



CHAPTER 6

Performing Your System Upgrade

This section discusses in detail the upgrade sequence for all of the IP telephony components that are configured in various deployment models for Cisco Unified Communications System Release 8.5(1).

Upgrade procedures for individual IP telephony components are not described in this document as they are available in individual component upgrade product documents. See the [Related Documentation](#) section for appropriate product upgrade documents.

This topic contains the following sections:

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



Note

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

IP Telephony Deployment Models

The upgrade procedures in this document are tailored for each deployment model in the IP telephony test environment, because each site includes different components.

The following IP telephony site models were tested in the Cisco Unified Communications System test environment:

- [Unified Communications Manager IP Telephony Model](#)
- [Unified Communications Manager Business Edition IP Telephony Model](#)

Unified Communications Manager IP Telephony Model

This section provide the upgrade procedure for the various IP telephony components in the enterprise deployment models.

Detailed information about IP telephony deployments and site models that are tested for the target release is available at

http://www.cisco.com/cisco/web/docs/iam/unified/ipt851/Review_Tested_Site_Models.html

The following deployment models were tested in the Cisco Unified Communications System IP telephony test environment:

- [Single-Site or Campus Deployment Model](#)
- [Multisite Centralized with SRST Model](#)
- [Multisite WAN Distributed Model](#)
- [Clustering Over the WAN Model](#)

Choose the deployment model that best matches your deployment to understand the upgrade process that best applies to your environment. The following sections provide the general upgrade sequence for the components in the each deployment model and provide other detailed upgrade procedures.

After you determine the general upgrade sequence, use one of the upgrade strategies that is described in [Upgrading IP Telephony Components](#) to upgrade your components.

Single-Site or Campus Deployment Model

In IP telephony single-site (campus) deployment model, upgrade the components in the following order:

1. Infrastructure components such as:
 - Core and access switches and routers
 - Security components such as Cisco Adaptive Security Appliance
 - Wireless LAN Controllers and Access Points
2. Gatekeepers and data/voice gateways:
 - Cisco Unified Communication Manager Express
 - IOS Gateways (MGCP, H.323, SIP)
 - IOS based transcoders and conference bridges
 - Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
 - Gatekeepers
 - Cisco Unified Border Element (formerly IPIPGW)
 - Cisco Unified SIP Proxy
 - Analog Phone Gateways (VG224, VG30D)
 - Cisco Aironet Access Points and Wireless Access Points
3. Network management tools such as Cisco Unified Operations Manager, Cisco Unified Service Monitor, Cisco Unified Service Statistics Manager, Cisco Unified Provisioning Manager.
4. Call processing components. The following components should be upgraded first in the following order:
 - a. Cisco Unified Presence
 - b. Cisco Unified Communications Manager
 - c. JTAPI on client applications (if necessary)
 - d. Cisco Security Agent and virus scanning software
 - e. Cisco Unified IP Phones Firmware (if needed) including ATA
 - f. Cisco Intercompany Media Engine (Optional)

The following call processing components can be upgraded in any order:


- Cisco Emergency Responder and Music On Hold
 - Cisco IP Communicator and Cisco Unified Personal Communicator
 - Cisco Unified Video Advantage (Video PC endpoint)
 - Cisco UC Integration for Microsoft Office Communicator
5. Queuing and self-service components such as Cisco Unified Contact Center Express and Cisco Unified Intelligence Suite.
 6. Cisco Messaging components such as Cisco Unity, Cisco Unity TSP (if required), Cisco Unity Express, Microsoft Exchange 2003, Domain Controller (including Active Directory), Cisco Unity Connection.
 7. Cisco Unified MeetingPlace components
 8. Video Endpoints SCCP/SIP/H.323/H.320 and IP/VC gateways and MCU
 9. Cisco and third-party adjunct applications or endpoints on other servers (such as SCCP video endpoints)

Multisite Centralized with SRST Model

You must first upgrade central sites followed by the remote SRST sites in the multisite centralized model.

Central Site

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

1. Infrastructure components such as:
 - Core and access switches and routers
 - Security components such as Cisco Adaptive Security Appliance
 - Wireless LAN Controllers and Access Points
 2. Gatekeepers and data/voice gateways:
 - Cisco Unified Communication Manager Express
 - PSTN Gateways (IOS)
 - Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
 - Gatekeepers
-  **Note** Gatekeeper licensing required for 3800 series integrated services routers.
- Cisco Unified Border Element (formerly IPIPGW)
 - Analog Phone Gateways (VG224, VG30D)
 - Cisco Aironet Access Points
 3. Network management tools such as Cisco Unified Operations Manager and Cisco Unified Service Monitor.
 4. Cisco Unified Presence, Cisco Unified Communications Manager, Cisco Unified IP Phones and Cisco Intercompany Media Engine
 5. Cisco Emergency Responder and Music On Hold
 6. Cisco Unified Personal Communicator and Cisco IP Communicator

7. Unified Contact Center Express
8. Cisco Unity components
9. Cisco Unified MeetingPlace components
10. Video components
11. Cisco applications co-resident on Media Convergence servers (MCSs) (such as Cisco Security Agent, JTAPI software)
12. Third-party on-board agents on MCS servers (such as antivirus, Backup agent, Management agent (SNMP))
13. Cisco and third-party adjunct applications or endpoints on other servers (such as Tandberg SCCP Video endpoints)

Remote Site

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

1. Infrastructure components including switches, routers and security components such as Cisco Adaptive Security Appliance
2. Analog Voice Gateways (VG224, VG30D)
3. PSTN Gateways (IOS)
4. Network management tools such as Cisco Unified Operations Manager and Cisco Unified Service Monitor
5. Cisco Unified Communications Manager Express or Unified SRST router/SRSV, Cisco Unified IP Phones, Cisco IP Communicator
6. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
7. SCCP/SIP/H.323/H.320 video endpoints

Multisite WAN Distributed Model

The multisite distributed model includes several Cisco Unified Communications Manager cluster sites interconnected by ICT or H.323 trunks.



Note 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 such as:
 - Core and access switches and routers
 - Security components such as Cisco Adaptive Security Appliance
 - Wireless LAN Controllers and Access Points
2. Gatekeepers and data/voice gateways:
 - Cisco Unified Communication Manager Express
 - PSTN Gateways (IOS)
 - Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
 - Gatekeepers
 - Cisco Unified Border Element (formerly IPIPGW)

- Analog Phone Gateways (VG224, VG230D)
 - Cisco Aironet Access Points
3. Network management tools such as Cisco Unified Operations Manager and Cisco Unified Service Monitor.
 4. Cisco Unified Presence, Cisco Unified Communications Manager, Cisco Unified IP Phones and Cisco Intercompany Media Engine (Optional)
 5. Cisco Emergency Responder and Music On Hold
 6. Cisco Unified Personal Communicator and Cisco IP Communicator
 7. Unified Contact Center Express
 8. Cisco Messaging Gateway, Cisco Unity components
 9. Cisco Unified MeetingPlace components
 10. Video components
 11. Cisco applications co-resident on MCSs (such as Cisco Security Agent, JTAPI software)
 12. Third-party on-board agents on MCS servers (such as antivirus, Backup agent, Management agent (SNMP))
 13. Cisco and third-party adjunct applications or endpoints on other servers (such as SCCP video endpoints)

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

1. Infrastructure components including switches, routers and security components such as Cisco Adaptive Security Appliance
2. Analog Voice Gateways (VG224, VG30D)
3. PSTN Gateways (IOS)
4. Network management tools such as Cisco Unified Operations Manager and Cisco Unified Service Monitor
5. Cisco Unified Communications Manager Express or Unified SRST router, Cisco Unified IP Phones, Cisco IP Communicator
6. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
7. SCCP/SIP/H.323/H.320 video endpoints

Clustering Over the WAN Model

In the IP telephony clustering over the WAN model, upgrade the components in the following order:

1. Infrastructure components such as:
 - Core and access switches and routers
 - Security components such as Cisco Adaptive Security Appliance
 - Wireless LAN Controllers and Access Points
2. Gatekeepers and data/voice gateways:
 - Cisco Unified Communication Manager Express
 - PSTN Gateways (IOS)
 - Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)

- Gatekeepers
 - Cisco Unified Border Element (formerly IPIPGW)
 - Analog Phone Gateways (VG224, VG30D)
 - Cisco Aironet Access Points
3. Network management tools such as Cisco Unified Operations Manager and Cisco Unified Service Monitor.
 4. Cisco Unified Presence, Cisco Unified Communications Manager, Cisco Unified IP Phones and Cisco Intercompany Media Engine (Optional)
 5. Cisco Emergency Responder and Music On Hold
 6. Cisco Unified Personal Communicator and Cisco IP Communicator
 7. Unified Contact Center Express
 8. Cisco Messaging Gateway and Unity components
 9. Cisco Unified MeetingPlace components
 10. Video components
 11. Cisco applications coresident on Media Convergence Servers (MCSs) (such as Cisco Security Agent, JTAPI software)
 12. Third-party on-board agents on MCS servers (such as antivirus, Backup agent, Management agent (SNMP))
 13. Cisco and third-party adjunct applications or endpoints on other servers (such as SCCP video endpoints)

If there are any remote sites, upgrade the components in those sites in the following order:

1. Infrastructure components including switches, routers and security components such as Cisco Adaptive Security Appliance
2. Analog Voice Gateways (VG224, VG30D)
3. PSTN Gateways (IOS)
4. Network management tools such as Cisco Unified Operations Manager and Cisco Unified Service Monitor
5. Cisco Unified Communications Manager Express or Unified SRST router, Cisco Unified IP Phones, Cisco IP Communicator
6. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
7. SCCP/SIP/H.323/H.320 video endpoints

Unified Communications Manager Business Edition IP Telephony Model

This section provides the general installation sequence for the various IP telephony components in midmarket business deployment models.

- [MultiSite Centralized with SRST or SRSV Model](#)

For more detailed information about these IP telephony deployment models, see:

http://www.cisco.com/cisco/web/docs/iam/unified/ipt851/Review_Tested_Site_Models.html

MultiSite Centralized with SRST or SRSV Model

A multisite centralized with SRST deployment refers to any scenario in which call processing servers (for example, Unified Communications Manager Business Edition) are located at the same site, while any combination of voice gateways, and phones are located remotely across a WAN link or centrally.

You must first upgrade central sites followed by the remote SRST sites in the multisite centralized model.

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

1. Infrastructure Components such as:
 - Core switches
 - Access switches
 - Security Components
 - Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
 - Cisco Wireless LAN Controller(s) and Access Points
2. Call processing components such as:
 - Cisco Unified Presence
 - Cisco Unified Communications Manager Business Edition
 - Cisco Unified Communications Manager



Note Upgrade of Cisco Unified Communication Manager in a Cisco Unified Communications Manager Business Edition site includes upgrading the co-resident Unity Connection on a UCS C-series server.

- Cisco Unified IP Phones
 - Cisco IP Communicator
 - Cisco Unified Personal Communicator
3. Media resource components such as:
 - Music on Hold
 - Transcoders
 - Conferences Bridges
 - Media Termination Points (MTPs)
 - RSVP agents
 4. Cisco Unified Contact Center Express, Cisco Unified IP Phone Agents
 5. Cisco Unity Connection and optional Voice Recognition Server
 6. Cisco Unified Business Attendant Console

For each remote site, install components in the following order:

1. Access switches
2. Security Components
3. Cisco Wireless LAN Controller(s) and Access Points

4. Cisco Unified Survival Remote Site Telephony router, Cisco Unified IP Phones, Cisco IP Communicator
5. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU)
6. SCCP/SIP/H.323/H.320 video endpoints
7. Cisco Computer Telephony Interface (CTI) OS Agent and Supervisor Desktop
8. Cisco Unified Business Attendant Console and Cisco Unified Department Attendant Console

Upgrading IP Telephony Components

This section describes the following upgrade strategies for IP telephony components:

- [Single-Stage Upgrade](#)—Recommended for small single-site or multisite installations.
- [Multistage System Upgrade](#)—Recommended for medium or large single-site and medium multisite installations.
- [Multisite Migration](#)—To upgrade large, multisite IP telephony installations to the Cisco Unified Communications System release set using the multisite migration upgrade strategy, you can use either the single-stage or multistage system upgrade procedures listed in the respective sections.

See [Chapter 4, “Planning Your System Upgrade”](#) for detailed information about these upgrade strategies and see [Chapter 5, “Preparing for Your 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 4-2 in Chapter 4, “Planning Your System Upgrade.”](#)

The upgrade paths that are available for upgrading IP telephony components are defined in [System Upgrade Paths to Cisco Unified Communications System Release 8.5\(1\)](#) in [Chapter 4, “Planning Your System Upgrade”](#)

When performing the upgrade of each component, see the product-specific upgrade document for detailed information. See the [Related Documentation](#) section for a list of URLs for component-specific release notes and installation and upgrade documents.

Single-Stage Upgrade

The single-stage upgrade process is recommended for small single-site and small multisite installations. This upgrade process can be performed in a single maintenance window, which allows you to upgrade components in a relatively short time and with no loss of functionality.

See [Chapter 5, “Preparing for Your System Upgrade,”](#) for the software release versions of the components involved in the upgrade. Based on your environment and the base release set deployed in your network, upgrade the components in the order listed in [Table 6-1](#).

Table 6-1 *Single-Stage Upgrade Order for IP Telephony Components*

Component to Upgrade	Release Set for Release			
	6.1(1)	7.1(3)	8.0(2)	8.5(1)
Cisco Catalyst 6506 (core switch)	1	1	1	1
Cisco Catalyst 6509/3524 ¹ (access switch)	2	2	2	2
Cisco Adaptive Security Appliance	3	3	3	3

Table 6-1 Single-Stage Upgrade Order for IP Telephony Components

Component to Upgrade	Release Set for Release			
	6.1(1)	7.1(3)	8.0(2)	8.5(1)
Cisco Resource Management Essentials	4	4	4	4
Cisco Unified Operations Manager and Cisco Unified Service Monitor	5	5	5	5
Cisco Unified Service Statistics Monitor and Cisco Unified Provisioning Manager	6	6	6	6
Cisco Unified Communications Manager cluster (Cisco Unified IP Phones, Cisco Intercompany Media Engine (optional), Cisco Catalyst 6500/6000 Gateways, Cisco IP Communicator, and Cisco ATA186/188/187 analog telephony adapters are upgraded with cluster)	7	7	7	7
Unified Contact Center Express	8	8	8	8
Cisco Unified Presence	9	9	9	9
Cisco Emergency Responder	10	10	10	10
Cisco Unified Communications Manager Express	11	11	11	11
Cisco IOS Gateway	12	12	12	12
Cisco Communications Media Module	13	13	13	13
Cisco VG248 (analog phone gateway)	14	14	14	—
Cisco VG244 (analog phone gateway)	15	15	15	14
Cisco VG30D (analog phone gateway)	—	—	—	15
Cisco IOS Gatekeeper	16	16	16	16
Cisco Unified MeetingPlace components	17	17	17	17
Cisco Unified MeetingPlace Express	18	18	—	—
Cisco Unity components and Cisco Unity Connection	19	19	18	18
Cisco Unity	20	20	—	—
Windows Exchange 2000 ???	21	21	19	19
Domain Controller (including Active Directory)	22	22	20	20
SCCP/ SIP / H.323/ H.320 ¹ Video Endpoints	23	23	21	21
Cisco Unified Videoconferencing Gateway ¹ and Cisco Unified Videoconferencing System MCUs	24	24	22	22
Cisco Unified VideoAdvantage (Video PC Endpoint)	25	25	23	23
Cisco Aironet Access Point 1200	26	26	24	24
Cisco Unified Personal Communicator	27	27	25	25
Cisco applications co-resident on MCS servers	28	28	26	26
Third-party on-board agents on MCS servers	29	29	27	27
Cisco and third-party applications on other servers	30	30	28	28

1. Tested in EUEM (European & Emerging Markets) site models only during Cisco Unified Communications System testing.

Multistage System Upgrade

A multistage system upgrade is the recommended approach for medium and large single-site and medium multisite installations. In this upgrade process, components are grouped 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 networks being upgraded. For smaller networks, several maintenance windows may be collapsed into a single maintenance window. Additional stages may be necessary for larger sites.

After each maintenance window and before initiating the next upgrade stage, we recommend that you verify that the operation of all basic and critical call types remains unaffected. We also recommend that you maintain a list of the components that have been upgraded and the ones yet to be upgraded.

See [Chapter 5, “Preparing for Your System Upgrade,”](#) for the software release versions of the components involved in the upgrade. Based on your environment and the base release set deployed in your network, upgrade the components in the order listed in [Table 6-2](#) for 6.1(1) to 8.5(1) upgrade, [Table 6-3](#) for 7.1(3) to 8.5(1) upgrade, and [Table 6-4](#) for 8.0(2) to 8.5(1) upgrade.

If you are upgrading from the following base release sets:

- Cisco Unified Communications System Release 6.1(1) to Release 8.5(1)—Be aware that Unified CCX 8.0(2) is not backward compatible with Unified Communications Manager 6.1(2) and Unified Communications Manager Release 8.5(1) is not backward compatible with Unified CCX 5.0(2). You should first upgrade Unified CCX 5.0(2) to 5.0(2)SR2 and Unified Communications Manager Release 6.1(2) to 8.0(2) before proceeding with the upgrade recommendations listed below.
- Cisco Unified Communications System Release 7.1(3) to Release 8.5(1)—You will be running Unified CCX 7.0(1)SR4 and Unified Communications Manager Release 7.1(3). You can directly proceed with the upgrade recommendations listed below.
- Cisco Unified Communications System Release 8.0(2) to Release 8.5(1)—You will be running Unified CCX 8.0(2) and Unified Communications Manager Release 8.0(2). You can directly proceed with the upgrade recommendations listed below.

Cisco recommends the following two upgrade options:

- Same Maintenance Window—You can upgrade all the call processing components first and Unified CCX 8.0(2) next in the same maintenance window. Be aware that time estimates for this option are approximately 16 hours.



Note To upgrade Unified Communications Manager and Unified CCX on the same maintenance window, ensure that Unified CCX is upgraded to 5.0(2)SR2 or 7.0(1)SR4 release before you upgrade the Unified Communications System Release 8.5(1) call processing components.

If you are upgrading from Unified Communications Release 6.1(1), use the information listed in Stage 4 in [Table 6-2 on page 6-11](#). If you are upgrading from Unified Communications Release 7.0(1), use the information listed in Stage 4 in [Table 6-3 on page 6-15](#).

- Different Maintenance Windows—You should upgrade Unified CCX to Release 8.5(1) before upgrading Unified Communications Manager Release 8.5(1).

If you are upgrading from Unified Communications Release 6.1(1), use the information listed in the Optional Stage in [Table 6-2 on page 6-11](#). If you are upgrading from Unified Communications Release 7.0(1), use the information listed in the Optional Stage in [Table 6-3 on page 6-15](#).

Table 6-2 Multistage System Upgrade Order for IP Telephony Components from Release 6.1(1) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
1	Switches, routers and security components	<ol style="list-style-type: none"> 1. Core Switches¹ 2. Access Switch¹ 3. Cisco Adaptive Security Appliance (ASA) 5540 	Verify the following exit criteria for Stage 1: <ol style="list-style-type: none"> 1. Switches and Routers Upgrade Exit Criteria 2. Security Components Upgrade Exit Criteria 3. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway 4. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 5. Unified Communications Manager Upgrade Exit Criteria 6. Unified Contact Center Express Upgrade Exit Criteria 7. Cisco Unity Upgrade Exit Criteria 8. Cisco Unity Connection Upgrade Exit Criteria 9. Cisco Unity Express Upgrade Exit Criteria 10. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway
2	Gatekeepers and data/voice gateways	<ol style="list-style-type: none"> 1. Cisco Unified Communications Manager Express 2. IOS Gateway (MGCP, H.323¹, and SIP) 3. Cisco VG244 (analog voice gateway) 4. IOS based transcoders and conference bridges 5. IOS Gatekeeper 6. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU) 7. Cisco Unified Border Element (formerly IPIPGW) 8. Cisco Aironet Access Point 1200 and Lightweight Wireless Access points 9. Cisco Unified SIP Proxy 	Verify the following exit criteria for Stage 2: <ol style="list-style-type: none"> 1. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 2. Unified Contact Center Express Upgrade Exit Criteria 3. Cisco Unified Intelligent Contact Management Enterprise Rogger/Progger Upgrade Exit Criteria 4. Unified Communications Manager Express Upgrade Exit Criteria 5. Cisco IOS Gatekeeper and Cisco Unified Border Element (formerly IPIPGW) Upgrade Exit Criteria 6. Cisco VG224 Upgrade Exit Criteria 7. Cisco Aironet Access Point 1200 Upgrade Exit Criteria 8. Cisco Unified SIP Proxy Upgrade Exit Criteria

Table 6-2 Multistage System Upgrade Order for IP Telephony Components from Release 6.1(1) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
3	Network management	<ol style="list-style-type: none"> 1. Cisco Unified Operations Manager 2. Cisco Unified Service Monitor 3. Cisco Unified Service Statistics Monitor 4. Cisco Unified Provisioning Manager 5. Cisco Resource Management Essentials 	Verify the following exit criteria for Stage 3: <ol style="list-style-type: none"> 1. Network Management Components Upgrade Exit Criteria 2. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 3. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 4. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 5. Cisco Unified Provisioning Manager Upgrade Exit Criteria
Optional Stage	<p>Note You must perform this stage only if you want to upgrade Unified CCX 8.5(1) and Unified Communications Manager 8.5(1) in different maintenance windows.</p>	<ol style="list-style-type: none"> 1. Upgrade Unified CCX to Release 5.0(2)SR2 2. Upgrade Unified CCX to Release 8.5(1) 3. In the Stage 4 maintenance window, perform only the upgrade order for call processing components/applications and skip the Unified Contact Center Express components upgrade. 	Verify the following exit criteria for this optional stage: <ol style="list-style-type: none"> 1. Unified Contact Center Express Upgrade Exit Criteria 2. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria

Table 6-2 Multistage System Upgrade Order for IP Telephony Components from Release 6.1(1) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
4	<p>Call processing</p> <p>Note To upgrade Unified Communications Manager 8.5(1) and Unified CCX 8.5(1) on the same maintenance window, ensure that Unified CCX is first upgraded to 5.0(2)SR2 release before you upgrade the Unified Communications System Release 8.5(1) call processing components.</p>	<p>Components upgraded first and in order:</p> <ol style="list-style-type: none"> 1. Cisco Unified Presence¹ 2. Cisco Unified Communications Manager² 3. Upgrade JTAPI if necessary on client applications 4. CSA and virus scanning software 5. Cisco Unified IP Phones Firmware (if needed) (including ATA and 6608) 6. Install Cisco Intercompany Media Engine (Optional) <p>Components below may be upgraded in any order after completion of upgrades above:</p> <ol style="list-style-type: none"> 1. Cisco Emergency Responder 2. Cisco IP Communicator 3. Cisco Unified Personal Communicator¹ 4. Cisco VT Advantage (Video PC Endpoint) 5. Cisco Unified Mobile Communication <p>Cisco recommends that Cisco Unified CCX upgrade is performed in the same upgrade stage as Cisco Unified Communications Manager.</p> <ol style="list-style-type: none"> 1. Install Cisco Unified Contact Center Express <p>For more information on installing and migrating Unified CCX, see the Cisco Unified Contact Center Express Considerations section.</p>	<p>Verify the following exit criteria for Stage 4:</p> <ol style="list-style-type: none"> 1. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 2. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 3. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 4. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 5. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 6. Cisco Unified Provisioning Manager Upgrade Exit Criteria 7. Unified Communications Manager Upgrade Exit Criteria 8. Cisco Unified Presence Upgrade Exit Criteria 9. Cisco Security Agent (CSA) Management Console Upgrade Exit Criteria 10. Cisco Unified Personal Communicator Upgrade Exit Criteria 11. Cisco Unified Mobility Advantage Upgrade Exit Criteria 12. Cisco Emergency Responder Upgrade Exit Criteria 13. Cisco Unified IP Phones Upgrade Exit Criteria 14. Cisco IP Communicator Upgrade Exit Criteria 15. Cisco Unified Video Advantage Upgrade Exit Criteria 16. Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria 17. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway 18. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria

Table 6-2 Multistage System Upgrade Order for IP Telephony Components from Release 6.1(1) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
5	Queueing and Self Service Components	<ol style="list-style-type: none"> 1. Cisco Unified CCX 2. Cisco Unified Intelligence Suite 	<p>19. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria</p> <p>Verify the following exit criteria for Cisco Unified CCX:</p> <ol style="list-style-type: none"> 1. Unified Contact Center Express Upgrade Exit Criteria
6	Voice mail and Unified Messaging	<ol style="list-style-type: none"> 1. Cisco Unity 2. Cisco Unity TSP (if needed) 3. Cisco Unity Express 4. Windows Exchange (Unity backend message store) and using COBRAS tool, migrate the data from Domino into new Exchange. 5. Domain Controller (including Active Directory) 6. Cisco Unity Connection^{1 2} 7. Cisco Unified Messaging Gateway 	<p>Verify the following exit criteria for Stage 6:</p> <ol style="list-style-type: none"> 1. Cisco Unified Personal Communicator Upgrade Exit Criteria 2. Cisco Unity Upgrade Exit Criteria 3. Cisco Unity Connection Upgrade Exit Criteria 4. Cisco Unity Express Upgrade Exit Criteria 5. Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria 6. Stage 6 Exit Criteria for Cisco Unified Messaging Gateway 7. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 8. Cisco Unified Provisioning Manager Upgrade Exit Criteria
7	Conferencing	<ol style="list-style-type: none"> 1. Cisco Unified MeetingPlace components 2. Migrate Cisco Unified MeetingPlace Express Release 2.1.2 to Cisco Unified MeetingPlace Release 8.0. For more information, see the Considerations for Migrating to Cisco Unified MeetingPlace Release 8.0 from Cisco Unified MeetingPlace Express section. 	<p>Verify the following exit criteria for Stage 7:</p> <ol style="list-style-type: none"> 1. Unified MeetingPlace 7.x Upgrade Exit Criteria 2. Cisco Unified MeetingPlace 6.x or Earlier Upgrade Exit Criteria 3. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria
8	Video Conferencing	<ol style="list-style-type: none"> 1. SCCP/ H.323 /H.3203 Video Endpoints 2. IP/VC Gateway and MCUs 	<p>Verify the following exit criteria for Stage 8:</p> <p>Cisco IP Videoconferencing and MCU Upgrade Exit Criteria</p>

Table 6-2 Multistage System Upgrade Order for IP Telephony Components from Release 6.1(1) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
9	Other Cisco applications	Cisco applications co-resident on servers: upgrade order depends on the applications being upgraded	
	Third-party on-board agents	Third-party on-board agents on MCS servers: upgrade order depends on the applications being upgraded	

1. This component is included in Cisco Unified Communications Manager Business Edition deployments in EUEM site model.
2. Upgrading Cisco Unified Communications Manager Business Edition includes upgrading co-resident Cisco Unity Connection.

Table 6-3 Multistage System Upgrade Order for IP Telephony Components from Release 7.1(3) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
1	Switches, routers and security components	<ol style="list-style-type: none"> 1. Core Switches¹ 2. Access Switch¹ 3. Cisco Adaptive Security Appliance (ASA) 5540 	<p>Verify the following exit criteria for Stage 1:</p> <ol style="list-style-type: none"> 1. Switches and Routers Upgrade Exit Criteria 2. Security Components Upgrade Exit Criteria 3. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 4. Unified Communications Manager Upgrade Exit Criteria 5. Unified Contact Center Express Upgrade Exit Criteria 6. Cisco Unity Upgrade Exit Criteria 7. Cisco Unity Connection Upgrade Exit Criteria 8. Cisco Unity Express Upgrade Exit Criteria 9. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway

Table 6-3 Multistage System Upgrade Order for IP Telephony Components from Release 7.1(3) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
2	Gatekeepers and IOS gateways	<ol style="list-style-type: none"> 1. Cisco Unified Communications Manager Express 2. IOS Gateway (MGCP, H.323¹, and SIP) 3. Cisco VG244 (analog voice gateway) 4. IOS based transcoders and conference bridges 5. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU) 6. IOS Gatekeeper 7. Cisco Unified Border Element (formerly IPIPGW) 8. Cisco Aironet Access Point 1200 	Verify the following exit criteria for Stage 2: <ol style="list-style-type: none"> 1. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 2. Unified Contact Center Express Upgrade Exit Criteria 3. Cisco Unified Intelligent Contact Management Enterprise Rogger/Progger Upgrade Exit Criteria 4. Unified Communications Manager Express Upgrade Exit Criteria 5. Cisco IOS Gatekeeper and Cisco Unified Border Element (formerly IPIPGW) Upgrade Exit Criteria 6. Cisco VG224 Upgrade Exit Criteria 7. Cisco Aironet Access Point 1200 Upgrade Exit Criteria
3	Network management	<ol style="list-style-type: none"> 1. Cisco Unified Operations Manager 2. Cisco Unified Service Monitor 3. Cisco Unified Service Statistics Monitor 4. Cisco Unified Provisioning Manager 5. Cisco Resource Management Essentials 	Verify the following exit criteria for Stage 3: <ol style="list-style-type: none"> 1. Network Management Components Upgrade Exit Criteria 2. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 3. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 4. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 5. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 6. Cisco Unified Provisioning Manager Upgrade Exit Criteria

Table 6-3 Multistage System Upgrade Order for IP Telephony Components from Release 7.1(3) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
Optional Stage	<p>Note You must perform this stage only if you want to upgrade Unified CCX 8.0(2) and Unified Communications Manager 8.0(2) in different maintenance windows.</p>	<ol style="list-style-type: none"> 1. Upgrade Unified CCX to Release 7.0(1)SR4 2. Upgrade Unified CCX to Release 8.0(2) 3. In the Stage 4 maintenance window, perform only the upgrade order for call processing components/applications and skip the Unified Contact Center Express component upgrade. 	<p>Verify the following exit criteria for this optional stage:</p> <ol style="list-style-type: none"> 1. Unified Contact Center Express Upgrade Exit Criteria 2. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria

Table 6-3 Multistage System Upgrade Order for IP Telephony Components from Release 7.1(3) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
4	<p>Call processing</p> <p>Note To upgrade Unified Communications Manager 8.0(2) and Unified CCX 8.0(2) on the same maintenance window, ensure that Unified CCX is first upgraded to 7.0(1)SR4 release before you upgrade the Unified Communications System Release 8.0(2) call processing components.</p>	<p>Components upgraded first and in order:</p> <ol style="list-style-type: none"> 1. Cisco Unified Presence¹ 2. Cisco Unified Communications Manager² 3. Upgrade JTAPI if necessary on client applications 4. CSA and virus scanning software 5. Cisco Unified IP Phones Firmware (if needed) (including ATA and 6608) 6. Install Cisco Intercompany Media Engine (Optional) <p>Components below may be upgraded in any order after completion of upgrades above:</p> <ol style="list-style-type: none"> 1. Cisco Emergency Responder 2. Cisco IP Communicator 3. Cisco Unified Personal Communicator¹ 4. Cisco VT Advantage (Video PC Endpoint) 5. Cisco Unified Mobile Communication <p>Cisco recommends that Cisco Unified CCX upgrade is performed in the same upgrade stage as Cisco Unified Communications Manager.</p> <ol style="list-style-type: none"> 1. Install Cisco Unified Contact Center Express 	<p>Verify the following exit criteria for Stage 4:</p> <ol style="list-style-type: none"> 1. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 2. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 3. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 4. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 5. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 6. Cisco Unified Provisioning Manager Upgrade Exit Criteria 7. Unified Communications Manager Upgrade Exit Criteria 8. Cisco Unified Presence Upgrade Exit Criteria 9. Cisco Security Agent (CSA) Management Console Upgrade Exit Criteria 10. Cisco Unified Personal Communicator Upgrade Exit Criteria 11. Cisco Unified Mobility Advantage Upgrade Exit Criteria 12. Cisco Emergency Responder Upgrade Exit Criteria 13. Cisco Unified IP Phones Upgrade Exit Criteria 14. Cisco IP Communicator Upgrade Exit Criteria

Table 6-3 Multistage System Upgrade Order for IP Telephony Components from Release 7.1(3) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
4			<ul style="list-style-type: none"> 15. Cisco Unified Video Advantage Upgrade Exit Criteria 16. Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria 17. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway 18. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 19. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 20. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 21. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 22. Cisco Unified Provisioning Manager Upgrade Exit Criteria <p>Verify the following exit criteria after installing Cisco Unified CCX:</p> <ul style="list-style-type: none"> 1. Unified Contact Center Express Upgrade Exit Criteria 2. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria
5	Voice mail and Unified Messaging	<ul style="list-style-type: none"> 1. Cisco Unity 2. Cisco Unity TSP (if needed) 3. Cisco Unity Express 4. Install Windows Exchange (Unity backend message store) and using COBRAS tool, migrate the data from Domino into new Exchange. 5. Domain Controller (including Active Directory) 6. Cisco Unity Connection^{1 2} 7. Cisco Unified Messaging Gateway 	<p>Verify the following exit criteria for Stage 6:</p> <ul style="list-style-type: none"> 1. Cisco Unified Personal Communicator Upgrade Exit Criteria 1. Cisco Unity Upgrade Exit Criteria 2. Cisco Unity Connection Upgrade Exit Criteria 3. Cisco Unity Express Upgrade Exit Criteria 4. Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria 5. Stage 6 Exit Criteria for Cisco Unified Messaging Gateway 6. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 7. Cisco Unified Provisioning Manager Upgrade Exit Criteria

Table 6-3 Multistage System Upgrade Order for IP Telephony Components from Release 7.1(3) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components with in Stage	Exit Criteria for the Stage
6	Conferencing	<ol style="list-style-type: none"> 1. Cisco Unified MeetingPlace Express components 2. Migrate Cisco Unified MeetingPlace Express Release 2.1.2 to Cisco Unified MeetingPlace Release 8.0. For more information, see the Considerations for Migrating to Cisco Unified MeetingPlace Release 8.0 from Cisco Unified MeetingPlace Express section. 	Verify the following exit criteria for Stage 7: <ol style="list-style-type: none"> 1. Unified MeetingPlace 7.x Upgrade Exit Criteria 2. Cisco Unified MeetingPlace 6.x or Earlier Upgrade Exit Criteria 3. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria
7	Videoconferencing	<ol style="list-style-type: none"> 1. SCCP/H.323/H.3203 Video Endpoints 2. IP/VC Gateway and MCUs 	Verify the following exit criteria for Stage 8: Cisco IP Videoconferencing and MCU Upgrade Exit Criteria
8	Other Cisco applications	Cisco applications co-resident on servers: upgrade order depends on the applications being upgraded	
9	Third-party on-board agents	Third-party on-board agents on MCS servers: upgrade order depends on the applications being upgraded	

1. This component is included in Cisco Unified Communications Manager Business Edition deployments in EUEM site model.
2. Upgrading Cisco Unified Communications Manager Business Edition includes upgrading co-resident Cisco Unity Connection.

Table 6-4 Multistage System Upgrade Order for IP Telephony Components from Release 8.0(2) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components within Stage	Exit Criteria for the Stage
1	Switches, routers and security components	<ol style="list-style-type: none"> 1. Core Switches¹ 2. Access Switch¹ 3. Cisco Adaptive Security Appliance (ASA) 5540 	Verify the following exit criteria for Stage 1: <ol style="list-style-type: none"> 1. Switches and Routers Upgrade Exit Criteria 2. Security Components Upgrade Exit Criteria 3. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 4. Unified Communications Manager Upgrade Exit Criteria 5. Unified Contact Center Express Upgrade Exit Criteria 6. Cisco Unity Upgrade Exit Criteria 7. Cisco Unity Connection Upgrade Exit Criteria 8. Cisco Unity Express Upgrade Exit Criteria 9. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway
2	Gatekeepers and IOS gateways	<ol style="list-style-type: none"> 1. Cisco Unified Communications Manager Express 2. IOS Gateway (MGCP, H.323¹, and SIP) 3. Cisco VG244 (analog voice gateway) 4. IOS based transcoders and conference bridges 5. Cisco Unified Videoconferencing gateway and Multipoint Control Units (MCU) 6. IOS Gatekeeper 7. Cisco Unified Border Element (formerly IPIPGW) 8. Cisco Aironet Access Point 1200 	Verify the following exit criteria for Stage 2: <ol style="list-style-type: none"> 1. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 2. Unified Contact Center Express Upgrade Exit Criteria 3. Cisco Unified Intelligent Contact Management Enterprise Rogger/Progger Upgrade Exit Criteria 4. Unified Communications Manager Express Upgrade Exit Criteria 5. Cisco IOS Gatekeeper and Cisco Unified Border Element (formerly IPIPGW) Upgrade Exit Criteria 6. Cisco VG224 Upgrade Exit Criteria 7. Cisco Aironet Access Point 1200 Upgrade Exit Criteria

Table 6-4 Multistage System Upgrade Order for IP Telephony Components from Release 8.0(2) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components within Stage	Exit Criteria for the Stage
3	Network management	<ol style="list-style-type: none"> 1. Cisco Unified Operations Manager 2. Cisco Unified Service Monitor 3. Cisco Unified Service Statistics Monitor 4. Cisco Unified Provisioning Manager 5. Cisco Resource Management Essentials 	Verify the following exit criteria for Stage 3: <ol style="list-style-type: none"> 1. Network Management Components Upgrade Exit Criteria 2. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 3. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 4. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 5. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 6. Cisco Unified Provisioning Manager Upgrade Exit Criteria

Table 6-4 Multistage System Upgrade Order for IP Telephony Components from Release 8.0(2) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components within Stage	Exit Criteria for the Stage
4	<p>Call processing</p> <p>Note To upgrade Unified Communications Manager 8.0(2) and Unified CCX 8.0(2) on the same maintenance window, ensure that Unified CCX is first upgraded to 7.0(1)SR4 release before you upgrade the Unified Communications System Release 8.0(2) call processing components.</p>	<p>Components upgraded first and in order:</p> <ol style="list-style-type: none"> 1. Cisco Unified Presence¹ 2. Cisco Unified Communications Manager² 3. Upgrade JTAPI if necessary on client applications 4. CSA and virus scanning software 5. Cisco Unified IP Phones Firmware (if needed) (including ATA and 6608) 6. Install Cisco Intercompany Media Engine (Optional) <p>Components below may be upgraded in any order after completion of upgrades above:</p> <ol style="list-style-type: none"> 1. Cisco Emergency Responder 2. Cisco IP Communicator 3. Cisco Unified Personal Communicator¹ 4. Cisco VT Advantage (Video PC Endpoint) 5. Cisco Unified Mobile Communication <p>Cisco recommends that Cisco Unified CCX upgrade is performed in the same upgrade stage as Cisco Unified Communications Manager.</p> <ol style="list-style-type: none"> 1. Install Cisco Unified Contact Center Express 	<p>Verify the following exit criteria for Stage 4:</p> <ol style="list-style-type: none"> 1. Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria 2. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 3. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 4. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 5. Cisco Unified Service Statistic Manager Upgrade Exit Criteria 6. Cisco Unified Provisioning Manager Upgrade Exit Criteria 7. Unified Communications Manager Upgrade Exit Criteria 8. Cisco Unified Presence Upgrade Exit Criteria 9. Cisco Security Agent (CSA) Management Console Upgrade Exit Criteria 10. Cisco Unified Personal Communicator Upgrade Exit Criteria 11. Cisco Unified Mobility Advantage Upgrade Exit Criteria 12. Cisco Emergency Responder Upgrade Exit Criteria 13. Cisco Unified IP Phones Upgrade Exit Criteria 14. Cisco IP Communicator Upgrade Exit Criteria 15. Cisco Unified Video Advantage Upgrade Exit Criteria 16. Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria 17. Stage 1 Exit Criteria for Cisco Unified Messaging Gateway 18. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria 19. Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria

Table 6-4 Multistage System Upgrade Order for IP Telephony Components from Release 8.0(2) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components within Stage	Exit Criteria for the Stage
			<p>20. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria</p> <p>21. Cisco Unified Service Statistic Manager Upgrade Exit Criteria</p> <p>22. Cisco Unified Provisioning Manager Upgrade Exit Criteria</p> <p>Verify the following exit criteria after installing Cisco Unified CCX:</p> <ol style="list-style-type: none"> 1. Unified Contact Center Express Upgrade Exit Criteria 2. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria
5	Voice mail and Unified Messaging	<ol style="list-style-type: none"> 1. Cisco Unity 2. Cisco Unity TSP (if needed) 3. Cisco Unity Express 4. Install Windows Exchange (Unity backend message store) and using COBRAS tool, migrate the data from Domino into new Exchange. 5. Domain Controller (including Active Directory) 6. Cisco Unity Connection^{1 2} 7. Cisco Unified Messaging Gateway 	<p>Verify the following exit criteria for Stage 6:</p> <ol style="list-style-type: none"> 1. Cisco Unified Personal Communicator Upgrade Exit Criteria 1. Cisco Unity Upgrade Exit Criteria 2. Cisco Unity Connection Upgrade Exit Criteria 3. Cisco Unity Express Upgrade Exit Criteria 4. Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria 5. Stage 6 Exit Criteria for Cisco Unified Messaging Gateway 6. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria 7. Cisco Unified Provisioning Manager Upgrade Exit Criteria
6	Conferencing	<ol style="list-style-type: none"> 1. Cisco Unified MeetingPlace components 2. Migrate Cisco Unified MeetingPlace Express Release 2.1.2 to Cisco Unified MeetingPlace Release 8.0. For more information, see the Considerations for Migrating to Cisco Unified MeetingPlace Release 8.0 from Cisco Unified MeetingPlace Express section. 	<p>Verify the following exit criteria for Stage 7:</p> <ol style="list-style-type: none"> 1. Unified MeetingPlace 7.x Upgrade Exit Criteria 2. Cisco Unified MeetingPlace 6.x or Earlier Upgrade Exit Criteria 3. Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria

Table 6-4 Multistage System Upgrade Order for IP Telephony Components from Release 8.0(2) to 8.5(1)

Stage	Component Grouping	Upgrade Order for IP Telephony Components within Stage	Exit Criteria for the Stage
7	Videoconferencing	<ol style="list-style-type: none"> 1. SCCP/H.323/H.3203 Video Endpoints 2. IP/VC Gateway and MCUs 	Verify the following exit criteria for Stage 8: Cisco IP Videoconferencing and MCU Upgrade Exit Criteria
8	Other Cisco applications	Cisco applications co-resident on servers: upgrade order depends on the applications being upgraded	
9	Third-party on-board agents	Third-party on-board agents on MCS servers: upgrade order depends on the applications being upgraded	

1. This component is included in Cisco Unified Communications Manager Business Edition deployments in EUEM site model.
2. Upgrading Cisco Unified Communications Manager Business Edition includes upgrading co-resident Cisco Unity Connection.

Exit Criteria for Multistage System Upgrade Stages

Table 6-5 provides exit criteria you need to execute after completing each system upgrade stage.

Table 6-5 System Upgrade Stages and Exit Criteria Matrix

Component Grouping	Multistage System Upgrade Stage							
	1	2	3	4	5	6	7	8
Switches and Routers Upgrade Exit Criteria	X							
Security Components Exit Criteria	X							
Gatekeepers and Voice and Data Gateways Exit Criteria	X	X		X				
Unified Communications Manager Express Upgrade Exit Criteria		X		X				
Cisco IOS Gatekeeper and Cisco Unified Border Element (formerly IPIGW) Upgrade Exit Criteria		X						
Cisco VG248; Cisco VG224 Upgrade Exit Criteria Cisco VG30D ???		X						
Cisco Aironet Access Point 1200 Upgrade Exit Criteria		X						
Network Management Components Upgrade Exit Criteria			X					
Unified Communications Manager Upgrade Exit Criteria	X			X				
Cisco Unified Presence Upgrade Exit Criteria				X				
Cisco Security Agent (CSA) Management Console Upgrade Exit Criteria				X				
Cisco Unified Personal Communicator Upgrade Exit Criteria				X		X		
Cisco Emergency Responder Upgrade Exit Criteria				X				

Table 6-5 System Upgrade Stages and Exit Criteria Matrix

Component Grouping	Multistage System Upgrade Stage							
	1	2	3	4	5	6	7	8
Cisco Unified IP Phones Upgrade Exit Criteria				X				
Cisco IP Communicator Upgrade Exit Criteria				X				
Cisco Unified Video Advantage Upgrade Exit Criteria				X				
Unified Contact Center Express Upgrade Exit Criteria	X	X		X	X			
Cisco Unity Upgrade Exit Criteria	X					X		
Cisco Unity Connection Upgrade Exit Criteria	X					X		
Cisco Unity Express Upgrade Exit Criteria	X					X		
Unified MeetingPlace 7.x Upgrade Exit Criteria							X	
Cisco Unified MeetingPlace 6.x or Earlier Upgrade Exit Criteria							X	
Cisco IP Videoconferencing and MCU Upgrade Exit Criteria								X
Cisco Unified Mobile Communicator Upgrade Exit Criteria				X		X		
Cisco Unified Messaging Gateway Upgrade Exit Criteria	X					X		
Cisco Unified Intelligent Contact Management Enterprise Rogger/Progger Upgrade Exit Criteria		X						
Cisco Unified Service Monitor Upgrade Exit Criteria			X	X				
Cisco Unified Operation Manager Upgrade Exit Criteria			X	X	X	X	X	
Cisco Unified Service Statistics Manager Upgrade Exit Criteria			X	X				
Cisco Unified Provisioning Manager Upgrade Exit Criteria			X	X		X		
Cisco UC Integration™ for Microsoft Office Communicator				X		X		
Cisco Intercompany Media Engine		X		X				

Switches and Routers Upgrade Exit Criteria

After upgrading core routers and switches, verify the following:

1. Check the buffer log or console for error messages.
2. Verify that a dump file was not created in the flash memory.
3. Use the `show running-config` command to verify that previous configuration was not deleted during the upgrade process.
4. Use the `show ip interface brief` command to verify that configured interfaces are in up/up state.
5. Verify that the Unified IP Phones connected to the switches are powered up and register correctly with their primary Unified Communications Manager node.

Security Components Upgrade Exit Criteria

After upgrading Cisco Catalyst 6500 Services Switch and Cisco Adaptive Security Appliance (ASA), verify the following:

1. In a deployment where Unified Communications Manager servers are separated by a Adaptive Security Appliance (ASA), place a call from a Unified IP Phone that is registered to one Unified Communications Manager to a Unified IP Phone that is registered to another Unified Communications Manager.
2. When Unified CM servers are inside the Firewall, make a call between outside and inside phones of the same Unified CM cluster. After the call completed and disconnected, perform a factory reset of the outside phone. Verify outside phone can successfully register with CUCM.
3. Repeat the above Step for SIP phone too.
4. (for IP telephony only) Update the Call Forward All (CFA) entry for a Unified IP Phone in a Unified Communications Manager cluster and verify that the update also happens in the other Unified Communications Manager when the Unified Communications Manager servers are separated by ASA.
5. Verify that database replication is successful between Unified Communications Manager servers which are separated by ASA.
6. Verify all voice gateways outside of Firewall can register with Unified Communications Manager inside the firewall.

Gatekeepers and Voice and Data Gateways Upgrade Exit Criteria

After upgrading IOS Gateways, verify the following:

1. At the Cisco IOS exec level, execute the CLI commands.

To check that the upgraded IOS target image is running:

```
show version
```

To verify that the boot system is configured to boot the correct image:

```
show running-config
```

To verify that configuration done previously (i.e. H.323/SIP dial-peer and MGCP) is not lost.

```
show running-config
```

To verify that the ISDN connection status is at MULTIFRAME_ESTABLISHED:

```
show isdn status
```

To verify that configured interfaces are in up/up state:

```
show ip interface brief
```

To verify a manually placed incoming calls:

```
show isdn history
```

To verify IP routing from branch site to a datacenter:

```
ping or traceroute
```

To verify IP routing from one branch site to another branch site:

```
ping or traceroute
```

2. Ensure that all MGCP end points (FXS, FXO, PRI, T1 CAS and BRI) are properly registered with Unified Communications Manager.

IOS MGCP Gateways Upgrade Exit Criteria:

1. From PSTN make an inbound call to IP Phone in Cisco Unified Communications Manager through MGCP Gateway.
IP (SCCP and SIP) <-> PSTN via MGCP Gateway.
2. Put the call on hold and then resume.
3. Verify PSTN user hears MOH when the call is on hold.

IOS SIP Gateways Upgrade Exit Criteria:

1. From PSTN make an inbound call to IP Phone in Cisco Unified Communications Manager through SIP Gateway.
IP (SCCP and SIP) <-> PSTN via SIP Gateway.
2. Put the call on hold and then resume.
3. Verify PSTN user hears MOH when the call is on hold.

IOS H.323 Gateways Upgrade Exit Criteria:

1. From PSTN make an inbound call to IP Phone in Cisco Unified Communications Manager through H.323 Gateway.
IP (SCCP and SIP) <-> PSTN via H.323 Gateway.
2. Put the call on hold and then resume.
3. Verify PSTN user hears MOH when the call is on hold.

Unified Communications Manager Express Upgrade Exit Criteria

After upgrading Unified Communications Manager Express, verify the following:

1. To check the Cisco Unified Communications Manager Express version running on the box, type the following show command:
`show telephony-service`
2. Verify the phones register to Cisco Unified Communications Manager Express after upgrade
3. Verify if you are able to make internal and PSTN calls from IP Phones.
4. Call From Phone A to Phone B which is CFA/CFNA to a PSTN Number
5. Verify if you are able to call VM (either Cisco Unity or Cisco Unity Express) from IP Phone.
6. Test calls to Shared Line
7. Verify Call-blocking functionality in Cisco Unified Communications Manager Express
8. Verify the Cisco Unified Communications Manager Express DN Overlay functionality.

Cisco IOS Gatekeeper and Cisco Unified Border Element (formerly IPIPGW) Upgrade Exit Criteria

After upgrading Cisco IOS Gatekeeper and Cisco Unified Border Element (formerly IPIPGW), verify the following:

1. To verify the running IVS version of IOS Image (for example, Cisco IOS Software, 3800 Software (C3845-IPVOICE_IVS-M), type the following show command:
`show version`
2. To check if the configuration is not lost, use the following show command:
`show running-config`

3. Verify that all H.323 End Points are configured to register with Gatekeeper registers properly.
4. Verify Cisco Unified Communications Manager registers with Gatekeeper
5. Make a call between two end points that uses Gatekeeper; verify the call is successful and proper bandwidth is reduced in Gatekeeper for that call.

Cisco VG224 Upgrade Exit Criteria

After upgrading Cisco VG224, verify the following:

1. Verify all configured VG224 ports are registered to Cisco Unified Communications Manager.
2. Make a call to VG224 Analog port and verify two way audio is working.
3. Make a call to VG224 Analog port and do a hook-flash transfer to an IP Phone.

Cisco Aironet Access Point 1200 Upgrade Exit Criteria

After upgrading Cisco Aironet Access Point 1200, verify the following:

1. Verify the 7920 and 7921 phones register with Cisco Unified Communications Manager; and stay registered after the upgrade.
2. Make call from IP Phone 7920 and IP Phone 7921 to another IP Phone and ensure audio in both direction.
3. When the call is active, verify audio in both direction when IP Phone 7920/21 phone roams between Access Points
4. Verify if IP Phone 7920/21 phone can register with different types of encryption

Network Management Components Upgrade Exit Criteria

After upgrading network management components, verify the following:

1. Verify the software version and the build ID using Cisco Works to ensure that the upgrade was successful.
2. Ensure that access to the Unified Operations Manager console is still available.
3. Ensure that access to all devices managed by Unified Operations Manager is still available.

Unified Communications Manager Upgrade Exit Criteria

After upgrading Unified Communications Manager, verify the following:

1. Verify that no error messages have occurred during the upgrade process.
2. Check the upgrade log file for any errors.
3. Verify that there is no replication failure between the Publisher and Subscribers.
4. Verify that SIP and SCCP IP Phones are registered with Cisco Unified Communications Manager.
5. Ensure the following devices are configured correctly:
 - Gatekeeper
 - MGCP/H.323 Gateways
 - Trunks
 - CTI Route points.

6. Ensure the Media Resources (Conference or MTP or Transcoder) are configured correctly by checking their status.
7. Verify if the end users are able to connect to their CTI Managers.
8. Check if the license usage is correct as reported in the License Unit Report.
9. Check if services on all servers in the cluster are up.
10. Perform the Cisco Unified Communications Manager Publisher and Subscriber process verification through the following RTMT Feature verification.
11. Verify the Active Directory integration for user information and authentication is carried out and all users are in place (IP telephony only).

Cisco Unified Communications Manager AAR Upgrade Exit Criteria:

Verify AAR configured and working in the system by making a IP to PSTN call (IP telephony only).

Cisco Unified Communications Manager Hunt Pilots and List Upgrade Exit Criteria:

Verify if Multiple Hunt Pilot and Hunt List are configured and working (IP telephony only).

Cisco Unified Communications Manager Attendant Console Upgrade Exit Criteria:

Verify if Attendant Console Cisco Unified Business Attendant Console /CUDAC (as applicable) are configured and running (IP telephony only).

Cisco Unified Communications Manager IPMA Upgrade Exit Criteria:

Check if Cisco IPMA is configured and running (IP telephony only):

- a. Verify Manager can intercept incoming call
- b. Verify all call routed to Assistance
- c. Verify intercom is working

Other Cisco Unified Communications Manager Upgrade Exit Criteria:

1. Verify if Extension Mobility is configured and working.
2. Verify if IP Phone Services are configured and working.
3. Check if Web Dialer is configured and working (IP telephony only).
4. Verify if non Cisco Skinny Video End Points are working (IP telephony only).
5. Check if Client Matter Codes (CMC) and Forced Authorization Codes (FAC) are configured for Route Patterns (IP telephony only).
6. Check if Multilevel Administration (MLA) is configured (IP telephony only).
7. Verify the Active Directory integration for user information and authentication is carried out and all users are in place (IP telephony only).
8. Verify if the phones can register in both Encrypted/Authenticated mode (IP telephony only).
9. Verify if Device Mobility is configured and working (IP telephony only).
10. Check if CAR is configured and working (IP telephony only).

Cisco Unified Presence Upgrade Exit Criteria

After upgrading Cisco Unified Presence, verify the following:

1. Verify that no error messages have occurred during the upgrade process.

2. Check the upgrade log file for any errors.
3. Check if the license usage is correct as reported in the License Unit Report. Using RTMT check if the CPU usage is consistent over 5 minutes of time without any spikes.
4. Add other Cisco Unified Personal Communicator clients to a Cisco Unified Personal Communicator client's buddy list.
5. Change the presence status of a client and verify that its presence status is updated in the other Cisco Unified Personal Communicator client.

Cisco Security Agent (CSA) Management Console Upgrade Exit Criteria

After upgrading Cisco Security Agent (CSA) Management Console, verify the following:

1. Ensure that basic functionality of call flows that previously worked before the upgrade should work the same and operate normally.
2. Check if the previous configuration still exists after the upgrade.
3. Check if access to the console is still available.
4. Check if all managed devices are visible.

Cisco Intercompany Media Engine Upgrade Exit Criteria

After upgrading Cisco IME, verify the following:

1. At the Cisco IOS exec level, execute the CLI commands:

To verify if Cisco IME servers have Unified CM registrations:

```
show ime vapstatus summary
```

To verify if there are no errors:

```
show ime dht summary
```

To verify the core dump:

```
utils core active list
```

2. Verify the calls from SJC to FYI:
 - Make a PSTN call from SJC to FYI with Cisco IME support
 - Repeat the same call and verify if it uses only Cisco IME trunk for the second call.
3. Verify the calls from FYI to SJC:
 - Make a PSTN call from FYI to SJC with Cisco IME support
 - Repeat the same call and verify if it uses only Cisco IME trunk for the second call.

Cisco Unified Personal Communicator Upgrade Exit Criteria

After upgrading Unified Personal Communicator, verify the following:

1. Check if Unified Personal Communicator is able to derive its soft-phone device name and register with Cisco Unified Communications Manager.
2. Establish a video call from the Cisco Unified Personal Communicator client.
3. Check if Cisco Unified Personal Communicator is able to derive its soft-phone device name and register with Cisco Unified Communications Manager.
4. Check if Cisco Unified Personal Communicator in Softphone mode is able to make internal and PSTN calls

5. Check if Cisco Unified Personal Communicator is able to control IP hard phones.
6. Check if IP Phone Messenger is configured and working.

Cisco Unified Mobility Advantage Upgrade Exit Criteria

After upgrading Cisco Unified Mobility Advantage, verify the following:

1. Register Cisco Unified Mobile Communicator clients with Cisco Unified Mobility Advantage
2. Verify if new messages for subscriber are received as voicemail alerts by Cisco Unified Mobile Communicator client.
3. Verify that the Cisco Unified Mobile Communicator client receive call log information after the call to the client's desk phone is torn down.

Cisco Emergency Responder Upgrade Exit Criteria

After upgrading Cisco Emergency Responder, verify the following:

1. In the OS Admin page, goto Settings ->Version to check if the correct active and inactive versions are shown.
2. Ensure 911, 912 and 913 Route points are registered in Cisco Unified Communications Manager.
3. Ensure CTI ports for on site security alert are registered in Cisco Unified Communications Manager.
4. Select Tools -> Event Viewer on the Serviceability page to ensure Cisco Emergency Responder did not raise any "SNMP unreachable" alert for any switch or Cisco Unified Communications Manager.
5. In the Serviceability page, select Tools -> Control Center and check that there is no stopped service.
6. Ensure there are no additional phones marked as unlocated by Cisco Emergency Responder after upgrade.
7. In a dual-node deployment, shut down the Primary Cisco Emergency Responder and make sure secondary Cisco Emergency Responder takes over. Then restart Primary Cisco Emergency Responder and make sure primary Cisco Emergency Responder takes over the control.
8. Make sure 911, 912 and 913 Route points are registered in CUCM.

Cisco Unified IP Phones Upgrade Exit Criteria

After upgrading Cisco Unified IP Phones, verify the following:

1. Verify that the phones are upgraded to the target firmware images as indicated in the Unified Communications Manager
2. Verify access to the Corporate Directories in the Unified IP Phones
3. Verify that Unified IP Phone services such as Fast Dial, Extension Mobility, etc. are working properly.

Cisco IP Communicator Upgrade Exit Criteria

After upgrading Cisco IP Communicator, verify the following:

1. After rebooting the PC, launch IP Communicator and verify that it registers correctly with Unified Communications Manager
2. Place a call to IP Communicator and verify that the two-way audio works properly
3. Place outbound, inbound, and PSTN calls from the IP Communicator and verify that the two-way audio works properly.

4. Verify that additional call functionality such as hold, transfers, conferences etc. work correctly. Verify access to the Corporate Directories in the Unified IP Phones
5. Verify that Unified IP Phone services such as Fast Dial, Extension Mobility, etc. are working properly.

Cisco Unified Video Advantage Upgrade Exit Criteria

After upgrading Cisco Unified Video Advantage, verify the following:

1. After rebooting your PC, launch the Cisco Unified Video Advantage
2. Verify if Cisco Unified Video Advantage finds the Unified Video Advantage phones and gets associated to them.
3. Check if you are able to make a call to another Unified Video Advantage phone.
4. Verify the Video pops-up.
5. Check if you put a call on hold, the video goes away and when you resume the call, Video comes back.

Unified Contact Center Express Upgrade Exit Criteria

After upgrading Cisco Unified Contact Center Express Solutions, verify the following:

1. Verify that no error messages have occurred during the upgrade process.
2. Check the upgrade log file for any errors. Verify if all required services are up after upgrade.
3. Verify if JTAPI is upgraded to the proper version and it is properly connected and synchronized to Cisco Unified Communications Manager.
4. Check if all CTI Ports are registered with Cisco Unified Communications Manager.
5. Check if all CTI Route Points are registered with Cisco Unified Communications Manager.
6. Check if a prompt is heard when a call is made.
7. Perform Telephony Synchronization and ensure it is successful.
8. If you are using CAD desktop, ensure the desktop auto upgrades to the version bundled with Cisco Unified Contact Center Express Solutions.
9. Log In to IP Phone Agent, CAD Agent and CRSADMIN, and ensure all logins are successful.
10. Make an inbound call and ensure call is presented to Ready Agent.
11. If it is dual node, ensure one node is Master while other Node is in Slave state.

Cisco Unity Upgrade Exit Criteria

After upgrading Cisco Unity, verify the following:

1. Launch the System Administrator to check the software version.
2. Check the status of Cisco Unity services.
3. Run GUSI to check the software version as well as the TSP version.
4. Run the 'Verify Servers' from UTIM to check the status of the integration.
5. Check the status of the voicemail ports in Cisco Unified Communications Manager.
6. Prior to the upgrade leave a voicemail for a subscriber for the MWI to turn on. Perform the upgrade and refresh the MWI status. After the upgrade, check to see if MWI is still on.

7. Create a couple of subscribers and verify that supervised transfer and MWI work properly.
8. Check if there are any errors in the event viewer.
9. If Cisco Unity is deployed in failover mode, check the Unity status using “Failover Monitor”
10. Manually failover the server to make the secondary server active and place a call into Unity to leave a message for a subscriber and verify if MWI turns on. Retrieve to check if the MWI turns off.
11. Stop the primary server and place a call into Unity to leave a message for a subscriber and verify if MWI turns on. Retrieve to check if the MWI turns off.
12. Make a cCall to Unity Subscriber's DN extension and deposit a short voice mail. Retrieve the voice mail and then delete the voice mail.

Cisco Unity Connection Upgrade Exit Criteria

After upgrading Unity Connection, verify the following:

1. Check the Cisco Unity Connection software version from the Command Line Interface (CLI) using the **show cuc** command
2. Check the software version on the active partition from Cisco Unified OS Administration web page
3. Check the status of the services either from the Serviceability page or through the CLI.
4. Check the status of voicemail ports in Unified Communication Manager.
5. Run the **Test Port** command from the Port page under Telephony Integrations.
6. Prior to the upgrade, activate the Message Waiting Indicator (MWI) by leaving a voicemail for a subscriber. After the upgrade, refresh the MWI status And verify that the MWI is still on.
7. Create a couple of subscribers and verify that supervised transfers and the MWI functionality work properly.
8. If authentication and encryption have been enabled for the ports, place a call from an endpoint that supports encryption into Unity Connection and verify that the RTP is encrypted.
9. If authentication and encryption have been enabled for the ports, place a call from an endpoint that supports authentication into Unity Connection and verify that the signaling is secure.
10. Make a call to Unity Connection Subscriber's DN extension and deposit a short voicemail.
11. Retrieve the voice mail and then delete the voice mail from Unity Connection.

Cisco Unity Express Upgrade Exit Criteria

After upgrading Unity Express, verify the following:

1. Check the Cisco Unity Express software version from the Command Line Interface (CLI) using the `show software status` command.
2. To verify if Cisco Unity Express is registered to Cisco Unified Communications Manager, use the **show ccn status ccm-manager** command.
3. Prior to the upgrade, leave a voicemail for a subscriber for message-waiting indication (MWI) to turn on. Perform the upgrade and refresh the MWI status. Check to see if MWI is still on.
4. Configure notification for a subscriber and verify if Cisco Unity Express can place call to the configured extension when there is a new voicemail.
5. Create a subscriber, leave and check a voicemail and delete the subscriber.
6. Make a call to Unity Express Subscriber's DN extension and deposit a short voicemail.

7. Retrieve the voice mail and then delete the voice mail from Unity Express.

Unified MeetingPlace 7.x Upgrade Exit Criteria

After upgrading Unified MeetingPlace 7.x, verify the following:

1. Since you cannot upgrade on the internal Cisco Unified MeetingPlace server, to verify if installation is completed successfully, login to Cisco Unified MeetingPlace Application server console as root and type the **mpx_version** command.
2. To verify all services running, type the **mpx_sys status** command from the MeetingPlace console or through SSH.
3. Login to Cisco Unified MeetingPlace web server, select Home-->Admin -->Test Server Configuration and check that no error is reported.
4. Login to Cisco Unified MeetingPlace web server, schedule audio, web and video. Verify you are able to dial-in, dial-out, join web and video calls.
5. Login and schedule audio, web and video meetings through outlook and verify if recipients receive meeting requests and are able to join these meetings.
6. Repeat step 4 for DMZ (SMA) server.
7. Login as Conference Manager to Unified MeetingPlace Application server console and verify if you are able to schedule and attend audio, web and video meetings.

Cisco Unified MeetingPlace 6.x or Earlier Upgrade Exit Criteria

After upgrading Unified MeetingPlace 6.x or Earlier, verify the following:

1. To verify if the Cisco Unified MeetingPlace software version is upgraded, login to Cisco Unified MeetingPlace Audio Server and type the **swstatus** command.
2. To verify if all the other servers (Unified MeetingPlace web server, Unified MeetingPlace IPGW, Unified MeetingPlace DMZ, Unified MeetingPlace DS, etc.) are registered to Cisco Unified MeetingPlace Application Server after the upgrade, type the **gwstatus** command.
3. Login to "MeetingTime" or "Conference Manager" client software, schedule meetings (audio, web and video) and verify if you are able to dial-in, dial-out of audio meeting, web conference, and video call.
4. To verify if Cisco Unified MeetingPlace software version is upgraded on Unified MeetingPlace web server, Unified MeetingPlace IP Gateway, Unified MeetingPlace DMZ, Unified MeetingPlace Outlook and Unified MeetingPlace Video, type the **gwstatus** command on the Unified MeetingPlace Audio Server.
5. Login to Cisco Unified MeetingPlace web server through browser and schedule audio, web and video meetings, check if you are able to dial-out, dial-in through web and video endpoints for these meetings.
6. After the upgrade, check logs in Event Viewer->System Log and Event Viewer->Application Log for any red alert/alarm for Cisco Unified MeetingPlace Web, Unified MeetingPlace IPGW, Unified MeetingPlace DS on Windows server.

Cisco IP Videoconferencing and MCU Upgrade Exit Criteria

After upgrading Cisco IP Videoconferencing and MCU, verify the following:

1. After you reboot Cisco IP Videoconferencing, verify that it registers to Cisco Unified Communications Manager in SCCP or H323 mode.

2. When a video end point registers to Cisco Unified Communications Manager, initiate a conference with two other video end points.
3. Verify that all parties can see each other with the configured multiple video window display.
4. Invite one more person to the conference and verify if this person is seen in the video window display.

Stage 1 Exit Criteria for Cisco Unified Messaging Gateway

In Stage 1, use the existing subscribers of Cisco Unity Express, Unity Connection, Unity and perform the following:

1. Send and mark a voice mail for Cisco Unity Express user as urgent.
2. Successfully retrieve Cisco Unity Express user's message and delete it.
3. Send and mark a voice mail for Cisco Unity Connection user as private.

Stage 6 Exit Criteria for Cisco Unified Messaging Gateway

In Stage 6, do the following after each messaging component is upgraded:

1. Send and mark a voice mail for Cisco Unity Express user as urgent.
2. Successfully retrieve Cisco Unity Express user's message and delete it.
3. Send and mark a voice mail for Cisco Unity Connection user as private.
4. Successfully retrieve Unity Connection user's message and delete it
5. Send a voice mail for Unity Connection user and mark it private and urgent.
6. Successfully retrieve Unity user's message and delete it.

Cisco Unified Intelligent Contact Management Enterprise Rogger/Progger Upgrade Exit Criteria

After upgrading the Unified ICME Support Tools Server, verify the following:

1. Ensure that basic calls and call functionality such as transfers, conferences, call treatment and queuing by Unified IP IVR, etc. are working properly.
2. Verify that all previously registered endpoint devices have re-registered correctly.
3. Check that no exceptions, errors, or unexpected events have occurred or found in the log buffer.
4. After Side A Central Controller components have been upgraded, verify basic operations such as the following:
 - Setup logs indicate no errors or failure conditions.
 - All components can “ping” public and private IP addresses as applicable.
 - Schema upgrade is successful for all databases and there is no loss of data integrity or data.
 - Registry changes are correct and match the information in the setup logs.
 - All component services start correctly without generating errors.
 - All general activities such as ability to access SQL server and to run third-party software components like VNC or PCAnywhere, etc. are not stopped by Cisco Security Agent.
 - “Ccagent” is in service and connected to any Peripheral Gateways located in Side A.
 - Recovery process not required, no activity other than process start up.

- Configuration information is passed to the router by the logger. Replication process begins when the Historical Database Server comes online.
- Replication process begins with no errors.
- Database space allocation and % used are reported correctly.
- Unified ICME Support Tools server can acquire logs, capture registry information, and schedule collection of logs.

Cisco Unified Service Monitor (CUSM) Upgrade Exit Criteria

1. In CUSM user interface, Go to Configuration > Trap Receivers.
2. Enter the Community String and IP address of the OM server.
3. Click 'ok'. Click 'yes' when the message window pops up asking "Do you want this set up?"
4. Start background load traffic.
5. In OM Dashboard, launch the Service Quality Alerts report.
6. In CUSM GUI, Go to Configuration > Trap Receivers.
7. Enter the Community String and IP address of the OM server.
8. Click 'ok'. Click 'yes' when the message window pops up asking "Do you want this set up?"
9. Make sure background load traffic is running.
10. Check if the traps are sent to trap receiver.

Cisco Unified Operation Manager (CUOM) Upgrade Exit Criteria

1. Check whether the devices are in Monitored state.
2. Stop the CUCM services or trigger a means for the CUOM to generate alert.
3. (Optional) Check whether email is generated when the services go down.
4. Emails are generated based on the severity and setting on CUOM, Emails should be generated for the criteria that was set under Notification.
5. Check whether Discovery ends after discovering all the devices (sometimes the discovery runs continuously).
6. Check whether the devices that falls in the subnet range are discovered.
7. Check whether the filtered IP are not getting discovered during the process.
8. Schedule Phone discovery.
9. After the discovery is completed Check whether all the above listed Phone types are getting Discovered.
10. Configure and run Auto Discovery.
11. After the discovery is completed Check whether the device listed in the Description are discovered.
12. Make sure CUOM is able to discover device cap of the device discovered.

Cisco Unified Service Statistic Manager Upgrade Exit Criteria

Periodically receive reports from Cisco Unified Operation Manager and Cisco Unified Service Monitor.

Cisco Unified Provisioning Manager Upgrade Exit Criteria

1. Successfully created two new users. One user is for CUCM and Unity, the other user is for CUCM and Unity Connection.
2. Verify the same two new users are in CUCM end users, Unity, and Unity Connection.
3. Verify a test call to each newly created user's DN.

Cisco Unified Mobile Communicator (CUMC) Upgrade Exit Criteria

1. Integrate CUPS. Make the client can see other clients on contact list.
2. In Stage 4, make a call via Presence contact list. Verify there is bi-directional audio
3. In Stage 6, call CUPS's extension and deposit a voicemail. Mark voicemail as private. Notice the voicemail counter increment by 1. Retrieve the voice mail via unity pilot # and delete it. Notice the voicemail counter in CUPS decrement by 1.
4. Black Berry Smart Client retrieving Voice Mails and read/unread/delete Voice Mails
5. Meeting Notification at Black Berry Smart Client.

Cisco Unified SIP Proxy Upgrade Exit Criteria

After upgrading Cisco Unified SIP Proxy, verify the following:

1. Verify if SIP calls from Unified CM to Unified CM Business Edition through Cisco Unified SIP Proxy is successful
2. Verify if SIP calls from Unified CME to Unified CM through Cisco Unified SIP Proxy is successful
3. Verify if conference calls between Unified CM and Unified CM Business Edition through Cisco Unified SIP Proxy is successful.

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 Documentation](#)

Compatibility Guides

The following documentation provides information about compatibility of components:

- For information about support for legacy products and third-party product interoperability with Cisco IP telephony products, see the Cisco Interoperability Portal at:
<http://www.cisco.com/go/interoperability>
- Cisco Unified Communications Compatibility Tool:
<http://tools.cisco.com/ITDIT/vtgsca>
- Cisco Unified Communications Manager Compatibility Information:
http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_device_support_tables_list.html

- *Cisco Unified Contact Center Express 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
- *Cisco Unified Communications Manager Express and Cisco IOS Software Version Compatibility Matrix:*
http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/requirements/guide/33matrix.htm
- 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
- UCS and MCS Server Models Supported by Cisco Unified Communications Manager Releases
http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/prod_brochure0900aec8062a4f9.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 IPT:
http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/unified/communications/system/versions/IPTMatrix.html
- IP Communications System Test Release at:
http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/GB_resources/ipcmatrix.htm

Component Release Notes and Installation and Upgrade Documentation

Table 6-6 lists provides references to release notes and installation and upgrade documents for components. These URLs link to web pages that list various release versions of these documents. Review the appropriate documents based on the release versions of the components in your base and target release sets.

Table 6-6 *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 Unity	http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_installation_guides_list.html
Cisco Unity Express	http://www.cisco.com/en/US/products/sw/voicesw/ps5520/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/voicesw/ps5520/prod_installation_guides_list.html
Cisco Unified MeetingPlace	http://www.cisco.com/en/US/products/sw/ps5664/ps5669/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/ps5664/ps5669/prod_installation_guides_list.html
Cisco IP/VC 3500 Series Videoconferencing	http://www.cisco.com/en/US/products/hw/video/ps1870/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/video/ps1870/prod_installation_guides_list.html

Table 6-6 Component-Specific Release Notes and Installation and Upgrade Documents (continued)

Components	Release Notes	Installation and Upgrade Documents
Cisco Unified Video Advantage	http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_release_notes_list.html	http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html
Cisco Unity Connection	http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6509/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
Cisco Unified IP Phone 6900 Series	http://www.cisco.com/en/US/products/ps10326/prod_release_notes_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 Unified Presence	http://www.cisco.com/en/US/products/ps6837/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6837/tsd_products_support_install_and_upgrade.html
Cisco Unified Service Monitor	http://www.cisco.com/en/US/products/ps6536/prod_release_notes_list.html	http://www.cisco.com/en/US/products/ps6536/tsd_products_support_install_and_upgrade.html
Cisco IP Communicator	http://www.cisco.com/en/US/products/sw/voicesw/ps5475/prod_release_notes_list.html	—
Cisco Unified Contact Center Express	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 Emergency Responder	http://www.cisco.com/en/US/products/sw/voicesw/ps842/prod_release_notes_list.html	—
Cisco Unified Survivable Remote Site Telephony	—	http://www.cisco.com/en/US/products/sw/voicesw/ps2169/prod_installation_guides_list.html
Cisco Catalyst 3550 Series Access Switches	http://www.cisco.com/en/US/products/hw/switches/ps646/prod_release_notes_list.html	http://www.cisco.com/en/US/products/hw/switches/ps646/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

Table 6-6 *Component-Specific Release Notes and Installation and Upgrade Documents (continued)*

Components	Release Notes	Installation and Upgrade Documents
Cisco IOS Software Releases 15.1	http://www.cisco.com/en/US/products/p_s10592/prod_release_notes_list.html	—
Cisco 1861 Integrated Services Router	—	http://www.cisco.com/en/US/products/p_s5853/prod_installation_guides_list.html
Cisco 3800 Series Voice Gateways	http://www.cisco.com/en/US/products/p_s5855/prod_release_notes_list.html	http://www.cisco.com/en/US/products/p_s5855/prod_installation_guides_list.html
Cisco 2800 Series Voice Gateways		http://www.cisco.com/en/US/products/p_s5854/prod_installation_guides_list.html
Cisco 3900 Series Voice Gateways		http://www.cisco.com/en/US/products/p_s10536/prod_installation_guides_list.html
Cisco 2900 Series Voice Gateways		http://www.cisco.com/en/US/products/p_s10537/prod_installation_guides_list.html

