



CHAPTER 3

Performing Your System Installation

This topic provides guidance for the installation order of components for a Cisco Unified Communications System Release 8.5(1) contact center deployment. This information is to be used with the information from the planning and design phases as input to the implementation plan. The implementation plan drives the staging, phases and deadlines of the system installation.

This document does not describe installation procedures for individual components. This information is included in the installation documents for the components. See [Related Documentation](#) for references to these documents.

This topic contains the following sections:

- [Deployment Models](#)
- [Installing Components](#)
- [Postinstallation Tasks](#)
- [Related Documentation](#)



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.

Deployment Models

This section describes the general order of installation for each Cisco Unified Communications System deployment model. Because each model can include different components, compare these deployments to your deployment to best understand the installation process that is applicable in your environment.

The following sections list the installation sequence of components in the various deployment models in the Cisco Unified Communications contact center test environment:

- [Single Site Model](#)
- [Multisite Centralized Model](#)
- [Multisite Distributed Model](#)
- [Clustering over the WAN Model](#)

Detailed information about these contact center deployment models at different sites is available at http://www.cisco.com/cisco/web/docs/iam/unified/ipcc851/Review_Tested_Deployment_Models.html and in the following documents:

- *System Description: Cisco Unified Communications Release 8.5(1)* at: http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/UC8.5.1/system_description/SD851.pdf
- *Cisco Unified Contact Center Enterprise Solution Reference Network Design (SRND)* at: http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/ipccenterprise8_0_1/design/guide/uccesrnd80.pdf

After you determine the general installation sequence for your deployment model, use one of the installation strategies that is described in [Installing Components](#) to install your components.

Single Site Model

A single site deployment refers to any scenario where all voice gateways, agents, desktops, phones, and call processing servers (Unified Communications Manager, Unified ICME/Unified CCE, and Unified IP IVR, Unified CCX or Unified CVP) are located at the same site and have no WAN connectivity between any Unified CCE software modules.

In the single site model, be aware of the following installation order for:

1. Infrastructure components such as:
 - Core and access switches and routers
 - Voice and data gateways and gatekeepers/proxy servers
 - Cisco Unified Presence (as a SIP Proxy Server for Unified CVP implementation)
 - Security components
 - Wireless LAN Controllers and Access Point(s)
2. Directory and network service components such as:
 - Domain Controllers (including Active Directory)
 - LDAP Directory
 - NTP Server
 - DHCP Server
 - DNS Server
 - TFTP Server
3. Network Management applications such as:
 - Cisco Unified Operations Manager
 - Cisco Unified ICME Support Tools Server
4. Call processing components such as:
 - Cisco Unified Communications Manager
 - Cisco Unified IP Phones
 - Cisco Unified IP Communicator
 - Cisco IME

5. Messaging components such as:
 - Cisco Unity Connection
 - Voice Recognition Server
6. Media resource components such as:
 - Music-On-Hold servers
 - Transcoders
 - Conference bridges
 - Media termination points
7. Contact Center components such as:
 - Cisco Unified ICM system (CallRouter, Logger, Peripheral Gateway, CTI OS and Cisco Agent Desktop (CAD) servers)
 - Real-time Administration Workstation (at least one)
 - Cisco Unified Outbound Dialer
 - CTI OS Agent and Supervisor Desktop
 - Cisco Agent Desktop (CAD) and Cisco Supervisor Desktop (CSD)
 - VoIP Monitor
 - Cisco Unified Customer Voice Portal (CVP) Voice Browser/Application Server/ HTTP Media Server or Cisco Unified IP IVR
 - Expert Advisor
 - Cisco Unified Intelligence Center
 - Cisco MediaSense
8. Cisco applications co-resident on MCS servers (such as Cisco Security Agent, etc.)
9. Third-party on-board agents on MCS servers (such as antivirus, backup agent, management agent (SNMP))



Note If using MCS servers for Unified Communications Manager Release 8.5(1), third-party on-board agents must be installed on a separate MCS server.

Multisite Centralized Model

A multi-site deployment with centralized call processing refers to any scenario where call processing servers (Unified Communications Manager, Unified ICME, and Unified IP IVR, Unified CCX, or Unified CVP) are located at the same site, while any combination of voice gateways, agents, desktops, and phones are located remotely across a WAN link or centrally.

In the multisite centralized model, install the central site first and then install the remote sites.

Central Site

In the central site, be aware of the following installation order for:

1. Infrastructure components such as:
 - Core and access switches and routers

- Voice and data gateways and gatekeepers/proxy servers
 - Cisco Unified Presence (as a SIP Proxy Server for Unified CVP implementation)
 - Security components
 - Wireless LAN Controllers and Access Point(s)
2. Directory and network service components such as:
 - Domain Controllers (including Active Directory)
 - LDAP Directory
 - NTP Server
 - DHCP Server
 - DNS Server
 - TFTP Server
 3. Network Management applications such as:
 - Cisco Unified Operations Manager
 - Cisco Unified ICME Support Tools Server
 4. Call processing components such as:
 - Cisco Unified Communications Manager
 - Cisco Unified IP Phones
 - Cisco Unified IP Communicator
 - Cisco IME
 5. Messaging components such as:
 - Cisco Unity Connection
 - Voice Recognition Server
 6. Media resource components such as:
 - Music-On-Hold servers
 - Transcoders
 - Conference bridges
 - Media termination points
 7. Contact Center components such as:
 - Cisco Unified ICM system (CallRouter, Logger, Peripheral Gateway, CTI OS and Cisco Agent Desktop (CAD) servers)
 - Real-time Administration Workstation (at least one)
 - Cisco Unified Outbound Dialer
 - CTI OS Agent and Supervisor Desktop
 - Cisco Agent Desktop (CAD) and Cisco Supervisor Desktop (CSD)
 - VoIP Monitor
 - Cisco Unified Customer Voice Portal (CVP) Voice Browser/Application Server/ HTTP Media Server or Cisco Unified IP IVR
 - Expert Advisor

- Cisco Unified Intelligence Center
 - Cisco MediaSense
8. Cisco applications co-resident on MCS servers (such as Cisco Security Agent, etc.)
 9. Third-party on-board agents on MCS servers (such as antivirus, backup agent, management agent (SNMP))



Note If using MCS servers for Unified Communications Manager Release 8.5(1), third-party on-board agents must be installed on a separate MCS server.

Remote Site

For the remote site(s), be aware of the following installation order for:

1. Infrastructure components such as:
 - Access switches
 - Voice and data gateways
 - Cisco Secure ASA Firewall and Cisco Catalyst Firewall Services Module (FWSM)
 - Cisco wireless LAN Controller(s) and Aironet Access Point(s)
2. CTI OS Agent and Supervisor Desktop
3. Cisco Agent Desktop and Cisco Supervisor Desktop

Multisite Distributed Model

In this model, each site has its own Unified Communications Manager cluster, treatment and queue points, Peripheral Gateways, and CTI Server. However, as with the centralized call processing model, sites could be deployed with or without local voice gateways. Some deployments may also contain a combination of distributed voice gateways (possibly for locally dialed calls) and centralized voice gateways (possibly for toll-free calls) as well as centralized or distributed treatment and queue points. The multisite distributed model includes several Unified CCE and Unified Communications Manager cluster sites interconnected by ICT or H.323 trunks.

Install the components in each cluster site and any small remote sites as listed in the [Multisite Centralized Model](#) section.



Note Treat the installation of each cluster site as a separate stage in the overall system installation.

Clustering over the WAN Model

In the Clustering over the WAN (CoW) model, a single Unified Communications Manager cluster with its subscriber servers and Unified CCE components are split across multiple sites connected via a QoS-enabled WAN. This model provides the redundancy of the distributed model with the simplicity of administering a single Unified Communications Manager cluster and Unified CCE installation.

Install the central sites first where CoW is implemented and then install any remote sites as listed in the [Multisite Centralized Model](#) section.

**Note**

Install clustered components in the same installation period and stage at each of the central sites.

Installing Components

After you review the general install sequence for your specific deployment model, install your components based on the following installation strategies:

- **Single-Stage Installation**—Recommended for small single-site and multisite deployments.
- **Multistage System Installation**—Recommended for medium and large single-site and medium multisite deployments.
- **Multisite Phased installation**—To install large, multisite contact center deployments to the Cisco Unified Communications release set using the multisite phased installation strategy, you can use either the single-stage or multistage system installation information listed in this section.

See [Chapter 1, “Planning Your System Installation”](#) for additional information about the above installation strategies and [Chapter 2, “Preparing for Your System Installation”](#) for the software release versions of the components in the release set being installed.

**Note**

After you install the system software and applications, you may also need to install client software such as CTI OS and CAD desktop software, and others on the client desktops.

To install each component, see the product-specific installation document for the relevant release for detailed information. See [Related Documentation](#) for a list of this documentation.

Single-Stage Installation

The single-stage installation process is recommended for small single-site and multisite installations and can be performed in a single installation window.

[Table 3-1](#) lists the recommended order in which to install components. See [Chapter 2, “Preparing for Your System Installation”](#) for the software release versions of the components in the release set being installed.

Table 3-1 *Single-stage Installation Order for Contact Center Components*

Order	Components Being Installed
1	Switches and routers
2	Voice and data gateways and gatekeepers/proxy servers
3	Security components
4	Wireless components
5	Directory and network services
6	Network management components
7	Call processing components
8	Messaging components
9	Media resources

Table 3-1 Single-stage Installation Order for Contact Center Components (continued)

Order	Components Being Installed (continued)
10	Contact center routing components
11	Agent management components
12	Agent desktop client software
13	Queuing and self-service components ¹ and reporting applications
14	Cisco application
15	Third-party on-board agents ²

1. In most deployments, you need to install only one of these queuing and call treatment components. However, if you want to deploy a parent and child model, you can install both components.
2. If using MCS servers for Unified Communications Manager Release 8.5(1), third-party on-board agents must be installed on a separate MCS server.

Multistage System Installation

A multistage system installation is the recommended approach for medium and large single-site and medium multisite installations. In this installation process, components are grouped together for installing in several stages or installation windows. Within each installation window, there is a recommended order for installing each component.

The grouping of the components into the stages may vary depending on the size of the networks being installed. For smaller networks, several separate installation windows may be collapsed into a single installation window. Additional stages may be necessary for larger sites.

After each installation window, we recommend that you verify that the interoperability of the installed components before you initiate the next installation stage listed in the table. We also recommend that you maintain a list to track the components that have been installed and the ones yet to be installed.

[Table 3-2](#) lists the recommended order in which to install components in stages and the sequence within each stage. See [Chapter 2, “Preparing for Your System Installation”](#) for the software release versions of the components in the release set.

Table 3-2 Multistage System Installation Order for Contact Center Components

Stage	Component Groupings	Installation Order of Components in Each Stage
1	Switches and Routers	<ol style="list-style-type: none"> 1. Core Switches 2. Access Switches
	Voice and data gateways and gatekeepers/proxy servers	<ol style="list-style-type: none"> 1. IOS Gateways (SIP, MGCP and H.323) 2. Cisco Unified CVP VXML Gateway 3. IOS Gatekeepers/Proxy Servers 4. Cisco Unified Border Element
	Security components	<ol style="list-style-type: none"> 1. Cisco Unified Presence (as a SIP Proxy Server for Unified CVP implementation) 2. Cisco Adaptive Security Appliance (ASA) 5540 Services 3. Cisco Adaptive Security Appliance 5500 AIP Security Services Module (IPS)

Table 3-2 *Multistage System Installation Order for Contact Center Components (continued)*

Stage	Component Groupings	Installation Order of Components in Each Stage
	Wireless components	1. Cisco Aironet Access Point 1240AG
	Directory and network service components	1. Domain Controllers (including Active Directory) 2. LDAP Directory 3. NTP Server 4. DHCP Server 5. DNS Server 6. TFTP Server
	Network management components	1. Cisco Unified Operations Manager 2. Cisco Unified ICME Support Tools Server
	Call processing components	1. Cisco Unified Communications Manager 2. Cisco Unified IP Phones 3. Cisco Unified IP Communicator 4. Cisco IME
	Messaging components	1. Cisco Unity Connection 2. Voice Recognition Server
	Media components	1. Music-On-Hold servers 2. Conference bridges 3. Transcoders 4. Media termination points
	Contact center routing components	1. Cisco Unified ICM system (Call Router, Logger, Peripheral Gateway) 2. Real Time AW/HDS/Webview 3. Cisco Unified Expert Advisor 4. Peripheral Gateways, Unified SCCG, Unified CCGE
	Agent Management components ¹	1. CTI OS Server 2. CAD Server 3. Cisco Unified Outbound Dialer
	Agent Desktop client software	1. CTI OS Agent/Supervisor Desktop 2. CAD Agent/Supervisor Desktop
	Queuing and self-service components ² and reporting applications	1. Cisco Unified CVP Voice Browser/Application Server/HTTP Media Server -or- 2. Unified IP IVR 3. Cisco Unified Intelligence Center 4. Cisco MediaSense

Table 3-2 Multistage System Installation Order for Contact Center Components (continued)

Stage	Component Groupings	Installation Order of Components in Each Stage
	Cisco applications co-resident on MCS servers	1. Cisco Security Agent
	Third party on-board agents ³ on MCS servers	1. Antivirus 2. Backup agent 3. Management agent

1. In most deployments, you need to install either CTI OS or CAD systems for agent desktop capabilities.
2. In most deployments, you need to install only one of these queuing and call treatment components. However, if you want to deploy a parent and child model, you can install both Unified IP IVR and Unified CVP components.
3. If using MCS servers for Unified Communications Manager Release 8.5(1), third party on-board agents must be installed on a separate MCS server.

Postinstallation Tasks

After you complete the tasks in the implement phase and install the contact center components in the Cisco Unified Communications System release set, be aware of the following postinstallation phases and related tasks.



Note

See the Cisco Unified Communications System Technical Information Site at <http://www.cisco.com/go/unified-techinfo> for comprehensive system-level deployment and lifecycle model information.

Implement Phase

Configure the newly-installed contact center system using the configuration information available at: http://docwiki.cisco.com/wiki/Category:Unified_Communications_System_Implementation

Operate Phase

Ensure that the newly-installed contact center system is fully operational by performing tasks that include the following:

- Manage the newly installed network by conducting:
 - Fault and performance management at the platform level—Use the Real-Time Monitoring Tool (RTMT), which is a client application, to monitor CPU, memory, disk space, processes, and critical services. Cisco Unified Analysis Manager (Unified Analysis Manager) is a new application included with RTMT that collects troubleshooting information from your system and provides an analysis of that information.
 - Network management at the system level—Use Unified Operations Manager to perform SNMP/HTTP/syslog monitoring, track device and inventory status, and monitor logical relationships and physical connectivity in the network.
- Conduct Day 1 operations (cutover to customer) tasks such as:
 - Train administrators to support end-users to use the newly installed contact center system.
 - Provide documentation including as-builts, equipment inventory lists, topology diagrams, and unique design or feature considerations.
 - Explain the engagement process with Technical Assistance Center (TAC) support and the tasks to perform before contacting TAC.

- Conduct Day 2 operations (post-cutover) tasks such as:
 - Enforce security with the appropriate anti-virus security software, where applicable.
 - Provision for system password synchronization and maintenance.
 - Implement data backup and restore. For more information, see Backing up and Restoring Components at: http://www.cisco.com/cisco/web/docs/iam/unified/ipcc851/Backing_Up_and_Restoring_Components.html
 - Ensure that a change control process exists within the customer's organization.
 - Plan for release set management and system and security patches updates.

Optimize Phase

During this phase, perform system optimization tasks such as:

- Tune and resize the network for better performance
- Perform configuration cleanup procedures such as deleting user IDs that are no longer in use.
- Set trace logs and reporting levels to ensure optimal performance.

Related Documentation

The following sections list compatibility guides and installation documentation for Cisco Unified Communications System components:

- [Compatibility Guides](#)
- [Component Release Notes and Installation and Upgrade Documents](#)

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

Compatibility Guides

For 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/ipccenterprise8_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

Component Release Notes and Installation and Upgrade Documents

Table 3-3 provides a listing of contact center components and URLs for related component release notes and installation and upgrade documents.

Table 3-3 *Component-Specific Release Notes and Installation and Upgrade Documents*

Components	Release Notes	Installation and Upgrade Documents
Cisco Unified Communications Manager	http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_installation_guides_list.html
Cisco Unified Presence	http://www.cisco.com/en/US/products/ps6837/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6837/prod_installation_guides_list.html

Table 3-3 Component-Specific Release Notes and Installation and Upgrade Documents

Components	Release Notes	Installation and Upgrade Documents
Cisco Unified SIP Proxy	http://www.cisco.com/en/US/products/ps10475/prod_release_notes_list.html	—
Cisco Unified Intelligent Contact Management	http://www.cisco.com/en/US/products/sw/custcosw/ps1001/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps1001/prod_installation_guides_list.html
Cisco Unified Contact Center Enterprise	http://www.cisco.com/en/US/products/sw/custcosw/ps1844/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps1844/prod_installation_guides_list.html
Cisco Unified Contact Center Express and Cisco Unified IP IVR	http://www.cisco.com/en/US/products/sw/custcosw/ps1846/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps1846/prod_installation_guides_list.html
Cisco Customer Voice Portal	http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_installation_guides_list.html
Cisco Outbound Option	http://www.cisco.com/en/US/products/sw/custcosw/ps1001/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps524/prod_installation_guides_list.html
Cisco Telephony Integration Object Server (CTI OS)	http://www.cisco.com/en/US/products/sw/custcosw/ps14/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps14/prod_installation_guides_list.html
Cisco Agent Desktop (CAD)	http://www.cisco.com/en/US/products/sw/custcosw/ps427/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/custcosw/ps427/prod_installation_guides_list.html
Cisco Unified Expert Advisor	http://www.cisco.com/en/US/products/ps9675/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps9675/tsd_products_support_install_and_upgrade.html
Cisco Unified Intelligence Center	http://www.cisco.com/en/US/products/ps9755/prod_release_notes_list.html	—
Cisco Unified Personal Communicator	http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6844/prod_installation_guides_list.html
Cisco Unified Operations Manager	http://www.cisco.com/en/US/products/ps6535/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6535/prod_installation_guides_list.html
Cisco MediaSense	http://www.cisco.com/en/US/products/ps11389/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps11389/prod_installation_guides_list.html
Cisco Unified Computing System	http://www.cisco.com/en/US/products/ps10477/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps10477/prod_installation_guides_list.html
Cisco ASA 5500 Series Adaptive Security Appliances	http://www.cisco.com/en/US/products/ps6120/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6120/tsd_products_support_install_and_upgrade.html

Table 3-3 Component-Specific Release Notes and Installation and Upgrade Documents

Components	Release Notes	Installation and Upgrade Documents
Cisco Security Agent	http://www.cisco.com/en/US/products/sw/secursw/ps5057/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/secursw/ps5057/tsd_products_support_install_and_upgrade.html
Cisco Adaptive Security Appliance 5500 AIP Security Services Module (IPS)	http://www.cisco.com/en/US/prod/collateral/vpndevc/ps5729/ps5713/ps4077/data_sheet_c78-459036_ps4077_Products_Data_Sheet.html	—
Cisco Series 800 Routers	http://www.cisco.com/en/US/products/hw/routers/ps380/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/routers/ps380/prod_installation_guides_list.html
Cisco 2800 Series Integrated Services Routers	—	http://www.cisco.com/en/US/products/ps5854/prod_installation_guides_list.html
Cisco Series 7200 Routers	http://www.cisco.com/en/US/products/hw/routers/ps341/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/routers/ps341/prod_installation_guides_list.html
Cisco Catalyst 3600 Series MultiService Platforms	—	http://www.cisco.com/en/US/products/hw/routers/ps274/prod_installation_guides_list.html
Cisco AS5400 Series Universal Gateways	http://www.cisco.com/en/US/products/hw/univgate/ps505/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/univgate/ps505/prod_installation_guides_list.html
Cisco 3800 Series Voice Gateways	http://www.cisco.com/en/US/products/ps5855/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps5855/prod_installation_guides_list.html
Cisco VGD 1T3 Voice Gateway	—	http://www.cisco.com/en/US/products/ps9890/prod_installation_guides_list.html
Cisco Catalyst 3750 Series Access Switches	http://www.cisco.com/en/US/products/hw/switches/ps5023/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/switches/ps5023/prod_installation_guides_list.html
Cisco Catalyst 6500 Series Switches	http://www.cisco.com/en/US/products/hw/switches/ps708/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/switches/ps708/prod_installation_guides_list.html
Cisco Unified IP Phone 9900 Series	http://www.cisco.com/en/US/products/ps10453/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps10453/prod_installation_guides_list.html
Cisco Unified IP Phone 8900 Series	http://www.cisco.com/en/US/products/ps10451/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps10451/prod_installation_guides_list.html
Cisco Unified IP Phone 7900 Series	http://www.cisco.com/en/US/products/hw/phones/ps379/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/switches/ps646/prod_installation_guides_list.html

Table 3-3 *Component-Specific Release Notes and Installation and Upgrade Documents*

Components	Release Notes	Installation and Upgrade Documents
Cisco Unified IP Phone 6900 Series	http://www.cisco.com/en/US/products/products10326/prod_release_notes_list.html	—
Cisco Aironet Access Point 1240AG	http://www.cisco.com/en/US/products/products6521/prod_release_notes_list.html	http://www.cisco.com/en/US/products/products6521/prod_installation_guides_list.html
Cisco IOS Software Releases 15.1	http://www.cisco.com/en/US/products/products10592/prod_release_notes_list.html	—