



CHAPTER 1

Planning Your System Installation

This topic provides an overview of the primary components typically deployed in a contact center environment and the installation processes for contact center components. It also describes the types of installations and various installation strategies.

This topic contains the following sections:

- [Cisco Unified Communications System Overview](#)
- [Scope of this Installation Documentation](#)
- [System Installation Overview](#)
- [System Installation Strategies](#)
- [Interoperability and Compatibility Portals](#)



Note

Many of the contact center component names have changed as part of Cisco Unified Communications System releases. Only the latest product names are used in this document, even when referencing products from previous releases.

Cisco Unified Communications System Overview

The Cisco Unified Communications System is a full-featured business communications system built into an intelligent IP network. It enables voice, data, and video communications for businesses of all sizes. The Cisco Unified Communications System is defined around commonly deployed enterprise topology models in North America and European & Emerging Markets (EUEM).

Cisco Systems provides an integrated system to meet customer needs. The system contains a number of communications products that are designed, developed, tested, documented, sold, and supported as one entity. This system is built upon individual IP telephony and contact center products including, but not limited to, the Cisco Unified Communications Manager, Cisco Unified Intelligent Contact Management Enterprise (Unified ICME), Cisco Unified Customer Voice Portal (Unified CVP), Cisco Unified Contact Center Enterprise (Unified CCE), Cisco Unified Contact Center Express (Unified CCX), Cisco Unified IP Integrated Voice Response (Unified IP IVR), Cisco Unified Expert Advisor (Unified Expert Advisor), self-service and queuing capabilities, and voice-capable gateways and routers.

Cisco contact center solutions allow you to move beyond today's contact center to a customer interaction network by creating a better customer experience, making customer-service agents more efficient and productive, improving contact center reporting, and extending the workforce with expert, mobile, and remote agents.

Cisco Unified Communications System testing is a process for specifying (designing) and validating the interoperability of enterprise voice products to ensure that they work together as an integrated system.

Scope of this Installation Documentation

The installation procedures that are described in this document are intended to provide a high-level guide to installing the Cisco Unified Communications System. This document provides installation information from a system perspective and only for the products that are part of Cisco Unified Communications System Release 8.5(1).

The Cisco Unified Communications contact center system should have the following basic characteristics and requirements:

- A deployment that is based on Cisco recommendations and guidelines for network design, architecture, and deployment models
- A new *greenfield* system deployment or integration with a legacy system deployment
- An installation of these systems, not an upgrade from previous software versions. This topic only provides information related to installing components that are present in the Cisco Unified Communications System. See Release Set Versions in [Chapter 2, “Preparing for Your System Installation”](#) for more information.



Note

If you have a legacy system with PBXs and other such products that need to interoperate with the Cisco Unified Communications system, see [Interoperability and Compatibility Portals](#) for interoperability and integration information.

Because of the variety of the installations and the complexity of the procedures that are required to completely set up a contact center system, this document does not provide installation procedures for:

- Individual standalone components and features of these components
- Third-party coresident applications such as antivirus, security, and remote access
- Additional third-party off-board applications such as operator console, and billing and accounting
- Server replacement (hardware installation) for components. For information on how to replace a single server or an entire cluster for Cisco Unified Communications Manager Release 8.5(1), see: http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/install/8_5_1/cluster/clstr851.html

For information on supported Cisco 7800 Series Media Convergence Servers and Unified Computing System B-series servers, see:

http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/prod_brochure0900acd8062a4f9.html

Refer to product-specific installation documents to perform the installation and configuration of the contact center products.

- Cisco Unified Communications on the Cisco Unified Computing System Solution Overview: http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/solution_overview_c22-597556.html
- Product-specific installation documentation for all Cisco voice products is available at: <http://www.cisco.com/cisco/web/psa/default.html?mode=prod>

- Links to component-specific installation documents for all contact center components in the Cisco Unified Communications System Release 8.5(1) are available at:
http://www.cisco.com/cisco/web/docs/iam/unified/ipcc851/Component_Installation_and_Configuration_Guides.html
 - Links to configuration information for contact center call flows and components tested in the Cisco Unified Communications System Release 8.5(1) are available at:
http://docwiki.cisco.com/wiki/Category:Unified_Communications_System_Implementation
- Also see Related Documentation in [Chapter 3, “Performing Your System Installation”](#).

System Installation Overview

This section includes the following sections:

- [Installation Types](#)
- [Release Sets](#)
- [System Installation Roadmap](#)
- [Components Installation Overview](#)

Installation Types

The following types of deployments should be considered when installing and creating a contact center environment:

- Greenfield deployment—A completely new installation of the Cisco Unified Communications system, using no existing equipment.
- Legacy deployment—A new installation of the Cisco Unified Communications system combined with existing legacy equipment, such as TDM PBXs and third-party adjuncts, which may require long-term co-existence and integration or eventual migration to the new installation.
- Installed base (“brownfield” deployment)—An existing Cisco Unified Communications system, which requires an upgrade/migration from a previous system release to the current system release. For more information about upgrading an existing installation, see the system upgrade topics later in this document.



Note When performing upgrades, be aware of backward compatibility issues such as coexistence and interoperability with sites on previous system release versions.

Release Sets

A *release set* is defined as the combination of products, components, and software versions that were tested to work together as an integrated Cisco Unified Communications system. A particular system release is also referred to as a release set.

Legacy Deployment and Installed Base Release Sets

If you are dealing with a legacy or “brownfield” deployment, you need to be aware of interoperability issues between legacy or existing component versions and the Cisco Unified Communications System Release 8.5(1) component versions.

You can browse a previous system release set by product release version in a summary matrix. Use the following links if you are unfamiliar with the version content of release sets deployed in contact center environments:

- Cisco Unified Communications System Release Summary Matrix for Contact Center at: http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/unified/communications/system/versions/CCMtrix.html
- IP Communications System Test Release at: http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/GB_resources/ipcmatrix.htm

You can also see [Interoperability and Compatibility Portals](#) for information about support for legacy products and third-party product interoperability with Cisco contact center products.

Greenfield Deployment Release Set

If you are dealing with a greenfield deployment, be aware that certain features, applications, and components are part of the Cisco Unified Communications System Release 8.5(1) family of products and have been tested and verified for interoperability and compatibility.

Based on your specific network design, you may choose to install all or some of these features, applications, and components. For a list of components that apply to a contact center environment, see [Components Installation Overview](#).

For information about the Cisco Unified Communications System Release 8.5(1) contact center components and their software and firmware versions, see Release Set Versions in [Chapter 2, “Preparing for Your System Installation”](#).

System Installation Roadmap

[Table 1-1](#) provides an overview of the tasks that are performed in the installation of the Cisco Unified Communications contact center system.

Table 1-1 Overview of Installation Tasks

	Task	Remarks
Step 1	Perform preinstallation tasks.	See Before You Begin in Chapter 2, “Preparing for Your System Installation,” and refer to the tasks that are described in the individual product installation documents.
Step 2	Install and cable the hardware.	—

Table 1-1 Overview of Installation Tasks (continued)

	Task	Remarks
Step 3	Install and configure the software for the components to enable functionality between the installed components.	See Chapter 3, “Performing Your System Installation.” for the installation sequence of the components. Refer to the detailed installation and configuration tasks described in the individual product installation and configuration documents. Additional configuration information for contact center call flow and components tested in the Cisco Unified Communications System Release 8.5(1) is available at: http://docwiki.cisco.com/wiki/Category:Unified_Communications_System_Implementation
Step 4	Initialize installed components and ensure that components are functional.	<ul style="list-style-type: none"> • Applications at the system level (such as cold start, elapse time) • Each application at the node level
Step 5	Perform verification and validation testing in between installing components to ensure that the installed components interoperate.	—
Step 6	Integrate between Cisco and third-party or legacy products to ensure interoperability.	See Before You Begin in Chapter 2, “Preparing for Your System Installation,” and refer to the tasks that are described in the individual product installation documents.
Step 7	Perform postinstallation tasks.	See Postinstallation Tasks in Chapter 3, “Performing Your System Installation”.

Components Installation Overview

The Cisco Unified Communications contact center environment consists of the following primary software components:

- Call processing infrastructure consisting of Cisco Unified Communications Manager components
- Contact center routing and agent management provided by Cisco Unified Contact Center Enterprise (Unified CCE), which is based on the Unified Intelligent Contact Management Enterprise (Unified ICME) software
- Queuing provided by either Unified IP IVR, Cisco Unified Contact Center Express (Unified CCX) or Unified CVP, including Unified CVP self-service for queuing and call treatment



Note Typically, in most contact center deployments, you need to install only one of these components for queuing and call treatment purposes. However, if you want to deploy a parent and child model, you can install both components.

- Agent desktop client applications consisting of the Cisco Agent Desktop (CAD) or Cisco Telephony Integration Object Server (CTI OS) desktop software



Note Typically, in most contact center deployments, you need to install only one of these components for agent desktop capabilities.

- Product options such as Cisco Unified Expert Advisor that extend the call center by allowing an expert to handle certain incoming calls
- Web-based reporting applications for Cisco Unified Communications family of products such as Cisco Unified Intelligence Center (Unified Intelligence Center)

In addition to these core components, the following Cisco hardware and software products are part of a typical contact center deployment:

- Cisco Unified IP Phones
- Cisco gateways and gatekeepers/proxy servers
- Cisco LAN/WAN infrastructure and components
- Cisco security components
- Network management tools
- Cisco Unified Computing System

Table 1-2 provides an overview of components in the Cisco Unified Communications System Release 8.5(1) product family that can be installed and configured in contact center environments.

For additional information, refer to Cisco Unified Communications System Product Comparison at:

http://www.cisco.com/en/US/products/sw/voicesw/products_category_buyers_guide.html

For information on the component software versions, see Release Set Versions in Chapter 2, “Preparing for Your System Installation”.



Note Some of the listed components might not apply to particular installations. Therefore, if there is an application, component, or feature listed that you do not require in your environment, you need not include them in your deployment.

Table 1-2 Contact Center Components in Cisco Unified Communications System

Component/Application/Feature	Purpose
Communications Infrastructure and Wireless Components	
Switches and routers	Cisco switches and routers provide switching and intelligent routing services that can deliver voice, video, data and Internet access, wireless, and other applications and provide high-speed connectivity among users, applications, and communications systems.
Gateways and gatekeepers/proxy servers	Cisco gateways and gatekeepers/proxy servers are optimized for data, wireless, and IP Communications, and support IP-to-IP connectivity between independent voice-over-IP (VoIP) networks and analog phone gateways using your existing phone equipment.

Table 1-2 Contact Center Components in Cisco Unified Communications System (continued)

Component/Application/Feature	Purpose
Proxy Servers	<p>Cisco Unified Presence (Unified Presence) and Cisco Unified SIP Proxy (Unified SIP Proxy) are designed to help connect and manage SIP networks by aggregating SIP elements, enabling application of highly developed routing rules and simplifying large deployments.</p> <p>The Unified SIP Proxy module is designed to be an integrated solution in Cisco 3800 Series Integrated Services Routers. The module provides multiple features including SIP trunk aggregation, name resolution, routing, scalability, and high availability.</p>
Firewall and security components	<p>Security components include firewall and policy enforcement services, intrusion prevention systems, antivirus software, and domain and web server hardening.</p> <p>Firewalls allow any port on the device to operate as a firewall port and integrates firewall security inside the network infrastructure.</p> <p>Policy enforcement services can protect networks from unauthorized access. These services combine with VPN services to enable businesses to securely extend their networks to business partners, remote sites, and mobile workers.</p>
Wireless components	Wireless components provide for secure, scalable, cost-effective WLANs with real-time access to instant messaging, e-mail, and network resources.
Cisco Unified Communications Manager and Call Processing Devices	
Cisco Unified Communications Manager	<p>Unified Communications Manager provides the call-processing functionality to Cisco Unified Communications contact center networks.</p> <p>Note Make sure that you obtain the required licenses to perform the installation.</p>
Cisco Unified Communications Manager services	A variety of services must be activated on the publisher, subscribers, and TFTP servers that are essential for call processing in the Unified Communications Manager cluster.
Cisco Unified IP Phones (SIP and SCCP)	Use different methods like auto-registration and Bulk Administration Tool (BAT) to install and add Unified IP Phones to the Unified Communications Manager database.
Cisco Unified Presence	<p>Cisco Unified Presence links the various knowledge within each application to provide a ubiquitous and broad view of a defined user within the Cisco Unified Communications system. It provides SIP presence to deliver Instant Messaging (IM) and Click to Call features; works in conjunction with Unified Communications Manager and supports Unified Personal Communicator, Cisco IP Phone Messenger and IBM Sametime clients.</p> <p>Note In certain deployments, Unified Presence can be implemented to provide SIP Proxy services as well.</p>
Cisco Unified Personal Communicator	Cisco Unified Personal Communicator is a desktop application that integrates frequently used communications applications and services such as voice, video, instant messaging, web conferencing, voicemail, and presence information from a single, multimedia interface.

Table 1-2 Contact Center Components in Cisco Unified Communications System (continued)

Component/Application/Feature	Purpose
Cisco Unified Communications Manager cluster (integration with switches, routers, gateways, gatekeepers/proxy servers, JTAPI client and Cisco Unified Communications Manager Telephony client and Unified ICME)	<p>Install the JTAPI client on the Unified Communications Manager PGs and the Unified Communications Manager Telephony client on the Unified IP IVR and on the Unified CCX systems to enable communication with the Unified Communications Manager cluster.</p> <p>Configure dial plans, route points, groups, device parameters, and the JTAPI user to set up call processing and policy rules in Unified Communications Manager to enable interaction with switches, routers, gateways, and gatekeepers/proxy servers.</p>
Cisco Unified Contact Center Enterprise and Contact Center Components	
Cisco Unified Contact Center Enterprise software	<p>Unified CCE combines Cisco's IP telephony products and Unified ICME software to create an IP-based contact management solution that provides intelligent call routing, network-to-desktop computer telephony integration (CTI), and multimedia contact management to contact center agents over an IP network.</p> <p>Note Cisco Unified System Contact Center Enterprise (Unified SCCE) is supported in Unified CCE Release 8.5(1); however, there is no separate Unified SCCE Release 8.5(1).</p>
Cisco Unified Communications Manager (integration with Cisco Unified Contact Center Enterprise)	Unified Communications Manager provides call processing to the Unified CCE applications, but requires configuration changes to support Unified CCE such as CTI and JTAPI capabilities.
Cisco Unified Intelligent Contact Management Enterprise software	<p>Unified ICME software provides the intelligence needed to make call-by-call routing decisions for your call center using a combination of multichannel contact management, intelligent routing, and network-to-desktop computer telephony integration (CTI) capabilities.</p> <p>This software includes the Rogger (CallRouter and Logger), Peripheral Gateways (generic, Unified Contact Center Gateway Enterprise (Unified CCGE), and Unified System Contact Center Gateway (Unified SCCG), Real-Time Administrator Workstation/Webview/HDS servers and Unified ICME Support Tools.</p>
Cisco Unified Intelligent Contact Management Enterprise setup	Configure skill groups, device targets, labels, agents, scripts and others on Unified ICME to provide call routing capabilities.
Cisco Unified Expert Advisor	Cisco Unified Communications System Release 8.5(1) provides Unified Expert Advisor functionality, where enterprise employees can act as expert resources for regular agents and handle certain incoming calls targeted for the call center.
Computer Telephony Integration Object Server (CTI OS)	CTI OS is a server-based integration point for third-party applications and for deploying CTI applications that provide desktops for use by call center agents and supervisors. Configuration and behavior information is managed at the server, simplifying customization, updates, and maintenance.
Cisco Agent Desktop server	Cisco Agent Desktop is a computer telephony integration (CTI) solution that provides agents and supervisors call control capabilities, such as call answer, hold, conference, and transfer, and ACD state control and so on.

Table 1-2 Contact Center Components in Cisco Unified Communications System (continued)

Component/Application/Feature	Purpose
CTI OS and Cisco Agent and Supervisor Desktops	<p>CTI OS includes the CTI OS Server, CTI OS Agent/Supervisor Desktop, CTI OS Toolkit, and Client Interface Library (CIL).</p> <p>Cisco Agent/Supervisor Desktop includes the Desktop Administrator, Agent Desktop, and Supervisor Desktop.</p> <p>The desktop applications provide productivity tools for agents and supervisors. The desktop allows supervisors to view agent states and call information, to send text messages to agents, to record conversations, and to provide advanced monitoring functions. You can select which application to deploy in the Unified CCE system.</p>
Cisco Unified Contact Center Express	<p>Provides customer interaction management services for medium-sized businesses and enterprise branches with up to 300 agents; options include multichannel content management and outbound campaign management.</p> <p>Note Make sure you obtain the required licenses to perform the installation.</p>
Cisco Unified IP IVR	<p>Provides IP-based Interactive Voice Response (IVR) and queuing capabilities for the Unified CCE system.</p> <p>Note Make sure you obtain the required licenses to perform the installation.</p>
Cisco Unified IP IVR system setup	<p>Configure media dialog groups, Unified Communications Manager Telephony connection, Unified ICME connection port, Voice Response Unit (VRU) scripts, applications, prompts and others on the Cisco Unified IP IVR system to provide call routing capabilities.</p>
Cisco Unified CVP system	<p>Unified CVP provides a call-management and call-treatment solution with a self-service IVR option. Automated speech recognition (ASR) and text-to-speech (TTS) capabilities enable callers to obtain personalized information and conduct business without interacting with a live agent.</p> <p>Note Make sure you obtain the required licenses to perform the installation.</p>
Cisco Unified Expert Advisor	<p>Unified Expert Advisor functionality allows enterprise employees to act as expert resources for regular agents and handle certain incoming calls targeted for the call center.</p> <p>Note In Unified Expert Advisor deployments, only Unified Presence can be implemented to provide SIP Proxy services.</p>
Cisco Unified CVP (integration with Cisco Unified SIP Proxy)	<p>Cisco Unified SIP Proxy (Unified SIP Proxy) is added as a server under Device Management in the Unified CVP Operations Console. Static routes are configured in Unified SIP Proxy to route incoming calls to Unified CVP from the gateway, to transfer calls to the VXML gateway, and to transfer calls to agent devices on Unified Communications Manager.</p>

Table 1-2 Contact Center Components in Cisco Unified Communications System (continued)

Component/Application/Feature	Purpose
Cisco Outbound Option	<p>Outbound Option provides outbound dialing functionality that can be “blended” with the existing inbound capabilities of Unified ICME software. Related components that require installing and configuring include the Outbound Campaign Manager, Outbound Dialer, SIP Dialer, and Media Routing Peripheral Gateway (MRPG).</p> <p>Note: In an Outbound Option deployment that uses the SIP Dialer, functions such as dialing, call control, and Call Progress Analysis for Outbound campaigns are handled by the voice gateway, and not by Unified Communications Manager. This increases the number of outbound agents that a deployment can service on a PG, and reduces the number of PGs and Dialers customers need to deploy for larger enterprise systems.</p>
Supervisors and agents setup	<p>This enables Unified Communications Manager, Unified ICME and gateways to route calls to the different types of supervisors and agents within and outside the contact center environment such as CAD, CTI OS, Remote Agents and Cisco Unified Mobile Agents.</p> <p>Cisco Unified Communications System Release 8.5(1) provides Unified Expert Advisor functionality, where enterprise employees can act as expert resources for regular agents and handle certain incoming calls targeted for the call center.</p>
Cisco Security Agent	<p>The agent provides intrusion detection and prevention and controls system operations by using a policy that allows or denies specific system actions before system resources are accessed.</p> <p>Note: Cisco Security Agent comes bundled with the product software for Unified Communications Manager, Unified CCX, Unified IP IVR and Unified Expert Advisor.</p>
Cisco Unified Operations Manager	<p>Unified Operations Manager provides comprehensive monitoring and diagnostics for the entire system. It performs automatic discovery of the entire system and provides contextual diagnostics for rapid troubleshooting.</p>
Cisco MediaSense	<p>MediaSense is an IP media recording and playback system that implements the Open Recording Architecture open interfaces. MediaSense comprises of many elements to support IP based recording. It solves the topology issues and accelerates the adoption of Cisco Unified Communications Solutions.</p>
Agent Greeting and Whisper Announcement	<p>Agent Greeting is defined as the ability for a computer telephony integration (CTI) application (e.g. contact center) to instruct Cisco Unified Communications Manager to automatically play a pre-recorded announcement to the customer immediately following a successful media connection to the Agent device.</p> <p>Whisper Announcement is defined as the ability to play a pre-recorded announcement to an Agent right before the caller is connected. The announcement is played to the Agent only and is not heard by the customer. The announcement helps the Agent answer the call correctly.</p>
Cisco Unified Computing System	

Table 1-2 Contact Center Components in Cisco Unified Communications System (continued)

Component/Application/Feature	Purpose
Cisco Unified Computing System	<p>The Cisco Unified Computing System (UCS) is a data center platform that unites computing, networking, storage access, and virtualization into a cohesive system and integrates a low-latency, lossless 10 Gb Ethernet unified network fabric with enterprise-class, x86-architecture servers.</p> <p>It includes products such as blade servers, network adapters, blade server chassis, fabric interconnect and extenders and UCS Manager, which provides centralized management capabilities for the Cisco Unified Computing System.</p>
UCS C-series Rack Mount Server	<p>The Unified Computing System (UCS) family expands to include the C-Series Rack Mount Servers. The Cisco Unified Computing System C210 M2 General-Purpose Rack Mount Server balances performance, density and efficiency for storage-intensive workloads. The system is built for applications such as network file servers and applications, storage servers, database servers, and content-delivery servers.</p>

For installation information on Cisco Unified Communications System Release 8.5(1) IP telephony components, see the following:

- System Installation and Upgrade for IP Telephony:
http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/UC8.5.1/ipt_system_inst_upg/suimt.pdf

System Installation Strategies

This section discusses the installation strategies for contact center components in the release set being deployed. Details of individual components installations are not described unless additional information or clarification is required.

Installation of new networks in Cisco Unified Communications contact center environments (using new hardware) is supported via a *flash-cut* or a *shrink-and-grow* approach.

Single-Stage Installation Using New Hardware (for Greenfield Deployments)

A completely new network is built using the components and software versions in the current Cisco Unified Communications System release set. The new system is operational once it is turned on and the required software is installed and initial configuration is completed.

Single-Stage Installation Using New Hardware (for Legacy Deployments)

A new network using the components and software versions in the current Cisco Unified Communications System release set is built alongside the legacy network. The new network is staged and configured to support the production environment.

In this strategy, you can implement the release versions on the new hardware and migrate all users from the existing legacy network to the new network in a single installation window using a flash-cut installation process.

Because interoperability is not required with the legacy system, components of the legacy system need not be upgraded and can remain at their original release versions. After all users have been moved to the newly installed system, the legacy system is decommissioned.

Multistage Installation using New Hardware (for Legacy Deployments)

A new network using the components and software versions in the current Cisco Unified Communications System release set is built alongside the legacy network. The new network is staged and configured to support the production environment.

This strategy uses either a flash-cut or shrink-and-grow installation process or a combination of both to:

- Deploy all the applications in one installation window (flash-cut) or in several installation windows (shrink-and-grow).
- Migrate all the users in one installation window (flash-cut) or in multiple installation windows (shrink-and-grow).

After all users have been moved to the newly installed system, the legacy system is decommissioned.

Multisite Phased Installation

For large enterprises with many sites, you can install one site at a time in multiple phases. Depending on whether it is a greenfield or legacy deployment, within each site, you can either employ the single-stage or multistage installation strategies described in this section.

Interoperability and Compatibility Portals

For information about support for legacy products and third-party product interoperability with Cisco Unified Communications contact center products, see the Cisco Interoperability Portal at:

www.cisco.com/go/interoperability

For software and hardware compatibility and interoperability information about Unified Communications Manager, Unified Contact Center Enterprise, Unified IP IVR and other Cisco Unified Communications contact center products, see the following sites:

- Cisco Unified Communications Compatibility Tool:
<http://tools.cisco.com/ITDIT/vtgsca>
- Cisco Unified Communications Manager (CallManager) Compatibility Information:
http://www.cisco.com/en/US/products/sw/voicew/ps556/products_device_support_tables_list.html
- Hardware and Software Compatibility Information for Cisco Unified Presence Release 8.5(1), including TCP and UDP port usage:
http://www.cisco.com/en/US/products/ps6837/products_device_support_tables_list.html
- *Cisco Unified Contact Center Enterprise (Unified CCE) Software Compatibility Guide*:
http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/ipccenterprise8_0_1/compatibility_matrices/guide/ipcccompat.pdf

- *Hardware and System Software Specification (Bill of Materials), Cisco Unified Intelligent Contact Management & Cisco Unified Contact Center Enterprise & Hosted Editions:*
http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/ipcccenterprise8_0_1/user/guide/icm80bom.pdf
- *Cisco Unified Contact Center Express (Cisco Unified CCX) Software and Hardware Compatibility Guide:*
http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/crs/express_compatibility/matrix/crscomtx.pdf
- *Hardware and System Software Specification for Cisco Unified Customer Voice Portal (Unified CVP), Release 8.5(1) at:*
http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_technical_reference_list.html
- *Cisco Computer Telephony Integration Option: CTI Compatibility Matrix:*
http://www.cisco.com/en/US/products/sw/custcosw/ps14/prod_technical_reference_list.html
- *Cisco 7800 Series Media Convergence Servers:*
http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html
- *Hardware and Software Interoperability Matrix for Unified Computing System (UCS) B-series Servers:*
http://www.cisco.com/en/US/docs/unified_computing/ucs/interoperability/matrix/hw_sw_interop_matrix_seriesB_111.pdf
- *Hardware and Software Interoperability Matrix for Unified Computing System (UCS) C-series Servers:*
http://www.cisco.com/en/US/docs/unified_computing/ucs/interoperability/matrix/hw_sw_interop_matrix_seriesC_101.pdf
- *Cisco Unified Communications Manager Server Support Matrix:*
http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure0900aecd8062a4f9.html
- *Cisco Unified Communications Virtualization (including links to UCS hardware information):*
www.cisco.com/go/uc-virtualized
- *Cisco Unified Communications System Release Summary Matrix for Contact Center:*
http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/unified/communications/system/versions/CCMtrix.html
- *IP Communications System Test Release:*
http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/GB_resources/ipcmtrix.htm

