



## **Cisco Prime Service Catalog 12.1 Virtual Appliance Quick Start Guide**

**First Published:** 2017-08-31

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# Introduction

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## 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 (OVA) 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 7.3
- Apache HTTP Server, version 2.4.6
- WildFly Application Server, version 10.1 Final
- Oracle 12c Database Enterprise Edition, version 12.1.0.2
- Prime Service Catalog, version 12.1
- Docker 1.12.6
- RabbitMQ 3.6.11

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 User Guide](#).





## Before You Begin

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- [System Requirements, page 3](#)
- [Licensing, page 3](#)
- [Preparing the Virtual Appliance for Deployment, page 4](#)

## System Requirements

- The OVA file for Prime Service Catalog 12.1 Virtual Appliance can be deployed in VMware vSphere version 6.x. To deploy the Prime Service Catalog OVA 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 OVA, 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

From Prime Service Catalog 12.1 release onwards, the virtual appliance bundle contains three OVA files. The "CPSC-virtual-appliance-as-12.1.ova" to install the application server and "CPSC-virtual-appliance-db-12.1.ova" to install the database and "CPSC-virtual-appliance-guac-12.1.ova" to install the guacamole server. 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.

- 
- Step 1** Download the following zip files from cisco.com web site as per your requirement:
- For application server download **CPSC-virtual-appliance-as-12.1.ova**.
  - For database server use **CPSC-virtual-appliance-db-12.1.ova**.
  - (Optional) For guacamole server use **CPSC-virtual-appliance-guac-12.1.ova**.
- Step 2** From vSphere Client, deploy the OVA file by navigating to the directory containing the extracted files, and select the respective files.
- Step 3** After the OVA is deployed as a VM in your VMware vCenter Server, power up the VM.
-





## Installing Prime Service Catalog

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- [Installing Prime Service Catalog Virtual Appliance, page 5](#)
- [Performing Post Installation Tasks, page 11](#)
- [Configuring Prime Service Catalog Virtual Appliance With Cisco ONE Enterprise Cloud Suite, page 17](#)
- [Replacing the Self-Signed Certificate, page 17](#)
- [Accessing RabbitMQ Server, page 18](#)

### Installing Prime Service Catalog Virtual Appliance

The OVA 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 , on page 5](#)
- [Installing the Prime Service Catalog Node , on page 7](#)
- [Installing Prime Service Catalog Cluster Node, on page 9](#)
- [Installing the Guacamole Node, on page 10](#)

### 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** Login as 'shelladmin' in to the database node using the default password **Cisco1234**.
- Step 2** **Do you want to reconfigure network settings?** By default the node boots up with DHCP, to continue select **n**. This skips the next prompt.
- Step 3** **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 server.  
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 4** **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 5** **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.

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# Installing the Prime Service Catalog Node

Use this procedure to set up a 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.

**Step 2** Login as 'shelladmin' in to the prime service catalog node using the default password **Cisco1234**. The VM console will display the following prompts:

- a) **Do you want to reconfigure network settings?** By default the node boots up with DHCP, to continue select **n**. This skips the next prompt.
- b) **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 server.  
  
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.
- c) **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.
- d) **Appliance Node Type:** Choose option **1 - Prime Service Catalog Node** to install Prime Service Catalog using an external database on a VM.
- e) **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
  - RabbitMQ 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: ^ \* - \_
- f) **Multicast IP Address:** Enter a unique multicast IP address in your network environment, for use by Prime Service Catalog server.
- g) **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.

- h) 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 3** Open a supported web browser and connect to the Prime Service Catalog URL. You should see the Login screen.

**Step 4** 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.

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The installation of the Prime Service Catalog Virtual Appliance is completed.

After the installation is complete, RabbitMQ Cluster connection is added automatically. This configuration can be verified in **Integrations > Internal > RabbitMQ Server**. For more information on RabbitMQ server see section [Accessing RabbitMQ Server](#), on page 18.

### 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 OVA 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.

**Step 2** Login as 'shelladmin' in to the Prime Service Catalog cluster node using the default password **Cisco1234**. The VM console will display the following prompts:

- Do you want to reconfigure network settings?** By default the node boots up with DHCP, to continue select **n**. This skips the next prompt.
- 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 server.  
  
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.
- 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.
- Appliance Node Type:** Choose option **1 - Prime Service Catalog Node** to install the Prime Service Catalog components on a VM.
- 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**. Similarly, you can add up to 6 nodes in a cluster.
- Domain Controller Hostname or IP address:** Enter the IP address of the machine where domain controller is installed.
- Domain Controller Password:** Enter the password to access the domain controller node.

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

---

The installation of the Prime Service Catalog Virtual Appliance Cluster is completed.

### What to Do Next

Proceed to the **Installing the Guacamole Node**.

## Installing the Guacamole Node

This is an optional node in case you want to integrate Guacamole server with Prime Service Catalog. For detailed information see section *Integrating Guacamole Server with Prime Service Catalog* in [Cisco Prime Service Catalog Administration and Operation Guide](#).

- 
- Step 1** Open the VM's Console in your vSphere Client.
- Step 2** Login as 'shelladmin' in to the Guacamole node using the default password **Cisco1234**. The VM console will display the following prompts:
- Step 3** **Do you want to reconfigure network settings?** By default the node boots up with DHCP, to continue select **n**. This skips the next prompt.
- 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 server.  
 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 **guac.mydomain.com**, or a short hostname such as **guac**. Hostname value must begin with an alphabetic character, and must contain only alphabetic characters, digits, hyphen, and period.
- c) **Enter new password for System Components:** Enter a common password that will be used for the following user(s):
- shelladmin user
  - root user
  - MaridDB root user
  - MariaDB guacamole user
  - guacadmin
- 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: ^ \* - \_
- d) **Enter PSC Domain Controller host name or IP address:** Enter the IP address of the machine where domain controller is installed.
- e) **Enter Prime Service Catalog Admin Password:** Enter the password for Prime Service Catalog admin.
- f) **Enter root password for Prime Service Catalog Domain Controller:** Enter the root password for Prime Service Catalog Domain Controller node.
- After the value for the last prompt is entered, the VM performs a series of tasks to configure the Guacamole server. 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 Guacamole node has been successfully initialized.

#### Step 4

Open a supported web browser and connect to the Guacamole URL `http://<ip-address>:8080/guacamole`. You should see the Guacamole Login screen. Enter "guacadmin" in the User Name field and enter the password value that you provided in *Step 3 c* in the Password field.

---

The installation of the Guacamole server is completed.

After the installation is complete, Guacamole server connection is added automatically. This configuration can be verified in **Integrations > Internal > Guacamole Server**.

#### 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 2 e* 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 and Guacamole 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 Docker Applications (available only for Guacamole node)
- 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 Firewall
- Manage Network Interface
- Manage SMTP
- Manage Cluster
- View Logs
- System Information & Cisco Support
- Manage Packages and Patches
- Manage Docker Applications
- 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, Cisco Prime Service Catalog Admin and RabbitMQ User.
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, Service Catalog, Service Link, Httpd, RabbitMQ, and Docker.
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.
Manage Network Interface	This menu option allows you to view the existing network information and to configure the proxy server settings.  <b>Note:</b> 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 Prime Service Catalog Cluster settings.
View Logs	This menu option allows you to view the runtime logs of various services on the VM.

Menu	Description
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: <ul style="list-style-type: none"> <li>• Display System Information</li> <li>• Send System Information to Cisco Support</li> </ul>
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.
Manage Docker Applications	This menu application allows you to view Guacamole containers status and start/stop Guacamole containers.
Login as Root	This menu option allows you to login to Linux as the <b>root</b> user. You must first enable the root access via Shell Menu <b>Manage Users</b> 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

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 Previous Cisco Prime Service Catalog Virtual Appliance](#).

- 
- 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**.
- 

## 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.
- 

## Accessing RabbitMQ Server

The rabbitmq-management plugin is installed on each Prime Service Catalog (RabbitMQ) node during installation. This provides an HTTP-based API for management and monitoring of your RabbitMQ server, along with a browser-based UI and a command line tool, rabbitmqadmin.

The RabbitMQ web UI can be accessed using the URL: `http://<serveIPaddress>:15672`. Enter `CPSCUSER` in the User Name field, type the password value that you provided in *Step 2e* of section [Installing the Prime Service Catalog Node](#) , on page 7.



### Important

The port 15672 is closed by default . You must manually open the port using the shelladmin menu: **Manage Firewall > Open/Close RabbitMQ Management Port.**

---



# Upgrading the Cisco Prime Service Catalog Virtual Appliance

You can upgrade to the 12.1 virtual appliance from any of the following version: 11.0, 11.1, 11.1.1, and 12.0.

To upgrade to Cisco Prime Service Catalog Virtual Appliance 12.1, you must perform a migration process rather than an in-place upgrade. This is because many third-party components have changed in version 12.1, such as the Operating System, RabbitMQ and so on. Therefore, you must deploy a new 12.1 virtual appliance prior to migrating the existing virtual appliance. For instructions to deploy Cisco Prime Service Catalog Virtual Appliance 12.1, 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 previous Prime Service Catalog virtual appliance set up.	Go to <b>Administration &gt; Settings</b> and disable the <b>UCSD Scheduler</b> option.
Step 2	Back up the database on the previous virtual appliance.	See <a href="#">Backing up the Database on Previous Cisco Prime Service Catalog Virtual Appliance</a> , on page 20
Step 3	Install a new 12.1 Virtual Appliance.	See <a href="#">Installing Prime Service Catalog Virtual Appliance</a> , on page 5
Step 4	Retrieve Remote Backup of Prime Service Catalog Database	See <a href="#">Retrieving Backup of Prime Service Catalog Database</a> , on page 21
Step 5	Upgrade the database from previous virtual appliance to 12.1 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 <a href="#">Upgrading to the Latest Virtual Appliance Database</a> , on page 23

Step 6	Perform the post upgrade steps to complete the upgrade/migration process.	See <a href="#">Performing Post-upgrade Tasks for the Virtual Appliance</a> , on page 24
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- [Backing up the Database on Previous Cisco Prime Service Catalog Virtual Appliance](#), page 20
- [Exporting Cisco Prime Service Catalog Schema and Importing to the External Oracle Database](#), page 21
- [Retrieving Backup of Prime Service Catalog Database](#), page 21
- [Upgrading to the Latest Virtual Appliance Database](#), page 23
- [Performing Post-upgrade Tasks for the Virtual Appliance](#), page 24

## Backing up the Database on Previous Cisco Prime Service Catalog Virtual Appliance



### 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](http://cisco.com) website and import the dump into your Oracle 12c database instance. 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 the previous Prime Service Catalog Virtual Appliance. 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:
- Do you want to proceed:** Enter **y** to proceed with the database backup.
  - Enter the desired name for the backup file `CPCSUSER_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 the previous 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 12.1 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 Previous Cisco Prime Service Catalog Virtual Appliance, 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`
- 

## Retrieving Backup of Prime Service Catalog Database

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. Follow the [Automated Method](#) if you want system to copy the database files from a remote machine. Choose the [Manual Method](#) if you want to manually copy the database from some location to your local folder.

## Automated Method

This option is used to retrieve backup of Prime Service Catalog database hosted on a remote server, using SSH connection.

- 
- 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 12.1. Once logged in, you will see the Shell Menu.
- Step 2** Select **Manage Databases > Retrieve Remote Backup of Prime Service Catalog Database**. While retrieving the backup of the database, you will be prompted for the following values:
- Step 3** Do you want to continue?: Enter y to proceed.
- Step 4** Enter the hostname or IP address of the remote server where the database backup file is located.
- Step 5** Enter the username of the remote server. The default value, 'root' is the username for Prime Service Catalog database node.
- Step 6** Enter the password of the remote server.
- Step 7** Enter the directory path to the backup files. The default path is specific to Prime Service Catalog database node. If using an external database, enter the path to the backup files.  
**Note** Ensure that the external server is connected via SSH.
- Step 8** Select the file to be backed up from the list of files located in the specified location.
- Step 9** Enter the desired name for the file retrieved on the local VA server. By default the same name is retained. After the value for the last prompt is entered, the VM imports the specified file from the remote server.
- 

## Manual Method

If you have already performed the steps to retrieve the backup of the prior virtual appliance, skip this procedure. Otherwise, use the following procedure to manually copy the database files from a local folder to the desired location.

### DETAILED STEPS

|               | Command or Action                                                                                                         | Purpose                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Step 1</b> | Login as the root user on the 12.1 Virtual Appliance.                                                                     |                                                                                                 |
| <b>Step 2</b> | Go to the Oracle Backup Directory by executing the following command:                                                     | <code>cd /opt/cisco/.backups/oracle/cpscuser</code>                                             |
| <b>Step 3</b> | Execute the following command to copy the backup files from previous Virtual Appliance to the new 12.1 Virtual Appliance: | <code>scp root@{IP_of_11.1_VA}:/opt/cisco/.backups/oracle/cpscuser/CPSC_11.1_backup.dmp.</code> |

|               | Command or Action                                 | Purpose                                                                                    |
|---------------|---------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Step 4</b> | Change the backup file ownership and permissions: | <pre>chown oracle.oracle CPSCUSER_11.0_backup.dmp chmod a+r CPSCUSER_11.0_backup.dmp</pre> |

### What to Do Next

Upgrade to the latest Virtual Appliance database. For more information, see [Upgrading the Cisco Prime Service Catalog Virtual Appliance, on page 19](#).

## 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 Previous Cisco Prime Service Catalog Virtual Appliance, on page 20](#).
- In case the backup files are located in another location follow the procedure in section [Retrieving Backup of Prime Service Catalog Database, on page 21](#) to copy the back up file to a local folder.

- 
- 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 12.1. 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 backup file to restore:
- 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** Update the python packages on the database and application nodes.
- 1 Login to the node, select **Manage Packages and patches > Update Prime Service Catalog Packages**.
  - 2 Choose the python package and update the node.
  - 3 Logout of shelladmin after the update.
- If you need access to the repository that contain the Cisco VA patch files on cisco.com, follow the steps in the section [Requesting Access to Repository, on page 15](#).
- Step 4** 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 5** 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.
-



## Uninstalling Prime Service Catalog

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- [Removing Virtual Appliance, page 25](#)

### 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.
-





## Limitations

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- [Additional Configuration for Firefox ESR 31.x Browser](#) , page 27
- [HTTP Server Configuration](#), page 28

## 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.