This document describes how to use the Infrastructure Stack plug-in to connect the monitoring capabilities of Oracle Enterprise Manager Cloud Control and Oracle Enterprise Manager Ops Center.

The following topics are discussed in this document:

- Introduction
- Requirements
- Get and Deploy the Plug-in
- Configure the Connection
- Enable Monitoring
- Verify and Validate the Plug-in
- About Events, Alerts, Problems, and Incidents
- View Incidents, Problems and Annotations
- Launch a Console Window
- Create and View Enterprise Manager Ops Center Reports
- Upgrade the Plug-in
- Undeploy the Plug-in
- Disconnect Enterprise Manager Cloud Control Access
- Related Resources

**Introduction**

Oracle Enterprise Manager Cloud Control and Oracle Enterprise Manager Ops Center are complementary technologies that are designed to provide an enterprise-level data center management solution for all levels, from applications to storage disks.

As shown in Figure 1, Oracle Enterprise Manager Cloud Control software enables businesses to improve application, middleware, database, and operating system performance. Oracle Enterprise Manager Ops Center software enables businesses to manage the operating systems, virtual machines, servers, and storage devices.
The plug-in module extends the Oracle Enterprise Manager Cloud Control monitoring features to include hardware-based events from Oracle Enterprise Manager Ops Center, including:

- Topology view of assets. All Metrics shows the various layers of the topology, including zones and logical domains, as shown in Figure 2. For example, if you have an agent on a zone within a logical domain, the topology details all of the components.
- Service processors.
- Server containers (chassis).
- Oracle SPARC Enterprise M-series server domains.

**Note:** This plug-in only passes hardware-based events from Enterprise Manager Ops Center to Enterprise Manager Cloud Control. The EM host agent is responsible for gathering OS level data.

To enable data to flow between the two applications, you must configure each application separately, then complete the connection.
When you configure Oracle Enterprise Manager Ops Center and Oracle Enterprise Manager Cloud Control applications to work together, the monitoring information is shared between both applications. Each user interface includes information about resources that the other application manages. Because each application provides operating system monitoring, operating system information is not shared between the applications.

**Note:** To collect metric information, you must discover and manage the hardware and operating system in Enterprise Manager Ops Center. You can manage the operating system with or without an Ops Center agent.

When you do not manage the operating system, the infrastructure stack is not fully defined. The infrastructure stack is created, but the software does not collect metrics.

### Requirements

This section describes what is needed to enable monitoring of the infrastructure stack:

- **Supported Versions**
- **Prerequisites**
- **User Requirements**

#### Supported Versions

The supported version of the plug-in is determined by the Oracle Enterprise Manager Cloud Control version. Beginning with Cloud Control 12c Release 1 (12.1.0.1.0), the Ops Center Infrastructure Stack 12c plug-in is available in the Oracle Enterprise Manager Store.

Each row in Table 1 is a supported combination of Oracle Enterprise Manager Cloud Control and Ops Center software and the required infrastructure plug-in.

<table>
<thead>
<tr>
<th>Oracle Enterprise Manager Cloud Control</th>
<th>Oracle Enterprise Manager Ops Center</th>
<th>Infrastructure Plug-in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Control 12c (12.1.0.4 and higher)</td>
<td>Ops Center 12c Release 2 and Release 3</td>
<td>The latest Ops Center infrastructure stack 12c plug-in from the Oracle Enterprise Manager Store.</td>
</tr>
</tbody>
</table>
To connect Oracle Enterprise Manager Grid Control 10 (10.2.0.5.0) with Oracle Enterprise Manager Ops Center 2.5, you must use the connector instead of the plug-in.

Prerequisites

Perform the following tasks before deploying the plug-in:

- Install and configure Oracle Enterprise Manager Cloud Control Server.
- Deploy Oracle Enterprise Manager Cloud Control Agents on the systems to be monitored. The plug-in uses the Java version that is bundled with the Oracle Management Agent.
- Install and configure Oracle Enterprise Manager Ops Center Enterprise Controller and Proxy Controller.

Note: Do not install Oracle Enterprise Manager Cloud Control and Oracle Enterprise Manager Ops Center on the same system due to resource constraints.

- Discover and manage the hardware and operating systems in Oracle Enterprise Manager Ops Center to deploy the Oracle Enterprise Manager Ops Center agents on the systems to be monitored.

<table>
<thead>
<tr>
<th>Oracle Enterprise Manager Cloud Control</th>
<th>Oracle Enterprise Manager Ops Center</th>
<th>Infrastructure Plug-in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud Control 12c (12.1.0.3)</td>
<td>Ops Center 12c Release 1 (12.1.0.0.0 - 12.1.4.0.0)</td>
<td>The latest Ops Center infrastructure stack 12c plug-in from the Oracle Enterprise Manager Store.</td>
</tr>
<tr>
<td>Cloud Control 12c (12.1.0.2)</td>
<td>Ops Center 12c Release 1 (12.1.0.0.0 - 12.1.3.0.0)</td>
<td>The latest Ops Center infrastructure stack 12c plug-in from the Oracle Enterprise Manager Store.</td>
</tr>
<tr>
<td>Cloud Control 12c (12.1.0.1)</td>
<td>Ops Center 11g Release 1 (all update releases)</td>
<td>The latest Ops Center infrastructure stack 12c plug-in from the Oracle Enterprise Manager Store.</td>
</tr>
<tr>
<td>Grid Control 11g Release 1 (11.1.0.1.0)</td>
<td>Ops Center 12c Release 1</td>
<td>ocas_plugin-2.x.jar</td>
</tr>
<tr>
<td>Grid Control 11g Release 1 (11.1.0.1.0)</td>
<td>Ops Center 11g Release 1</td>
<td>ocas_plugin-2.x.jar</td>
</tr>
<tr>
<td>Grid Control 10g Release 2 (10.2.0.5.0)</td>
<td>Ops Center 11g Release 1</td>
<td>ocas_plugin-2.x.jar</td>
</tr>
</tbody>
</table>

Note: Releases earlier than Oracle Enterprise Manager Ops Center 11g Release 1, Update 3 (11.1.3.0.0) cannot display repository data from the Oracle Enterprise Manager 12c database.
If you use a WS-MAN/JMX HTTP proxy, you can use an existing HTTP proxy that the Oracle Management Agent uses, or you can configure a new proxy to access the Oracle Enterprise Manager Ops Center Enterprise Controller.

Additional sub-requirements for proper operation of the plug-in are met if the Enterprise Manager Cloud Control and Ops Center software are installed as documented.

See Related Resources for links to the Oracle Enterprise Manager Cloud Control and Ops Center documentation for instructions on installing the software, deploying the Enterprise Manager Cloud Control Agents, installing and configuring the Oracle Enterprise Manager Ops Center Enterprise Controller and Proxy Controller and discovering and managing hardware and operating systems with Enterprise Manager Ops Center.

User Requirements
The SYSMAN user is required to deploy the plug-in and view the asset information collected by the Oracle Enterprise Manager Ops Center software in the Oracle Enterprise Manager Cloud Control console.

A new user in Oracle Enterprise Manager Ops Center is required for Oracle Enterprise Manager Cloud Control integration. This user does not require any roles or permissions.

Get and Deploy the Plug-in
Complete the following tasks to obtain and deploy the plug-in:

1. Download the Plug-in From the Enterprise Manager Store
2. Deploy the Plug-in to the Management Server
3. Add Targets for Monitoring

The Oracle Enterprise Manager Store is an external site that contains functional updates, including the latest version of the management plug-in files. Enterprise Manager Cloud Control checks the site periodically to provide you with the latest version. You can download the plug-in from the Oracle Enterprise Manager Store to the Software Library (the local store).

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**Note:** Enterprise Manager must have Internet access to download the plug-in from the Oracle Enterprise Manager Store.

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Things to Know
The following are things you should know before you deploy the plug-in:

- You can import multiple versions of the same plug-in. However, you can only deploy one version on the Oracle Management Service (OMS) at any given time.
- The Management Agent can have the same or earlier version of the plug-in that is deployed on the OMS host.
- The Management Agent cannot have a later version than the version that is on the OMS host.
The Management Repository SYSMAN user password is required to complete the deployment process.

**Download the Plug-in From the Enterprise Manager Store**

This procedure assumes that you are connected to the Internet and describes how to download the plug-in immediately. Alternatively, you can choose to schedule the download to occur at a specified time.

1. From the **Setup** menu, click **Extensibility**, then click **Self Update** to get the list of updates.
2. Click **Plug-in** from the list.
3. Select **Ops Center Infrastructure Stack** from the list, then click **Download**.
4. Select **Immediately**, then click **Select** to start downloading the update.
   
   When the download is complete, plug-in deployment page appears.

**Deploy the Plug-in to the Management Server**

The Management Repository SYSMAN user password is required to complete the deployment process.

1. On the **Plug-in Deployment** page, select the **Ops Center Infrastructure Stack** plug-in.
   
   If you are not on the Plug-in Deployment page, expand the **Setup** menu and click **Extensibility**, then click **Plug-ins**.
2. Click **Deploy On**, then click **Management Servers**.
3. Complete the required details on the Deploy Plug-in dialog box.
   
   In the Version of Plug-in to Deploy section, select the Plug-in version from the Plug-in drop-down. The Target Type information appears in the table. Enter the Repository SYSMAN password, then click **Continue**.
4. Complete the steps in the Deploy Plug-in dialog box.
5. Click **Deploy** to deploy the selected plug-in on all Enterprise Manager Servers.

**Add Targets for Monitoring**

You must associate the Infrastructure Stack plug-in to existing Oracle Enterprise Manager Cloud Control Agents to enable cross-software monitoring.

1. Log in to Oracle Enterprise Manager Cloud Control as SYSMAN.
2. From the **Setup** menu, click **Add Target**, then click **Add Targets Manually**.
3. Select **Add Targets Declaratively by Specifying Target Monitoring Properties**, then select the **Infrastructure Stack** target type, browse and select a Monitoring Agent, then click **Add Manually**.
4. Complete the following information:
   
   a. **Target Name**: The unique target name that appears in the Oracle Enterprise Manager Cloud Control UI.
   
   b. **Ops Center Enterprise Controller Host Name**: The host name for the Oracle Enterprise Manager Ops Center Enterprise Controller. The host name must be
resolvable by, and reachable from, the host where the Enterprise Manager Cloud Control Agent is running.

c. **Ops Center Enterprise Controller User Name**: The user log in name for the Oracle Enterprise Manager Ops Center Enterprise Controller.

d. **Ops Center Enterprise Controller Password**: The corresponding password for the Oracle Enterprise Manager Ops Center user.

e. Optionally, add the WS-MAN/JMX proxy host name and port.

Figure 4  Add Infrastructure Stack to New Targets

5. Click **OK** to add the new target.

**Configure the Connection**

After the plug-in is deployed and configured in Enterprise Manager Cloud Control, you must configure the Enterprise Controller to communicate with the Enterprise Manager Cloud Control repository. The connection enables target information from Enterprise Manager Cloud Control to appear in the Enterprise Manager Ops Center user interface.
1. Launch the Oracle Enterprise Manager Ops Center software and log in as an Administrative user.

2. Expand the Administration section in the Navigation pane, then click Cloud Control.

3. Click Configure/Connect in the Actions pane.

4. Enter the server name and port number for the Oracle Enterprise Manager Cloud Control console. The default port is 7799.

5. Enter the Oracle Enterprise Manager Cloud Control database host name, port number, SID (Oracle System ID), SYSMAN user name and password for the Enterprise Manager Cloud Control instance. The default port is 1521.

6. Click Finish.

**Enable Monitoring**

In Enterprise Manager Cloud Control, monitoring is disabled by default. You must enable monitoring for each target.

1. Click Targets, then All Targets. Find your target by entering the target name, or by sorting the Target Type column in the table and scrolling to Infrastructure Stack. Click the target name to display the target page.

   **Figure 5  Sort by Target Type**

<table>
<thead>
<tr>
<th>Target Name</th>
<th>Target Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure Stack for</td>
<td>Infrastructure Stack</td>
</tr>
<tr>
<td>x4140-3</td>
<td>Infrastructure Stack</td>
</tr>
<tr>
<td>x4200-21-InfraStack</td>
<td>Infrastructure Stack</td>
</tr>
</tbody>
</table>

2. Expand the Target menu in the upper left corner, select Monitoring, then select Metric and Collection Settings.

   **Figure 6 Metric and Collection Settings**

3. The Metric and Collection Settings table has a column titled Collection Schedule. Click the link titled Disabled for the Infrastructure Stack Alarms to enable the metrics collector.
4. Click **Enable** to begin collecting Infrastructure Stack alarms, then click **Continue**. Click **OK** to save the setting. Click **OK** to close the confirmation.

**Figure 7  Collection Schedule**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Comparison Operator</th>
<th>Warning Threshold</th>
<th>Critical Threshold</th>
<th>Corrective Actions</th>
<th>Collection Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>x4200-21-InfraStack</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disabled</td>
</tr>
<tr>
<td>Infrastructure Stack Alarms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When enabled, data collection occurs every five (5) minutes.

**Verify and Validate the Plug-in**

In Oracle Enterprise Manager Cloud Control, you can launch the Oracle Enterprise Manager Ops Center home page from the Infrastructure Stack target home page. If correctly configured, the page appears for the operating system that is associated with the target.

After waiting a few minutes for the plug-in to start collecting data, use the following steps to verify and validate that Enterprise Manager is properly monitoring the plug-in target:

1. Click **Targets**, then click **All Targets**. Scroll down to **Others**, then click **Infrastructure Stack**.

**Figure 9  All Targets Menu**

The All Targets page appears and shows all available targets that are aware of the infrastructure stack and the target status.

**Figure 10  All Targets Page for the Selected Target Type**
2. Verify that you can see reports by clicking Reports, then Information Publisher Reports in the Enterprise menu. See Create Reports for more information.

3. Verify that you can see configuration data by clicking Configuration and then Last Collected in the Target menu. If configuration data does not immediately appear, click Refresh in the Latest Configuration page.

**About Events, Alerts, Problems, and Incidents**

Basic information gathered by both applications is accessible from both user consoles. For more detailed information, go to the software console that gathered the information.

**What is an Event or Alert?**

An event, or alert, is a discrete occurrence detected by Enterprise Manager related to one or more managed entities at a particular point in time which may indicate normal or problematic behavior. Examples of events include: database target going down, performance threshold violation, change in application configuration files, successful completion of job execution, or job failure. An alarm can have one or more alerts. The alert determines the alarm severity.

Enterprise Manager 11g generated alerts for exception conditions (metric alerts). Beginning with Enterprise Manager 12c Release 1, metric alerts are a type of event, one of many different event types. The revised event model significantly raises the number of conditions in an IT infrastructure for which Enterprise Manager can detect and raise events.

**Where to View Alarms?**

An alarm can have one or more alerts. Only the latest open Enterprise Manager Ops Center alert appears in Enterprise Manager Cloud Control. The Ops Center Root Cause ID is the identifier for the latest alert. If another alert appears, the previous alert and associated ID are no longer visible in the UI.

To view the alarm metrics from Enterprise Manager Ops Center for a system, select the system, then go to the All Metrics page. The alarm metrics appear in the Infrastructure Stack Alarms page, as shown in Figure 11.

**Figure 11   Infrastructure Stack Alarms**

![Image of Infrastructure Stack Alarms](image)

Alarm metrics from Enterprise Manager Ops Center 12c Release 1 Update 3 and earlier appear in the Deprecated page under All Metrics, as shown in Figure 12.
See Related Resources for links to the Oracle Enterprise Manager Ops Center documentation to learn more about Enterprise Manager Ops Center alarms, states, and severity levels.

What is an Incident or Problem?
An incident is an event or a set of closely correlated events that requires immediate action to resolve. A problem is defined as a less critical set of events. When an alarm reaches a Critical or Warning severity, the software generates an incident. The incident is based on the current severity level, not the highest severity level.

In Oracle Enterprise Manager Ops Center 12c, events are associated with Informational, Warning, or Critical incidents. A critical incident in Oracle Enterprise Manager Ops Center equals an incident in Oracle Enterprise Manager Cloud Control. Earlier versions of Oracle Enterprise Manager Ops Center use the term problem instead of incident.

Table 2 shows the relationship of the terms between the applications and releases.

<table>
<thead>
<tr>
<th>Oracle Enterprise Manager Cloud Control 12c</th>
<th>Oracle Enterprise Manager Ops Center 12c</th>
<th>Oracle Enterprise Manager Ops Control 11g Update 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incident</td>
<td>Critical Incident</td>
<td>Critical Problem</td>
</tr>
<tr>
<td>Problem</td>
<td>Warning Incident</td>
<td>Warning Problem</td>
</tr>
<tr>
<td>Problem</td>
<td>Informational Incident</td>
<td>Informational Problem</td>
</tr>
</tbody>
</table>

From the Oracle Enterprise Manager Ops Center user interface, you can launch the Oracle Enterprise Manager Cloud Control console while viewing a specific asset that is being monitored by both applications. You can also launch the console from the Administration section in the Oracle Enterprise Manager Ops Center user interface.

What are Annotations?
Annotations are comments, suggestions, or automated operations with associated scripts that you can use to document an incident in Oracle Enterprise Manager Ops Center. Annotations might include the Oracle Auto Service Request (ASR) number.

Instead of manually filing a service request, you can configure Enterprise Manager Ops Center to automatically create service requests for known issues. When ASR is enabled in Enterprise Manager Ops Center, the software automatically generates service requests based on critical incidents. Contact information for the ASR is taken either from Enterprise Manager Ops Center or from the Customer Service Identifier.
(CSI) associated with the asset. Annotations are added to the incident to indicate the status of the ASR creation. Once created, ASRs are identical to other service requests.

**View Incidents, Problems and Annotations**

In Oracle Enterprise Manager Cloud Control, use the Incident Manager Console to view, manage, diagnose and resolve incidents.

In Oracle Enterprise Manager Ops Center, use the Message Center to view and add annotations and to view, manage, diagnose and resolve incidents.

Only Critical incidents or problems from Oracle Enterprise Manager Ops Center appear in the Oracle Enterprise Manager Cloud Control console. Warning incidents from Oracle Enterprise Manager Ops Center do not appear as an incident.

In Oracle Enterprise Manager Cloud Control, you can create a custom set of Incident Rules that defines which Incident Rule levels display in the metric alerts.

**View Open Problems and Incidents in Oracle Enterprise Manager Cloud Control**

1. From the **Enterprise** menu, click **Monitoring**, then click **Incident Manager**. The Incident Manager page appears.

   ![Figure 13 Incident Manager](image)

2. Click a row to display tabs that contain General information, Events, My Oracle Support Knowledge, Updates, and Related Events and Incidents. General information includes Incident Details, Tracking, Metric Data, and Guided Resolution.

3. Click the link in the Target cell to display more details, including utilization graphs, details on incidents, and job activity. At the bottom of the page, in the Related Links section, is a link to launch the Oracle Enterprise Manager Ops Center console.

**View Annotations in Oracle Enterprise Manager Cloud Control**

When you add an annotation to an Incident in Oracle Enterprise Manager Ops Center, the software automatically updates the annotation details in the Oracle Enterprise Manager Cloud Control user interface. For a given system, go to **All Metrics**, then select **Infrastructure Stack Annotations**, as shown in *Figure 14*.

1. From the **Enterprise** menu, click **Targets**, then **All Targets**. Find your target by entering the target name, or by sorting the Target Type column in the table and scrolling to Infrastructure Stack. Click the target name to display the target page.
2. Expand the Target menu in the upper left corner, select Monitoring, then select All Metrics.

3. Click Infrastructure Stack Annotations to view asset-specific annotations.

**Figure 14  Infrastructure Stack Annotations on the All Metrics Menu**

The following Infrastructure Stack annotation details are available: Ops Center Annotation identifier (ID), timestamp for the Annotation Last Update Time, Annotation Synopsis with the Automated Service Request (ASR) number, when available, the Ops Center Alarm identifier (ID), and the Ops Center Root Cause Alarm ID. **Figure 15** is an example of how the Ops Center Annotation ID, Annotation timestamp, and Annotation Synopsis appear on the page. The Annotation ID is a unique key for the metric. When a service request is generated, the details appear in the Annotation Synopsis, as seen in the last line in **Figure 15**.

**Figure 15  Infrastructure Stack Annotations**

See the Oracle Enterprise Manager Ops Center documentation for more information about annotations.

**Launch a Console Window**

An asset, or target, that is being monitored by both applications has information from both software applications. You can launch the console for one software application from the other software console.
Launch the Enterprise Manager Ops Center Console From Enterprise Manager Cloud Control

Launch the Enterprise Manager Cloud Control Console From an Asset in Enterprise Manager Ops Center

Launch the Oracle Enterprise Manager Cloud Control Console From Oracle Enterprise Manager Ops Center

Launch the Enterprise Manager Ops Center Console From Enterprise Manager Cloud Control

While in Oracle Enterprise Manager Ops Center, you can view more details about the information gathered with Oracle Enterprise Manager Cloud Control by clicking the asset to launch the monitored target page in Oracle Enterprise Manager Cloud Control.

Perform the following steps to launch the Oracle Enterprise Manager Ops Center console from Oracle Enterprise Manager Cloud Control:

1. Log in to Oracle Enterprise Manager Cloud Control as SYSMAN, then navigate to the target’s home page.

2. Click Launch Ops Center console in the Related Links section at the bottom of the page.

Launch the Enterprise Manager Cloud Control Console From an Asset in Enterprise Manager Ops Center

Perform the following steps to launch the Oracle Enterprise Manager Cloud Control console from Oracle Enterprise Manager Ops Center:

1. Log in to Enterprise Manager Ops Center.

2. Click Assets in the Navigation pane, expand and click an operating system that has the Oracle Enterprise Manager Cloud Control Agent installed.

   The Dashboard page appears.

3. Click the Targets Tab to view Cloud Control target information, including status alerts, and availability.

Launch the Oracle Enterprise Manager Cloud Control Console From Oracle Enterprise Manager Ops Center

To launch the Oracle Enterprise Manager Cloud Control console outside the context of a specific monitored asset, use the link in the Administration section of Oracle Enterprise Manager Ops Center. This method is useful to confirm configuration and connectivity.

Perform the following steps to launch the console from Oracle Enterprise Manager Ops Center Administration:

1. Log into Oracle Enterprise Manager Ops Center.

2. Click Administration in the Navigation pane.

3. Click Cloud Control Console in the Action pane.
Create and View Enterprise Manager Ops Center Reports

With the Infrastructure Stack plug-in, the following Oracle Enterprise Manager Ops Center reports are available in the Oracle Enterprise Manager Cloud Control Information Publisher reports:

- Topology report: Provides stack layers report
- Configuration report: Provides basic configuration of each layer within the stack
- Hardware sensors report: Provides hardware sensors details based on the service processor, including current value and status, and thresholds

Create Reports

1. From the Enterprise menu, click Reports, then click Information Publisher Reports.

Figure 16 Information Publisher Reports

2. Select Infrastructure Stack from the Target Type menu, then click Go.

Figure 17 Infrastructure Stack Target Type

3. To run a report, click the report name, such as Infrastructure Stack Topology.

Figure 18 Ops Center Reports
4. Specify the target for the report in the Search and Select: Targets page.

**Figure 19  Search and Select: Targets**

![Image of Search and Select: Targets](image)

5. On the Specify Target for Report page, click **Continue** to display the report. **Figure 20** is an example of an Infrastructure Stack Topology report.

**Figure 20  Infrastructure Stack Topology Report**

![Image of Infrastructure Stack Topology Report](image)

To save the data in a comma separated value (CSV) format, click the icon next to the table. To print the report, click **Printable Page** and use your browser print function.

**Create a Customized Report**

1. To define report parameters to create a customized report, scroll down to **Ops Center reports**. Select a report, such as Infrastructure Stack Topology, then click **Create**.

**Figure 21  Customized Report**

![Image of Customized Report](image)

2. Define the report parameters in the Create Report Definition page, then click **OK**.
3. The report appears in the Reports table.

Upgrade the Plug-in

New versions of the Infrastructure Stack plug-in might be released independent of the Oracle Enterprise Manager releases. You can go to the Oracle Enterprise Manager Store to download the latest version of the Infrastructure Stack plug-in.

Available updates are visible on the Plug-ins page. You can download them from the Enterprise Manager Store or import them using the emcli command.

Things to Know About Upgrading

The following are some things to know about upgrading a plug-in:

- You do not need to remove the existing version of a plug-in from the Oracle Management Service (OMS) or Management Agents before upgrading to the latest version.
- Upgrading a plug-in to a new version does not remove the content of the older plug-in.
- You can import multiple versions of the same plug-in. However, you can only deploy one version on the OMS at any given time.
- A Management Agent cannot have a later version of the plug-in than the OMS.
- You cannot downgrade to an earlier version.

**Upgrade the Plug-in**

Perform the following steps to upgrade the plug-in:

1. Log into Enterprise Manager Cloud Control as a Super Administrator (SYSMAN).
2. Download the plug-in from the Enterprise Manager Store.
3. Deploy the plug-in to the OMS.
   
   You can only deploy one version on the Manager Servers at any given time. The plug-in is automatically updated on the Management Agent.

**Undeploy the Plug-in**

Follow instructions provided within the *Oracle Enterprise Manager Cloud Control Administrator’s Guide* to remove, or un-deploy, a plug-in. At a high level, the Oracle Enterprise Manager Cloud Control administrator must do the following:

- Ensure that all Infrastructure Stack instances being monitored are removed from the agent monitoring configuration
- Un-deploy the Plug-in from all agents
- Remove the Plug-in

Removing a plug-in removes all of its metadata from the Management Repository.

1. From the Setup menu, click **Extensibility**, then click **Plug-ins**.
2. Select the row for the plug-in you want to remove to in the table.
3. Click **Undeploy From**, then click either **Management Servers** or **Management Agent**. You can then select the OMS or Management Agent you want to remove the plug-in from.
4. Confirm the plug-in removal. Enterprise Manager notifies the connected and relevant Enterprise Manager users and begins the de-configuration process.

**Disconnect Enterprise Manager Cloud Control Access**

You can disconnect and unconfigure the link between the Oracle Enterprise Manager Ops Center and Cloud Control applications.

1. Log into Oracle Enterprise Manager Ops Center.
2. Click **Administration**, then click **Enterprise Manager Cloud Control**.
3. Click Disconnect/Unconfigure in the Actions pane.
4. Confirm the action.

**Related Resources**

For Oracle Enterprise Manager Cloud Control, see the documentation library at [http://docs.oracle.com/cd/E24628_01/index.htm](http://docs.oracle.com/cd/E24628_01/index.htm).

- For information about installing the Enterprise Manager Cloud Control software and agents, see the *Oracle Enterprise Manager Cloud Control Basic Installation Guide* or the *Oracle Enterprise Manager Cloud Control Advanced Installation and Configuration Guide*.

- For more information about plug-ins, including how to undeploy a plug-in, see the *Oracle Enterprise Manager Cloud Control Administrator’s Guide*.

For Oracle Enterprise Manager Ops Center 12c Release 3, see the documentation library at [http://docs.oracle.com/cd/E59957_01/index.htm](http://docs.oracle.com/cd/E59957_01/index.htm).

See the following for more information:

- Installing and configuring the Enterprise Controller and Proxy Controller: *Oracle Enterprise Manager Ops Center Installation Guide for Oracle Solaris Operating System* or the *Oracle Enterprise Manager Ops Center Installation Guide for Linux Operating Systems*

- Monitoring: *Oracle Enterprise Manager Ops Center Configure Reference*
Annotations: Oracle Enterprise Manager Ops Center Operations Reference

For Oracle Enterprise Manager Ops Center 12c Release 2, see the Oracle Enterprise Manager Ops Center Feature Reference Guide and other documentation in the library at http://docs.oracle.com/cd/E40871_01/index.htm.

Documentation Accessibility

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

Access to Oracle Support

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