

Oracle Private Cloud Appliance

How to Manage Oracle Private Cloud Appliance with Enterprise Manager 13c Cloud Control

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ORACLE®

Private Cloud
Appliance

13^c **ORACLE®**
Enterprise Manager



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Introduction

The purpose of this document is to define the end-to-end process to deploy an Oracle Enterprise Manager 13c agent to the highly available management nodes within the Oracle Private Cloud Appliance (PCA), deploy the Oracle PCA Plug-in and discover the Oracle VM Manager within the Oracle PCA.

Features

Oracle Enterprise Manager 13c, introduced the Oracle PCA Plug-in which enables users to discover multiple Oracle PCAs and manage them from a single instance of Oracle Enterprise Manager 13c. Users can also leverage the Oracle Enterprise Manager console to manage hybrid (private and public) cloud environments, through a single pane of glass. The Oracle PCA Plug-in also provides photorealistic views of the rack and its components, to facilitate hardware level monitoring.

Oracle Enterprise Manager also provides an Oracle Virtualization (VT) Plug-in which enables users to discover and manage multiple Oracle VM Manager instances. The VT Plug-in provides the ability to monitor all Oracle VM components such as Oracle VM guests, Oracle VM Servers (hypervisors), resource pools, storage and networking. The VT Plug-in also provides the foundation for infrastructure cloud services, providing secure multi-tenancy with self-service, elasticity and accountability.



Prerequisites

An Oracle Enterprise Manager 13c environment needs to exist outside of any Oracle PCA rack. The Oracle Enterprise Manager 13c environment should ideally be the latest version, which at the time of writing is Release 13.3. The Oracle Enterprise Manager 13c Release 13.3 provides enhanced monitoring for the Oracle Fabric Interconnect Switches within the Oracle PCA.

The following needs to exist and be available via the Oracle Enterprise Manager extensibility framework:

- Linux x86-64 agent software
- Oracle Enterprise Manager VT Plug-in

High Level Steps

- Install the Oracle Enterprise Manager 13c agent on the Oracle PCA management nodes
- Install the Oracle Enterprise Manager VT Plug-in
- Discover Oracle PCA
- Register Oracle PCA's Oracle VM Manager with Oracle Enterprise Manager 13c

Installing the Oracle Enterprise Manager 13c Agent

For this section, it is recommended to reference this document: [Installing the Management Agent on Oracle PCA](#).

- As the root user, change the "oracle" user password to a known password.

```
passwd oracle
```

- Verify the Oracle PCA Virtual IP address (VIP) and public Oracle Enterprise Manager IP address are in the /etc/hosts file.

```
YOUR.VIP pca1-vip.us.oracle.com pca1-vip-vip  
YOUR.IP em01.us.oracle.com em01
```

- On the Oracle PCA active management node, and as the root user, create an agent directory within the shared nfs directory. The shared nfs directory is required for both availability and failover purposes.

```
mkdir /nfs/shared_storage/oemagent  
chown oracle:dba /nfs/shared_storage/oemagent
```

- Oracle PCA software contains a pre-configured firewall entry for the default agent port of 3872 on both management nodes. If this port needs to be changed, the Oracle PCA firewall needs to be configured as the root user on both the active and passive management nodes.

```
iptables -A INPUT -m state --state NEW -m tcp -p tcp --dport <agent_port> -j
ACCEPT
service iptables save
service iptables restart
```

- Using the Oracle Enterprise Manager UI, add a named credential for the Oracle Enterprise Manager agent install user to install the agent.
- From the Oracle Enterprise Manager UI, deploy the agent to Oracle PCA:
 1. **Setup=> Add Target=> Add Targets Manually**
 2. **Install Agent on Host=> Add Manually**
 3. Enter the fully qualified hostname (FQDN) for the Oracle PCA management nodes' VIP (Virtual IP Address)
 4. Enter **Linux x86-64** as the **Platform**
 5. **Next=>**
 6. Enter the following information:
 - a. **Installation Base Directory:** /nfs/shared_storage/oemagent
 - b. **Instance Directory:** This field will be automatically populated based upon the Installation Base Directory input
 - c. **Named Credential:** This is a drop down menu. Select the agent install user named credential created earlier
 - d. **Privileged Delegation Setting:** Leave the default. By default, this field is populated with /usr/bin/sudo -u %RUNAS% %COMMAND%
 - e. **Port:** By default, this field is populated with 3872
 - f. **Preinstallation Script:** Leave this field blank.
 - g. **Postinstallation Script:** Leave this field blank.
 - h. **Additional Parameters:** Leave this field blank.
 - i. **Next =>**
 - j. **Deploy Agent =>**

Note: During the agent install, the sudo command will display a warning and state that privilege scripts need to be run manually as the root user. Select to “Continue All Hosts” and once the agent install has completed, run the following privileged scripts as the root user on the Oracle PCA active management node:

```
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/root.sh
/u01/app/orainventory/orainstRoot.sh
```

- On the Oracle PCA active management node, set the following property as the Enterprise Manager agent user, which for Oracle PCA is the "oracle" user.

```
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/bin/emctl setproperty agent --
name "AgentListenOnAllNICs" --value "false"
```

This setting by default instructs the agent to listen on all configured Network Interfaces. This is set to false and only listens on the Network Interface which is associated with the Oracle PCA VIP (Virtual IP address).

- As the root user, and on the Oracle PCA active management node, copy the agent installation files to the passive management node (ovcamn06r1 is passive in this example):

```
scp /etc/init.d/gcstartup root@ovcamn06r1:/etc/init.d/
rsync -og /etc/oragchomelist root@ovcamn06r1:/etc/oragchomelist
rsync -rog /u01/app/oralInventory/ root@ovcamn06r1:/u01/app/oralInventory/
```

- As the root user, and on the Oracle PCA active management node, remove all the operating system startup files (gcstart) within the rc.d directories. For availability and failover reasons, it is required that the start and stop of the agent to be under the control of the Oracle PCA software.

```
for x in `find /etc/rc.*/*rc* | grep gcstart`; do rm $x; done
```

- Restart the Oracle Enterprise Manager agent on the Oracle PCA active management node either as the root user from the startup script **OR** as the agent user ("oracle") using the agent's emctl command:

- As the root user

```
/etc/init.d/gcstartup stop
/etc/init.d/gcstartup start
```

- Or as the "oracle" user

```
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/bin/emctl stop agent
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/bin/emctl start agent
```

Installing the Oracle Enterprise Manager VT Plug-in

For this section, we recommended referencing the Oracle Enterprise Manager 13.3 document: [Downloading, Deploying, and Upgrading Plug-ins](#). In summary, the VT Plug-in is required to be installed on the Oracle Enterprise Manager 13c Management Server as well as the agent that is installed on the Oracle PCA active management node. Use of the latest version of the VT Plug-in on both the management server and agent is recommended.

The VT Plug-in is required for both discovering the Oracle PCA and for registering Oracle PCA's Oracle VM Manager.

Plug-ins

This page lists the plug-ins available, downloaded, and deployed to the Enterprise Manager system. Use this page to deploy or undeploy plug-ins.

Actions ▼ View ▼ Deploy On ▼ Undeploy From ▼ Check Updates Deployment Activities

Name	Version			Management Agent with Plug-in	Description
	Latest Available	Latest Downloaded	On Management Server		
Oracle Virtualization	13.3.1.0.0	13.3.1.0.0	13.3.1.0.0	8	Enables management capabilities for Oracle Linux, Ksplice, Oracle VM and Oracle Private Cloud Appliance in Enterprise Manager.

Discovering the Oracle Private Cloud Appliance

Once the Oracle Enterprise Manager 13c agent is installed and running on the Oracle PCA active management node, it is possible to discover Oracle PCA using the Oracle Enterprise Manager 13c PCA Plug-in. If using Oracle Enterprise Manager EM13c Release 13.3 there are some pre-requisite steps to enable the discovery and management of the Oracle Fabric Interconnect switches within Oracle PCA. These high-level steps are as follows:

- Download the Oracle Enterprise Manager OVN Plug-in
- Install the Enterprise Manager OVN plug-in on the Oracle PCA active management node
- On the Oracle PCA active management node import the Oracle Fabric Manager certificate into the Enterprise Manager agent keystore
- Discover the Oracle PCA in Enterprise Manager

For this section, it is recommended that you reference the following Oracle Enterprise Manager 13.3 documents: [Prerequisites to Monitor the Fabric Interconnect in Oracle PCA](#) & [Discovering the Oracle PCA in Enterprise Manager](#).




1. From the Oracle Enterprise Manager 13c UI go to the **Setup** menu, then **Add Target**, then **Add Targets Manually**.

	Initial Setup Console
Configure Auto Discovery	Add Target ▶
Auto Discovery Results	Extensibility ▶
Add Targets Manually	Proxy Settings ▶
Group	Security ▶
Dynamic Group	Incidents ▶
Administration Groups	Notifications ▶
Generic System	Cloud ▶
Redundancy System	Provisioning and Patching ▶
Generic Service	My Oracle Support ▶
	Middleware Management ▶
	Manage Cloud Control ▶
	Command Line Interface
	Management Packs ▶

2. Then select **Add Non-Host Targets Using Guided Process**.

Add Targets Manually

▶ Overview

<p style="text-align: center;">Add Host Targets</p> <div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 10px;"> <p>Install Agent on Host</p> <p>Install Agent Results</p> </div> <p style="font-size: small; margin-top: 10px;">Add Host targets by installing an agent using remote installation process. View status of past Agent installations.</p>	<p style="text-align: center;">Add Non-Host Targets Using Guided Process</p> <div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 10px;"> <p>Add Using Guided Process</p> </div> <p style="font-size: small; margin-top: 10px;">Run guided discovery on a host to find manageable targets. Choose to promote some or all discovered targets to become managed.</p>	<p style="text-align: center;">Add Non-Host Targets Using Declarative Process</p> <div style="text-align: center;">  </div> <div style="text-align: center; margin-top: 10px;"> <p>Add Target Declaratively</p> </div> <p style="font-size: small; margin-top: 10px;">Add targets by explicitly specifying monitoring properties.</p>
---	--	---

3. Click on **Add Using Guided Process**. A pop-up window will appear. Select **Oracle Private Cloud Appliance** then click **Add**. This will then start the discovery wizard process.

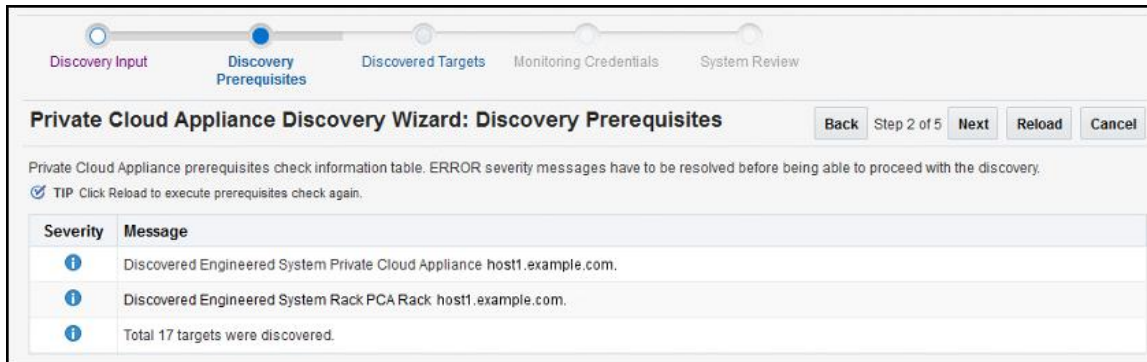
4. On the **Discovery Input** page you will need to select the **Monitoring Agent** host location. Click the **Search** or Radio button and select the Oracle Enterprise Manager agent you installed in the first section on the Oracle PCA active management node. This agent will perform the discovery of the entire Oracle PCA. The Oracle PCA management nodes are connected to the private management network, which is required to access the internal components for the discovery process.

The screenshot shows the 'Discovery Input' step of the 'Private Cloud Appliance Discovery Wizard'. At the top, there is a progress bar with five steps: 'Discovery Input' (active), 'Discovery Prerequisites', 'Discovered Targets', 'Monitoring Credentials', and 'System Review'. Below the progress bar, the title 'Private Cloud Appliance Discovery Wizard: Discovery Input' is displayed, followed by 'Back', 'Step 1 of 5', 'Next', and 'Cancel' buttons. The main content area contains the instruction: 'Select an Enterprise Manager Agent with access to Private Cloud Appliance Engineered system. The agent will communicate with the Management Node Host of the Private Cloud Appliance Engineered System to discover all supported targets in the system.' Below this is a search field labeled '* Monitoring Agent' with a magnifying glass icon.

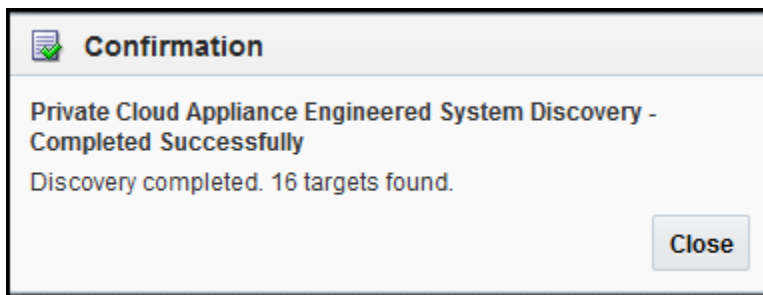
The screenshot shows a 'Select Discovery Agent' dialog box. It has a search section with a 'Target Name' input field and a 'Search' button. Below the search section is a table with two columns: 'Target Name' and 'Status'. The table contains two rows: 'pca1.example.com:3378' with a green up arrow icon, and 'pca2.example.com:1728' with a yellow gear icon. At the bottom right of the dialog, there is a 'Mode Single Select' label and 'Select' and 'Cancel' buttons.

Target Name	Status
pca1.example.com:3378	↑
pca2.example.com:1728	⚙️

5. Next is the **Discovery Prerequisites** page where a series of checks are automatically performed. Any errors here should be investigated and resolved before continuing. Once resolved, the checks can be re-run by clicking on the **Reload** button.



6. A pop-up confirmation window will now appear to show how many targets have been discovered. Click the **Close** button to continue.



7. The **Discovered Targets** page displays the discovered targets. By default all targets are pre-selected.

Private Cloud Appliance Discovery Wizard: Discovered Targets Back Step 3 of 5 Next Cancel

List of all targets discovered in the Private Cloud Appliance Engineered System. Please uncheck the targets, that are to be ignored by this discovery wizard.

TIP All discovered components are pre-selected by default.

Management Nodes

Select	Rack Name	Name
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom1/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom2/host1.example.com

Compute Nodes

Select	Rack Name	Name
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom-cn12/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom-cn11/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom-cn10/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom-cn09/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom-cn08/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ilom-cn07/host1.example.com

Ethernet Switches

Select	Rack Name	Name
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	ethernet1/host1.example.com

Fabric Interconnect Switches

Select	Rack Name	Name
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	fabric1/host1.example.com
<input checked="" type="checkbox"/>	PCA Rack host1.example.com	fabric2/host1.example.com

- The **Monitoring Credentials** page is next and shows a status flag which, when red, indicates that monitoring credentials are not set. For each target type, click the **Edit** button and insert the username and password. Note the top tick box which will allow you to use the same credentials for targets. Using this tick box will eliminate the need to enter the same credentials information multiple times. Note, for the InfiniBand switch enter “public” in the **Community String** mandatory field. Following the input of the required credentials, the status flag should now change from red to green.

Discovery Input Discovery Prerequisites Discovered Targets **Monitoring Credentials** System Review

Private Cloud Appliance Discovery Wizard: Monitoring Credentials Back Step 4 of 5 Next Cancel

Provide monitoring credentials to enable monitoring of the targets.
 TIP You can check 'Use for all...' option in the credentials edit dialog to use same credentials for all targets of the type.

Management Nodes

Managed	Rack Name	Name	Monitoring Credentials		
			Status	Edit	Configured Credentials
	PCA Rack host1.example.com	ilom1/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...
	PCA Rack host1.example.com	ilom2/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...

Compute Nodes

Managed	Rack Name	Name	Monitoring Credentials		
			Status	Edit	Configured Credentials
	PCA Rack host1.example.com	cn12/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...
	PCA Rack host1.example.com	cn11/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...
	PCA Rack host1.example.com	cn10/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...
	PCA Rack host1.example.com	cn09/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...
	PCA Rack host1.example.com	cn08/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...
	PCA Rack host1.example.com	cn07/host1.example.com	<input checked="" type="checkbox"/>		ILOM SSH Monitoring Credent...

Ethernet Switches

Managed	Rack Name	Name	Monitoring Credentials		
			Status	Edit	Configured Credentials
	PCA Rack host1.example.com	ethernet1/host1.example.com	<input checked="" type="checkbox"/>		This Target does not require ...

Fabric Interconnect Switches

Managed	Rack Name	Name	Monitoring Credentials		
			Status	Edit	Configured Credentials
	PCA Rack host1.example.com	fabric1/host1.example.com	<input checked="" type="checkbox"/>		This Target does not require ...

ilom1/pca1.example.com Monitoring Credentials X

Use same credentials for all Management Nodes targets Test Credentials Save Cancel

Credential type: ILOM SSH Credentials

* Username:

* Password:

* Confirm Password:

9. The **System Review Page** is next and prompts you to click the **Promote Targets** button.

Confirmation

Private Cloud Appliance Engineered System Promotion - Completed Successfully

▲ Hide

Targets promotion completed. 19 new targets were promoted.
 Private Cloud Appliance vt26-vca-vip.us.oracle.com associated to rack(s).
 Adding targets to Private Cloud Appliance Engineered rack(s) system completed.
 Private Cloud Appliance Engineered System promotion task completed. Duration 30,405 m

Close

Discovery Input Discovery Prerequisites Discovered Targets Monitoring Credentials **System Review**

Private Cloud Appliance Discovery Wizard: System Review Back Step 5 of 5 Close

Promotion of targets can be started by clicking 'Promote Targets' button. After promotion process is completed table is updated with the promotion results.

✓ TIP After promotion, you can directly navigate to targets by clicking links in the 'Name' column.
 ✓ TIP If promotion of target(s) failed, you can navigate back fixing inputs and proceeding with 'Promote Targets' again.

▲ Private Cloud Appliance Engineered Systems

Managed	Name	Promoted	Target Promotion Status
✓	Private Cloud Appliance host1.example.com	✓	<ul style="list-style-type: none"> Add target Private Cloud Appliance host1.example.com completed successfully. Target Private Cloud Appliance host1.example.com association with PCA Rack host1.example.com completed successfully.

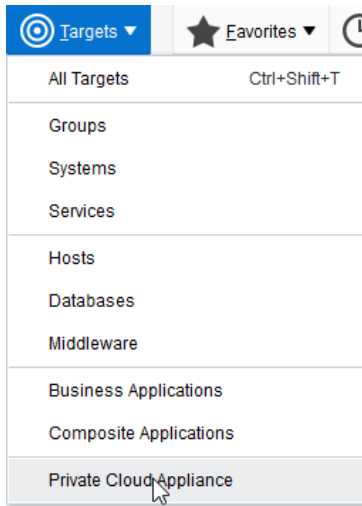
▲ Racks

Managed	Name	Promoted	Target Promotion Status
✓	PCA Rack host1.example.com	✓	<ul style="list-style-type: none"> Add target PCA Rack host1.example.com completed successfully.

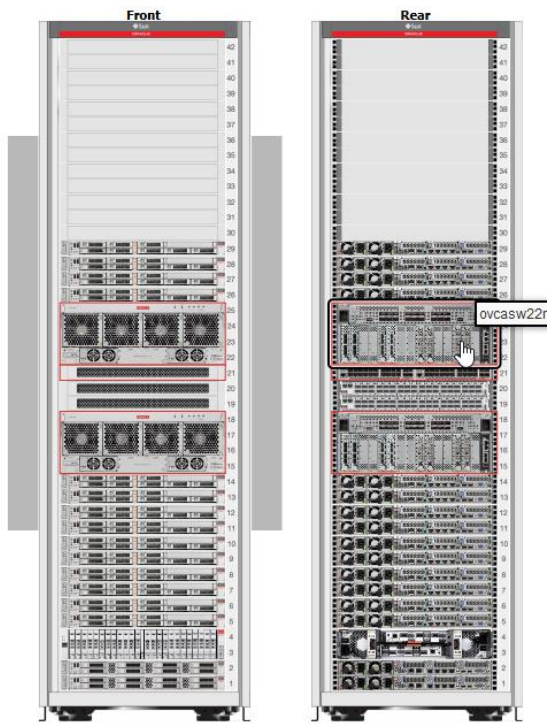
▲ Management Nodes

Managed	Rack Name	Name	Promoted	Target Promotion Status
✓	PCA Rack host1.example.com	ilom1/host1.example.com	✓	<ul style="list-style-type: none"> Add target ilom1/host1.example.com completed successfully. Target ilom1/host1.example.com is placed in rack PCA Rack host1.example.com on

10. Once the discovery process is complete and all Oracle PCA targets are promoted, Oracle Enterprise Manager will then bring all Oracle PCA components into a rack view, including the option to access and view individual target home pages. To access this view go to **Targets=> Private Cloud Appliance**.



From here, click on the recently discovered Oracle PCA which will take you to the Oracle PCA home page. Here you can select to see the photorealistic rack view (as shown below)



Registering Oracle VM Manager with Oracle Enterprise Manager 13c (Oracle Private Cloud Appliance Software Version 2.3.3 and above)

At the time of writing, the latest version of Oracle PCA is 2.3.3. This release has Oracle VM Server 3.4.4 where a tcps certificate is not required for registration with Oracle Enterprise Manager. Oracle VM Manager Version 3.4 contains an internal Certificate Authority (CA) that is used to perform certificate-based authentication and to sign the SSL certificate that is used for the web-based user interface. Certificates are generated automatically upon the install of the Oracle PCA 2.3.3 software. The export and import of the Oracle VM Manager Weblogic certificate is required and detailed below.

For a new install of Oracle PCA software 2.3.3 and above, follow this procedure:

- As the root user, and on the Oracle PCA active management node, export the Oracle VM Manager certificate

```
/u01/app/oracle/ovm-manager-3/ovm_upgrade/bin/ovmkeytool.sh exportca > /u01/app/oracle/ovm-manager-3/ws
```

- As the agent user, and on the Oracle PCA active management node, import the Oracle VM Manager certificate using password “welcome”

```
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/bin/emctl secure add_trust_cert_to_jks -trust_certs_loc /u01/app/oracle/ovm-manager-3/ws -alias ovmm
```

- From the Oracle Enterprise Manager UI, register Oracle PCA’s Oracle VM Manager

Enterprise=> Cloud=> Oracle VM Infrastructure Home

Infrastructure Cloud=> Register OVM Manager

Name: Enter the target name for the Oracle VM Manager, for example “PCA-OVMM”

Monitoring Agent: Select the agent running on the management nodes

Oracle VM Manager URL: tcps://

Oracle VM Manager Console URL: https://<pca-oracle-vm-manager-FQDN>:7002/.

Username: admin

Password: < pca oracle vm manager admin password>

Enable Automatic Synchronization with Oracle VM Manager

Submit

The Oracle VM Manager within Oracle PCA will now be visible within the Oracle VM Infrastructure Home page.

Registering Oracle VM Manager with Oracle Enterprise Manager 13c (Oracle Private Cloud Appliance Software Versions 2.1.1 to 2.2.2)

With Oracle PCA software version 2.1.1 to 2.2.2, a tcps certificate is deployed in the shared nfs filesystem available to the Oracle PCA management nodes. For versions 2.1.1 to 2.2.2, this certificate should be used in the registration process for Oracle PCA's Oracle VM Manager using Oracle Enterprise Manager in all new installs. This deployed certificate will not change during any updates to the Oracle PCA software and therefore tcps does not need to be configured at each software upgrade.

For a new install of Oracle PCA software 2.1.1 to 2.2.2, follow this procedure:

- As the root user, and on the Oracle PCA active management node, export the Oracle VM Manager certificate using password "Welcome1"

```
/u01/app/oracle/java/bin/keytool -keystore /nfs/shared_storage/certs/ovmm.ks -  
exportcert -alias ovmm -file /tmp/ovmm.cert
```

- As the agent user, and on the Oracle PCA active management node, import the Oracle VM Manager certificate using password "welcome"

```
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/bin/emctl secure  
add_trust_cert_to_jks -trust_certs_loc /tmp/ovmm.cert -alias ovmm
```

- From the Oracle Enterprise Manager UI, register Oracle PCA's Oracle VM Manager

Enterprise=> Cloud=> Oracle VM Infrastructure Home

Infrastructure Cloud=> Register OVM Manager

Name: Enter the target name for the Oracle VM Manager, for example "PCA-OVMM"

Monitoring Agent: Select the agent running on the management nodes

Oracle VM Manager URL: tcps://<pca-oracle-vm-manager-FQDN>:54322

Oracle VM Manager Console URL: https://<pca-oracle-vm-manager-FQDN>:7002/.

Username: admin

Password: < pca oracle vm manager admin password>

Enable Automatic Synchronization with Oracle VM Manager

Submit

The Oracle VM Manager within Oracle PCA will now be visible within the Oracle VM Infrastructure Home page.

Registering Oracle VM Manager with Oracle Enterprise Manager 13c (Oracle Private Cloud Appliance Software Version 2.0.5 and below)

For Oracle PCA software version 2.0.5, and below, the tcps certificate is stored locally and not within the shared nfs filesystem. Therefore tcps must be configured on each node using the following procedure referencing document: [Oracle VM Installation and Upgrade Guide for 3.2](#)

- As the root user, and on the Oracle PCA active management node, run the following script to setup tcps

```
/u01/app/oracle/ovm-manager-3/bin/secureOvmmTcpGenKeyStore.sh
/u01/app/oracle/ovm-manager-3/bin/secureOvmmTcp.sh
```

After the two scripts have run, the Oracle VM Manager service will need to be restarted. As the root user, and on the Oracle PCA active management node, run the following

```
service ovmm stop
service ovmm start
```

Once the Oracle VM Manager service has been restarted, check that tcps is enabled and is listening on port 54322 by running the following as the root user on the Oracle PCA active management node

```
netstat -a|grep 54322
tcp      0      0  *:54322          *.*              LISTEN
```

The newly created tcps certificate needs to be copied from the Oracle PCA active management node to the passive management node (ovcamn06r1 is passive in this example), to enable tcps to start in the event of failover.

- As the root user, and on the Oracle PCA active management node, run the following:

```
scp -p /u01/app/oracle/ovm-manager-3/ovmmCoreTcps.ks
ovcamn06r1:/u01/app/oracle/ovm-manager-3/ovmmCoreTcps.ks
```

- As the root user, and on the Oracle PCA active management node, export the Oracle VM Manager certificate using the KeyStore password used when running the secureOvmmTcpGenKeyStore.sh & secureOvmmTcp.sh scripts.

```
/u01/app/oracle/java/bin/keytool -keystore /u01/app/oracle/ovm-manager-3/ovmmCoreTcps.ks -exportcert -alias ovmm -file /tmp/ovmm.cert
```

- As the agent user, and on the Oracle PCA active management node, import the Oracle VM Manager certificate using password “welcome”.

```
/nfs/shared_storage/oemagent/agent_13.3.0.0.0/bin/emctl secure
add_trust_cert_to_jks -trust_certs_loc /tmp/ovmm.cert -alias ovmm
```

- From the Oracle Enterprise Manager UI, register Oracle PCA’s Oracle VM Manager:

Enterprise=> Cloud=> Oracle VM Infrastructure Home

Infrastructure Cloud=> Register OVM Manager

Name: Enter the target name for the Oracle VM Manager, for example “PCA-OVMM”

Monitoring Agent: Select the agent running on the management nodes

Oracle VM Manager URL: tcps://<pca-oracle-vm-manager-FQDN>:54322

Oracle VM Manager Console URL: https://<pca-oracle-vm-manager-FQDN>:7002/.

Username: admin

Password: <pca oracle vm manager admin password>

Enable Automatic Synchronization with Oracle VM Manager

Submit

The Oracle VM Manager within Oracle PCA will now be visible within the Oracle VM Infrastructure Home page

For more information

Visit the Web resources listed in Table 1.

TABLE 1. WEB RESOURCES FOR FURTHER INFORMATION	
WEB RESOURCE DESCRIPTION	WEB RESOURCE URL
Oracle Private Cloud Appliance	http://www.oracle.com/pca
Oracle Enterprise Manager	http://www.oracle.com/us/products/enterprise-manager/
Oracle Virtualization	http://www.oracle.com/virtualization
Oracle VM Templates	http://www.oracle.com/technetwork/server-storage/vm/templates-101937.html
Oracle Partitioning	http://www.oracle.com/us/corporate/pricing/partitioning-070609.pdf
Oracle Solaris	http://www.oracle.com/solaris
Oracle Linux	http://www.oracle.com/linux
Oracle Servers	http://www.oracle.com/servers
Oracle Storage	http://www.oracle.com/storage
Oracle Networking	http://www.oracle.com/us/products/servers-storage/networking/







Oracle Corporation, World Headquarters

500 Oracle Parkway
Redwood Shores, CA 94065, USA

Worldwide Inquiries

Phone: +1.650.506.7000
Fax: +1.650.506.7200

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Integrated Cloud Applications & Platform Services

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How to Manage an Oracle Private Cloud Appliance with Oracle Enterprise Manager 13c
Author: Simon Hayler