application Management Pack for Oracle Utilities may be available for immediate deployment on Enterprise Manager.

To check for the availability of Application Management Pack for Oracle Utilities, choose **Setup** > **Extensibility** > **Plug-ins**:

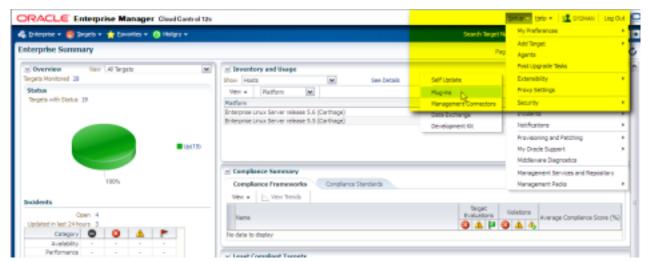


Figure 1: Viewing the Plug-ins Page

On the **Plug-ins** page, check for **Application Management Pack for Oracle Utilities** on the **Applications** list:

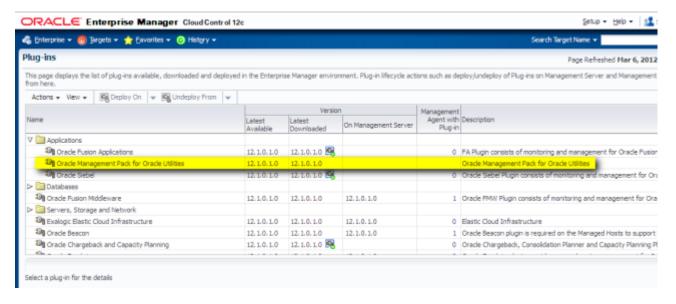


Figure 2: Plug-ins Page

If present, Application Management Pack for Oracle Utilities 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 Application Management Pack for Oracle Utilities on OMS* 

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

#### Installation Procedures if the Managment Pack is Not Present

If Application Management Pack for Oracle Utilities is not available for immediate deployment, it must be downloaded and imported as follows:

- **1.** Download the Application Management Pack for Oracle Utilities installation file and extract the open files contained within it.
- 2. Set up the software library required for import and deployment.
- 3. Set up the Enterprise Manager Command Line (EMCLI) utility.
- **4.** Use EMCLI to import Application Management Pack for Oracle Utilities into Enterprise Manager Cloud Control.

This section describes each of these procedures.

After downloading and importing Application Management Pack for Oracle Utilities, the Application Management Pack must be deployed on Management Servers and Management Agents.

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

#### Positioning the Installation File

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

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

The Application Management Pack installation file (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 Application Management Pack for Oracle Utilities for installation:

- 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 dropdown list, a platform from the **Platform** list, and click **Go** to list downloadable media packs.
- **3.** Locate and click the Application Management Pack for Oracle Utilities 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
```

### **Setting Up the Software Library**

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

To set up the software library:

- **1.** Create a folder on the system on which Enterprise Manager is installed (e.g., /net/hostname/scratch/aime/swlib1).
- 2. From the console, select **Enterprise**, then **Provisioning and Patching**, then **Software Library**.
- 3. Click Actions, then Administration.
- 4. Click Add.
- **5.** In the pop up window, enter the name of the folder you created in Step 1 (e.g., /net/hostname/scratch/aime/swlib1).
- **6.** Wait for the software library setup process to complete.

### **Setting Up the EMCLI Utility**

**Note:** This procedure is not required if Application Management Pack for Oracle Utilities is available for immediate deployment as described earlier in the

topic, Downloading and Importing Application Management Pack for Oracle Utilities.

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

• The Cloud Control console provides a page containing instructions on setting up EMCLI. Access the page at the following URL:

```
https://em_host:em_port/em/console/emcli/download
```

For example:

```
https://emserver.acme.com:7799/em/console/emcli/download
```

 After setting up EMCLI, synchronize the EMCLI client with an Oracle Management Service (OMS):

```
emcli sync
```

After synchronization, all verbs and associated command line Help available to this OMS become available at the EMCLI client.

```
https://emserver.acme.com:7799/em/console/emcli/download
```

#### **Importing Application Management Pack for Oracle Utilities**

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

The Application Management Pack must be imported into Enterprise Manager Cloud Control using the emcli import\_update command. Two options are available, depending on the system on which you are running the EMCLI utility:

• If the EMCLI utility is on the same system as the .opar file, run the following command:

```
emcli import_update
  -file="<fully-qualified path to the .opar file>"
  -omslocal
```

The -omslocal flag indicates that the Application Management Pack archive is on the same system on which the command is run, and the path exists on this system.

#### Example:

```
emcli import_update -file=/tmp/<opar_file>.opar -omslocal
```

 If you are running the EMCLI utility on a different system than that on which <par\_file>.opar\_resides, run this command:

```
emcli import_update
  -file="<fully-qualified path to the .opar file>"
  -host="<hostname of Application Management Pack host>"
  -credential_name="<credential for Application Management
Pack host>"
```

```
-credential_owner="<credential owner on the Application Management Pack host>"
```

#### where:

- -file: The absolute path to the .opar file on the system on which the file was extracted.
- -host: The host name for the host target where the file is available.
- -credential\_name: The name of the credentials on the remote system you are connecting to.
- -credential\_owner: The owner of the credentials on the host system you are connecting to.

#### Example:

```
emcli import_update -file=/tmp/<opar_file>.opar -
host="host1.acme.com" -credential_name="myOracleCred" -
credential_owner="mypassword"
```

• As an alternative to the previous step, you can run the following command:

```
emcli import_update
  -file="<fully-qualified path to the .opar file>"
  -host="hostname"
  -credential_set_name="setname"
```

#### where:

-credential\_set\_name: The set name of the preferred credential stored in the Management Repository for the host target. It can be one of the following:

HostCredsNormal: The default unprivileged credential set.

HostCredsPriv: The privileged credential set.

# **Deploying the Application Management Pack for Oracle Utilities on OMS**

Application Management Pack for Oracle Utilities must be deployed on Oracle Management Service (OMS) and Management Agents before it can be used to monitor targets.

To deploy the Application Management Pack on the management servers:

- 1. If you have an earlier version of Application Management Pack for Oracle Utilities, it is recommended that you undeploy it from all agents and OMS before deploying this version. (See notes regarding deployment below and review the section, "Undeploying Application Management Pack for Oracle Utilities".)
- **2.** From the Setup menu, select **Extensibility**, then **Plug-ins**. Enterprise Manager displays the list of plug-ins that have been downloaded and can be deployed on the **Plug-ins** page.
- **3.** On the **Plug-ins** page, select Application Management Pack for Oracle Utilities.

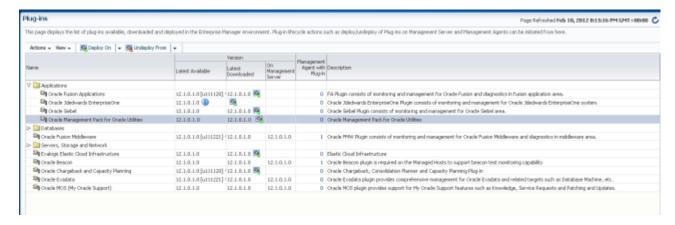


Figure 3: Selecting the Application Management Pack

**4.** Click **Deploy**, then choose **Management Servers** from the **Deploy** dropdown list.

**Important:** Application Management Pack for Oracle Utilities must be deployed on Management Servers before deployment on Management Agents.

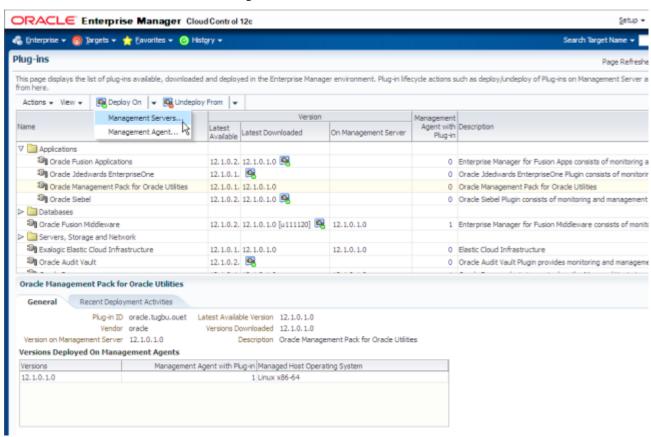


Figure 4: Deploying to Management Servers

**5.** Enter the required details on the **Deploy Plug-in** dialog box. To deploy on Management Servers, you will need the Management Repository SYS user password to complete the deployment process.

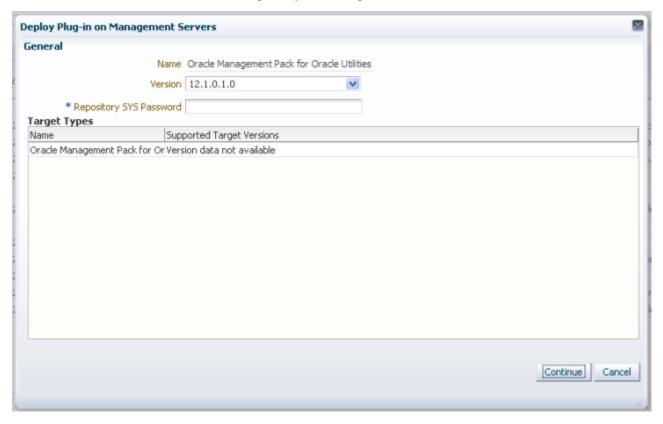


Figure 5: Deploy Plug-in on Management Servers

- **6.** A prerequisite check will be performed. Click **Continue**, then **Next** to proceed through the steps in the **Deploy Plug-in** dialog.
- **7.** Click **Deploy** to deploy the Application Management Pack on all management servers.
- **8.** Click **Show Status** to proceed to the **Deployment Activities** page where you can monitor the deployment status.

To deploy the Application Management Pack on the Management Agents:

- 9. From the Setup menu, select Extensibility, then Plug-ins.
- 10. On the Plug-ins page, select Application Management Pack for Oracle Utilities.
- **11.** Click **Deploy**, then choose **Management Agents** from the **Deploy** dropdown list. Note that the agents to which you are deploying must be available.
- **12.** From the popup menu, click the **Add** button, then highlight and select the agents on which you want to deploy the plug-in.
- **13.** Proceed through the succeeding dialogs, then click **Deploy** to deploy the plug-in on the selected Management Agents.
- **14.** To monitor the deployment status, click **Show Status** to open the **Deployment Activities** page.

**Note:** You can also monitor deployment status through the Cloud Control console by opening the **Plug-ins** page (as described in Step 1), selecting the plug-in, then selecting the **Recent Deployment Activities** tab at the bottom of

the page for the selected plug-in. This section also displays important plug-in details, including ID, version, vendor, etc.

If plug-in deployment fails, check the logs at \$ORACLE\_HOME/cfgtoollogs/pluginca/\*. These logs can be used to debug deployment issues, and should always be included if a deployment failure support request is filed.

#### **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 (cissys). 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.
- 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.
- Updating a plug-in to a new version does *not* remove the content of the older plug-in(s) that were imported. That is, the older plugin will *not* be deleted from Enterprise Manager's self-update facility.
- The Management Agent can have the same or earlier version of the plug-in that is deployed on the OMS. A version later than the version on the OMS is not allowed on the Management Agent.
- The plug-in on OMS and the Management Agent can be updated independently of each other as long as the version on the OMS is the latest version.
- To maintain consistency and to avoid any versioning issues, it is recommended 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.

Availability of the environment as a whole is evaluated based on the status of the application server. Other parts of the system that are being monitored, such as the database and threadpool worker, may be up "Up" but the target's overall status is based on whether or not the application server is available via http.

To discover target environments:

1. Log in to Enterprise Manager.

Setup : Help + | 1 SYSMAN | Log Out ◯ ORACLE Enterprise Manager Cloud Control 12c ÷ My Preferences 🚜 Enterprise + 🧑 Ijargets + 🏫 Eavorites + 😸 History + Enterprise Summary Configure Auto Discovery, Add Target Auto Discovery Results Apents Add Targets Hanually Post Upgrade Tasks View All Targets ∠ Overview \* Targets Monitored 54 Show Hosts × See Details Extensibility Group... Status Praxy Settings View - Platform Administration Groups... M Targets with Status 38 Security Generic System... Enterprise Linux Server release 5.5 (Carthage) Incidents Redundancy System. Notifications Generic Service... Sun06 Down(7) Up(31) Provisioning and Patching My Oracle Support ✓ Compliance Summary Middleware Diagnostics Compliance Frameworks Management Services and Repository Management Packs Average Compliance Score (%) O A P O A 4 Category 🖨 🔞 🛕 🏲 ≥ Least Compliant Targets Performance View ▼ | \_ View Trends Target Name tudeviv0332.us.orade.com sfogbu020.us.orade.com 100 100 100 w Without Service Request 6 sf-ugbu-23.us.orade.com Host rrjaix04.us.orade.com Host nded Executions (last 7 days) 0 🗸 Problem Executions (last 7 days) 8 🗙 ✓ Service Requests Action Required Executions (last 7 days) 0 🗸 View ≠ SR Number M View by 

Classification 

Target Type Security Columns Hidden 8 All Recommendations

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

Figure 6: Selecting Auto Discovery

 On the Configure Auto Discovery page, select the Application Management Pack for Oracle Utilities module in the Discovery Module list, then click the item's Configure icon.

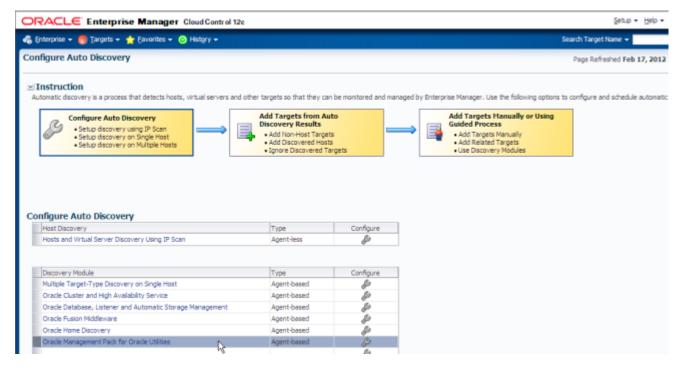


Figure 7: Configuring Auto Discovery

**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 8: The Add Host dialog

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

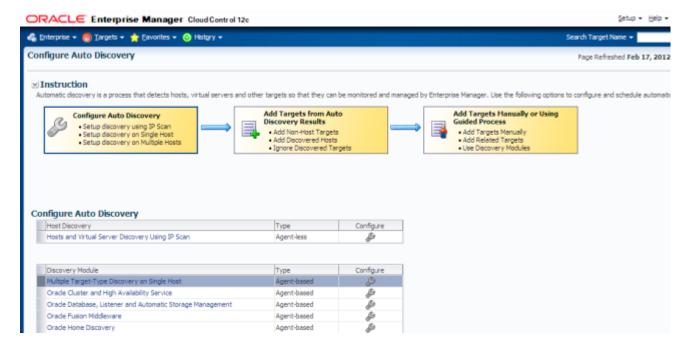


Figure 9: Choosing Multiple Target-Type Discovery on Single Host

The Target Discovery (Agent Based) window opens.

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

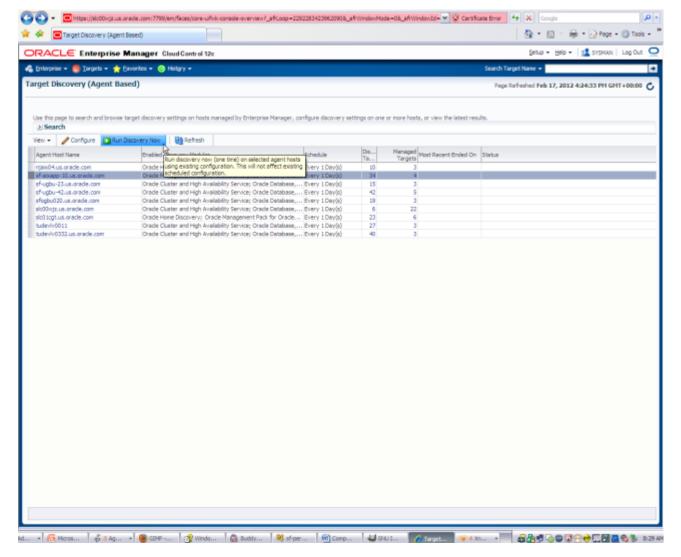


Figure 10: Choosing a host to discover

A confirmation dialog appears on successful discovery of the host.

7. Click Close to dismiss the confirmation dialog.

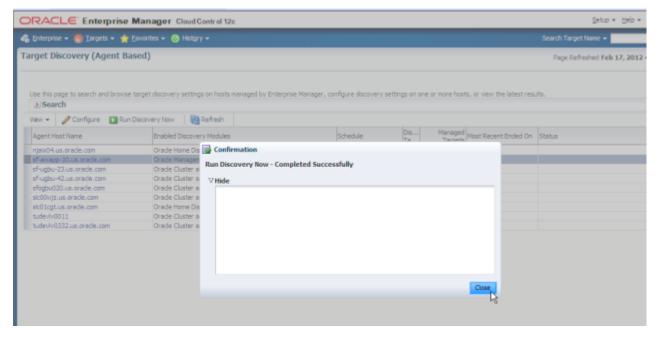


Figure 11: Host discovery confirmation dialog

## **Promoting Targets**

To promote targets so they can be managed:

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

The Target Discovery (Agent Based) window opens.

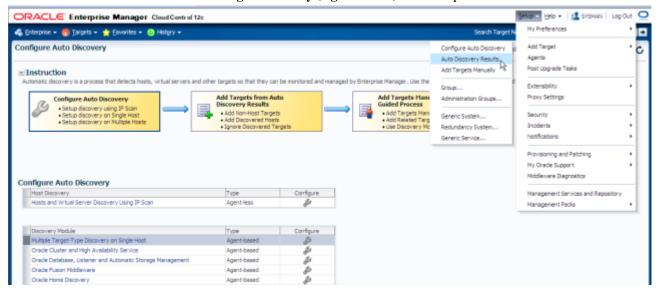


Figure 12: Target Discovery (Agent Based) window

3. Click the Non-Host Targets tab.

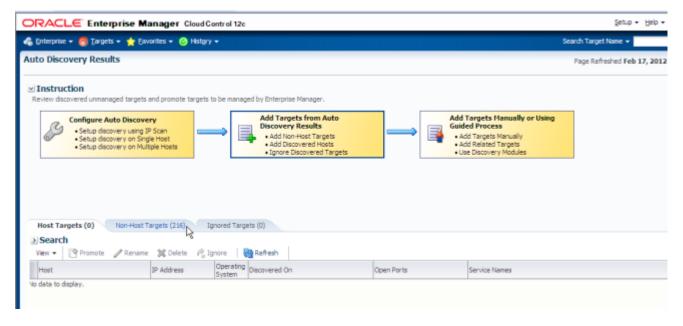


Figure 13: Auto Discovery Results window

**4.** In the **Results** list, select the target environment you want to promote from an *Unmanaged* to *Managed* state, then press the **Promote** button.

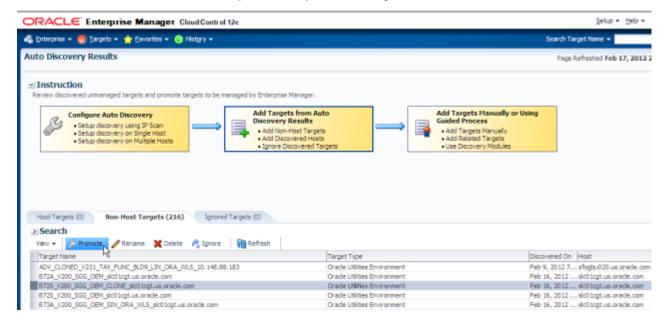


Figure 14: Promoting a target environment

**5.** The **Promote Unmanaged Target** window appears, displaying properties for the target. Press the **Promote** button.

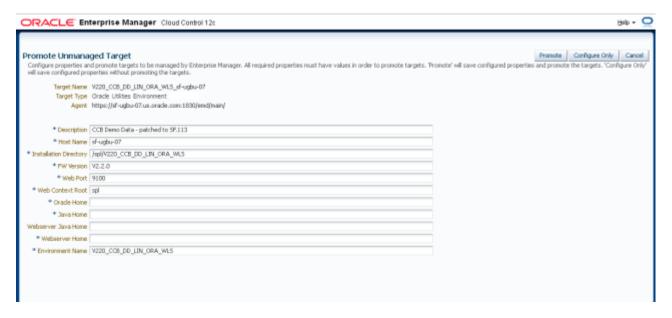


Figure 15: Unmanaged target properties

Most of the fields are pre-populated, but, depending on the Framework version of the target environment, some fields may need to be filled in.

For all Framework version 2.2.0-based target environments, enter the location for Oracle Home and Java Home.

For all Framework version 2.2.0 based environments running on Linux with WebLogic, enter (in addition to Java Home and Oracle Home) the Web Server Home and Web Server Java Home values. 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.

A confirmation dialog appears when the promotion is successful.

- **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 16: Monitoring Configuration

## **Undeploying Application Management Pack for Oracle Utilities**

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

#### To undeploy from Management Agents:

- 1. Log in to Enterprise Manager as a Super Administrator.
- 2. Select the **Targets** tab, and then the **All Targets** subtab.
- Select the Application Management Pack for Oracle Utilities Plug-in target and click Remove.

**Important:** You must perform this step for all targets of the plug-in.

- **4.** Ensure that the preferred credentials are set on the Management Agents on which the plug-in is deployed. To access the **Preferences** page, select **Preferences** from the top-right corner of the Enterprise Manager Cloud Control console.
- **5.** On the upper-right corner of the Cloud Control home page, click **Setup**, then navigate to **Extensibility and Plugins** to get to the **Plugins** page.
- **6.** Highlight the line containing Application Management Pack for Oracle Utilities then select **Management Agents** from the **Undeploy** dropdown list.
- **7.** Add all **Agents** that are currently deployed with the Application Management Pack for Oracle Utilities plug-in, then click **Continue**, then **Undeploy**.

The **Undeploy Management Plug-in** page appears.

**8.** Check all Agents that are currently deployed with the Application Management Pack for Oracle Utilities plug-in and click **OK**.

**Important:** You must undeploy the plug-in from every Management Agent in the system before you can undeploy from Management Servers.

#### To undeploy from Management Servers:

**9.** On the upper-right corner of the Cloud Control home page, click **Setup**, then navigate to **Extensibility and Plugins** to get to the **Plugins** page.

- **10.** Highlight the line containing Application Management Pack for Oracle Utilities, then select **Management Servers** from the **Undeploy** dropdown list.
- **11.** Enter the Management Repository SYS user password when prompted, then click **Continue**, then **Undeploy**.

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