Installation and Upgrade

Before You Begin

This section describes how to install Cisco Prime License Manager on a virtual machine. You install the operating system and application by running one installation program.

System requirements for installation

As defined in the OVA that should be used to install Cisco Prime License Manager, the following are the server requirements:

Requirement	Details
Product	Cisco Prime License Manager
Version	10.5(2)
CPU	1 vCPU with 1800 Mhz reservation
Memory	4 GB (RAM) with 4 GB reservation
Hard Drive	1 - 50 GB disk

The Cisco Prime License Manager OVA image is available for download at the Software Download Center, http://software.cisco.com, under **Downloads Home > Products > Cloud and Systems Management > Collaboration and Unified Communications Management > Cisco Prime License Manager > Cisco Prime License Manager 10.5**.

Pre-Installation Tasks for Cisco Prime License Manager

Perform all pre-installation tasks to ensure that you can successfully install Cisco Prime License Manager.

Procedure

Step 1 Review the system requirements and ensure that the server you wish to host the application on has sufficient resources.

Step 2 Create your virtual machine using the Cisco Prime License Manager Virtual Server Template (OVA file) recommended for your current release.

Step 3 Verify that you have an NTP server accessible, since an NTP server is required for VMware deployments.

Step 4 Ensure that the hostname and address that you plan to use for Cisco Prime License Manager are registered with the name server and that both forward and reverse lookups are possible.

Frequently Asked Questions About the Installation

The following section contains commonly asked questions and responses. Review this section carefully before you begin the installation.

How Much Time Does the Installation Require?

The entire Cisco Prime License Manager installation process, excluding pre- and post-installation tasks, takes approximately 30 minutes.

What Usernames and Passwords Do I Need to Specify?

During the installation, you must specify the following usernames and passwords:

- OS Administrator account username and password

- Security password

- Cisco Prime License Manager application account username and password

Use the OS Administrator account username and password to log into the Command Line Interface. Use the Cisco Prime License Manager application account username and password to log into the Cisco Prime License Manager GUI interface.

Note   You can change the Administrator account password or add a new Administrator account by using the command line interface. For more information, see the Command Line Interface Guide for Cisco Unified Communications Solutions.

What is a Strong Password?

The installation wizard checks to ensure that usernames and passwords configured during installation follow these guidelines:

- Username—A username must start with an alphabetic character and can contain alphanumeric characters, hyphens, and underscores.

- Password—A password must be at least six characters long and can contain alphanumeric characters, hyphens, and underscores.

In addition to the above requirements, we recommend that you create a strong password:

- Mix uppercase and lowercase letters.

- Mix letters and numbers.

- Include hyphens and underscores.

- Remember that longer passwords are stronger and more secure than shorter ones.

Can I Install Other Software on the Virtual Machine?

You cannot install or use unapproved third-party software applications. The system can upload and process only software that is Cisco approved.

Approved software installations and upgrades can be performed using the CLI.

Port Requirements

The following table provides a list of ports used by Cisco Prime License Manager. If you wish to use automatic license fulfillment, Cisco Prime License Manager should be allowed direct outbound access to the Internet.

Description	Protocol	Inbound Port	Outbound Port
Browser HTTP	TCP	80/8080, 443/8443	N/A
SSH/SFTP	TCP	22	N/A
Ephemeral port ranges for clients initiating connections	TCP, UDP	32768-61000	N/A
DNS name resolution	TCP, UDP	N/A	53

Description	Protocol	Inbound Port	Outbound Port
To connect to Product instances and to the Cisco licensing portal for e-Fulfillment	TCP	N/A	80, 8080, 443, 8443 (HTTP and HTTPS)
DRS	TCP	N/A	22 (SSH/SFTP)
DHCP client	UDP	N/A	67
NTP client	TCP, UDP	N/A	123

Gather Information for Installation

Use the following table to collect information that is pertinent to your system and network configuration.

Table 1: Server Configuration Data

Parameter	Description	Can Entry Be Changed After Installation?
Time Zone	This field specifies the local time zone and offset from Greenwich Mean Time (GMT). Select the time zone that most closely matches the location of your machine.	Yes, you can change the entry after installation by using the following CLI command: `set timezone` To view the current time zone configuration, use the following CLI command: `show timezone config`
MTU Size	The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network. Enter the MTU size in bytes for your network. If you are unsure of the MTU setting for your network, use the default value. Default specifies 1500 bytes.	Yes, you can change the entry after installation by using the following CLI command: `set network mtu`

Parameter	Description	Can Entry Be Changed After Installation?
DHCP	Cisco Prime License Manager requires a static IP address. As a result, we recommend that you select **No** for the DHCP option and then enter a hostname, IP address, IP mask, and gateway.	No, you should not change the entry after installation.
Hostname	Enter a hostname that is unique to your server. The hostname can comprise up to 32 characters and can contain alphanumeric characters and hyphens. The first character cannot be a hyphen.	Yes, you can change the entry after installation. `set network hostname` **Note** Do not change your hostname while any tasks are running.
IP Mask	Enter the IP subnet mask of this machine.	Yes, you can change the entry after installation by using the following CLI command: `set network ip eth0`
Gateway Address	Enter the IP address of the network gateway. If you do not have a gateway, you must still set this field to 255.255.255.255. Not having a gateway will prevent Cisco Prime License Manager from communication outside of its subnet and will prevent the use of e-fulfillment.	Yes, you can change the entry after installation by using the following CLI command: `set network gateway`
DNS Enable	A DNS server resolves a hostname into an IP address or an IP address into a hostname. Select **Yes** to enable DNS. This will ensure that e-fulfillment will work properly.	No, you should not change the entry after installation.

Parameter	Description	Can Entry Be Changed After Installation?
DNS Primary	Enter the IP address of the DNS server that you want to specify as the primary DNS server. Enter the IP address in dotted decimal format as ddd.ddd.ddd.ddd.	Yes, you can change the entry after installation by using the following CLI command: `set network dns` To view DNS and network information, use the following CLI command: `show network eth0 detail`
DNS Secondary (optional)	Enter the IP address of the DNS server that you want to specify as the optional secondary DNS server.	Yes, you can change the entry after installation by using the following CLI command: `set network dns`
Administrator ID	This field specifies the OS Administrator account username and password that you use for secure shell access to the CLI on Cisco Prime License Manager.	No, you cannot change the entry after installation. **Note** After installation, you can create additional Administrator accounts, but you cannot change the original Administrator account username.
OS Administrator Password	This field specifies the password for the Administrator account, which you use for secure shell access to the CLI. You also use this password with the adminsftp user. You use the adminsftp user to access local backup files, upload server licenses, and so on. For guidelines relating to strong passwords, see the corresponding password section.	Yes, you can change the entry after installation by using the following CLI command: `set password user admin`

Parameter	Description	Can Entry Be Changed After Installation?
Certificate Parameters	From the list, select the appropriate organization, unit, location, and state for your installation. **Note** You can use this field to enter multiple organization units. To enter more than one organization unit name, separate each entry with a comma. For entries that already contain a comma, enter a backslash before the comma that is included as part of the entry.	Yes, you can change the entry after installation by using the following CLI command: `set web-security`
NTP Server	Enter the hostname or IP address of one or more Network Time Protocol (NTP) servers with which you want to synchronize. You can enter up to five NTP servers. **Note** To avoid potential compatibility, accuracy, and network jitter problems, the external NTP servers that you specify for the primary node can be NTP v4 (version 4). If you are using IPv6 addressing, external NTP servers must be NTP v4.	Yes, you can change the entry after installation Yes, you can change the entry after installation `utils ntp server`
Security Password	Enter your security password. The password must contain at least six alphanumeric characters. The password can contain hyphens and underscores, but it must start with an alphanumeric character.	Yes, you can change the entry after installation by using the following CLI command: `set password user security`
Cisco Prime License Manager Application Account Username	This field specifies the Cisco Prime License Manager application account username that you use to log on to Cisco Prime License Manager GUI.	Yes, you can change the entry after installation by using the following CLI command: `license management change user name`

Parameter	Description	Can Entry Be Changed After Installation?
Cisco Prime License Manager Application Password	This field specifies the password for the Cisco Prime License Manager application account, which you use for secure shell access to Cisco Prime License Manager GUI.	Yes, you can change the entry after installation by using the following CLI command: `license management change user password`

Install Cisco Prime License Manager

Install Virtual Machine

Use this procedure and your VMware documentation to install your virtual machine.

Procedure

Step 1 Access the Software Download Center and download the Cisco Prime License Manager OVA template for your desired release: **Downloads Home** > **Products** > **Cloud and Systems Management** > **Collaboration and Unified Communications Management** > **Cisco Prime License Manager**.

Step 2 From the vCenter or vSphere Client, open the console of your newly downloaded virtual machine template.

Step 3 From the vCenter or vSphere Client, select **File > Deploy OVF Template**.

Step 4 Follow the **Deploy OVF Template** wizard to create the Cisco Prime License Manager virtual machine After the installation is complete, the newly installed virtual machine appears in the selected location within the vCenter or vSphere Client.

Install Cisco Prime License Manager

Before You Begin

Install virtual machine.

Procedure

Step 1 Download the ISO installation file from Cisco electronic software delivery or locate the DVD provided with your order. Copy the ISO image to your host data store.

Step 2 Using the vCenter or vSphere Client, select **Edit virtual machine settings > Network adapter 1 > MAC Address.**

Step 3 Select the Manual option and enter a unique MAC address.

For a standalone installation of Cisco Prime License Manager, only static MAC addresses are supported on the virtual machine.

Step 4   Edit CD/DVD drive. Select **Connect at power-on** and select the ISO installation file from where it was saved to the data store or Host Device if using a physical DVD.

Step 5   From the vCenter or vSphere Client, open the console of your virtual machine.

Step 6   Power on the virtual machine. The installation begins automatically.

Step 7   If you are using an ISO file, click **Skip** on the Disc Found screen to skip testing the media before installation. Otherwise, select the **OK** tab and press Enter to initiate testing of the media before installation. The Media Found screen appears with the following message: "Found local installation media".

Step 8   The Product Deployment Selection screen appears. Select the product (there may only be one product available to select) and click **OK** to proceed with the installation.

Step 9   Click **Yes**.

Step 10   Select **Proceed** to continue with the installation.

Step 11   Click **Continue**.

Step 12   In the Timezone Configuration screen, select your time zone and click **OK**.

Step 13   In the Auto Negotiation Configuration screen, click **Continue.**

Step 14   When asked if you want to change the MTU size from the OS default, click **No** to proceed.

Step 15   For the network configuration, select **No** to set up a static network IP address for the node.

Step 16   Enter the following static network configuration values:

- Hostname

- IP Address

- IP Mask

- GW Address

Click **OK**. Go to **Step 14**.

Step 17   The DNS Client Configuration screen appears. To enable DNS, click **Yes**, then enter your DNS client information and click **OK**.

Step 18   Enter your Administrator login and password information.
Note   The Administrator login must start with an alphabetic character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. You will need the Administrator login to log at the command line interface.

Step 19   The Certificate Information window displays. Enter the Certificate Information:

- Organization

- Unit

- Location

- State

- Country

Click **OK** to proceed.

Step 20   The Network Time Protocol Client Configuration screen appears. Enter your NTP server information.

Note If the DNS client was not enabled, use an IP address. If DNS is enabled, either a hostname or IP address may be entered.

Click **OK** to proceed.

Step 21 When asked, enter your Security Password. Click **OK** to continue.

Step 22 The Application User Configuration screen appears. Enter your username and password and log in to Cisco Prime License Manager. Click **OK**.

Step 23 The Platform Configuration Confirmation screen appears. Click **OK** to complete the configuration and start the installation.

The installation takes approximately 30 minutes to complete.

Note If there is an installation failure, the console directs you to export the installation logs to a USB key, if necessary.

Remove Cisco Prime License Manager

In a coresident deployment, you have the option to remove Cisco Prime License Manager if it is not being used. For example, in a Cisco Unified Communications Manager cluster, Cisco Prime License Manager is installed on publisher nodes *and* subscriber nodes. Since the Cisco Prime License Manager only needs to be active on a single node to manage the licensing of all nodes, you may choose to remove Cisco Prime License Manager from the nodes where it is inactive.

Note A system reboot is required, impacting all services relating to the server. We recommend that you remove Cisco Prime License Manager during off-peak hours.

After Cisco Prime License Manager has been removed, you will continue to see a link to Cisco Prime License Manager upon login to the application, but if you try to access Cisco Prime License Manager, you are notified of the removal along with a date and time stamp.

Caution You cannot restore Cisco Prime License Manager after it has been removed.

Procedure

Step 1 From the command line interface, enter the following command: **license management system remove**. Note that this command is not available if Cisco Prime License Manager has already been removed.

Step 2 Confirm that you would like to proceed with the removal by entering **y**.

Step 3 Perform a system reboot.

Upgrade Software Using the Cisco Prime License Manager GUI

You can upgrade software or apply a patch using a COP file. Use one of the following options to upgrade software using the Cisco Prime License Manager GUI:

- Upgrade from a remote file system

- Upgrade from a local source

Upgrade from a Remote File System

To upgrade the software from an FTP or SFTP server, use the following procedure.

Before You Begin

Copy the application ISO file to an FTP server that is accessible from Cisco Prime License Manager.

Procedure

Step 1 From the Cisco Prime License Manager main menu, select **Administration** > **Install/Upgrade**.
The Install/Upgrade page opens.

Step 2 Click **Install/Upgrade Software**.
The Install/Upgrade Software dialog box opens.

Step 3 Click **Install/Upgrade from Network** (this option should be selected by default).
Enter following information:

- IP Address/Hostname

- Username

- Password

- Directory (the path to the location where you placed the ISO)

- Transfer Protocol (select either **FTP** or **SFTP** from the drop-down menu)

Step 4 Click **Next**.

Step 5 All valid upgrades are listed in the table. Select the required upgrade file from the list.
Note   There can be multiple options
listed.

Step 6 Click **Start Installation/Upgrade**. A message appears asking you to confirm the upgrade. Click **Continue**
to begin the upgrade.
Note   You can leave the screen up while the upgrade is in progress, as it provides feedback on the progress
of the upgrade, or close the browser. The upgrade proceeds even if you close the browser. The upgrade
may take 45 minutes to an hour to complete.

Upgrade from a Local Source

Before You Begin

Define the media source of the virtual machine. For example, is it an ISO file in the datastore or a physical
optical drive on the client or host. Check the **Connected** checkbox for the VM CD/DVD drive.

Procedure

Step 1 From the Cisco Prime License Manager main menu, select **Administration** > **Install/Upgrade**.

Step 2 Click **Install/Upgrade Software**.

Step 3 Click **Install/Upgrade from DVD/CD drive on Cisco Prime License Manager server**.

Step 4 All valid upgrades are listed in the table. Select the appropriate (valid) upgrade file from the list.

Step 5 Click **Start Installation/Upgrade**.

Step 6 Click **Continue** to begin the upgrade.

Note You can either leave the screen up while the upgrade is in progress or close your browser. Closing your browser does not impact the upgrade process. The upgrade may take 45 minutes to an hour to complete.

Upgrade Software Using the Cisco Prime License Manager CLI

You can upgrade software or apply a patch using a COP file. To initiate an upgrade from a local or remote source using CLI commands, use the following procedures.

Upgrade from a Remote File System

To upgrade the software from an FTP or SFTP server, use the following procedure. Keep in mind that this procedure uses example software versions. For the latest software version, see the appropriate Release Notes for Cisco Prime License Manager.

Before You Begin

You need to place the ISO on a network location or remote drive that is accessible from Cisco Prime License Manager prior to starting this procedure.

Procedure

Step 1 Enter the **utils system upgrade initiate** command, as shown in the following example.

Example:
utils system upgrade initiate
The following options appear:

- Warning: Do not close this window without first canceling the upgrade.

- 1) Remote Filesystem via SFTP

- 2) Remote Filesystem via FTP

- 3) Local DVD/CD

- q) quit

- Please select an option (1 - 3 or "q"):

Step 2   Select option 1.

Step 3   Enter Directory, Server, User Name, and Password information when prompted.

- Please select an option (1 - 3 or "q"): 1

- Directory: /auto/ipcbu-builds2-published/ELM/10.0.0.98030-1

- Server: se032c-94-61

- User Name: bsmith

- Password: ********

- Checking for valid upgrades. Please wait...

Step 4   Enter SMTP Host Server (optional) to receive email notification once upgrade is complete.
The following options appear:

- Available options and upgrades in "se032c-94-61:/auto/ipcbu-builds2-published/ELM/10.0.0.98030-1":

- 1) CiscoPrimeLM_64bitLnx_ 10.5.1.11901-1.sgn.iso

- q) quit

Step 5   Select option 1 to download upgrade file.
The following messages appear:

- Accessing the file. Please wait...

- Validating the file...

- Downloaded 935 MB.

- Checksumming the file...

- A system reboot is required when the upgrade process completes or is canceled. This will ensure services affected by the upgrade process are functioning properly.

- Downloaded: CiscoPrimeLM_64bitLnx_ 10.5.1.11901-1.sgn.iso

- File version: 10.5.1.11901-1

- File checksum: c4:13:ad:95:7b:c8:c1:01:1b:91:bb:da:8d:84:09:ea

Step 6   Enter No when asked to automatically switch versions if the upgrade is successful.
Automatically switch versions if the upgrade is successful (yes/no): no

Step 7   Enter Yes to start installation.
Start installation (yes/no): yes

Upgrade from Local Source

Before You Begin

If you do not have a Cisco-provided upgrade disk, create an upgrade disk by burning the upgrade file that you downloaded onto a DVD as an ISO image.

Just copying the .iso file to the DVD will not work. Most commercial disk burning applications can create ISO image disks.

Procedure

Step 1 Insert the new DVD into the disc drive on the local server that is to be upgraded.

Step 2 Enter the **utils system upgrade initiate** command, as shown in the following example.

Example:
```
admin:utils system upgrade initiate
```
The following options appear:
```
Warning: Do not close this window without first exiting the upgrade command.
Source: 1) Remote Filesystem via SFTP 2) Remote Filesystem via FTP 3) Local DVD/CD
 q) quit Please select an option (1 - 3 or "q" ):
```

Step 3 Select option 3.
```
1) CiscoPrimeLM_64bitLnx_ 10.5.1.11901-1.sgn.iso q) quit
```

Step 4 Select option 1 to download upgrade file.
Accessing the file. Please wait... Checksumming the file... Validating the file... A system reboot is required when the upgrade process completes or is canceled. This will ensure services affected by the upgrade process are functioning properly. Downloaded: CiscoPrimeLM_64bitLnx_ 10.5.1.11901-1.sgn.iso File version: 10.5.1.11901-1 File checksum: c4:13:ad:95:7b:c8:c1:01:1b:91:bb:da:8d:84:09:ea

Step 5 Enter yes to automatically switch versions if the upgrade was successful.
```
Automatically switch versions if the upgrade is successful (yes/no): yes
```

Step 6 Enter yes to start installation.
```
Start installation (yes/no): yes
```

Post-Upgrade Tasks

After the upgrade, perform the following tasks:

- Check the version number in the About box to verify that it is the expected upgraded version.

- Perform a synchronization by selecting **Product Instances** > **Synchronize Now**.

- Check the Dashboard to verify that there are no alerts and then run a backup by selecting **Administration** > **Backup/Restore**.

Change Hostname using the Cisco Prime License Manager CLI

This procedure describes how to use the CLI to change the IP address or hostname for the Cisco Prime License Manager.

Note Do not change both the IP address and the hostname at the same time.

Before You Begin

If you have DNS configured anywhere on Cisco Prime License Manager, ensure that the following conditions exist before you change the IP address:

- The forward and reverse records (for example, A record and PTR record) for the new IP address and host name.

- The DNS is reachable and working.

Procedure

Step 1 To check network connectivity and DNS server configuration, enter the `utils diagnose` CLI command as shown in the following example:

```
admin: utils diagnose module validate_network
Log file: /var/log/active/platform/log/diag1.log

Starting diagnostic test(s)
===========================
test - validate_network    : Passed

Diagnostics Completed
admin:
```

Step 2 Run a manual backup and ensure that all active services are backed up successfully.

Step 3 Enter the `set network hostname` CLI command and follow the prompts to change the hostname, IP address, or default gateway. See the following example:

```
 admin:set network hostname

WARNING: To avoid license synchronization failures, delete the
         product instance from the Cisco Prime License Manager
         managing this server's licenses before changing network
         settings. You will have to re-add the product instance
         after the network settings have been changed.

Continue (y/n)?y

ctrl-c: To quit the input.
```

```
          ***   W A R N I N G   ***
Do not close this window without first canceling the command.

This command will automatically restart system services.
The command should not be issued during normal operating
hours.

===========================================================
 Note: Please verify that the new hostname is a unique
       name across the cluster and, if DNS services are
       utilized, any DNS configuration is completed
       before proceeding.
===========================================================

Security Warning : This operation will regenerate
       all CUCM Certificates including any third party
       signed Certificates that have been uploaded.

Enter the hostname:: newHostname

Would you like to change the network ip address at this time [yes]::


Warning: Do not close this window until command finishes.



ctrl-c: To quit the input.



          ***   W A R N I N G   ***
===========================================================
 Note: Please verify that the new ip address is unique
       across the cluster.
===========================================================

Enter the ip address:: 10.10.10.28
Enter the ip subnet mask:: 255.255.255.0
Enter the ip address of the gateway:: 10.10.10.1
Hostname:       newHostname
IP Address:     10.10.10.28
IP Subnet Mask: 255.255.255.0
Gateway:        10.10.10.1

Do you want to continue [yes/no]? yes




calling 1 of 5 component notification script: ahostname_callback.sh
Info(0): Processnode query returned =
name
```

```
==========
bldr-vcm18
updating server table from:'oldHostname', to: 'newHostname'
Rows: 1
updating database, please wait 90 seconds
updating database, please wait 60 seconds
updating database, please wait 30 seconds
Going to trigger /usr/local/cm/bin/dbl updatefiles
--remote=newHostname,oldHostname
calling 2 of 5 component notification script: clm_notify_hostname.sh
notification
Verifying update across cluster nodes...
platformConfig.xml is up-to-date: bldr-vcm21

cluster update successfull
calling 3 of 5 component notification script: drf_notify_hostname_change.py

calling 4 of 5 component notification script: regenerate_all_certs.sh
calling 5 of 5 component notification script: update_idsenv.sh
calling 1 of 2 component notification script: ahostname_callback.sh
Info(0): Processnode query returned =
name
====
Going to trigger /usr/local/cm/bin/dbl updatefiles
--remote=10.10.10.28,10.67.142.24
calling 2 of 2 component notification script: clm_notify_hostname.sh
Verifying update across cluster nodes...
Shutting down interface eth0:
```

Step 4   Complete the Post-Change Task List, on page 17.

Post-Change Task List

After you finish changing the IP addresses or hostname, complete the tasks in the following procedure.

Procedure

Step 1   Run a backup and ensure that all active services back up successfully. For more information, see the Backup/Restore section of the Administration chapter.

    Note   You must run a manual DRS backup after you change the IP address of a node, because you cannot restore a node with a DRS file that contains a different IP address or hostname. The post-change DRS file will include the new IP address or hostname.

Step 2   If using the integrated DHCP server that runs on Cisco Prime License Manager, update the DHCP server.

Step 3   Perform manual synchronization and verify that there are no alerts in the dashboard.

Install COP Files

Use the following procedure to install Cisco Option files (COP) files. COP files are used to enable more functionality (for example: patches).

Procedure

Step 1   Obtain the desired COP file from the Cisco Software Download Center on Cisco.com and store locally.

Note   To access the Software Patches site, go to http://software.cisco.com , select **Upgrade and Update**, then select **Download Software**. From the **Download Software** window, navigate to the desired release: **Downloads Home** > **Products** > **Unified Communications** > **Unified Communications Management** > **Prime License Manager** > **Prime License Manager 10.5**.

Step 2   Place the COP file on an FTP or SFTP server that the server that you are upgrading can access.

Step 3   Log in to Cisco Prime License Manager.

Step 4   Select **Administration** > **Install/Upgrade**.

Step 5   Click **Install/Upgrade Software**.

Step 6   In the **Specify File Location** section of the **Install/Upgrade Software** window, enter the following:

- IP Address/Hostname

- Username

- Password

- Directory

- Transfer Protocol

Step 7   Click **Next**.

Step 8   Select the appropriate (valid) COP file from valid COP files listed and click **Start Installation/Upgrade** to begin the install.