



BUILDING TRAINING SOLUTIONS  
FOR THE IT WORLD

## Implementing Cisco Unified Communications Manager Part 2 8.0

**Days:** 5  
**Format:** Instructor-Led  
**Class Code:** CIPT2

### Recommended Course Sequence

Knowledge of prerequisites noted below.

*Course content is subject to change without notice.*

### Course Description:

Implementing Cisco Unified Communications Manager, Part 2 (CIPT2) v8.0 prepares you for implementing Cisco Unified Communications solution in a multisite environment. It covers globalized call routing, Cisco Service Advertisement Framework (SAF) and Call Control Discovery (CCD), tail-end hop-off (TEHO), Cisco Unified Survivable Remote Site Telephony (SRST), and mobility features such as Device Mobility and Cisco Extension Mobility. You will apply a dial plan for a multisite environment including TEHO, configure survivability for remote sites during WAN failure, and implement solutions to reduce bandwidth requirements in the IP WAN. You will also enable Call Admission Control (CAC), including Session Initiation Protocol (SIP) Preconditions and automated alternate routing (AAR).

### Target Student:

- Network Administrators, Network Engineers, and Systems Engineers
- Anyone who has their CCNA Voice Certification and/or is working towards their CCNP Voice Certification

### Prerequisites:

To fully benefit from this course, students should have the following prerequisite skills and knowledge:

- Working knowledge of converged voice and data networks
- Working knowledge of the MGCP, SIP, and H.323 protocols and their implementation on Cisco IOS gateways
- Ability to configure and operate Cisco routers and switches
- Ability to configure and operate Cisco Unified Communications Manager in a single-site environment
- Knowledge attained from attending prerequisite authorized Cisco courses: ICND 1 & 2 or CCNA Bootcamp, ICOMM, CVOICE, and CIPT 1

### At Course Completion:

After completing this course, students will be able to:

- Describe multisite deployment issues and solutions, and describe and configure required dial plan elements
- Implement call-processing resiliency in remote sites by using Cisco Unified SRST, MGCP fallback, and Cisco Unified Communications Manager Express in Cisco Unified SRST mode
- Implement bandwidth management and CAC to prevent oversubscription of the IP WAN
- Implement Device Mobility and Cisco Extension Mobility
- Describe and implement CCD deployments

## Course Outline

### Module 1: Multisite Deployment Implementation

<b>Lesson 1: Identifying Issues in a Multisite Deployment</b>
<ul style="list-style-type: none"><li>■ Multisite Deployment Issues Overview</li><li>■ Quality Issues</li><li>■ Bandwidth Issues</li><li>■ Availability Issues</li><li>■ Dial Plan Issues</li><li>■ NAT and Security Issues</li></ul>
<b>Lesson 2: Identifying Multisite Deployment Solutions</b>
<ul style="list-style-type: none"><li>■ Multisite Deployment Solution Overview</li><li>■ QoS</li><li>■ Solutions to Bandwidth Limitations</li><li>■ Availability</li><li>■ Dial Plan Solutions</li><li>■ NAT and Security Solutions</li></ul>
<b>Lesson 3: Implementing Multisite Connections</b>
<ul style="list-style-type: none"><li>■ Multisite Connection Options</li><li>■ MGCP Gateway Implementation Review</li><li>■ H.323 Gateway Implementation Review</li><li>■ Trunk Implementation Overview</li><li>■ SIP Trunk Implementation</li><li>■ Intercluster and H.225 Trunk Implementation</li></ul>
<b>Lesson 4: Implementing a Dial Plan for International Multisite Deployments</b>
<ul style="list-style-type: none"><li>■ Multisite Dial Plan Overview</li><li>■ Implementing Site Codes for On-Net Calls</li><li>■ Implementing PSTN Access in Cisco IOS Gateways</li><li>■ Implementing Selective PSTN Breakout</li><li>■ Implementing PSTN Backup for On-Net Intersite Calls</li><li>■ Implementing TEHO</li><li>■ Implementing Globalized Call Routing</li><li>■ Considering Globalized Call-Routing Interdependencies</li></ul>

### Module 2: Centralized Call-Processing Redundancy Implementation

<b>Lesson 1: Examining Remote Site Redundancy Options</b>
<ul style="list-style-type: none"><li>■ Remote Site Redundancy Overview</li><li>■ Cisco Unified SRST Operation</li><li>■ MGCP Fallback Operation</li><li>■ Cisco Unified SRST Versions and Feature Support</li><li>■ Dial Plan Requirements for MGCP Fallback and Cisco Unified SRST Scenarios</li></ul>
<b>Lesson 2: Implementing SRST and MGCP Fallback</b>
<ul style="list-style-type: none"><li>■ MGCP Fallback and Cisco Unified SRST Configuration</li></ul>

## Implementing Cisco Unified Communications Manager Part 2 8.0

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<ul style="list-style-type: none"><li>■ Overview</li><li>■ Cisco Unified Communications Manager SRST Configuration</li><li>■ Cisco IOS Gateway SRST Configuration</li><li>■ Cisco IOS Gateway MGCP Gateway Fallback Configuration</li><li>■ Cisco Unified Communications Manager Dial Plan Configuration for SRST Support</li><li>■ Cisco IOS Gateway MGCP Fallback and Cisco Unified SRST Dial Plan Configuration</li></ul>
<b>Lesson 3: Implementing Cisco Unified Communications Manager Express in SRST Mode</b>
<ul style="list-style-type: none"><li>■ Cisco Unified Communications Manager Express Overview</li><li>■ Cisco Unified Communications Manager Express Features</li><li>■ General Configuration of Cisco Unified Communications Manager Express</li><li>■ Configuration of Cisco Unified Communications Manager Express in SRST Mode</li></ul>

### Module 3: Bandwidth Management and CAC Implementation

<b>Lesson 1: Managing Bandwidth</b>
<ul style="list-style-type: none"><li>■ Bandwidth Management Overview</li><li>■ Cisco Unified Communications Manager Codec Configuration</li><li>■ Local Conference Bridge Implementation</li><li>■ Transcoder Implementation</li><li>■ Multicast MOH from Branch Router Flash Implementation</li></ul>
<b>Lesson 2: Implementing CAC</b>
<ul style="list-style-type: none"><li>■ CAC Overview</li><li>■ Standard Locations</li><li>■ RSVP-Enabled Locations</li><li>■ Automated Alternate Routing</li><li>■ SIP Preconditions</li><li>■ H.323 Gatekeeper CAC</li></ul>

### Module 4: Implementation of Features and Applications for Multisite Deployments

<b>Lesson 1: Implementing Device Mobility</b>
<ul style="list-style-type: none"><li>■ Issues with Devices Roaming Between Sites</li><li>■ Device Mobility Overview</li><li>■ Device Mobility Configuration Elements</li><li>■ Device Mobility Operation</li></ul>

## Implementing Cisco Unified Communications Manager Part 2 8.0

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<ul style="list-style-type: none"><li>■ Device Mobility Interaction with Globalized Call Routing</li><li>■ Device Mobility Configuration</li></ul>
<b>Lesson 2: Implementing Cisco Extension Mobility</b>
<ul style="list-style-type: none"><li>■ Issues when Users Roam Between Sites</li><li>■ Cisco Extension Mobility Overview</li><li>■ Cisco Extension Mobility Configuration Elements</li><li>■ Cisco Extension Mobility Operation</li><li>■ Cisco Extension Mobility Configuration</li></ul>

### Module 5: Call Control Discovery

<b>Lessons</b>
<ul style="list-style-type: none"><li>■ The lesson includes these topics:</li><li>■ SAF and CCD Overview</li><li>■ SAF Characteristics</li><li>■ CCD Characteristics</li><li>■ CCD Operation</li><li>■ SAF and CCD Implementation</li><li>■ CCD Considerations</li></ul>