



## 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 Instant Messaging and Presence service.



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**Caution**

Do not modify any of the Instant Messaging and Presence Service server entries on the Application Server or Server configuration pages of the Cisco Unified CM Administration interface. The Instant Messaging and Presence Service upgrade process automatically updates these entries on the Unified Communications Manager cluster during the final stages (switch version) of the upgrade process.

For upgrades from Release 8.x or 9.x to Release 10.x or later, any manual modification of these entries during the upgrade process will result in data migration failures between Instant Messaging and Presence Service and Unified Communications Manager. If such failures occur, you must restart the entire upgrade process for both Unified Communications Manager and Instant Messaging and Presence Service clusters.

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## Hardware Requirements

You can install Unified Communications Manager and Instant Messaging and Presence 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

- Unified Communications (UC) on Cisco Unified Computing System (UCS) Tested Reference Configuration (TRC)
- UC on UCS specifications-based server
- Third-party specifications-based servers

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](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 Instant Messaging and Presence applications.

## Network Requirements

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

### 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 Instant Messaging and Presence must either use or not use DNS.
- If your deployment uses DNS—Unified Communications Manager and Instant Messaging and Presence should use the same DNS server. If you use different DNS servers between Instant Messaging and Presence 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 Instant Messaging and Presence, 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/gsfps/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://sshwindows.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 Instant Messaging and Presence 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 <a href="https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/collaboration-virtualization-sizing.html">https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/collaboration-virtualization-sizing.html</a>.</p>
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 Instant Messaging and Presence 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 Instant Messaging and Presence. 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>

### 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 Instant Messaging and Presence 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 access Unified Communications Manager with this browser...	...if you use one of these operating systems
Microsoft Internet Explorer 8	<ul style="list-style-type: none"> <li>• Microsoft Windows XP SP3</li> <li>• Microsoft Windows Vista SP2 (or latest service pack available)</li> <li>• Microsoft Windows 7 (32-bit) (with latest service pack available)</li> </ul>
Mozilla Firefox 3.x or 4.x (if available)	<ul style="list-style-type: none"> <li>• Microsoft Windows XP SP3</li> <li>• Microsoft Windows Vista SP2 (or latest service pack available)</li> <li>• Microsoft Windows 7 (32-bit) (latest service pack available)</li> <li>• Apple Mac OS X (latest service pack available)</li> </ul>
Safari 4.x or 5.x (if available)	Apple Mac OS X (or newest OS release available)

## Licensing Requirements

The following sections provide information about the licensing requirements for Unified Communications Manager and the Instant Messaging and Presence

### Cisco 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 prior to 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 license requirements

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



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

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You can assign Instant Messaging and Presence on a per user basis, regardless of the number of clients you associate with each user. When you assign Instant Messaging and Presence to a user, this enables the user to send and receive IMs and availability updates. If users are not enabled for Instant Messaging and Presence, they will not be able to log in to the Instant Messaging and Presence 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 Instant Messaging and Presence using any of the following options:

- The **End User Configuration** window in Unified Communications Manager. For more information, see [Administration Guide for Cisco Unified Communications Manager](#).
- The Bulk Administration Tool (BAT)
- Assign Instant Messaging and Presence 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 Instant Messaging and Presence chapter in the *Cisco Unified Communications Manager Features and Services Guide*.

Instant Messaging and Presence capabilities are included within both User Connect Licensing (UCL) and Cisco Unified Workspace Licensing (CUWL). Instant Messaging and Presence 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 Instant Messaging and Presence 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.

### 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 Instant Messaging and Presence 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 Instant Messaging and Presence 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.

## Upgrade Requirements for Release 10.5(2)SU6

If you are upgrading to a Cisco Unified Communications Manager 10.5(x) minimum release of 10.5(2)SU6, the following requirements apply:

- You must upgrade your associated Cisco Prime License Manager to Release 10.5(2)SU1a. This requirement applies whether you want to run Cisco Unified Communications Manager in nonsecure mode or mixed mode.
- If you want to run Cisco Unified Communications Manager in mixed-mode, you must install an encryption license on Cisco Prime License Manager.



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**Note** These requirements do not apply for 10.5(x) releases of Cisco Unified Communications Manager prior to Release 10.5(2)SU6.

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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) of Cisco Unified Communications Manager to any 10.x, 11.x or 12.x release, an issue exists with older locale installations that causes upgrade and migration failures. This issue exists if you are using one of the following three locales, and your locale installer is dated prior to August 31, 2017;

- pt-BR (Brazil)
- en-GB (United Kingdom)

- combined\_network

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.

## Blue Screen Appears for Unified CM Refresh Upgrades

An issue exists with refresh upgrades of Cisco 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](#).