

Upgrading IPT Software Components

This topic discusses in more detail the upgrade sequence for all the IP telephony (IPT) components configured in specific deployment models for Cisco Unified Communications Release 5.0.

Upgrade procedures for individual IPT components are not described in this document, since they are available in individual component upgrade documents. See the [Related Documentation](#) section at the end of this topic for the appropriate upgrade documents and their URLs.

This topic contains the following sections:

- [IPT Deployment Models](#)
- [Upgrading IPT Components](#)
- [Related Documentation](#)

IPT Deployment Models

Upgrade procedures in this document are specifically tailored for each of the deployment models in the IPT test environment, since each of the sites includes different components.

Detailed information about IPT deployment models that are tested for Cisco Unified Communications Release 5.0 is available in the *System Architecture Reference Manual for IP Telephony* at: <http://www.cisco.com/univercd/cc/td/doc/systems/unified/unified1/starmipt/index.htm>

Listed below are the various deployment models possible in the Cisco Unified Communications IPT test environment:

- [Single Site](#)
- [Multi-Site Centralized and SRST](#)
- [Multi-Site WAN Distributed](#)

Compare the above deployments to your specific deployment to best understand the upgrade process that is applicable in your environment.

This section provides the general upgrade sequence for the various components in the different deployment models. More detailed upgrade procedures are discussed later in this topic.

Single Site

In the IPT single site model, upgrade the components in the following order:

1. Infrastructure components including Catalyst 6K switches and routers
2. CRS (IPCC Express)
3. Cisco CallManager servers (Cisco IP Phones are upgraded at the same time), including Cisco CallManager Express
4. Cisco Emergency Responder and Music On Hold
5. Analog Gateways (VG224, VG248)
6. PSTN Gateways (IOS, Communications Media Module)
7. Gatekeepers
8. Cisco MeetingPlace
9. Cisco Unity
10. Video components
11. Cisco applications co-resident on Media Convergence Servers (MCS) (such as Cisco Security Agent, JTAPI software, etc.)
12. Third-party applications co-resident on MCS servers (Antivirus, Backup agent, Management agent (SNMP), etc.)

**Note**

For Unified CallManager Release 5.0(2), co-residency of third-party applications is not supported.

13. Cisco and third-party adjunct applications or endpoints on other servers (MIND CTI, Tandberg, etc.)

Multi-Site Centralized and SRST

You must first upgrade central sites followed by the remote SRST sites in the multi-site centralized model.

In each central site, upgrade the components in the following order:

1. Infrastructure components including Catalyst 6K switches and routers
2. CRS (IPCC Express)
3. Cisco CallManager servers (Cisco IP Phones are upgraded at the same time), including Cisco CallManager Express
4. Cisco Emergency Responder and Music On Hold
5. ICT Gateways
6. Analog Gateways (VG224, VG248)
7. PSTN Gateways (IOS, Communications Media Module)
8. Gatekeepers
9. Cisco MeetingPlace
10. Cisco Unity
11. Video components

12. Cisco applications co-resident on Media Convergence servers (MCS servers) (such as Cisco Security Agent, JTAPI software, etc.)
13. Third-party applications co-resident on MCS servers (Antivirus, Backup agent, Management agent (SNMP), etc.)

**Note**

For Unified CallManager Release 5.0(2), co-residency of third-party applications is not supported.

14. Cisco and third-party adjunct applications or endpoints on other servers (MIND CTI, Tandberg, etc.)

In each remote site, upgrade the components in the following order:

1. Infrastructure components including Catalyst 6K switches and routers
2. Analog Gateways (VG224, VG248)
3. PSTN Gateways (IOS, Communications Media Module)
4. Cisco IP Phones (are upgraded along with the Cisco CallManager clusters)
5. Cisco applications co-resident on MCS servers (such as Cisco Security Agent, JTAPI software, etc.)
6. Third-party applications co-resident on MCS servers (Antivirus, Backup agent, Management agent (SNMP), etc.)

**Note**

For Unified CallManager Release 5.0(2), co-residency of third-party applications is not supported.

7. Cisco and third-party adjunct applications or endpoints on other servers (MIND CTI, Tandberg, etc.)

Multi-Site WAN Distributed

The multi-site distributed model includes several Cisco CallManager cluster sites inter-connected by ICT or H.323 trunks.

You should treat the upgrade of each site as a separate stage in the overall upgrade process.

Upgrade the components within each site in the following order:

1. Infrastructure components including Catalyst 6K switches and routers
2. CRS (IPCC Express)
3. Cisco CallManager servers (Cisco IP Phones are upgraded at the same time)
4. Cisco Emergency Responder and Music On Hold
5. Analog Gateways (VG224, VG248)
6. PSTN Gateways (IOS, Communications Media Module)
7. Gatekeepers
8. Cisco CallManager Express
9. Cisco MeetingPlace
10. Cisco Unity
11. Video components
12. Cisco applications co-resident on MCS servers (such as Cisco Security Agent, JTAPI software, etc.)

13. Third-party applications co-resident on MCS servers (Antivirus, Backup agent, Management agent (SNMP), etc.)

**Note**

For Unified CallManager Release 5.0(2), co-residency of third-party applications is not supported.

14. Cisco and third-party adjunct applications or endpoints on other servers (MIND CTI, Tandberg, etc.)

Upgrading IPT Components

This section describes the following upgrade strategies for IPT components:

- [Single Stage Upgrade](#)—Recommended for small single/multi-site installations.
- [Multi-Staged System Upgrade](#)—Recommended for medium/large single-site and medium multi-site installations.
- [Multi-Site Migration](#)—To upgrade large, multi-site IPT installations to the Cisco Unified Communications release set using the Multi-Site Migration Upgrade strategy, you can use either the Single Stage or Multi-Staged System upgrade procedures listed in this section.

See [“Planning Your System Upgrade”](#) for detailed information on the above upgrade strategies and [Chapter 2, “Preparing for System Upgrade”](#) for the software release versions of the components involved in the upgrade. For more information about the number of seats in these various types of sites, see [Table 1-1 the Summary of Upgrade Strategies table](#) in [“Planning Your System Upgrade.”](#)

Single Stage Upgrade

The Single Stage upgrade process is recommended for small single/multi-site installations and can be performed in a single maintenance window. This enables you to upgrade all the components in a brief period of time with no loss of functionality.

North America IPT Components

In a North America IPT environment, you should upgrade the components in the order listed in [Table 3-1](#).

Table 3-1 *Single Stage Upgrade Order for North America IPT Components*

Order of Upgrade	Components being Upgraded
1	Cisco Catalyst 6506 (core switch)
2	Cisco Catalyst 6509 (access switch)
3	CRS (IPCC Express)
4	Cisco CallManager cluster (Cisco IP Phones, Cisco IP Communicator, and Cisco ATA186/188 analog telephony adapters are upgraded along with cluster)
5	Cisco Emergency Responder
6	Music on Hold
7	Cisco Catalyst 6K FXS Gateway

Table 3-1 *Single Stage Upgrade Order for North America IPT Components (continued)*

Order of Upgrade	Components being Upgraded
8	IOS Gateway (MGCP)
9	IOS Gateway (H.323)
10	Cisco Communications Media Module
11	Cisco VG248 (analog voice gateway)
12	Cisco VG244 (analog voice gateway)
13	Cisco 3745 Gatekeeper
14	Cisco MeetingPlace
15	Cisco Unity
16	Windows Exchange 2000
17	Domain Controller (including Active Directory)
18	Cisco Catalyst 6K Gateway for Unity Bridge
19	Cisco Unity Bridge Server
20	Tandberg T1000 (Video Endpoints)
21	IP/VC MCU 3540
22	Cisco VT Advantage (Video PC Endpoint)
23	Cisco Aironet Access Point 1200

EUEM IPT Components

In an EUEM IPT environment, you should upgrade the components in the order listed in [Table 3-2](#).

Table 3-2 *Single Stage Upgrade Order for EUEM IPT Components*

Order of Upgrade	Components being Upgraded
1	Cisco Catalyst 6506 (core switch)
2	Cisco Catalyst 3524 (access switch)
3	Cisco CallManager cluster (Cisco IP Phones, Cisco IP Communicator, and Cisco ATA 186/188 analog telephony adapters are upgraded along with cluster)
4	Cisco CallManager Express
5	Cisco Catalyst 6K FXS Gateway
6	IOS Gateway (MGCP)
7	IOS Gateway (H.323)
8	IOS Gateway
9	IOS Gatekeeper
10	Cisco VG248 (analog voice gateway)
11	Cisco VG224 (analog voice gateway)
12	Cisco Unity-IBM/Lotus Domino

Table 3-2 *Single Stage Upgrade Order for EUEM IPT Components (continued)*

Order of Upgrade	Components being Upgraded
13	Windows Exchange 2000
14	Domain Controller (including Active Directory)
15	Tandberg T1000 (Video Endpoints)
16	IP/VC MCU 3511
17	IP/VC H.323 Gateway 3526
18	IP/VC Gatekeeper 3725
19	Cisco VT Advantage (Video PC Endpoint)
20	Cisco Aironet Access Point 1200

Multi-Staged System Upgrade

A Multi-Staged System upgrade is the recommended approach for medium/large single-site and medium multi-site installations.

In this upgrade process, components are grouped together for upgrading in several stages or maintenance windows. Within each maintenance window, there is a recommended order for upgrading each component.

The grouping of the components into the stages may vary depending on the size of the network being upgraded. For smaller networks, one or more separate maintenance windows may be collapsed into a single maintenance window. Additional stages may be necessary for larger sites.

After each maintenance window, we recommend that you verify that the operation of all basic and critical call types remains unaffected, before you initiate the next upgrade stage listed.

See [Chapter 2, “Preparing for System Upgrade”](#) for the software release versions of the components involved in the upgrade.

North America IPT Components

In a North America IPT environment, the stages and the components you should upgrade during each stage are listed in [Table 3-3](#):

Table 3-3 Multi-Staged System Upgrade Order for North America IPT Components

Stage	Component Groupings	Upgrade Order of Components in Each Stage
1	Core and Access Switches	<ol style="list-style-type: none"> 1. Core Switch 2. Access Switch
2	CRS, Cisco CallManager, Cisco Unity TSP, Cisco IP Phones, Cisco Emergency Responder, and Music On Hold	<ol style="list-style-type: none"> 1. CRS (IPCC Express) 2. Cisco CallManager (includes ATA) 3. Cisco Unity TSP 4. Cisco IP Phones 5. Cisco IP Communicator 6. Cisco Emergency Responder 7. Music On Hold
3	Gateways, Gatekeepers, and Cisco CallManager Express	<ol style="list-style-type: none"> 1. Cisco Catalyst 6K FXS Gateway 2. IOS Gateway (MGCP) 3. IOS Gateway (H.323) 4. Cisco VG248 (analog voice gateway) 5. Cisco VG244 (analog voice gateway) 6. PSTN Gateway (Communications Media Module) 7. Gatekeeper 8. Cisco CallManager Express 9. Cisco Unity Express¹ 10. Cisco MeetingPlace
4	Cisco Unity components	<ol style="list-style-type: none"> 1. Cisco Unity 2. Windows Exchange 2000 3. Domain Controller (including Active Directory) 4. Cisco Catalyst 6K Gateway for Cisco Unity Bridge Server 5. Cisco Unity Bridge Server
5	Video and Wireless components	<ol style="list-style-type: none"> 1. Tandberg T1000 (Video Endpoints) 2. IP/VC MCU 3540 3. Cisco VT Advantage (Video PC Endpoint) 4. Cisco Aironet Access Point 1200
6	Cisco applications co-resident on MCS servers	Depends on the applications being upgraded
7	Third-party applications co-resident on MCS servers	For Unified CallManager Release 5.0(2), co-residency of third-party applications is not supported
8	Cisco and third-party applications on other servers	Depends on the applications being upgraded

1. See additional compatibility information in [Cisco CallManager Upgrade and Compatibility Considerations](#).

EUEM IPT Components

In an EUEM IPT environment, the stages and the components you should upgrade during each stage are listed in [Table 3-4](#):

Table 3-4 Multi-Staged System Upgrade Order for EUEM IPT Components

Stage	Component Groupings	Upgrade Order of Components in Each Stage
1	Core and Access Switches	<ol style="list-style-type: none"> 1. Core Switch 2. Access Switch
2	CRS, Cisco CallManager, Cisco Unity TSP, Cisco IP Phones, Cisco Emergency Responder, and Music On Hold	<ol style="list-style-type: none"> 1. CRS (IPCC Express) 2. Cisco CallManager (includes ATA) 3. Cisco Unity TSP 4. Cisco IP Phones 5. Cisco IP Communicator 6. Cisco Emergency Responder 7. Music On Hold
3	Gateways, Gatekeepers, and Cisco CallManager Express	<ol style="list-style-type: none"> 1. Cisco Catalyst 6K FXS Gateway 2. IOS Gateway (MGCP) 3. IOS Gateway (H.323) 4. Cisco VG248 (analog voice gateway) 5. Cisco VG244 (analog voice gateway) 6. Gatekeeper 7. Cisco CallManager Express 8. Cisco Unity Express¹
4	Cisco Unity components	<ol style="list-style-type: none"> 1. Cisco Unity 2. Windows Exchange 2000 3. Domain Controller (including Active Directory) 4. Cisco Catalyst 6K Gateway for Unity Bridge 5. Cisco Unity Bridge Server
5	Video and Wireless components	<ol style="list-style-type: none"> 1. Tandberg T1000 (Video Endpoints) 2. IP/VC MCU 3511 3. Cisco VT Advantage (Video PC Endpoint) 4. Cisco Aironet Access Point (AP) 1200
6	Cisco applications co-resident on MCS servers	Depends on the applications being upgraded
7	Third-party applications co-resident on MCS servers	For Unified CallManager Release 5.0(2), co-residency of third-party applications is not supported
8	Cisco and third-party applications on other servers	Depends on the applications being upgraded

1. See additional compatibility information in [Cisco CallManager Upgrade and Compatibility Considerations](#).

Related Documentation

Compatibility Documentation

- *Cisco CallManager Compatibility Matrix:*
http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm
- *Cisco Unity and the Software on Subscriber Workstations:*
http://www.cisco.com/en/US/docs/voice_ip_comm/unity/compatibility/matrix/cuclientmtx.html
- *Cisco Unity, the Cisco Unity-CM TSP, Cisco CallManager, and Cisco CallManager Express:*
http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/cmptblty/tspmtrx.htm
- *Cisco Response Solutions (CRS) Software and Hardware Compatibility Guide:*
http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/crscomtx.pdf
- *Cisco CallManager Express and Cisco IOS Software Version Compatibility Matrix:*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/requirements/guide/33matrix.htm

Cisco CallManager Installation and Upgrade Documentation

- *Release Notes for Cisco Unified CallManager Release 5.0(2):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/rel_notes/5_0_2/502cmrn.html
- *Installing Cisco Unified CallManager Release 5.0(2):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/install/5_0/cm502.html
- *Upgrading Cisco Unified CallManager Release 5.0(2):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/upgrade/5_0/upgrd502.html
- *Disaster Recovery System Administration Guide Release 5.0(2):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/drs/5_0_2/drsag502.html
- *Data Migration Assistant User Guide Release 5.0(2):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/dma/5_0_x/dmaug502.html
- *Installing Cisco IPC Express: Cisco CallManager Express and Cisco Unity Express:*
http://www.cisco.com/application/pdf/en/us/guest/products/ps4625/c2001/ccmigration_09186a0080527164.pdf
- *Installing Cisco CallManager Release 4.1(3):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/install/4_1/cm413ins.html
- *Upgrading Cisco CallManager Release 4.1(3):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/upgrade/4_1_3/upg413.html
- *Using Cisco CallManager Upgrade Assistant Utility 4.1(3):*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/upgrade/assistant/up413tl.html

Cisco Unity Installation and Upgrade Documentation

- *Cisco Unity Install and Upgrade Guides:*
http://www.cisco.com/en/US/products/sw/voicew/ps2237/prod_installation_guides_list.html
- *Cisco Unity Express Installation and Upgrades:*
http://www.cisco.com/en/US/docs/voice_ip_comm/unity_exp/installation/note/CUEinu.html

- *Installing Cisco IPC Express: Cisco CallManager Express and Cisco Unity Express:*
http://www.cisco.com/application/pdf/en/us/guest/products/ps4625/c2001/ccmigration_09186a0080527164.pdf

Cisco MeetingPlace and IP/VC Documentation

- *Installation Planning Guide for Cisco MeetingPlace:*
http://www.cisco.com/en/US/docs/voice_ip_comm/meetingplace/5_3/english/installation/planning/guide/53ipg.html
- *Administrator's Installation, Upgrade, and Troubleshooting Guide for Cisco MeetingPlace Express:*
http://www.cisco.com/en/US/docs/voice_ip_comm/meetingplace_express/1_1/english/installation/guide/iutg1216.pdf
- *Cisco IP/VC 3500 Series Videoconferencing Products Install and Upgrade Guides:*
http://www.cisco.com/en/US/products/hw/video/ps1870/prod_installation_guides_list.html

CRS and IPCC Express Installation and Upgrade Documentation

- *Known Upgrade Issues in Release Notes:*
http://www.cisco.com/application/pdf/en/us/guest/products/ps6879/c1178/ccmigration_09186a008063b195.pdf
- *Cisco CRS Installation Guide:*
http://www.cisco.com/application/pdf/en/us/guest/products/ps6879/c1097/ccmigration_09186a0080610e12.pdf
- *Getting Started with Cisco IPCC Express Edition:*
http://www.cisco.com/application/pdf/en/us/guest/products/ps6879/c1689/ccmigration_09186a0080611815.pdf
- *Backup and Restore System for Cisco Customer Response Solutions 4.5:*
http://www.cisco.com/application/pdf/en/us/guest/products/ps6879/c1097/ccmigration_09186a0080612a78.pdf