



# Installation Requirements

This section explains the following:

- [Installation Requirements](#), on page 1
- [Number of Servers](#), on page 2
- [VMware Requirements](#), on page 3
- [System Requirements - Server and Client Machine Requirements](#), on page 3
- [Mandatory Service Pack\(s\) or Engineering Special\(s\)](#), on page 7
- [Deployment Model - Assurance](#), on page 10

## Installation Requirements

*Table 1: Installation Requirements*

Requirements	Description
Number of Servers	Cisco Prime Collaboration Assurance application must be installed on virtual machines. To learn about the installation modes and the required number of servers, see <a href="#">Number of Servers</a> .
Virtualization Requirements	The Cisco Prime Collaboration Assurance images are in the OVA file format. To learn more about the VMware environment required, see <a href="#">VMware Requirements</a> .
System Requirements	<p>System requirements vary based on the number of endpoints that you want to manage. See <a href="#">System Requirements - Server and Client Machine Requirements</a>, on page 3.</p> <p>For details on the maximum system capacity, such as, number of access ports, number of device pools, number of voice interfaces in Cisco Prime Collaboration Assurance Guide, see <a href="#">System Capacity for Cisco Prime Collaboration Assurance</a>.</p>

Requirements	Description
Ports Requirements	<p>Cisco Prime Collaboration uses several protocols to communicate with other processes and devices.</p> <p>Ensure that the required ports are available for Cisco Prime Collaboration to communicate. For more details, see <a href="#">Required Ports for Cisco Prime Collaboration Assurance</a>.</p>
Device configurations ( CiscoTelePresence Management Suite (TMS), Cisco Unified Communications Manager (CUCM), Cisco TelePresence Video Communication Server(VCS), Video endpoints, Multipoint Control Unit (MCU), and so on)	<p>The voice and video endpoints and infrastructure devices require certain configurations for the Cisco Prime Collaboration server to communicate. For more details, see <a href="#">Setting up Devices for Cisco Prime Collaboration Assurance</a>.</p>
Download Images	<p>Cisco Prime Collaboration images are provided on the eDelivery site and on the <a href="#">Cisco.com support software download</a> site. You must have an order for an eDelivery or SWSS contract.</p>
User Accounts and Installation Prompts	<p>During installation, you must perform the following:</p> <ul style="list-style-type: none"> <li>• Specify various passwords at different instances for Cisco Prime Collaboration Assurance. See <a href="#">User Account</a>.</li> <li>• Specify the Virtual machine details. See <a href="#">Installation Prompts</a>.</li> </ul>

## Number of Servers

To install Cisco Prime Collaboration Assurance - Advanced (without Cisco Prime Collaboration Analytics), you need only one virtual machine. If you want to enable Cisco Prime Collaboration Analytics during the Cisco Prime Collaboration Assurance Advanced installation, the number of virtual machines that are required to install Cisco Prime Collaboration Assurance depends on the number of endpoints that you want to manage in Cisco Prime Collaboration Analytics:

- If you have fewer than or equal to 80,000 endpoints (small, medium, and large deployment models), you need one virtual machine where you can install both the database and application. To learn about configuring Cisco Prime Collaboration Assurance for small, medium, and large deployment models, see [Deploy Small, Medium, and Large Cisco Prime Collaboration Assurance OVA Using vCenter](#).
- If you have more than 80,000 endpoints (very large deployment model), you need two virtual machines to install the database and application separately on each machine. To learn about configuring Cisco Prime Collaboration Assurance for very large deployment model, see [Deploy Very Large Cisco Prime Collaboration Assurance OVA Using vCenter](#).

Before installing the Cisco Prime Collaboration Assurance, ensure that you know the IP addresses for each of the virtual machines.

# VMware Requirements

Ensure that your VMware environment meets the following requirements:

- OVA is downloaded and saved to the same machine on which the vSphere Client is installed.
- VMware ESXi is installed and configured on the ESXi host. For more information on setting up and configuring your host machine, see the VMware documentation.

The VMware vSphere Client is Windows-based. Therefore, download and install the client from a Windows system.

Once you install the vSphere Client, you can run it and log in to the virtual host, using the hostname or IP address of the virtual host, the root log in ID, and the password that you configured. You can add the host to a vCenter if you want to manage it through vCenter. For more information, see the VMware documentation.

- VMware ESXi server hostname is configured in the DNS server.
- VMware ESXi server is synchronized with the NTP server.



---

**Note** Make sure you have admin privileges to configure vCenter, UCS, and ESXi in Cisco Prime Collaboration Assurance.

---

## System Requirements - Server and Client Machine Requirements

Cisco Prime Collaboration Assurance 12.x runs on any VMware-certified hardware.

### For Cisco Prime Collaboration Release 12.1 SP3 and later

Cisco Prime Collaboration Assurance runs on any VMware-certified hardware with ESXi Server and vCenter Application versions 6.0, 6.5, 6.7, or 7.0 is installed. Small, Medium, Large and Very Large deployment models require ESXi Server and vCenter Application versions 6.0, 6.5, 6.7, or 7.0.

### For Cisco Prime Collaboration Release 12.1 SP2 and earlier

Cisco Prime Collaboration Assurance runs on any VMware-certified hardware with ESXi Server and vCenter Application versions 5.5, 6.0, or 6.5 is installed. Small, Medium, Large and Very Large deployment models require ESXi Server and vCenter Application versions 5.0, 6.0, or 6.5.



---

**Note**

- We recommend that you install and run Cisco Prime Collaboration Assurance on Cisco Unified Computing System (UCS), which is VMware-certified.
- Cisco Prime Collaboration Assurance 12.x runs on CentOS. This operating system is included with the Cisco Prime Collaboration Assurance application and is installed when the Cisco Prime Collaboration Assurance OVA is deployed.

---

## Virtual Machine Requirements for Cisco Prime Collaboration Assurance

The table lists the virtual machine requirements for the Cisco Prime Collaboration Assurance application, based on the number of endpoints that are managed in Cisco Prime Collaboration Assurance. The virtual machine requirements mentioned in this table are also applicable for Cisco Prime Collaboration Analytics and Cisco Prime Collaboration Contact Center Assurance. For details on the endpoint quantities supported in each OVA deployment model, see [Endpoint and Contact Center Agents Count](#) section.

Managed Endpoints	Number of exclusive vCPUs	Minimum vCPU Reservation	RAM	Memory Reservation	NIC	IOPS	Disk Space
<b>Enterprise: Small and Medium</b>							
Up to 3000 endpoints (Small-Assurance only)	4	10 GHz	14 GB	14 GB	1 GB	100	250 GB
Up to 3000 endpoints (Small-Assurance & Analytics)	4	10 GHz	14 GB	14 GB	1 GB	200	250 GB
Up to 20,000 endpoints (Medium-Assurance only)	6	15 GHz	22 GB	22 GB	1 GB	200	300 GB
Up to 20,000 endpoints (Medium-Assurance & Analytics)	6	15 GHz	22 GB	22 GB	1 GB	400	300 GB
<b>Enterprise and MSP</b>							
<i>Large</i> - Up to 80,000 endpoints							
Up to 80,000 endpoints (Large-Assurance only)	14	35 GHz	34 GB	34 GB	1 GB	800	500 GB
Up to 80,000 endpoints (Large-Assurance & Analytics)	14	35 GHz	34 GB	34 GB	1 GB	1300	500 GB
<b>Enterprise and MSP</b>							
<i>Very Large</i> - Up to 150,000 endpoints							

Managed Endpoints	Number of exclusive vCPUs	Minimum vCPU Reservation	RAM	Memory Reservation	NIC	IOPS	Disk Space
Cisco Prime Collaboration Assurance only	22	55 GHz	40 GB	40 GB	1 GB	1000	750 GB
Cisco Prime Collaboration Assurance and Cisco Prime Collaboration Analytics (Application Server)	22	55 GHz	40 GB	40 GB	1 GB	1000	750 GB
Cisco Prime Collaboration Assurance and Cisco Prime Collaboration Analytics (Database Server)	8	20 GHz	16 GB	16 GB	1 GB	1000	750 GB

**Note**

- The Input/Output Operations/Sec (IOPS) measurements were taken using **VMware IO Analyzer** tool, available at: [I/O Analyzer](#) .
- The Input/Output Operations/Sec (IOPS) is tested when the services are running.
- vCPU speed depends on the Cisco UCS server or the virtualized hardware.
- We do not support oversubscribing server parameters (not using a 1:1 ratio of physical to virtual resources), such as, vCPU and memory. Cisco Prime Collaboration Assurance needs exclusive use of these resources.
- For CPU, any model with physical core speed 2.5 GHz or higher (normal not Turbo) is required. If the requirement is not met after installation, a warning banner is displayed at the top of the user interface until the resource requirement is met.
- For possible, processor recommendations, visit [Virtualization for Cisco Prime Collaboration Assurance \(PCA\)](#) and refer to appropriate [UCS Tested Reference Configurations](#) or [UCS or 3rd-party Specs-based on Intel Xeon](#) choices.

**Recommendations to Improve IOPS:**

- RAID Configuration: RAID 10 provides better write performance and provides redundancy.
- Data store configuration: Dedicated data store for all OVA types.
- Use SSDs or 15K RPM SAS disks for 80K and 150K deployments.
- Use Fibre Channel-SAN storage with dedicated LUN with IOPS mentioned in the preceding table.

## Client Machine Requirements for Cisco Prime Collaboration Assurance

This table lists the client machine requirements for Cisco Prime Collaboration Assurance application.

Attributes	Values
Display resolution	1440 x 900
Supported Browser	<p><b>For Cisco Prime Collaboration Release 12.1 SP3 and later</b></p> <p>The following browsers are supported:</p> <ul style="list-style-type: none"> <li>• Windows Internet Explorer 10 and 11</li> <li>• Google Chrome 73 or later</li> <li>• Mozilla Firefox - upto 52 ESR</li> </ul> <p><b>For Cisco Prime Collaboration Release 12.1, 12.1 Service Pack 1, and 12.1 Service Pack 2</b></p> <p>The following browsers are supported:</p> <ul style="list-style-type: none"> <li>• Mozilla Firefox 38 ESR and 45 ESR</li> <li>• Windows Internet Explorer 10 and 11</li> <li>• Google Chrome 53 or later</li> </ul> <p>Cisco Prime Collaboration Assurance provides a self-signed certificate (HTTPS). To allow access to the Cisco Prime Collaboration Assurance client, ensure that security is set to either medium or low in the browsers and do the following:</p> <ul style="list-style-type: none"> <li>• Ensure that you enable cookies in the browser.</li> <li>• Ensure that you install the operating system and the browser in English version, and set locale as English (United States) [en-US] for Cisco Prime Collaboration Assurance.</li> </ul> <p><b>Note</b> Ensure that you select only English (United States) [en-US] under Languages and remove the other locale options from the browsers settings.</p> <ul style="list-style-type: none"> <li>• Ensure that you disable the popup blocker if you have installed it as Cisco Prime Collaboration Assurance uses popup dialog boxes at several instances.</li> </ul>

Attributes	Values
Adobe Flash Player	<p>Install Adobe Flash Player on the client machine for Cisco Prime Collaboration Assurance features to work properly. We recommend that you download and install Adobe Flash Player version 13.x or later from the Adobe website.</p> <p><b>Note</b> For Cisco Prime Collaboration Assurance 12.1 Service Pack 4 and later, Adobe Flash Player is not required.</p>
Environment	<p>Clients must be able to access Cisco Prime Collaboration Assurance:</p> <ul style="list-style-type: none"> <li>• Across a firewall - for information on how to configure client access, see <a href="#">Firewall documentation</a>.</li> <li>• Across a VPN - the VPN tunnel must connect the client and a VPN router or similar device. For more information on required ports, see <a href="#">Required Ports for Cisco Prime Collaboration Assurance</a>.</li> </ul>
Network Connectivity	<p>If you have deployed Cisco Prime Collaboration Assurance in a large or very large deployment, we recommend that you have a minimum of 30-Mbps network connectivity. The network connectivity is with reference to the speed of the internet connection.</p>

## Mandatory Service Pack(s) or Engineering Special(s)

The following table lists the various upgrade path(s) that are mandatory for Cisco Prime Collaboration Assurance 12.1 Service Pack(s) or Engineering Special(s).

**Table 2: Mandatory Upgrade Path(s)**

Service Pack(s) / Engineering Special(s)	Original Release Date	Comments / Mandatory Service Pack(s) or Engineering Special(s) and their Status
SP4	08-DEC-2020	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 4 must be installed on Cisco Prime Collaboration Assurance 12.1 Service Pack 3 (with or without Engineering Specials).</p> <p>For more information, see the chapter on 'Introduction' in <a href="#">Readme for Cisco Prime Collaboration Assurance and Analytics 12.1 Service Pack 4</a>.</p> <p><b>Status:</b> Mandatory</p>

Service Pack(s) / Engineering Special(s)	Original Release Date	Comments / Mandatory Service Pack(s) or Engineering Special(s) and their Status
ES4	17-FEB-2020	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 4 is a cumulative of Cisco Prime Collaboration Assurance Service Pack 3 along with Engineering Special 1, Engineering Special 2, Engineering Special 3, and Engineering Special 4. Install either Cisco Prime Collaboration Assurance 12.1 Service Pack 3 or Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 3 or Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 2 or Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 1 before applying the Cisco Prime Collaboration Assurance Service Pack 3 Engineering Special 4.</p> <p><b>Status:</b> Current</p>
ES3	27-NOV-2019	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 3 is a cumulative of Cisco Prime Collaboration Assurance Service Pack 3 along with Engineering Special 1, Engineering Special 2, and Engineering Special 3. Install either Cisco Prime Collaboration Assurance 12.1 Service Pack 3 or Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 2 or Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 1 before applying the Cisco Prime Collaboration Assurance Service Pack 3 Engineering Special 3.</p> <p><b>Status:</b> Current</p>
ES2	21-AUG-2019	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 2 is a cumulative of Cisco Prime Collaboration Assurance Service Pack 3 along with Engineering Special 1 and Engineering Special 2. Install either Cisco Prime Collaboration Assurance 12.1 Service Pack 3 or Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 1 must be installed before applying the Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 2.</p> <p><b>Status:</b> Obsolete</p>
ES1	29-MAY-2019	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 3 must be installed before applying the Cisco Prime Collaboration Assurance 12.1 Service Pack 3 Engineering Special 1.</p> <p><b>Status:</b> Obsolete</p>



Service Pack(s) / Engineering Special(s)	Original Release Date	Comments / Mandatory Service Pack(s) or Engineering Special(s) and their Status
SP3	15-APR-2019	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 3 must be installed on Cisco Prime Collaboration Assurance 12.1 Service Pack 2.</p> <p>For more information, see the chapter on 'Introduction' in <a href="#">Readme for Cisco Prime Collaboration Assurance and Analytics 12.1 Service Pack 3</a>.</p> <p><b>Status:</b> Mandatory</p>
ES2	08-MAR-2019	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 2 Engineering Special 2 is a cumulative of Cisco Prime Collaboration Assurance Service Pack 2 along with Engineering Special 1 and Engineering Special 2. Install either Cisco Prime Collaboration Assurance 12.1 Service Pack 2 or Cisco Prime Collaboration Assurance 12.1 Service Pack 2 Engineering Special 1 before applying the Cisco Prime Collaboration Assurance Service Pack 2 Engineering Special 2.</p> <p><b>Status:</b> Obsolete</p>
ES1	22-NOV-2018	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 2 must be installed before applying the Cisco Prime Collaboration Assurance 12.1 Service Pack 2 Engineering Special 1.</p> <p><b>Status:</b> Obsolete</p>
SP2	15-OCT-2018	<p>Cisco Prime Collaboration Assurance 12.1 Service Pack 2 must be installed on Cisco Prime Collaboration Assurance 12.1 Service Pack 1.</p> <p><b>Status:</b> Mandatory</p>
SP1	09-AUG-2018	<p><b>Path(s):</b></p> <ol style="list-style-type: none"> <li>12.1 → SP1 (Fresh Installation) Apply Cisco Prime Collaboration Assurance 12.1 SP1 directly on a freshly installed server. Or 12.1 with ES (ES1/ES2/ES3/ES4) upgrade to SP1.</li> <li><b>Migration:</b> 11.6 → Install 12.1 → Apply 12.1 SP1 → Perform DMA</li> </ol> <p>SP1 includes all the defect fixes from ES1 to ES4.</p> <p><b>Status:</b> Mandatory</p>
ES4	16-JUL-2018	<p><b>Status:</b> Obsolete</p>

Service Pack(s) / Engineering Special(s)	Original Release Date	Comments / Mandatory Service Pack(s) or Engineering Special(s) and their Status
ES3	28-MAY-2018	<b>Status:</b> Obsolete
ES2	28-MAY-2018	<b>Status:</b> Obsolete
ES1	08-FEB-2018	<b>Status:</b> Obsolete
12.1	19-DEC-2017	New Features and Enhancements: For more information, see Cisco Prime Collaboration Assurance - Advanced and Analytics End-User Guide or Online Help for 12.1 on <a href="http://Cisco.com">Cisco.com</a> . <b>Status:</b> Mandatory

## Deployment Model - Assurance

You can install Cisco Prime Collaboration Assurance in Advanced mode. .

You can download the Cisco Prime Collaboration Assurance OVA deployment file based on the VM resources required to handle the number of endpoints that you want to manage. For more information on the different types of OVA deployment models and the endpoint quantities supported in each deployment model, see [Endpoints and Contact Center Agents Count](#).

### Cisco Prime Collaboration Assurance and Analytics - Advanced

Cisco Prime Collaboration Assurance Advanced provides all the features that enable integrated assurance management of applications and the underlying transport infrastructure. The Advanced mode of Cisco Prime Collaboration supports multiple clusters.

For more details on features available in Advanced mode 12.x, see the *Cisco Prime Collaboration Advanced Features* section of “Overview of Cisco Prime Collaboration Assurance” chapter in [Cisco Prime Collaboration Assurance Guide - Advanced](#).

If you choose to install Cisco Prime Collaboration Assurance in the Advanced mode, you can select either:

- Enterprise mode deployment - Cisco Prime Collaboration Assurance Advanced OVA includes both Cisco Prime Collaboration Analytics and Cisco Prime Collaboration Contact Center Assurance. Each feature is licensed separately.
- Managed Service Provider (MSP) deployment - Cisco Prime Collaboration Assurance Advanced includes only Cisco Prime Collaboration Contact Center Assurance.

In Cisco Prime Collaboration Assurance and Analytics 11.1 and earlier versions, Analytics is disabled for MSP - multi-customer enabled installations. Analytics support for MSP installations is being planned for a future release.

There are no separate Cisco Prime Collaboration Assurance - Advanced OVAs for Enterprise and MSP deployments for Small, Medium, and Large deployment models. However, for Very large deployment model, there are separate OVAs for Enterprise and MSP. By default, the Cisco Prime Collaboration Analytics and Cisco Prime Collaboration Contact Center Assurance are installed as part of the Cisco Prime Collaboration

Assurance - Advanced Enterprise installation. For more details, see the [System Requirements - Server and Client Machine Requirements](#).

The MSP mode or Enterprise mode deployment selection is available only when you choose to install Cisco Prime Collaboration Assurance in the Advanced mode.



---

**Note** In Cisco Prime Collaboration Assurance and Analytics 11.1 and earlier versions, in the MSP mode deployment, Cisco Prime Collaboration Analytics is not installed as part of Cisco Prime Collaboration Assurance Advanced.

---

