Planning Your System Upgrade

This topic provides an overview of the upgrade process for contact center components, the software releases that are involved in the upgrade process, and the different upgrade strategies that can be used based on the size of the customer network.

This topic contains the following sections:

- Cisco Unified Communications System Overview
- Release Sets
- Upgrade Roadmap
- Upgrade Overview
- System Upgrade Strategies

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

Cisco Unified Communications System Overview

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

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

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

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

Scope of this Upgrade Documentation

The upgrade process discussed for this Cisco Unified Communications System release addresses different upgrade paths and strategies, preparation for the upgrade operation, order of operations such as the sequence in which the contact center components should be upgraded, and other dependencies such as backward compatibility of software.

This topic only provides information related to upgrading components that are present in the base release set that is to be upgraded. See Release Sets for more information.

This topic does not provide installation, upgrade or backup procedures for:

- Components that are not part of the existing production network and are being newly added as a part of the target release. This information is available in the individual component documents.

- Individual standalone components such as Unified Communications Manager, Unified CCE, and Unified CVP. It only addresses the upgrade sequence and information of Cisco Unified Communications System components at a system-level.

  See Table 6-3 in Chapter 6, "Performing Your System Upgrade" for a list of URLs to component-specific release notes and installation and upgrade documents. When performing the actual component upgrades, see the product-specific upgrade documents for detailed information.

- Third-party co-resident applications (although they can be used during the upgrade and backup process) such as:

  – Antivirus

  – Security

  – Server management

  – Remote access

- Additional third-party off-board applications such as:

  – Operator console

  – VoIP recording

  – Billing and accounting

- Server replacement (hardware upgrade) for components. For information on how to replace a single server or an entire cluster for Cisco Unified Communications Manager Release 8.5(1), see: http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/install/8_5_1/cluster/clstr851.html

  For information on supported Cisco 7800 Series Media Convergence Servers and Unified Computing System B-series servers, see: http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/prod_brochure0900aecd8062a4f9.html

- Cisco Unified Communications on the Cisco Unified Computing System Solution Overview: http://www.cisco.com/en/US/prod/collateral/voicesw/ps6790/ps5748/ps378/solution_overview_c22-597556.html

Release Sets

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

A *base* release or release set is defined as the starting release set that is being upgraded. A *target* release or release set is defined as the ending release set to which the base release set is being upgraded.

The systems that are involved in the upgrade and discussed in this document include:

- Base release:
  - Cisco Unified Communications System Release 8.0(2)—Based on your specific environment, this release set may be the deployed software release that is being upgraded. For detailed information about the deployment models and topologies developed to test this release set, see Review Tested Deployment Models for Contact Center.
- Target release:
  - Cisco Unified Communications System Release 8.5(1)—The new software release set that is the goal of the upgrade process, regardless of your base release set. For detailed information about the deployment models and topologies developed to test this release set, see Review Tested Deployment Models for Contact Center.

For detailed information about the software versions of the components in the base and target release sets, see Chapter 5, "Preparing for Your System Upgrade."

For upgrade information on Cisco Unified Communications System Release 8.5(1) IP Telephony components, see:

http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/UC8.5.1/ipt_system_inst_upg/suimt.pdf

Upgrade Roadmap

This section provides a roadmap of the high-level upgrade tasks:

Step 1   Review your hardware and software requirements. For instance, verify that the deployed hardware configurations and operating system support the target release and are ready for an upgrade.

For a list of supported MCS servers, see Interoperability and Compatibility Portals.

Step 2   Perform all required hardware equipment checks. For instance, verify that the DVD ROM drive in the server where you plan to perform the upgrade tasks is operational before you start the upgrade process.

Step 3   Ensure that you have backed up all configuration files prior to performing an upgrade of your system, in the event that your upgrade is unsuccessful and you need to restore your previous configuration.

For information on backing up and restoring major contact center components, see http://www.cisco.com/cisco/web/docs/iam/unified/ipcc851/Backing_Up_and_Restoring_Components.html

Step 4   If necessary, remove any engineering specials or service releases for components that are related to the previous base release version before upgrading to the target release version.

Step 5   Access and download the license files required to upgrade (or newly install) and operate the appropriate software at: http://www.cisco.com/go/license.

Step 6 Upgrade the *existing* network components from the base release set to the target release set. For a list of existing components, see Table 4-1.

> ✎
> **Note** The existing network should include components that are already supported by the base release set.

Use the recommended upgrade strategies described in System Upgrade Strategies to perform the upgrade. The upgrade strategies you select should depend on a number of factors, such as:

- Base release set currently deployed in your network
- Size of the network and number of sites
- Topology of the network
- Presence or absence of shared components among sites, for instance, a Unified ICME system that spans multiple clusters

Step 7 Perform verification and validation testing in between upgrading components in multiple stages to ensure that the components in the network interoperate. For information on verifying and validating multistage upgrades and interoperability of components, see Verifying Multistage System Upgrades in Chapter 6, "Performing Your System Upgrade."

> ✎
> **Note** Ensure that you have a comprehensive "backout" plan in the event of an upgrade failure.

Step 8 Install any *new* components supported by the target release in the network and configure them. For a list of new components and their installation and configuration documents. see New Components and Features in Target Release Set.

Step 9 Remove and/or replace any components from your network that are not part of the target release or have reached EOL (end-of-life) and/or EOS (end-of-sale). Follow proper procedures to uninstall these components. For a list of components that should be removed/replaced, see Components Not in Target Release Set.

> ✎
> **Note** See the EOS and EOL website for a list of recommended replacements at:
> http://www.cisco.com/en/US/products/prod_end_of_life.html. For Cisco EOS and EOL policy, see the information at: http://www.cisco.com/en/US/products/products_end-of-life_policy.html.

Upgrade Overview

This section lists the components included in the base release set involved in the upgrade process, the components that have to be newly installed for the target release set, and components that must be uninstalled because they are not part of the target release set.

This section includes:

- Existing Components in Base Release Set
- New Components and Features in Target Release Set
- Components Not in Target Release Set

Existing Components in Base Release Set

Table 4-1 contains a listing of components that are part of the base release set that should be upgraded to Cisco Unified Communications System Release 8.5(1), For information on the component software versions, see Upgrade Release Versions in Chapter 5, "Preparing for Your System Upgrade".

Note Table cells with "—" indicate products that were not tested, either because of unavailability or because they are not part of the base release sets.

Table 4-1   Existing Contact Center Components in Cisco Unified Communications System Base Release Set

Component	Release 8.0(2)
Cisco Unified Communications Manager	X
Cisco Unified SIP Proxy	—
Cisco Unified Intelligent Contact Management Enterprise and Cisco Unified Contact Center Enterprise	X
Cisco Unified Intelligent Contact Management Enterprise and Cisco Unified Contact Center Enterprise Operating System	—
Cisco Unified ICME Support Tools	—
Cisco Unified Expert Advisor	—
Cisco Unified Expert Advisor Operating System	—
Cisco Unified Contact Center Express	—
Cisco Unified IP IVR	X
Cisco Unified Contact Center Express/Unified IP IVR Operating System	—
Cisco Unified Customer Voice Portal	X[1]
Cisco Unified Customer Voice Portal Operating System	—
Cisco Unified Intelligence Center	—
Cisco Unified Presence	—
Cisco Unified Videoconferencing 3545 MCU	—
Cisco Unified Conferencing for TelePresence	—
Cisco Unity Connection	—
Cisco IP Communicator	—
Cisco Unified Personal Communicator	—
Cisco Unified Video Advantage	—
Cisco Unified IP Phones 7900 Series (7921G (Wireless), 7940, 7940G, 7960, 7960G, 7962, 7970, and 7970G)	X
Cisco Unified IP Phones 6900 Series (6911, 6921, 6941 6961, and 6945)	X
Cisco Unified IP Phones models 9951 and 9971	X
Cisco Unified IP Phones model 8961	X

Table 4-1   Existing Contact Center Components in Cisco Unified Communications System Base Release Set

Component	Release 8.0(2)
Cisco Aironet Access Point 1240AG	—
Cisco Catalyst 6500 Series Switch Firewall Services Module	—
Cisco Adaptive Security Appliance (5520, 5540, 5580) Services	—
Cisco Adaptive Security Appliance 5500 AIP Security Services Module (IPS)	—
CiscoWorks Management Center for Cisco Security Agents	—
Cisco Security Agent for Unified Communications Manager	X
Cisco Security Agent for Unified IP IVR	X
Cisco Security Agent for Unified Contact Center Express	X
Cisco Security Agent for Unified Expert Advisor	X
Cisco Security Agent for Unified Intelligent Contact Management Enterprise	X
Cisco Security Agent for Unified Customer Voice Portal	X
Cisco Unified Operations Manager	—
Cisco IOS Mainline Release	—
Cisco 3725, 3745 (Unified CVP VXML, voice/data, H.323, SIP, MGCP, IOS-based Transcoders and Conference Bridges, and Cisco Unified Border Element gateways)	—
Cisco 3825, 3845 (Unified CVP VXML, voice/data, H.323, SIP, MGCP, IOS-based Transcoders and Conference Bridges, and Cisco Unified Border Element gateways)	X[2]
Cisco AS5400XM (Unified CVP VXML, voice, H.323, SIP and PSTN gateways)	—
Cisco Unified Border Element	—
Cisco VGD-1T3 Voice Gateway	X[2]
Cisco 3825 MGCP gateway	X[2]
Cisco 3745 gatekeeper	—
RSVP Agent (on 38xx platforms)	—
Cisco 7206VXR (core/WAN router)	X[2]
Cisco 831 router	—
Cisco 871 router	—
Cisco 881 router	X[2]
Cisco Catalyst 3750 (access switch)	X
Cisco Catalyst 6506, 6509 (core switch, Supervisor 2)	X
Cisco Catalyst 6506, 6509 (Supervisor 2)	—
Cisco Catalyst 6506, 6509 (Supervisor 720)	X
Cisco CSS 11501 Content Services Switch	X

1. [1]Unified CVP video feature is supported in Unified CVP Release 8.0(1), however this feature was not tested in the System Test environment. The functionality and interoperability testing of the feature was performed during product testing for this release.

2. Cisco IOS Release 15.1(1)T is a short deployment Standard Maintenance release ideal for the very latest new features and hardware support from Cisco. Cisco provides 18 months of support for Standard Maintenance releases. Customers requiring longer-term maintenance support should consider upgrading to the next 15 M Extended Maintenance release (when it becomes available), which will incorporate all features and hardware support of previous Standard Maintenance and Extended Maintenance releases. For more information, refer to http://www.cisco.com/en/US/prod/collateral/iosswrel/ps8802/ps10587/ps10591/ps10621/qa_c67_561940.html.

New Components and Features in Target Release Set

Some components are new to the Cisco Unified Communications System Release 8.5(1) release set. You must install these new components and configure them into the network (rather than upgrade them).

Cisco MediaSense is the new component in the Cisco Unified Communications System Release 8.5(1) release set.

http://www.cisco.com/en/US/products/ps11389/tsd_products_support_series_home.html

New Components when Upgrading from Cisco Unified Communications System Release 8.0(2)

This section lists components that are new in the Release 8.5(1) release set when you upgrade from Release 8.0(2).

Cisco MediaSense is the new component in the Cisco Unified Communications System Release 8.5(1) release set. See the installation and configuration documents for this component at the following URL:

http://www.cisco.com/en/US/products/ps11389/tsd_products_support_install_and_upgrade.html

Components Not in Target Release Set

The following deployment and components were removed from the Cisco Unified Communications System Release 8.5(1) release set (and previous release sets) in relation to the base release sets:

- Cisco Unified System Contact Center Enterprise (Unified SCCE) is supported in Unified CCE Release 8.5(1); however, there is no separate Unified SCCE Release 8.5(1). If you request features that are in Release 8.5(1), you must migrate all Unified SCCE deployments to Unified CCE deployments. For more information on the migration from Unified SCCE Release 8.0(1) to Unified CCE 8.5(1), see *Upgrade Guide for Cisco Unified ICM/Contact Center Enterprise & Hosted, Release 8.0(1)* at:
  http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/ipccenterprise8_5_1/installation/guide/icm85ug.pdf

- Unified CVP video feature is supported in Unified CVP Release 8.0(1); however, this feature was not tested in the system test environment. The functionality and interoperability testing of the feature was performed during product testing for this release.

- Cisco 2691 router—Replace this router with the Cisco 2851 Integrated Services Router. Information about the Cisco 2800 Series Integrated Services Router is available at:
  http://www.cisco.com/en/US/products/ps5854/tsd_products_support_series_home.html

- Cisco 831, 836 and 837 Series Routers—Replace these routers with the Cisco 881 Integrated Services Router for providing multiple types of DSL technologies, broadband cable, and Metro Ethernet connections in teleworker sites for your remote and mobile agents. Information about the Cisco 871 Series Integrated Services Router is available at:
  http://www.cisco.com/en/US/products/hw/routers/ps380/tsd_products_support_series_home.html

- Cisco Catalyst 3550 Series Switches—Replace this switch with the Cisco Catalyst 3750 Series Switches for a stackable, multilayer switch. Information about the Cisco Catalyst 3750 Series Switch is available at:
  http://www.cisco.com/en/US/products/hw/switches/ps5023/tsd_products_support_series_home.html

- Cisco 3660 Series Multiservice Platforms—Replace this router with the Cisco 3800 Series Integrated Services Router for flexible routing and low-density switching. Information about the Cisco 3800 Series Integrated Services Router is available at:
  http://www.cisco.com/en/US/products/ps5855/tsd_products_support_series_home.html

- Cisco 3700 Series Routers—Replace this router with the Cisco 3800 Series Integrated Services Router for flexible routing and low-density switching. Information about the Cisco 3800 Series Integrated Services Router is available at:
  http://www.cisco.com/en/US/products/ps5855/tsd_products_support_series_home.html

- Cisco AS5400HPX/Cisco AS5850—Replace these gateways with the AS5400XM gateways. Information about the Cisco AS5400XM gateways is available at:
  http://www.cisco.com/en/US/products/hw/univgate/ps505/prod_installation_guides_list.html

- Cisco Catalyst 6500 Series Supervisor Engine 2 and Multilayer Switch Feature Card 2—Replace these modules with Cisco Catalyst 6500 Series Supervisor Engine 720 or Cisco Catalyst 6500 Supervisor Engine 32. Information about these modules is available at:
  http://www.cisco.com/en/US/products/hw/switches/ps708/tsd_products_support_series_home.html

- Cisco Unified Videoconferencing 3511 MCU and Cisco Unified Videoconferencing System 3540—Replace with the Cisco Unified Videoconferencing 3515 MCU and Cisco Unified Videoconferencing System 3545. Information about the Cisco Unified Videoconferencing 3500 Series Products is available at:
  http://www.cisco.com/en/US/products/hw/video/ps1870/tsd_products_support_series_home.html

- Cisco Communications Media Module (CMM)—Replace the Cisco Communications Media Module with the Cisco 3800 Series Routers. Information about the Cisco 3800 Series Integrated Services Router is available at:
  http://www.cisco.com/en/US/products/ps5855/prod_installation_guides_list.html

Note For a list of recommended replacements (if any) for components that are no longer supported or sold, see the EOS and EOL website at: http://www.cisco.com/en/US/products/prod_end_of_life.html. For Cisco EOS and EOL policy, see the information at:
http://www.cisco.com/en/US/products/products_end-of-life_policy.html.

Upgrade Path to Cisco Unified Communications System Release 8.5(1)

Figure 4-1 illustrates the upgrade path available for Cisco Unified Communications System Release 8.5(1) in contact center environments - from Cisco Unified Communications System Release 8.0(2) to Cisco Unified Communications System Release 8.5(1).

Figure 4-1   Upgrade Path for Cisco Unified Communications System Release
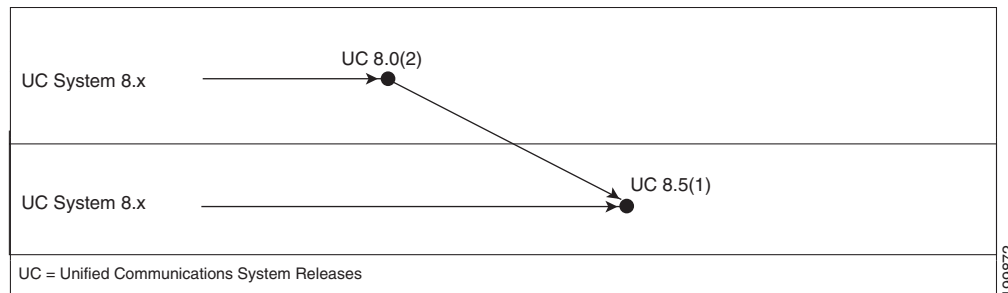
Note The vertical arrow indicates the upgrade path from one release to the next.

System Upgrade Strategies

This section discusses the upgrade strategies for all components in the target release deployment scenarios. Details of individual components upgrades are not described unless additional information or clarification is required.

The following upgrade strategies are available for use when upgrading to the target release:

- Single-stage upgrade using existing hardware (*flash-cut*)—All components in the network start at the base release set and all components can be upgraded to the target release set within a single maintenance window.

- Single-stage upgrade using new hardware (either flash-cut or *shrink-and-grow*)—A parallel network should be built using new hardware and prestaged with configuration to support the existing production network.

  All users can then be moved from the existing production network to the new network in one of two ways:

  – In a single maintenance window using a flash-cut upgrade process

  – In several maintenance windows using a shrink-and-grow upgrade process (where a single maintenance window is used to implement the new release versions on the new hardware, but multiple windows are used to migrate the users)

Note We recommend that you do not use backup and restore procedures to perform the prestaged configuration on the parallel network. In many applications, you are required to use the same hostname and IP address for the backup as well as the restore process. This can prevent you from creating a truly parallel network, as two systems cannot exist on the same network with identical hostnames and IP addresses.

The above upgrade strategies involving the single-stage upgrade approach are appropriate for small sites (fewer than 300 seats) with a smaller number of components in the network.

- Multistage system upgrade using existing hardware (hybrid system)—The components in individual sites can be upgraded from the base release set software to the target release set software in stages, during separate maintenance windows.

    At the completion of each intermediate stage, the network within each site exists as a *hybrid system* with a mix of the following:

    – Some components are operating on the base release set

    – Other upgraded components are operating on the target release set

> **Note** *Hybrid system* refers only to interproduct versions, not to intraproduct versions. For instance, all Unified Communications Manager servers in the same cluster, or all servers that are part of the same Unified ICME system, will remain at the same software version.

    The multistage system upgrade approach is recommended for medium-to-large sites (ranging from 301 to 1,499 seats for medium and 1,500 to 4,999 seats for large) with a greater number of components in the network.

- Multisite migration (via hybrid network with release set interworking)—Components are upgraded from the base release set software to the target release set software on a site-by-site basis, during separate maintenance windows.

    At the completion of each maintenance window, a *hybrid network* exists within the multiple sites with a mix of the following:

    – Sites whose components are operating on the base release set

    – Sites whose components are operating on the target release set

    – Sites whose components are a hybrid system as described in Multistage System Upgrade Using Existing Hardware (Hybrid System)

    This model assumes that sites may be upgraded independently. However, with the multisite migration strategy, you must account for distributed applications with shared components among sites. For example, if you have deployed a distributed Unified ICME system or a Unified Communications Manager cluster using Clustering over the WAN (CoW), then these sites must be upgraded concurrently.

    Users can be moved in stages from the existing production network to the new network operating on the target release set software.

    The multisite migration strategy is recommended for large multisite environments (more than 5,000 seats) with a large number of components in the network.
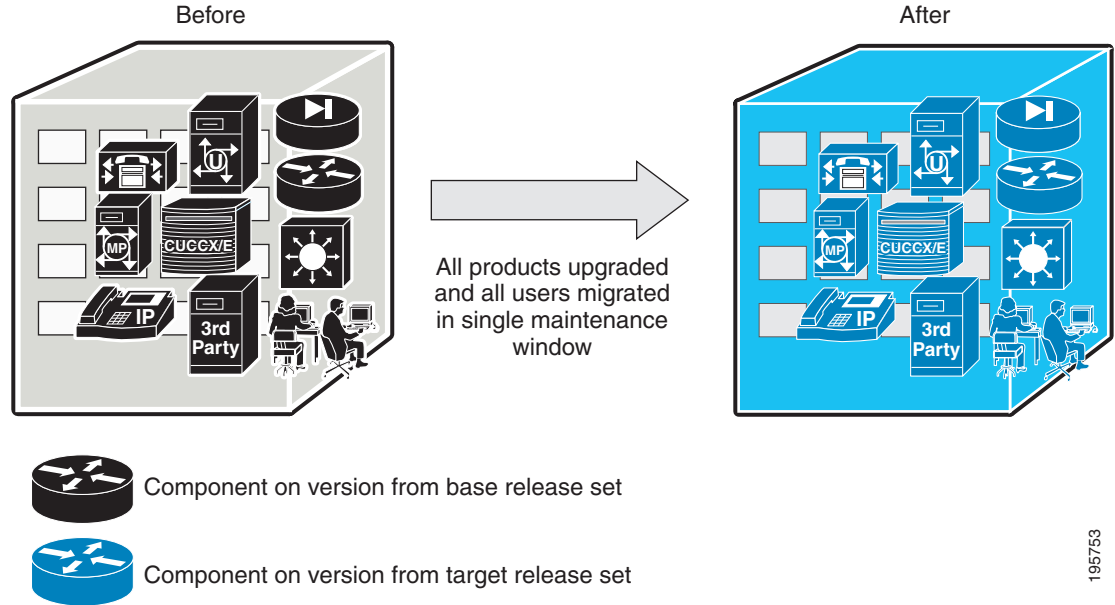
Single-Stage Upgrade Using Existing Hardware

All components in the network start at the base release set and all components are upgraded to the target release set software within a single maintenance window. Because all components are upgraded within a single maintenance window, interoperability is not required between the base and target release sets.

The single-stage upgrade on existing hardware approach is typically not recommended for large customer sites and networks, because it has to be performed within a single maintenance window.

Figure 4-2 shows an example of the single maintenance window that is involved in the single-stage upgrade on existing hardware approach.

Figure 4-2   *Single-Stage Upgrade Using Existing Hardware*

Before

After

All products upgraded
and all users migrated
in single maintenance
window

Component on version from base release set

Component on version from target release set

195753

Single-Stage Upgrade Using New Hardware

A parallel Cisco Unified Communications System network should be built using new hardware and prestaged with configuration to support the existing production network. All users can be then moved from the existing production network to the new network operating with the target release set software either in a single maintenance window (using flash-cut) or in several maintenance windows (using shrink-and-grow).

The single-stage upgrade on new hardware approach is not recommended for large customer sites and networks for the following reasons:

- The upgrade cannot be performed within a single maintenance window.

- The expense of a complete new parallel network is significant.

Figure 4-3 shows an example of the maintenance windows that are involved in the single-stage upgrade on new hardware approach.

Figure 4-3   Single-Stage Upgrade Using New Hardware
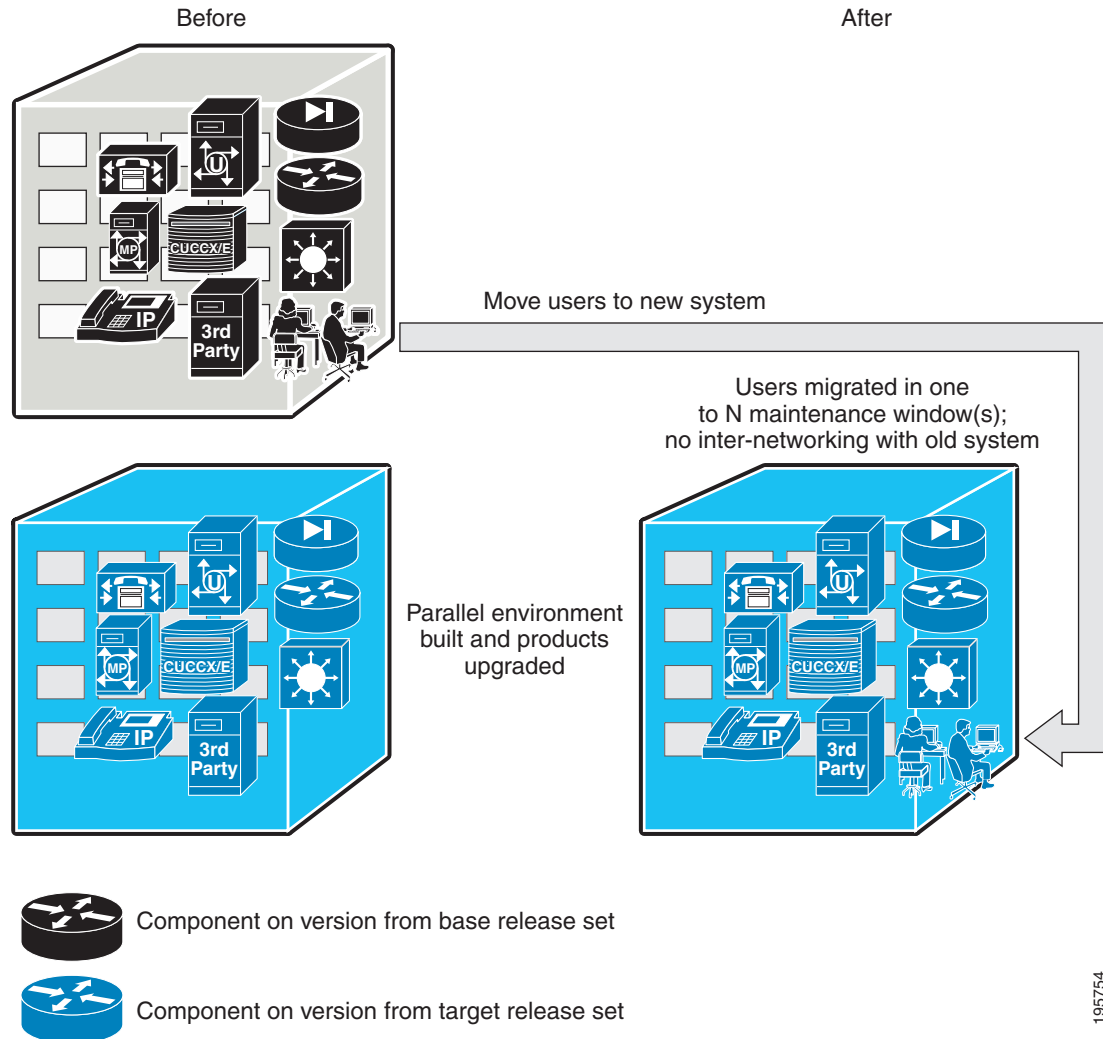
Multistage System Upgrade Using Existing Hardware (Hybrid System)

Individual components and/or sites can be upgraded in stages, from the base release set software to the target release set software, during separate maintenance windows. At the completion of each intermediate stage, the individual site exists as a *hybrid system* with a mix of the following:

- Some components operating on the base release set software
- Other upgraded components operating on the target release set software

The multistage system upgrade on existing hardware is the recommended approach for medium-to-large networks. In this case, individual components within a single site and/or individual sites in a multisite environment are progressively upgraded over the span of several days or weekends.

This type of staging is required because:

- Sufficient time may not be available (maintenance window) to take the system out of service for the complete upgrade of all the components involved.

- You must test existing functionality following the upgrade.

- You must test new functionality following the upgrade.

You can view a staged upgrade as a series of maintenance windows separated by intermaintenance window intervals. During each maintenance window, one or more components of the system or a subset of the components is upgraded.

Customers typically have a maintenance window during which service disruptions are likely to have minimal impact and affect only a limited number of users, for example, during the night or during a weekend.

Before the staged upgrade is completed, the whole network exists in a partially upgraded state where some components have been upgraded to the target release set software and the remaining components are operating with the base release set software.

Backward compatibility of the components is critical during the staged upgrade, so that target release set components are able to interoperate with the base release set components. If any component is not backward compatible, this can potentially result in prolonged periods of service outage spanning several maintenance windows (possibly several weeks).

Therefore, during multistage upgrades, it is mandatory to have interoperability between the base and target release set software versions. For more information about software and backward compatibility considerations, see Chapter 5, "Preparing for Your System Upgrade.".

Figure 4-4 shows an example of the maintenance windows that are involved in the multistage system upgrade on existing hardware approach.

Figure 4-4   Multistage System Upgrade Using Existing Hardware (Hybrid System)

Each stage / maintenance window upgrades some products resulting in migrating all users to a *hybrid system*. Only *hybrid systems* as defined here are allowed

Component on version from base release set

Component on version from target release set
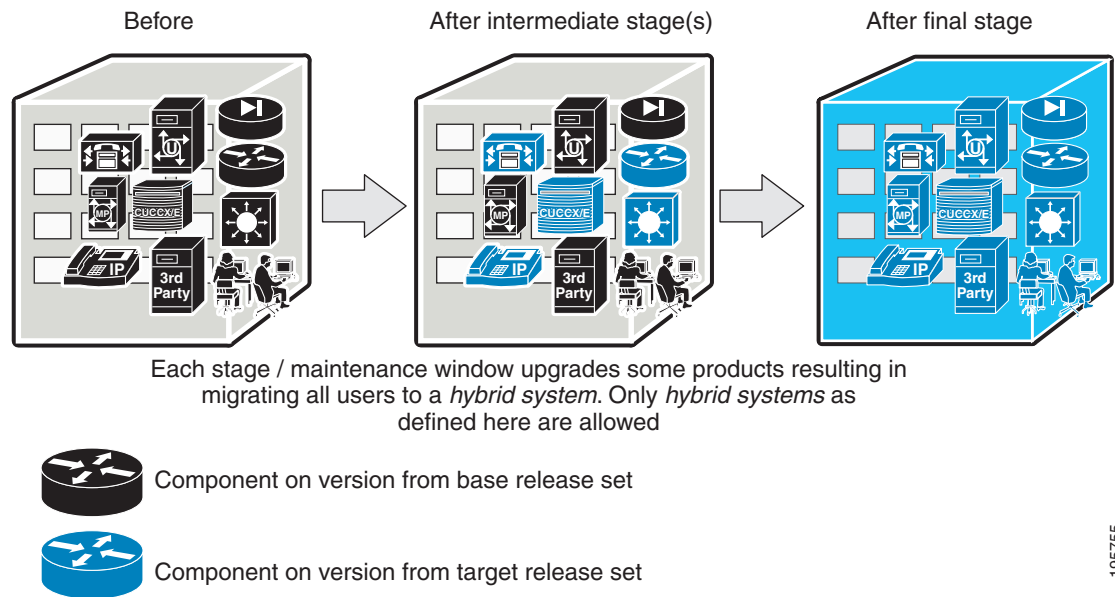
Multisite Migration (Hybrid Network)

Components are upgraded from the base release set to the target release set on a site-by-site basis during separate maintenance windows.

At the completion of each maintenance window, a *hybrid network* will exist across multiple sites. Within each site, either a single-stage or multistage system upgrade strategy can be used to upgrade that particular site's components from the base to the target release set.

Interworking can be expected among sites with *pure* base release set versions and sites with *pure* target release set versions as shown in Figure 4-5. However, interworking will not be possible between these *pure* sites and *hybrid system* sites. For more information about software and backward compatibility considerations, see Chapter 5, "Preparing for Your System Upgrade.".

Note   A component that is common to multiple sites, such as a shared Unified ICME system, may impact the interoperability itself, the order in which sites may be upgraded, or which sites must be upgraded concurrently.

Users can be moved in stages from the existing production network to the new network operating with the target release set software. The number of users on the existing base network will shrink while the number on the target network will grow correspondingly.

This migration process can span several weeks and, sometime months, if necessary. During this upgrade approach, it is essential that the two networks, existing and new, are able to communicate with each other.

Figure 4-5 shows an example of the maintenance windows that are involved in the multisite migration approach.

Figure 4-5   Multisite Migration
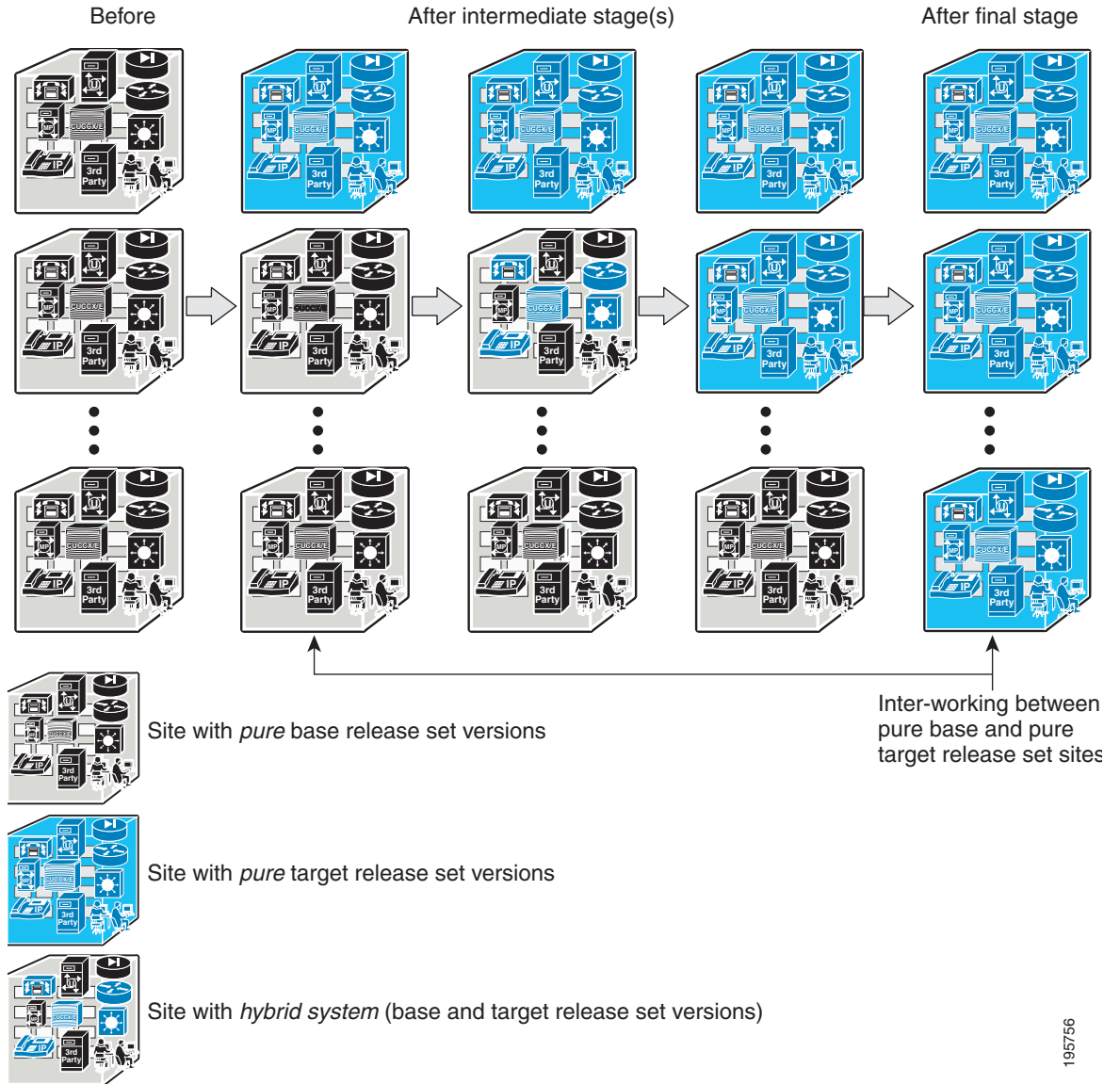
Table 4-2 provides a summary of the preceding upgrade strategies.

Table 4-2   ***Summary of Upgrade Strategies***

	Single-Stage Upgrade	**Multistage System Upgrade**	**Multisite Migration**
Recommended for type of deployment	• Small single-site • Small multisite (fewer than 300 seats)	• Medium single-site • Medium multisite (301 to 1,499 seats) • Large single-site (1,500 to 4,999 seats)	• Large multisite (5,000 seats and more)
Maintenance Window	One	Multiple	Multiple
Interoperability between releases at component level	Not Required	Required	Required
Interoperability between releases at site level	Not Required	Not Required for medium single-site and large single-site Required for medium multisite	Required
User migration	Complete in one stage	Partial until final stage	Partial until final stage
Upgrade time period	One time slot, for example, during a weekend maintenance window	Several days to weeks	Several weeks to months

Interoperability and Compatibility Portals

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

www.cisco.com/go/interoperability

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

- Cisco Unified Communications Compatibility Tool:
  http://tools.cisco.com/ITDIT/vtgsca
- Cisco Unified Communications Manager (CallManager) Compatibility Information:
  http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_device_support_tables_list.html
- Hardware and Software Compatibility Information for Cisco Unified Presence Release 8.5(1), including TCP and UDP port usage:
  http://www.cisco.com/en/US/products/ps6837/products_device_support_tables_list.html
- *Cisco Unified Contact Center Enterprise (Unified CCE) Software Compatibility Guide:*
  http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/ipccenterprise8_0_1/compatibility_matrices/guide/ipcccompat.pdf
- *Hardware and System Software Specification (Bill of Materials), Cisco Unified Intelligent Contact Management & Cisco Unified Contact Center Enterprise & Hosted Editions*:
  http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/ipcc_enterprise/ipccenterprise8_0_1/user/guide/icm80bom.pdf

- *Cisco Unified Contact Center Express (Cisco Unified CCX) Software and Hardware Compatibility Guide*:
  http://www.cisco.com/en/US/docs/voice_ip_comm/cust_contact/contact_center/crs/express_compatibility/matrix/crscomtx.pdf

- *Hardware and System Software Specification for Cisco Unified Customer Voice Portal (Unified CVP), Release 8.5(1)* at:
  http://www.cisco.com/en/US/products/sw/custcosw/ps1006/prod_technical_reference_list.html

- Cisco Computer Telephony Integration Option: CTI Compatibility Matrix:
  http://www.cisco.com/en/US/products/sw/custcosw/ps14/prod_technical_reference_list.html

- Cisco 7800 Series Media Convergence Servers:
  http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure_list.html

- Hardware and Software Interoperability Matrix for Unified Computing System (UCS) B-series Servers:
  http://www.cisco.com/en/US/docs/unified_computing/ucs/interoperability/matrix/hw_sw_interop_matrix_seriesB_111.pdf

- Hardware and Software Interoperability Matrix for Unified Computing System (UCS) C-series Servers:
  http://www.cisco.com/en/US/docs/unified_computing/ucs/interoperability/matrix/hw_sw_interop_matrix_seriesC_101.pdf

- Cisco Unified Communications Manager Server Support Matrix:
  http://www.cisco.com/en/US/products/hw/voiceapp/ps378/prod_brochure0900aecd8062a4f9.html

- Cisco Unified Communications Virtualization (including links to UCS hardware information):
  www.cisco.com/go/uc-virtualized

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

- IP Communications System Test Release:
  http://www.cisco.com/en/US/docs/voice_ip_comm/uc_system/GB_resources/ipcmtrix.htm

Interoperability and Compatibility Portals