Cisco Prime Service Catalog 12.0 Virtual Appliance Quick Start Guide

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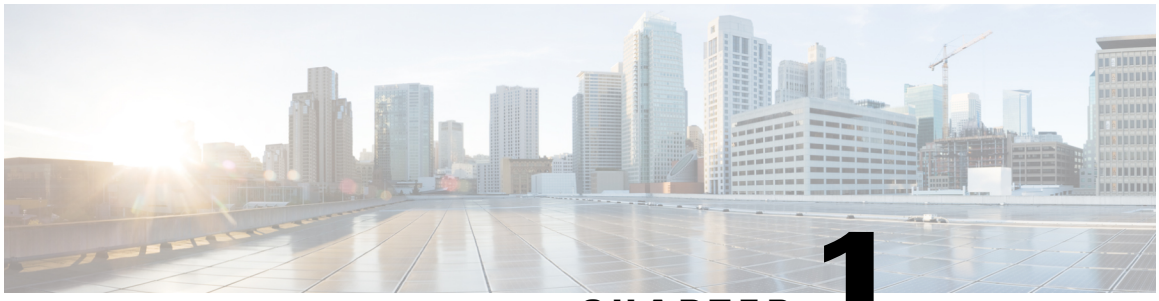


CHAPTER 1

Introduction

Overview

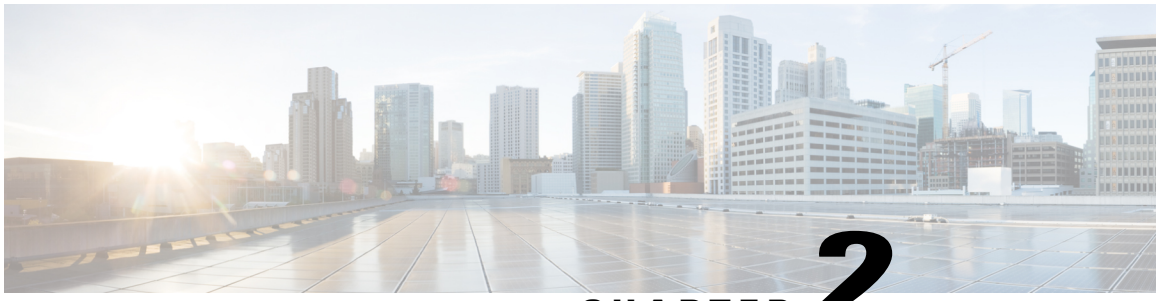
Cisco Prime Service Catalog software is a self-service portal to order and manage any type of IT services from the data center to desktop. You can also order Infrastructure as a Service (IaaS) such as virtual machines, fenced containers, and VACS (if integrated with UCSD), and use Prime Service Catalog for lifecycle management of these entities.

Cisco Prime Service Catalog Virtual Appliance (OVF) package enables you to deploy Cisco Prime Service Catalog product as a Virtual Machine.

The Virtual Appliance comes with the following pre-installed and pre-configured software:

- CentOS Linux, version 7.2
- Apache HTTP Server, version 2.4.6
- WildFly Application Server, version 10.0.0. Final
- Oracle 12c Database Enterprise Edition, version 12.1.0.2
- Prime Service Catalog, version 12.0
- Docker 1.10.3

The Cisco Prime Service Catalog Quick Start Guide provides information on deploying and configuring Prime Service Catalog Virtual Appliance. For more information about using Prime Service Catalog, see the Cisco Prime Service Catalog 12.0 User Guide.



CHAPTER 2

Before You Begin

System Requirements

- The OVF file for Prime Service Catalog 12.0 Virtual Appliance can be deployed in VMware vSphere version 6.x. To deploy the Prime Service Catalog OVF file, you need to open a vSphere Client and connect it to your VMware vCenter Server 6.x.
- Make sure that your VMware vCenter Server has enough resources to accommodate the Virtual Appliance: 4 CPU, 8 GB of memory, 100 GB of disk space.
- An SMTP server is required. After deploying the OVF, you can enter the SMTP server setting via the Shell Menu, as described in the Installation Instructions. The SMTP server that you use must listen to port 25, and should not require authentication.

Licensing

Cisco ONE Enterprise Cloud Suite is a part of the Cisco ONE for Data Center solution and consists of four components: Infrastructure Automation, Cloud Management, Big Data Automation and Service Management. Each component can be used individually, or all components can be used together to create an integrated hybrid cloud solution. All components were designed to work together, providing you with an incremental approach to hybrid cloud automation.

The Cisco ONE ECS Service Management package which includes Cisco Prime Service catalog and Cisco Process Orchestrator is sold as a one-year, three-year, or five-year subscription and a customer can order the Service Management Base bundle with an option to add-on the Service Management Workplace option.

For more information about licensing contact your account manager.

Preparing the Virtual Appliance for Deployment

All-in-One installation mode is not supported in this release. From Prime Service Catalog 12.0 release onwards, the virtual appliance bundle contains two OVF files. The "CPSC-virtualappliance-as-12.0.0.47.ova" to install the application server and "CPSC-virtualappliance-db-12.0.0.35_SIGNED.ovf" to install the database. These separate packages allow you to choose not to install the Prime Service Catalog database node by instead making use of an existing Oracle 12c Database.

Use the below procedure to download and deploy Cisco Prime Service Catalog Virtual Appliance (OVA) package. You can deploy Cisco Virtual Appliance separately using the respective OVA file. The Database Node can be deployed separately based on your requirement using the respective ova files mentioned in the following procedure:

Step 1 Download the following zip files from cisco.com web site as per your requirement:

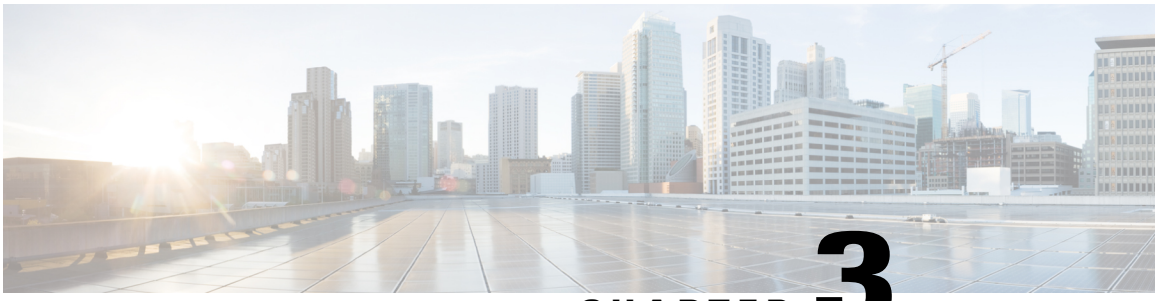
- For application server download **CPSC-virtualappliance-as-12.0.0.47.ova**.
- For database server use **CPSC-virtualappliance-db-12.0.0.35_SIGNED.ovf**, The DB server can be downloaded from the below three separate zip files:
  - CPSC-virtual-appliance-db-12.0-Part1
  - CPSC-virtual-appliance-db-12.0-Part2
  - CPSC-virtual-appliance-db-12.0-Part3

Step 2 Create a temporary directory that will contain the contents of the three zip files, for example, "C:\Temp\CPSC_12.0_VA".

Step 3 Extract each of the three zip files into the directory created in the previous step, so that the contents of all three zip files are located in the same directory.

Step 4 From vSphere Client, deploy the OVF file by navigating to the directory containing the extracted files, and select the file "CPSC-virtualappliance-as-12.0.0.47.ova" for application server or "CPSC-virtualappliance-db-12.0.0.35_SIGNED.ovf" for database.

Step 5 After the OVF is deployed as a VM in your VMware vCenter Server, power up the VM.



CHAPTER 3

Installing Prime Service Catalog

Installing Prime Service Catalog Virtual Appliance

Using Cisco Prime Service Catalog 12.0 Virtual Appliance (OVF) package, you can deploy Cisco Prime Service Catalog using the Distributed Mode:

This type of OVF installation will install all the Virtual Appliance components on different nodes. The nodes should be deployed in the same order as shown in the Virtual Appliance prompt. You can also add additional Prime Service Catalog nodes to set up a cluster for failover.

Installing the Database Node

Open the VM's Console in your vSphere Client. The VM console will display the following prompts:

Before You Begin

Prepare the Virtual Appliance for deployment. For more information, see Preparing the Virtual Appliance for Deployment.

Step 1 **Do you want to configure DHCP or Static IP?** Enter either the value **dhcp** or **static**.
If you select DHCP address, make sure that your VM is using a VMware network portgroup that is connected to a DHCP sever.

If you select Static IP address, you are prompted to enter the values for Static IP Address, Subnet Mask, Default Gateway, Primary DNS Address, and (optionally) Secondary DNS Address.

You are prompted to confirm the values that you have entered before continuing.

Step 2 **Appliance Hostname:** Enter the hostname for your VM. You can enter a Fully Qualified Domain Name such as **pscdb.mydomain.com**, or a short hostname such as **pscdb**. Hostname value must begin with an alphabetic character, and must contain only alphabetic characters, digits, hyphen, and period.

Step 3 **Password for System Components:** Enter a common password that will be used for the following user(s):

- Shelladmin user
- root user
- Oracle **system** and **sys** users
- Prime Service Catalog Database user

A valid password must conform to the following rule:

- Is between 8 to 16 character long
- Begins with an alphabetic character
- Contains at least one upper-case character
- Contains at least one lower-case character
- Contains at least one digit
- Contains at least one special character from the following list: ^ * - _

After the value for the last prompt is entered, the VM will perform a series of tasks to install and configure the Oracle database server. This process will take a few minutes to complete. Wait until you see the message on the screen, which says that the Database Node has been successfully initialized. The message will contain the details to access Prime Service Catalog database.

The system will also show the details such as Host IP address, DB Port, DB Service Name, and User Name for connecting to Prime Service Catalog Database.

Installing the Prime Service Catalog Node

Before You Begin

- Prepare the Virtual Appliance for deployment. For more information, see Preparing the Virtual Appliance for Deployment.
- Set up the database node and ensure that it is up and running. For information on setting up a database node, see Installing the Database Node .

Step 1 Open the VM's Console in your vSphere Client. The VM console will display the following prompts:

a) **Do you want to configure DHCP or Static IP?** Enter either the value **dhcp** or **static**.
If you select DHCP address, make sure that your VM is using a VMware network portgroup that is connected to a DHCP sever.

If you select Static IP address, you are prompted to enter the values for Static IP Address, Subnet Mask, Default Gateway, Primary DNS Address, and (optionally) Secondary DNS Address.

You are prompted to confirm the values that you have entered before continuing.

b) **Appliance Hostname:** Enter the hostname for your VM. You can enter a Fully Qualified Domain Name such as **psc.mydomain.com**, or a short hostname such as **psc**. Hostname value must begin with an alphabetic character, and must contain only alphabetic characters, digits, hyphen, and period.

c) **Distributed Node Type:** Choose option **1 - Prime Service Catalog Node** to install Prime Service Catalog using an external database on a VM.

d) **Password for System Components:** Enter a common password that will be used for the following user(s):

- Shelladmin user
- root user
- Prime Service Catalog Site Administrator user
- Prime Service Catalog JMS user

A valid password must conform to the following rule:

- Is between 8 to 16 character long
- Begins with an alphabetic character
- Contains at least one upper-case character
- Contains at least one lower-case character
- Contains at least one digit
- Contains at least one special character from the following list: ^ * - _

Note Keep this password handy as this is the password for the Prime Service Catalog admin user and will be used while deploying the Orchestration node.

e) **Multicast IP Address:** Enter a unique multicast IP address in your network environment, for use by Prime Service Catalog server.

f) **Multicast Port number:** Enter a unique multicast port number in your network environment, for use by the Prime Service Catalog server.

Note If you plan to deploy multiple Prime Service Catalog nodes in a clustered configuration, ensure that you use the same Multicast Address and Port number for all the nodes.

g) Choose the node type for the location of your Prime Service Catalog database, you will be prompted with the following values:

- Enter **1** to proceed with **Prime Service Catalog Virtual Appliance Database Node**, you will be prompted with the following values:
  - Enter the Hostname or IP address of the machine where database node was installed.
  - Enter the database node password.
  - Enter the root password for Prime Service Catalog database node.
- Enter **2** to proceed with **Externally-Managed Oracle Database 12c**, you will be prompted with the following values:
  - Enter the Hostname or IP address of the machine where database node was installed.
  - Enter other database details such as the database port, Oracle service name or Oracle SID, database user name, and the Oracle database user password.

After the value for the last prompt is entered, the VM will perform a series of tasks to boot up the CentOS, and configure the Prime Service Catalog services. This process may take up to 10 minutes to complete. Wait until you see the message on the screen, which says that the Cisco Prime Service Catalog Virtual Appliance initialization completed successfully. The message will also contain the URL for Cisco Prime Service Catalog.

Step 2 Open a supported web browser and connect to the Prime Service Catalog URL. You should see the Login screen.

Step 3 To login as the Site Administrator user of Prime Service Catalog, type **admin** in the User Name field, type the password value that you provided in *Step 1 d* in the Password field, and then click the **Log In** button. Once logged in, you should see the Service Catalog home page.

What to Do Next

Proceed to the **Installing Prime Service Catalog Cluster Node**.

Installing Prime Service Catalog Cluster Node

Use the procedure detailed here only if you want to configure a clustered environment for Prime Service Catalog. In this section, you will deploy the OVF file for a second Prime Service Catalog Node, that will act as a secondary cluster node. The first Prime Service Catalog Node that you already have will act as the primary cluster node.

Before You Begin

- Prepare the Virtual Appliance for deployment. For more information, see Preparing the Virtual Appliance for Deployment.
- Set up the database node and ensure that it is up and running. For information on setting up a database node, see Installing the Database Node .

- Install the Prime service Catalog node and ensure that it is up and running. For more on installing a Prime Service Catalog node, see Installing the Prime Service Catalog Node .
- Make sure that root login is enabled on the Prime Service Catalog Primary node. You can enable the root login through shell admin menu. For more information, see Launching Shell Menu.
- Make sure that all the Firewall ports for services such as Service Link, Domain Controller, and Prime Service Catalog Application Management Port are open. You can enable these ports through shell admin menu. For more information on Shell Menu, see Launching Shell Menu.

Step 1 Open the VM's Console in your vSphere Client. The VM console will display the following prompts:

a) **Do you want to configure DHCP or Static IP?** Enter either the value **dhcp** or **static**.
If you select DHCP address, make sure that your VM is using a VMware network portgroup that is connected to a DHCP sever.

If you select Static IP address, you are prompted to enter the values for Static IP Address, Subnet Mask, Default Gateway, Primary DNS Address, and (optionally) Secondary DNS Address.

You are prompted to confirm the values that you have entered before continuing.

b) **Appliance Hostname:** Enter the hostname for your VM. You can enter a Fully Qualified Domain Name such as **psc.mydomain.com**, or a short hostname such as **psc**. Hostname value must begin with an alphabetic character, and must contain only alphabetic characters, digits, hyphen, and period.

c) **Distributed Node Type:** Choose option **1 - Prime Service Catalog Node** to install the Prime Service Catalog components on a VM.

d) **Prime Service Catalog Cluster Node:**Choose option **2 - PSC Cluster Node 2** to set up a two node cluster. If you want to set up a three node cluster, then execute the option **3 - PSC Cluster Node 3**.

e) **Domain Controller Hostname or IP address:** Enter the IP address of the machine where domain controller is installed.

f) **Domain Controller Password:** Enter the password to access the domain controller node.

g) Enter the root password for Prime Service Catalog Domain Controller node.

Step 2 The Prime Service Catalog Node that you just deployed is the secondary cluster node. You must go back to the primary cluster node, and add the information of the second Prime Service Catalog Node to the load balancer. To do this, log in as **shelladmin** user on the first Prime Service Catalog Node, and choose the **Manage Cluster** shell menu. For more information on how to use the shell menu, see Launching Shell Menu.

What to Do Next

Proceed to **Post Installation Tasks** section to perform the additional configuration tasks, which are required if you plan to use more advanced features of Prime Service Catalog .

Performing Post Installation Tasks

This section consists of the following sub-sections:

- Launching Shell Menu
- Configuring SMTP

- Configuring Proxy Server Settings
- Manage Packages and Patches

Launching Shell Menu

The Shell Menu allows you to perform various administrative tasks for the Virtual Appliance such as configuring SMTP setting, configuring Proxy server, changing passwords, starting and stopping services on the Linux operating system, etc.

Login to the Virtual Appliance as the **shelladmin** user. You can do this via the VM Console in your vSphere Client, or via an SSH connection to the IP address of the VM. On the Login Prompt, type **shelladmin** for the user name, and type the password value that you provided in *Step 1 d* of the Installing the Prime Service Catalog Node section. Once logged in, you will see the Shell Menu depending upon the type of installation. Following is the list of commands that appears in a Shell Menu for different types of installation. For details on these prompts, see the table below.

Database Node Shell Menu Options

- Manage Users
- View Service Status
- Stop Services
- Start Services
- Manage Database
- Manage Network Interface
- Manage SMTP
- View Logs
- System Information & Cisco Support
- Manage Packages and Patches
- Login as Root
- Shutdown Appliance
- Reboot Appliance
- Quit

Prime Service Catalog Node Shell Menu Options

- Manage Users
- View Service Status
- Stop Services
- Start Services
- Manage Database
- Manage Firewall

- Manage Network Interface
- Manage SMTP
- Manage Cluster
- View Logs
- System Information & Cisco Support
- Manage Packages and Patches
- Login as Root
- Shutdown Appliance
- Reboot Appliance
- Quit

The following table contains the descriptions of all the menu items available on the Shell Menu:

Note For some of the menu items, you may be presented with a list of choices to select. If you don't see any choices that you want and you want to get back to the previous menu, press Control-C (Ctrl+C).

Menu	Description
Manage Users	This menu option allows you to enable or disable root access to CentOS, and to set the password for the root user. It also allows you to change the System Passwords for the Virtual Appliance, shelladmin, and Cisco Prime Service Catalog Admin.
View Services Status	This menu option displays the status (running or stopped) of all services on the VM that are related to the Prime Service Catalog.
Stop Services	This menu option allows you stop individual services on the VM, such as, Prime Service Catalog Services, Prime Service Catalog, and so on.
Start Services	This menu option allows you to start individual services on the VM.
Manage Databases	This menu option allows you to perform database backup, restore, upgrade previous version of Prime Service Catalog database, execute custom SQL on database, and update the data source. It also allows you change Oracle system password and Cisco Prime Service Catalog database user password.
Manage Firewall	This menu option allows you to open or close the TCP port numbers for certain services.

Menu	Description
Manage Network Interface	This menu option allows you to view the existing network information, and to configure the proxy server settings. **Note:** The Virtual Appliance is not required to have Internet access. If you want to have Internet access for the Virtual Appliance, and your network requires your VM to go through a proxy server to connect to the internet, use this menu to configure the proxy settings on your VM.
Manage SMTP	This menu option allows you to configure the SMTP server setting.
Manage Cluster	This menu option allows you to configure the Cluster settings.
View Logs	This menu option allows you to view the runtime logs of various services on the VM.
System Information & Cisco Support	This menu option allows you to view the system information and send system information to Cisco Support by selecting appropriate sub-menu options: • Display System Information • Send System Information to Cisco Support
Manage Packages and Patches	This menu option allows you to install a patch for the appliance, should there be a patch released by Cisco in the future for this version of the Virtual Appliance.
Login as Root	This menu option allows you to login to Linux as the **root** user. You must first enable the root access via Shell Menu **Manage Users** option.
Shutdown Appliance	This menu option shuts down the Linux operating system and power off the VM.
Reboot Appliance	This menu option reboots the Linux operating system.
Quit	This menu option logs you out of Linux and returns you to the Linux Login Prompt.

Configuring SMTP

The Prime Service Catalog service needs to connect to an SMTP server for all outbound emails. To configure the SMTP server:

Step 1 From the Shell Menu, select option **Manage SMTP**.

Step 2 Select the sub-menu option **Configure SMTP**. You will be prompted to enter the Fully Qualified Domain Name (or the IP address) of the SMTP server, and a valid Support Email Address. Press **Enter** to continue to configure the SMTP.

Configuring Proxy Server Settings

If your VM must go through a proxy server to connect to the internet, do the following on the Shell Menu:

Step 1 Select the option **Manage Network Interface**.

Step 2 Select the sub-menu option **Configure Proxy Settings**. You will be prompted with several questions regarding your proxy server. The system will reconfigure the appliance to use the proxy settings that you have entered.

Step 3 To verify the proxy settings, select the sub-menu option **View Proxy Settings**. Otherwise, select the sub-menu option **Return to Previous Menu** to get back to the main Shell Menu screen.

Manage Packages and Patches

Manage Packages and Patches has the following sub-menu options:

- Send Request for Repository Access
- Enable/Update Cisco Package repository
- Refresh Package repository cache
- Update Outdated System packages
- Update Prime Service catalog Packages
- Install New System Packages

Requesting Access to Repository

From the Prime Service catalog 12.0 release onwards, to be able to download the Cisco VA patch files from cisco.com you would need to request access to the repository. The sub menu *Send Request for Repository Access* sends an email requesting access for the required user.

Step 1 Select the option **Manage Packages and Patches** from the shell menu.

Step 2 Select the sub-menu option **Send Request for repository Access**.

Step 3 Enter the cisco account **username** who would need access and email address.
An email notification is sent once the access is granted.

Configuring Cisco Package Repository

If your Prime Service catalog VA must be updated with patches, you must enable the cisco repository that contains the latest packages.

Before You Begin

- You must have valid Cisco account.
- You must have access to package repository. For more information on requesting access, see section Requesting Access to Repository.
- You must configure proxy server settings.
- To configure proxy settings, select Manage Network Interface from the main menu and select the Configure Proxy Settings option.

Step 1 Select the option **Manage Packages and Patches**.

Step 2 Select the sub-menu option **Enable/Update Cisco Package Repository**.

Step 3 Enter the SSO **Username** and paste the **API Key** information from the clipboard. For information on Generating API Key, see Generate API Key Using SSO Login.

Step 4 Your repository is now enabled.

Generate API Key Using SSO Login

To generate the API Key using the SSO login, perform the following:

Step 1 Go to **JFrog Artifactory** using the link **https://devhub.cisco.com**.
Step 2 Click **Log In**, in the top right hand corner of the home page.
Step 3 Skip the credentials in this pop-up and Click **SSO Login** in the login page.
Step 4 Enter **User Name** and **Password** in the Cisco.com login page, you will be redirected back to the JFrog Artifactory home page.
Step 5 Click **Profile Name** on the top right hand side of the home page.
Step 6 Click **Generate** to create API Key.

Updating System Packages or Prime Service Catalog VA Patches

Once you have access to the repository and downloaded the packages, you can update the System Packages or Prime Service Catalog Patches from the shell menu.

Before You Begin

Ensure the database files are backed up. For more information on backing the old database, see Backing up the Database on Cisco Prime Service Catalog Virtual Appliance 11.0, 11.1, or 11.1.1.

Step 1 Select the option **Manage Packages and Patches** from the shell menu.
Step 2 Select the sub-menu option **Update Prime Service catalog Packages** to update Prime Service Catalog Patches or **Update Outdated System packages** to update system packages.
Step 3 Enter **Y** to continue, select the package to be updated from the list and enter **Y** again.

Configuring Prime Service Catalog Virtual Appliance With Cisco ONE Enterprise Cloud Suite

Step 1 Log in to Prime Service Catalog as Site Administrator.
Step 2 Go to the **Service Link** module and ensure that the UCSD Agent is up and running.
Step 3 Go to **Service Designer** > **Services**.
Step 4 Expand the **Reserved Services** folder, and then click the **UCSD Application Template Service** template.
Step 5 Choose **Plan**, and then click the **Publish HeatTemplate** task.

The task details appear in the lower pane.

Step 6 In the **General** tab, choose the workflow type, and then click the … button.
A dialog box appears.

Step 7 Choose a public key, and then click **Save**.

Step 8 Go to **Administration** > **Settings**.

Step 9 Enable the **UCSD Scheduler** option, and then click **Update**.

Applying Customization to Prime Service Catalog Virtual Appliance WildFly Cluster Setup

Perform the following steps on the virtual appliance for applying any customization.

Step 1 Login to VM that has the Domain Controller (VM1) and go to the `/opt/cisco/psc/bin` directory.

Step 2 Execute the following commands based on your requirement:

- To customize the RequestCenter.war and ISEE.war, execute the command:
  `./pre-customization.sh ALL`
- To customize just RequestCenter.war, execute the command:
  `./pre-customization.sh RC`
- To customize just ISEE.war, execute the command:
  `./pre-customization.sh SL`

These scripts extract the RequestCenter.war and/or ISEE.war to `/opt/cisco/psc/tmp` directory which is created by the script.

Step 3 Apply the customization by modifying or overwriting the files in the `/opt/cisco/psc/tmp/RequestCenter.war` or `/opt/cisco/psc/tmp /ISEE.war` directory.

Step 4 Execute the script `./post-customization.sh` from the `/opt/cisco/psc/bin` directory to apply post-customization on VM1.

Step 5 To apply the customizations on all the nodes of the cluster that do not have the domain controller, log in to each node and execute `./apply-customization.sh .`

Replacing the Self-Signed Certificate

This is an optional procedure, perform these steps only if you wish to replace the Self-Signed certificate with a new one.

Step 1 Log into the Virtual Appliance system as root.

Step 2 If you have generated a new private key when creating your CSR, backup the original private key and replace it with the new private key:

```
# mv /etc/pki/tls/private/localhost.key /etc/pki/tls/private/localhost.key.orig
```

Step 3 Copy the new private key to /etc/pki/tls/private/localhost.key:

```
# cp {new.key} /etc/pki/tls/private/localhost.key
      # chown root:root /etc/pki/tls/private/localhost.key
      # chmod 400 /etc/pki/tls/private/localhost.key
```

Step 4 Back up the original cert:

```
# mv /etc/pki/tls/certs/localhost.crt /etc/pki/tls/certs/localhost.crt.orig
```

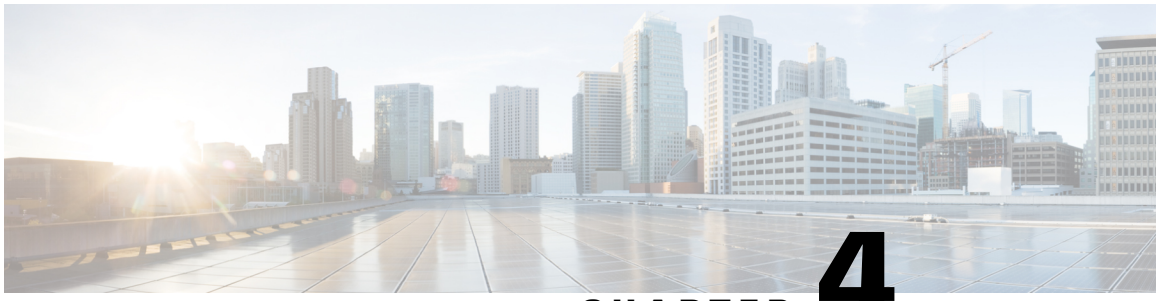
Step 5 Copy the new cert to /etc/pki/tls/certs/localhost.crt:

```
# cp {new.cert}  /etc/pki/tls/certs/localhost.crt
      # chown root:root /etc/pki/tls/certs/localhost.crt
      # chmod 400 /etc/pki/tls/certs/localhost.crt
```

Step 6 Restart the webserver:

```
# systemctl restart httpd
```

Step 7 Verify the new certificate is in place by browsing to https://{ip} and examine the certificate.



CHAPTER 4

Upgrading the Cisco Prime Service Catalog Virtual Appliance

You can upgrade from 11.0, 11.1, and 11.1.1 to 12.0. Only these two upgrade paths are supported.

To upgrade to Cisco Prime Service Catalog Virtual Appliance 12.0, you must perform a migration process rather than an in-place upgrade. This is because many third-party components have changed in version 12.0, such as the Operating System and so on. Therefore, you must deploy a new 12.0 virtual appliance prior to migrating the existing 11.0, 11.1, or 11.1.1 virtual appliance. For instructions to deploy Cisco Prime Service Catalog Virtual Appliance 12.0, see Installing Prime Service Catalog Virtual Appliance .

At a high level, the upgrade procedures are as follows:

Table 1: High-Level Upgrade Procedures

Step 1	Disable the UCS Director automatic polling flag. This setting should be disabled on the Prime Service Catalog 11.0, 11.1, or 11.1.1 virtual appliance set up .	Go to **Administration > Settings** and disable the **UCSD Scheduler** option.
Step 2	Back up the database on 11.0, 11.1, or 11.1.1 virtual appliance.	See Backing up the Database on Cisco Prime Service Catalog Virtual Appliance 11.0, 11.1, or 11.1.1
Step 3	Installing a new 12.0 Virtual Appliance.	See Installing Prime Service Catalog Virtual Appliance
Step 4	Upgrade the database from 11.0, 11.1, or 11.1.1 virtual appliance to 12.0 virtual appliance. You can either manually copy the database from the backup in Step 2 or you can let the system copy it from the remote location using the shell menu option.	See Upgrading to the Latest Virtual Appliance Database
Step 5	Perform the post upgrade steps to complete the upgrade/migration process.	See Performing Post-upgrade Tasks for the Virtual Appliance

Backing up the Database on Cisco Prime Service Catalog Virtual Appliance 11.0, 11.1, or 11.1.1

Note If you plan to use your own database and choose not to install the database node. You can download the factory default dump `CPCSUSER__factory_default.dmp` from the cisco.com website and import the dump into your oracle. For more information on Importing, see Exporting Cisco Prime Service Catalog Schema and Importing to the External Oracle Database, on page 21.

Step 1 Login to the Virtual Appliance as the **shelladmin** user and the password that you had provided while Installing Prime Service Catalog Virtual Appliance 11.0, 11.1 or 11.1.1. Once logged in, you will see the Shell Menu.

Step 2 Back up database. Select **Manage Databases** > **Backup Prime Service Catalog Database**. While taking the backup of the database, you will be prompted for the following values:

a) **Do you want to proceed:**Enter **y** to proceed with the database backup.

b) Enter the desired name for the backup file `CPSCUSER_backup_<timestamp>.dmp`. For example: `pscbdBackup.dmp`

After the value for the last prompt is entered, the VM will perform a series of tasks to backup the Oracle database. This process will take a few minutes to complete. Wait until you see the message on the screen, which says that the Backup performed successfully. After the backup is done, the system will ask you whether you want to start all Prime Service Catalog services. You can start the services on 11.0, 11.1, or 11.1.1 virtual appliance.

Step 3 Ensure database backup was successful.

Step 4 Login as the root user. From the Shell Menu, select **Login as Root**.

Step 5 Access the Oracle Backup Directory by executing the following command:

```
cd /opt/cisco/.backups/oracle/cpscuser
```

What to Do Next

Install the 12.0 virtual appliance. For more information, see Installing Prime Service Catalog Virtual Appliance , on page 5

Exporting Cisco Prime Service Catalog Schema and Importing to the External Oracle Database

Step 1 Back up the database. For detailed procedure, see section Backing up the Database on Cisco Prime Service Catalog Virtual Appliance 11.0, 11.1, or 11.1.1, on page 20.

Step 2 Login as the root user on the Prime Service Catalog 12.0 Virtual Appliance.

Step 3 Go to the Oracle Backup Directory by executing the following command:
```
cd /opt/cisco/.backups/oracle/cpscuser
```

Step 4 Execute the following command to copy the backup files from previous Virtual Appliance to the external Oracle database:
```
scp CPSCUSER_backup_<timestamp>.dmp root@{IP_of_external oracle database}:/<external oracle directory>
```

Step 5 Enter the password of the external oracle database.

Step 6 Execute the following command on the external oracle to create the directory in the external oracle database by logging in as system user:
```
SQL> create or replace directory CPSC_BACKUPS as 'opt/cisco/.backups/oracle/cpscuser'
```

Step 7 Execute the following command on the external oracle to verify the location of the dump file in the specified directory:
```
SQL> select directory_name,directory_path from dba_directories
```

Step 8 Execute the following command on the external oracle to import the backup files:
```
impdp <systemuser>_schemas=cpscuser directory=CPSC_BACKUPS  dumpfile=CPSCUSER_backup_<timestamp>.dmp
```

Upgrading to the Latest Virtual Appliance Database

Before You Begin

- Make sure the root user is enabled on the database node. From the Shell Menu, select **Manage Users** > **Enable Root Access**.
- Make sure the old database files are backed up. For more information on backing the old database, see Backing up the Database on Cisco Prime Service Catalog Virtual Appliance 11.0, 11.1, or 11.1.1, on page 20.

Step 1 Login to the Virtual Appliance as the **shelladmin** user and the password that you had provided while Installing Prime Service Catalog Virtual Appliance 12.0. Once logged in, you will see the Shell Menu.

Step 2 Select **Manage Database** > **Restore Prime Service Catalog Database**. You will be prompted for the following values:

a) **Do you want to proceed:**Enter **y** to proceed with the database upgrade.

b) **Select the location from where the database file should be retrieved**: You can either manually copy the database from the backup or you can let the system copy it from the remote location using the shell menu option. Choose **remote** if you want system to copy the database files from a remote machine. Choose **local** if you want to manually

copy the database from some location to your local folder . To manually copy, do the following on the 12.0 Virtual Appliance prior to proceeding with this "Upgrade Previous Version of Prime Service Catalog Database" shell menu:

1. Login as the root user on the 12.0 Virtual Appliance.
2. Go to the Oracle Backup Directory by executing the following command:

   ```
   cd /opt/cisco/.backups/oracle/cpscuser
   ```

3. Execute the following command to copy the backup files from previous Virtual Appliance to the new 12.0 Virtual Appliance :

   ```
   scp root@{IP_of_11.1_VA}:/opt/cisco/.backups/oracle/cpscuser/CPSC_11.1_backup.dmp .
   ```

4. Change the backup file ownership and permissions:

   ```
   chown oracle.oracle CPSCUSER_11.0_backup.dmp

   chmod a+r CPSCUSER_11.0_backup.dmp
   ```

If you have selected **remote** option, the following options are displayed:

1. Enter the IP address of the Virtual Appliance node where the database backup files can be retrieved:
2. Enter the root password of the Virtual Appliance node:
3. Select the database backup file from the list of backup files:

Note At the end of the restore process, you will be prompted for starting Prime Service Catalog services. Enter **n** to proceed with the upgrade process.

Step 3 Select **Manage Database** > **Upgrade Prime Service Catalog Database from Earlier Appliance** from the Prime Service Catalog node. You will be prompted for the following values:
Do you want to proceed: Enter **y** to proceed with the database upgrade.

Step 4 Ensure database upgrade was successful.

What to Do Next

Perform the post upgrade steps to complete the upgrade/migration process. For more information, see Performing Post-upgrade Tasks for the Virtual Appliance.

Performing Post-upgrade Tasks for the Virtual Appliance

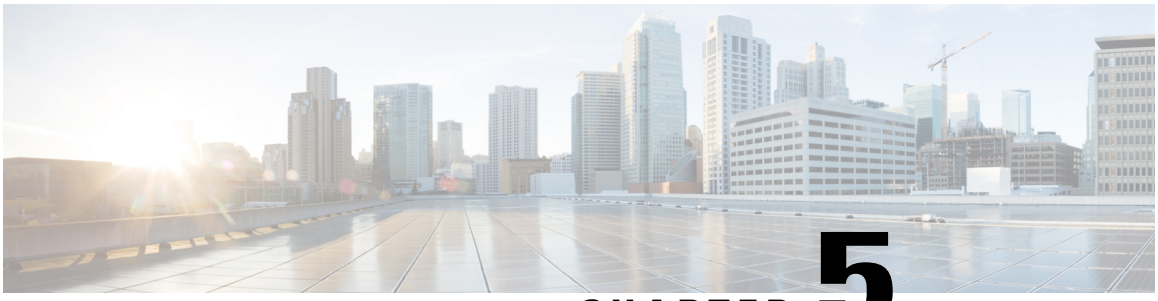
Step 1 Log in to the Service Catalog application as a Site Administrator user.

Step 2 Update UCSD users, groups, infrastructure templates, containers.

a) From the main menu, navigate to **Advanced Configuration > Integrations**.
b) Select the UCSD connection and import data into Prime Service Catalog using click **Import all Objects** option from **Manage Integration** drop-down.

Step 3 (Optional) This step is applicable only if the Docker app was used in 11.0. After the upgrade, select an application template with Docker software, click on the software and do the following:

1. Change the Docker version from 1.4.1 to the latest.
2. Set the Docker registry to private registry or a public docker hub (for example: https://hub.docker.com/login/).
3. Enter the values for RegistryUsername, RegistryPassword, and RegistryUserEmail .
4. Click **Save** after updating the Docker configuration.
5. Rebuild the Docker application service.



CHAPTER 5

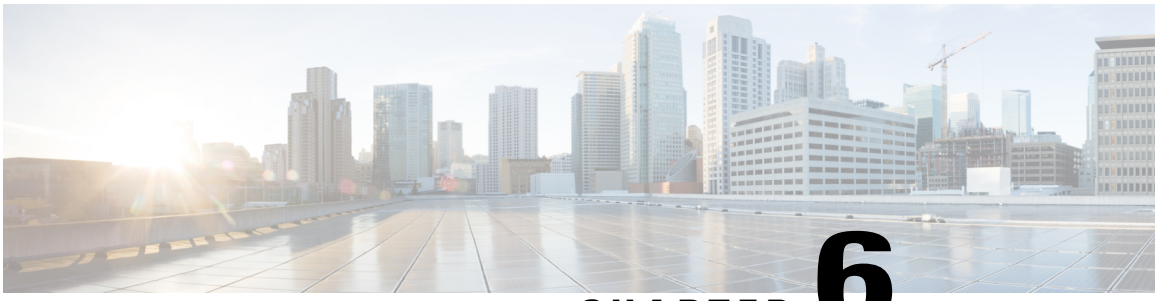
Uninstalling Prime Service Catalog

Removing Virtual Appliance

Step 1 Login to vSphere Client and connect to your VMware vCenter Server.

Step 2 Right-click the Prime Service Catalog Virtual Appliance, go to **Power** > **Shut Down Guest** (or choose Power Off).

Step 3 Right-click the Prime Service Catalog Virtual Appliance, select **Delete from Disk** option to remove the VM.
The Prime Service Catalog Virtual Appliance is removed.



CHAPTER 6

Limitations

Additional Configuration for Firefox ESR 31.x Browser

If you use the Firefox ESR 31.x browser and have problem connecting to the Prime Service Catalog URL, you may need to perform the configuration settings for your Firefox as described in this section.

Step 1 Launch Firefox.

Step 2 On the Address field, type **about:config**

Step 3 Click **I'll be careful, I promise!** to continue.

Step 4 Enter **tls** in the Search box.

Step 5 Change the following config parameters if necessary:

```
security.tls.version.max = 3

security.tls.version.min = 1

services.sync.prefs.sync.security.tls.version.max = true

services.sync.prefs.sync.security.tls.version.min = true
```

Step 6 Select **Tools > Options** menu (or **Firefox > Preferences** menu, if you are on Mac Operating System).

Step 7 Click **Advanced.**

Step 8 Select the **Certificates** tab.

Step 9 Click **View Certificates**.

Step 10 Select **Authorities** tab.

Step 11 Scroll down until you see a section called **Cisco** or **Cisco Systems, Inc.**.

Step 12 Select all certificates under **Cisco** or **Cisco Systems, Inc.** section, and click **Delete**.

Step 13 Click **OK** at confirmation prompt.

Step 14 Click **OK** to close the Certificate Manager popup.

Step 15 Click **OK** to close the Options popup.

You can now access the Prime Service Catalog HTTPS URL using Firefox ESR 31.x.

HTTP Server Configuration

The **mod_evasive** module of the HTTP server in the Virtual Appliance is disabled by default, to prevent overly aggressive DDOS protection that causes the 403 Forbidden error in real sessions. Users who want to turn it back on should research and understand how to tune this module for the HTTP server.