



Preparation

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Scenarios

Cisco Unified Contact Center Enterprise (Unified CCE) is supported only in a virtualized environment.

Installation Scenario

In a virtualized environment, you can run Unified CCE on a VMware ESXi platform. Run the virtual machines (VMs) on Cisco Unified Computing System (UCS) B-series or C-series servers, or equivalent third-party servers.

Install the Cisco Unified CCE components after you configure the VMs.

You can use the OVA template to deploy the VMs before beginning with the installation of CCE components.

The Unified CCE 11.6(1) installer is available as an add-on release to Unified CCE 11.0(x). Therefore, complete the installation of the base Unified CCE 11.0(1) before applying Unified CCE 11.6(1). Unified CCE 11.6(1) can be installed on 11.5(x) as well.

For more information about the complete procedure, see the [Installation Task Flow](#).

Upgrade Scenarios

Upgrading to Unified CCE Release 11.6(1) from Unified CCE Release 11.x, is the same as upgrading or applying any other maintenance release. However, the Unified CCE 11.6(1) minor release contains an updated database schema. Before the upgrade begins, the installer takes a backup of the configuration data from the logger database of the existing Unified CCE 11.x configuration.

You can upgrade from Unified CCE Release 10.0(x)¹ and 10.5(x) to Release 11.x by using one of the two methods:

- The Common Ground method is an in-place upgrade performed on your existing virtual machine which involves upgrading the Unified CCE and all other associated software hosted on it. If your hardware meets the requirements for this release, you can perform a Common Ground upgrade without acquiring additional hardware.

- Use the Technology Refresh upgrade method to upgrade your hardware at the same time as the Unified CCE system. When using the Technology Refresh method, you prepare a destination system on new hardware and then migrate data from your existing deployment to the new one. You can also bypass the Windows Server operating system and SQL Server upgrade process, as would be required when upgrading from Unified CCE Release 10.0(x) and Release 10.5(x) to Unified CCE Release 11.0(x).

Upgrade scenarios are considered at a component level; you can perform one type of upgrade on one component, and another type of upgrade on another component. However, the A and B side of any given component must be running on identical hardware.

Follow the task flow and tasks for the upgrade scenario that applies to each individual component involved in the overall upgrade.

Upgrade to Unified CCE Release 11.6(1) by either of the methods is possible by employing an in-line upgrade (the process of specifying Release 11.6(1) installer location, while running the Release 11.0(1) base installer). The system after upgrading to Release 11.0(1) and restarting, commences upgrading to Release 11.6(1).

¹Note: The upgrade from 10.0(x) to 11.6(1) is specific to Unified CCE components (for example, Router, PG, and so on).

Common Ground Upgrades

Unified CCE Release 11.6(1) is supported on a Windows Server 2012 R2 and SQL Server 2014 platform. For information about supported editions or service packs, see the *Unified CCE Solution Compatibility Matrix* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

Unified CCE Release 11.5(1) is supported on a Windows Server 2012 R2 and SQL Server 2014 platform. For information about supported editions or service packs, see the *Unified CCE Solution Compatibility Matrix* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

The common ground upgrade method consists of the following tasks:

- In-place upgrade of the operating system to Windows Server 2012 R2
- SQL server upgrade (for components such as Logger and Distributor)
- Database schema migration using the Enhanced Database Migration Tool (EDMT)
- Upgrade the Unified CCE software

For more information, see *Virtualization for Unified Contact Center Enterprise* at http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-unified-contact-center-enterprise.html.

Technology Refresh Upgrades

To perform a Technology Refresh upgrade, you first prepare the destination system using new hardware, and then migrate configuration data from your existing production system. This method reduces the maintenance window required for the upgrade process compared to a Common Ground upgrade because the operating system and SQL Server upgrade steps can be by-passed.

Follow the documented procedures to build a parallel network using new hardware and pre-stage it with configuration data to support the existing production network. Use the Enhanced Database Migration Tool

(EDMT) to transfer data and perform a schema upgrade during the upgrade process. Do not use backup and restore procedures to perform the pre-staged configuration on the parallel network.

System Requirements

Platform Requirements

Server selection for Unified CCE in a virtualized environment involves several factors, including:

- The server and all related hardware must be supported for use in a virtualized Unified CCE system
- Minimum specifications for processing, memory, and storage
- Whether you want a packaged and tested Cisco configuration (Tested Reference Configuration or TRC) or a configuration that you base on Cisco-defined minimum requirements (Specs-based Configuration)
- Compatibility requirements for all hardware, and Cisco and third-party software including the VMware required to run and manage a virtual environment

Confirm that your hardware selection is supported for Unified CCE and meets all minimum specifications:

Server	VMware required	For detailed requirements information, see
UCS C-series (TRC):	<ul style="list-style-type: none"> • VMware vSphere ESXi • VMware vCenter (Optional) 	<i>Virtualization for Unified Contact Center Enterprise</i> at https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html
UCS C-series (Specs-based):	<ul style="list-style-type: none"> • VMware vCenter • VMware vSphere ESXi 	
Third-party (Specs-based)	<ul style="list-style-type: none"> • VMware vCenter • VMware vSphere ESXi 	

In addition to confirming that your servers meet minimum specifications, confirm that your server choice is compatible with all Cisco and third-party software.

Related Topics

[Compatibility Requirements](#), on page 6

Network Requirements

Network requirements for virtualized Unified CCE systems vary widely, depending on the size and type of Unified CCE solution deployment. Confirm that you have clearly established all network requirements before you install or upgrade a Unified CCE contact center.

For more information, see *Virtualization for Unified Contact Center Enterprise* at https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html.

Related Topics

[Cisco Unified Contact Center Enterprise Design Guide](#)

Transport Layer Security Version 1.2 Required

Contact center enterprise solutions require the use of TLS 1.2 only connections in this release. Our services accept incoming TLS connections only over TLS 1.2. All outgoing TLS connection use only TLS 1.2.

All clients that connect to either our web interfaces or databases must support TLS 1.2.



Note The older versions of the TLS/SSL are disabled by 11.6 Installer.

For more information see, *Unified CCE Solution Compatibility Matrix* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

Software License Requirements

Cisco Products

The following table lists the Cisco components that comprise a Unified CCE solution:

Components	License requirements
Cisco Unified Contact Center Enterprise	One server license for each of the voice applications. One agent license for each concurrent user with different feature tiers.
Cisco Unified Communications Manager	One license for each Cisco Unified Communications Manager node, plus device licenses for connected devices.
Cisco Unified Customer Voice Portal (CVP)	One CVP software license for each server that runs Call Server or VXML Server software (or both coresident), ports or redundant ports, or Call Director software. One CVP reporting license for each Reporting Server. No license required for Operations Console. Port license package required for ports used for simultaneous sessions requiring self-service or queuing (voice and video). Redundant port licenses required for each redundant port. One license for each developer machine running Call Studio. Upgrade licenses from Unified IP IVR available.
Cisco Unified Intelligence Center	One license for each server.

Components	License requirements
Cisco Finesse or Cisco CTI OS	Cisco Finesse: User licenses included with selected tiers of Cisco Unified Contact Center Enterprise user licenses. One license for each server pair. One license for each Media Kit. Cisco CTI Object Server (CTI OS): User licenses included with selected tiers of Cisco Unified Contact Center Enterprise user licenses.
Cisco Unified Contact Center Management Portal	User licenses included with selected tiers of Cisco Unified Contact Center Enterprise user licenses.
Cisco MediaSense	Server licenses required for Primary and Secondary Servers. Expansion Server Software licenses required for extra capacity. Session licenses (base, and either audio or video) required for each user.
Cisco SocialMiner	User license included with Unified CCE Premium Agent License. One server license for each SocialMiner server.

Third-Party Products



Note For detailed information about the software editions and versions supported for this release, see the *Unified CCE Solution Compatibility Matrix* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

Before you begin an installation or upgrade of any part of your contact center, confirm the following:

- That you have all the required software products.
- That all the software versions are compatible with each other.
- That all software versions are also compatible with all hardware and VMware.

Virtualization Requirements

You run the Unified Contact Center Enterprise solution on VMware ESXi platform.

The following requirements apply to VMware on virtual machines for Unified CCE:

- After you install the Unified CCE components on each VM, install the latest VMware Tools from your VMware host using the VMware Tool default settings.



Note Update the VMware Tools whenever you patch or upgrade ESXi.



Note Deploying VM with Guest Operation System ‘Microsoft Windows Server 2019’ on ESXi 7.0 using CCE OVA template displays a warning message, “The configured guest OS (Microsoft Windows Server 2016 or later (64-bit)) for this virtual machine does not match the guest that is currently running (Microsoft Windows Server 2019 (64-bit)). You should specify the correct guest OS to allow for guest-specific optimization”. This warning message is informational only and has no detrimental effect on the system. The warning message is displayed only once and can be dismissed.

For more information, see *Virtualization for Unified Contact Center Enterprise* at https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/cisco-collaboration-virtualization.html.

Related Topics

[Install VMware Tools for Windows](#)

ESXi Supportability

For information on supported versions of ESXi for this release see *Unified CCE Solution Compatibility Matrix* at <https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html>.

As part of the Common Ground upgrade process, if there are no available overlapping supported ESXi versions, upgrade the UCCE software first if a back-out of the upgrade is required.

If the upgrade is successful and working, you can then proceed to upgrade ESXi to a supported version for final testing and restoring production operation.

Compatibility Requirements

As part of the planning process, ensure that all hardware, Cisco software, third-party software, VMware, and firmware are compatible. Confirm that you meet all the following compatibility requirements:

For this compatibility information	See
VMware and Cisco software components	<i>Virtualization Software Requirements</i> at http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-software-requirements.html

For this compatibility information	See
Required firmware	<p>See the following:</p> <p><i>VMware Compatibility Guide</i> at http://www.vmware.com/resources/compatibility/search.php.</p> <p>For more information, see <i>Virtualization for Unified Contact Center Enterprise</i> at http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-unified-contact-center-enterprise.html.</p> <p>Cisco Installation and Upgrade Guides at http://www.cisco.com/c/en/us/support/servers-unified-computing/ucs-c-series-rack-servers/products-installation-guides-list.html</p>
Cisco software product intercompatibility	<p><i>Unified CCE Solution Compatibility Matrix</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html</p> <p>Note Review the compatibility between different versions of the Cisco components to plan upgrades that occur across multiple maintenance windows. Components that are upgraded in one maintenance window must continue to operate with other components that are still at the previous version until the full upgrade is completed.</p>
Windows OS and SNMP <ul style="list-style-type: none"> • SNMP Service • SNMP MI Provider 	<p>See the following:</p> <p><i>SNMP Guide for Cisco Unified ICM/Contact Center Enterprise</i> at http://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-and-configuration-guides-list.html</p> <p><i>Serviceability Guide for Cisco Unified ICM/Contact Center Enterprise</i> at http://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-installation-and-configuration-guides-list.html</p>
Third party software products	<p><i>Unified CCE Solution Compatibility Matrix</i> at https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-enterprise/products-device-support-tables-list.html</p>

