



Requirements and Limitations

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Requirements and Limitations

The following sections provide information about the requirements that your system must meet, and limitations that apply when you install or upgrade Unified Communications Manager or IM and Presence Service.



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- Note**
- By default, your system is in non-FIPS mode, you must enable it, if desired.
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Hardware Requirements

You can install Unified Communications Manager and IM and Presence Service on a virtual server hosted on the following types of hardware. If your current deployment does not use one of these servers, then you must migrate to a supported hardware platform:

- Cisco Business Edition 6000 or 7000 appliance
- Virtualized Cisco hardware (such as Cisco UCS or Cisco HyperFlex) with VMware vSphere ESXi

- Virtualized Third-party hardware with VMware vSphere ESXi

The requirements and support policies are different for each of these options. Before you begin an upgrade, verify that your current hardware meets the requirements of the new release. You can find detailed information about the requirements by going to https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html and following the links for the Unified Communications Manager and IM and Presence Service applications.

Network Requirements

This section lists the requirements that your network must meet before you can deploy Unified Communications Manager and the IM and Presence Service.

IP Address Requirements

A complete collaboration solution relies on DNS in order to function correctly for a number of services and thus requires a highly available DNS structure in place. If you have a basic IP telephony deployment and do not want to use DNS, you can configure Unified Communications Manager and IM and Presence Service to use IP addresses rather than hostnames to communicate with gateways and endpoint devices.

You must configure the server to use static IP addressing to ensure that the server obtains a fixed IP address. Using a static IP address also ensures that Cisco Unified IP Phones can register with the application when you plug the phones into the network.

DNS requirements

Note the following requirements:

- Mixed-mode DNS deployments not supported—Cisco does not support mixed-mode deployments. Both Unified Communications Manager and IM and Presence Service must either use or not use DNS.
- If your deployment uses DNS—Unified Communications Manager and IM and Presence Service should use the same DNS server. If you use different DNS servers between IM and Presence Service and Unified Communications Manager, it is likely to cause abnormal system behavior.
- If your deployment does not use DNS, will need to edit the following Host Name/IP Address fields:
 - Server—In the Cisco Unified CM Administration **Server Configuration** window, set IP addresses for your cluster nodes.
 - IM and Presence UC Service—In the Cisco Unified CM Administration **UC Service Configuration** window, create an IM and Presence UC service that points to the IP address of the IM and Presence database publisher node
 - CCMCIP Profiles—In the Cisco Unified CM IM and Presence Administration **CCMCIP Profile Configuration** window, point any CCMCIP profiles to the IP address of the host.
- Multinode considerations—If you are using the multinode feature in IM and Presence Service, see the section regarding multinode deployments in the *Configuration and Administration of IM and Presence on Cisco Unified Communications Manager* for DNS configuration options.

SFTP Server Support

Cisco allows you to use any SFTP server product but recommends SFTP products that have been certified with Cisco through the Cisco Solution Partner Program (CSPP). CSPP partners, such as GlobalSCAPE, certify their products with specified versions of Unified Communications Manager. For information on which vendors have certified their products with your version of Unified Communications Manager, go to the following URL and select "Collaboration" from the Technology list in the navigation pane.

<https://marketplace.cisco.com/catalog>

For information on using GlobalSCAPE with supported Unified Communications Manager versions, refer to the following URL:

<http://www.globalscape.com/gsftps/cisco.aspx>

Cisco uses the following servers for internal testing. You may use one of the servers, but you must contact the vendor for support:

- Open SSH (refer to <http://sshtwindows.sourceforge.net/>)
- Cygwin (refer to <http://www.cygwin.com/>)
- Titan (refer to <http://www.titanftp.com/>)

Cisco does not support using the SFTP product free FTDP. This is because of the 1GB file size limit on this SFTP product.

For issues with third-party products that have not been certified through the CSPP process, contact the third-party vendor for support.

Virtual Machine Configuration

Before you begin an upgrade or migration, verify that your current virtual machine (VM) software meets the requirements of the new release.

Table 1: Virtual Machine Requirements

Item	Description
OVA templates	<p>OVA files provide a set of predefined templates for virtual machine configuration. They cover items such as supported capacity levels and any required OS/VM/SAN alignment. You must use a VM configuration from the OVA file provided for the Unified Communications Manager and IM and Presence Service applications.</p> <p>The correct VM configuration to use from the OVA file is based on the size of the deployment. For information about OVA files, search for the topic "Unified Communications Virtualization Sizing Guidelines" at https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/collaboration-virtualization-sizing.html.</p>

Item	Description
VMware vSphere ESXi	<p>You must install a version of vSphere ESXi hypervisor that meets the compatibility and support requirements for the release.</p> <p>If you use Cisco Prime Collaboration Deployment (PCD) to perform an upgrade or migration, you must also ensure that you install vSphere ESXi with the correct license type. PCD is not compatible with all the license types of vSphere ESXi because some of these licenses do not enable required VMware APIs.</p>
VMware vCenter	<p>VMware vCenter is optional when you deploy Unified Communications Manager or IM and Presence Service on Business Edition 6000/7000 appliances, or on UC on UCS tested reference configuration hardware.</p> <p>VMware vCenter is mandatory when you deploy on UC on UCS specs-based and third-party server specs-based hardware.</p>
VM configuration virtual hardware specifications	<p>Verify whether you need to change the virtual hardware specifications on your VM in order to upgrade to a new release of Unified Communications Manager or IM and Presence Service. For example, verify the requirements for vCPU, vRAM, vNIC adaptor type, and vDisk size, as well as other specifications.</p> <p>Any changes to a VM must align with the OVA configuration. VM changes that result in an unsupported OVA configuration are not allowed. For information about VM requirements, see Readme file with the OVA template that supports your release.</p> <p>Note If Unified Communications Manager is upgraded to version 12.5 from version 11.5 or higher, using 80GB OVA it is expected to have a higher active partition up to 98%. We can correct this by a system rebuilt with HDD 90GB/110GB. Use a default 110GB OVA template and rebuilt the node. Or on current 80GB OVA, prior to clean install, go to VM > Edit Settings, and increase the HDD size from 80GB to 90GB/110GB. Other specs remain the same. Adding HDD disk to the system already installed only adds additional HDD space to common partition.</p>

VMware Upgrade Requirements

If the upgrade requires you to update your VMware, go to [Virtual Machine Configuration Tasks](#).

Browser Requirements

Unified Communications Manager and the IM and Presence Service both provide interfaces that you can use to configure and manage the system. You can access the interfaces by using the browsers and operating systems listed in the following table. Cisco does not support or test other browsers.

Table 2: Supported Browsers and Operating Systems

You can use this browser...	...with one of these operating systems
Google Chrome (latest browser version)	Microsoft Windows 10 (64 bit)
Microsoft Internet Explorer 11	<ul style="list-style-type: none"> • Microsoft Windows 10 (64 bit) • Microsoft Windows 8.1 (64 bit) • Microsoft Windows 7 (64 bit)
Microsoft Edge	Microsoft Windows 10 (32 bit/64 bit)
Mozilla Firefox (latest browser version)	Microsoft Windows 10 (64 bit)
Safari	Apple Mac OS 10.x (or newest OS release available)

Licensing Requirements

The following sections provide information about the licensing requirements for Unified Communications Manager and the IM and Presence Service

Unified Communications Manager License Requirements

Use the Cisco Prime License Manager to allocate and monitor the licenses for Unified Communications Manager, its applications, and endpoints. See the *Cisco Prime License Manager User Guide* for information about generating and installing licenses.



Important Unused PAKs and/or licenses for versions before Release 9.0 cannot be installed once your system has been upgraded to Release 9.0 or later. If you have uninstalled PAKs, install all licenses before upgrading.

IM and Presence Service License Requirements

The IM and Presence Service does not require a server license or software version license. However, you must assign users and enable the IM and Presence Service for each assigned user.



Note With the Jabber for Everyone offer, no end user licenses are required to enable IM and Presence Service functionality. For more information, see "*Jabber for Everyone Quick Start Guide*".

You can assign IM and Presence Service on a per user basis, regardless of the number of clients you associate with each user. When you assign IM and Presence Service to a user, this enables the user to send and receive IMs and availability updates. If users are not enabled for IM and Presence Service, they will not be able to log in to the IM and Presence Service server to view the availability of other users, send or receive IMs, and other users will not see their availability status.

You can enable a user for IM and Presence Service using any of the following options:

- The **End User Configuration** window in Unified Communications Manager. For more information, see the [Administration Guide for Cisco Unified Communications Manager](#).
- The Bulk Administration Tool (BAT)
- Assign IM and Presence Service to a feature group template which you can reference from the **Quick User/Phone Add** window in Unified Communications Manager.

For more information, see the [System Configuration Guide for Cisco Unified Communications Manager](#).

IM and Presence Service capabilities are included within both User Connect Licensing (UCL) and Cisco Unified Workspace Licensing (CUWL). IM and Presence Service capabilities can also be acquired for users that are not Unified Communications Manager IP Telephony users through the Jabber for Everyone Offer. For more information, see *Jabber for Everyone Quick Start Guide*.

Limitations

This section describes the limitations that apply when you install or upgrade Unified Communications Manager or the IM and Presence Service Service.

Subnet Limitations

Do not install Unified Communications Manager in a large Class A or Class B subnet that contains a large number of devices. For more information, see [Cisco Collaboration System 12.x Solution Reference Network Designs \(SRND\)](#).

Cluster Size

The number of Unified Communications Manager subscriber nodes in a cluster cannot exceed 4 subscriber nodes and 4 standby nodes, for a total of 8 subscribers. The total number of servers in a cluster, including the Unified Communications Manager publisher node, TFTP server, and media servers, cannot exceed 21.

The maximum number of IM and Presence Service nodes in a cluster is 6.

For more information, see "*Cisco Collaboration Solutions Design Guidance*" at <http://www.cisco.com/go/ucsrnd>

IP Subnet Mask

If you are using a 24-bit IP subnet mask, ensure that you use the following format:255.255.255.0. Do not use the format 255.255.255.000. Although 255.255.255.000 is a valid format, it may cause problems during the upgrade process. We recommend that you change the format before you begin an upgrade to avoid possible problems. You can change the subnet mask by executing the **set network ip eth0 <server_IP_address> 255.255.255.0** command.

Other formats are supported for subnet masks and this limitation applies to 24-bit subnet masks only.

Support for Intercluster Peers

The IM and Presence Service supports intercluster peers to clusters that are running different software versions. To find the interdomain federations that are supported, see the "Supported Integrations" chapter in the [Compatibility Matrix for Cisco Unified Communications Manager and IM and Presence Service](#).

Device Name for Cisco Unified Mobile Communicator

Ensure that the device name for the Cisco Unified Mobile Communicator device contains 15 or fewer characters. If the device name contains more than 15 characters for the Cisco Unified Mobile Communicator, the device does not migrate during the upgrade.

Daylight Saving Time Settings Update

From Release 11.5(1)SU10 onwards, the time zone database (DST) is updated to 2021a. As part of this update, the US/Pacific-New time zone has been removed. If the Unified Communication Manager or IM and Presence Service server is currently configured with the US/Pacific-New time zone, it must be changed prior to upgrading to avoid failures.

Spectre and Meltdown Vulnerabilities During Upgrade

This release of Unified Communications Manager, Cisco IM and Presence Service, Cisco Emergency Responder, and Cisco Unity Connection Deployment contain OS and Kernel updates to address the Spectre and Meltdown security vulnerabilities that might impact system performance.

The following actions might help mitigate the performance impact caused by the kernel update:

- If the VM version is not 13+, update the vmv version to 13 or later. This may require an ESXi version upgrade to 6.5 and above (if you're running on an older ESXi release version).
- Before you upgrade or migrate to Release 11.5(1)SU10 or above, we recommend that you work with your channel partner or account team to use the Cisco Collaboration Sizing Tool to identify whether there are any system impact from the Spectre and Meltdown fixes. If required, compare the Cisco Collaboration Sizing Tool output with your current cluster to check if any deployment changes are advised so that the upgraded deployment provides the best performance.

OS Admin Account Required for CLI-Initiated IM and Presence Upgrades

If you are using the **utils system upgrade** CLI command to upgrade IM and Presence Service nodes, you must use the default OS admin account, as opposed to a user with administrator privileges. Otherwise, the upgrade will not have the required privilege level to install essential services, thereby causing the upgrade to fail. You can confirm the account's privilege level by running the **show myself** CLI command. The account must have privilege level 4.

Note that this limitation exists for CLI-initiated upgrades of IM and Presence Service only and does not apply to Unified Communications Manager. Also note that this limitation may be fixed for newer ISO files. See your ISO Readme file for details on your specific ISO file. For up-to date information on this limitation, see [CSCvb14399](#).

Upgrade Requirements with Standalone Prime License Manager

Cisco Unified Communications Manager Release 11.5(1)SU3, SU4, SU5, SU6, SU7, SU8, SU9, SU10, and SU11 are compatible with Cisco Prime License Manager Release 11.5(1)SU2 or higher. If you are deploying a standalone Cisco Prime License Manager, make sure that your Prime License Manager version is a minimum release of 11.5(1)SU2. Otherwise, Unified Communications Manager cannot synchronize its license usage with the standalone Prime License Manager.

If you are upgrading to one of these Unified Communications Manager releases and you are running a standalone version of Prime License Manager, upgrade your Prime License Manager instance to 11.5(1)SU2 or higher before you upgrade Unified Communications Manager.



Note With co-resident Prime License Manager deployments, Unified Communications Manager and Cisco Prime License Manager are compatible automatically.

Upgrades from 11.5(1)SU2 with Push Notifications Enabled

If you are upgrading from the 11.5(1)SU2 release and you had enabled Push Notifications in the previous release, you must disable Push Notifications in the current release and then follow the onboarding process to enable Push Notifications once again. This is required due to API changes in this release that were not a part of the 11.5(1)SU2 release. Your upgraded system do not send troubleshooting logs to the Cisco Cloud unless you disable Push Notifications and then follow the onboarding process for this release.

After you upgrade your system, do the following:

Procedure

- Step 1** To disable Push Notifications, perform the following:
- a) From Cisco Unified CM Administration, choose **Advanced Features > Cisco Cloud Onboarding**.
 - b) Uncheck the following check boxes:
 - Enable Push Notifications
 - Send Troubleshooting information to the Cisco Cloud
 - Send encrypted PII to the Cisco Cloud for troubleshooting
 - c) Click **Save**
- Step 2** Add a Cisco Unified Communications Manager product instance into Smart Licensing system. For more information, see the “Smart Software Licensing” chapter of the System Configuration Guide for Cisco Unified

- Communications Manager at <http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-and-configuration-guides-list.html>
- Step 3** Enable Push Notifications for this release. For the full onboarding process, see the “Configure Push Notifications for Cisco Jabber on iPhone and iPad” chapter of the System Configuration Guide for Cisco Unified Communications Manager at <http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-installation-and-configuration-guides-list.html>.
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Duplicate ENUMS Break Upgrades and Migrations from 9.1(2)

If you are upgrading or migrating from Release 9.1(2) 10.5(2), or 11.0(1) to any later release, an issue exists with older locale installations that causes upgrade and migration failures. This issue exists if any of the following CUCM combined network locales have been installed:

- cm-locale-combined_network-9.1.2.1100-1
- cm-locale-combined_network-10.5.2.2200-1
- cm-locale-combined_network-11.0.1.1000-1

This issue can also occur if the following CUCM locales are installed together in the same cluster:

- cm-locale-en_GB-9.1.2.1100-1
- cm-locale-pt_BR-9.1.2.1100-1
- cm-locale-en_GB-10.5.2.2200-1
- cm-locale-pt_BR-10.5.2.2200-1
- cm-locale-en_GB-11.0.1.1000-1
- cm-locale-pt_BR-11.0.1.1000-1

To ensure that your upgrade does not fail, update your Unified Communications Manager and phone locale installation to use a locale that is dated after August 31, 2017 as this issue does not exist for any locale file issued after that date. After you update your locale installation, you can begin the upgrade or migration. For details on the workaround, see <https://bst.cloudapps.cisco.com/bugsearch/bug/CSCuz97687>.

Blue Screen Appears for Unified CM Refresh Upgrades

An issue exists with refresh upgrades of Unified Communications Manager to specific destination releases. After the timezone data populates, you may see a blue transition screen appear for 30 minutes or more.

If you see this blue screen, DO NOT stop the upgrade, or a kernel panic occurs. The upgrade will continue to run even while the blue screen displays. The blue screen will clear itself after approximately 30 minutes

Affected 'To' Versions

This issue affects refresh upgrades of Unified Communications Manager where the destination version falls within the range in the below table. This range includes SU and ES versions that lay within the range. This

issue does not occur for upgrades to older or newer versions that do not fall within the range, or for upgrades of the IM and Presence Service.

Table 3: Affected 'To' Versions for Blue Screen Refresh Upgrade Issue

Release Category	Affected Upgrade Destination Range
10.5(x)	10.5.2.21170-1—10.5.2.22188-1 (includes 10.5(2)SU9)
11.5(x)	11.5.1.16099—11.5.1.17118-1 (includes 11.5(1)SU6)
12.0(x)	12.0.1.23036-1 — 12.0.1.24053-1 (includes 12.0(1)SU3)
12.5(x)	12.5.1.11001-1 — 12.5.1.12018-1 (includes 12.5(1)SU1)

For additional details, see [CSCvs28202](#).