

Hands-On

CIPT2 - v8.0-v9.0 Part 2

Implementing Cisco Unified Communications Manager



Course Description

This Hands-On course Implementing Cisco Unified Communications Manager, Part 2 (CIPT2) v9.0 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).

Students Will Learn

- 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
- Survivability for remote sites during WAN failure
- Automated alternate routing (AAR) to deliver calls over the public switched telephone network (PSTN) if no bandwidth is available
- And more...

Target Audience

Anyone on the path for their CCNP and Network professionals who install, configure, and manage Cisco Unified Communications solutions.

Prerequisites

Completion of CIPT1 course or a working knowledge of converged voice and data networks, 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

Course Outline

Module 1: Multisite Deployment Implementation

- Lesson 1: Identifying Issues in a Multisite Deployment
 - Multisite Deployment Issues Overview
 - Quality Issues
 - Bandwidth Issues
 - Availability Issues
 - Dial Plan Issues
 - NAT and Security Issues
- Lesson 2: Identifying Multisite Deployment Solutions
 - Multisite Deployment Solution Overview
 - QoS
 - Solutions to Bandwidth Limitations
 - Availability
 - Dial Plan Solutions
 - NAT and Security Solutions
- Lesson 3: Implementing Multisite Connections
 - Multisite Connection Options
 - MGCP Gateway Implementation Review
 - H.323 Gateway Implementation Review
 - Trunk Implementation Overview
 - SIP Trunk Implementation
 - Intercluster and H.225 Trunk Implementation
- Lesson 4: Implementing a Dial Plan for International Multisite Deployments
 - Multisite Dial Plan Overview
 - Implementing Site Codes for On-Net Calls
 - Implementing PSTN Access in Cisco IOS Gateways
 - Implementing Selective PSTN Breakout
 - Implementing PSTN Backup for On-Net Intersite Calls
 - Implementing TEHO
 - Implementing Globalized Call Routing
 - Considering Globalized Call-Routing Interdependencies

Module 2: Centralized Call-Processing Redundancy Implementation

- Lesson 1: Examining Remote Site Redundancy Options
 - Remote Site Redundancy Overview
 - Cisco Unified SRST Operation
 - MGCP Fallback Operation
 - Cisco Unified SRST Versions and Feature Support
 - Dial Plan Requirements for MGCP Fallback and Cisco Unified SRST Scenarios
- Lesson 2: Implementing SRST and MGCP Fallback
 - MGCP Fallback and Cisco Unified SRST Configuration Overview
 - Cisco Unified Communications Manager SRST Configuration
 - Cisco IOS Gateway SRST Configuration
 - Cisco IOS Gateway MGCP Gateway Fallback Configuration

- Cisco Unified Communications Manager Dial Plan Configuration for SRST Support
 - Cisco IOS Gateway MGCP Fallback and Cisco Unified SRST Dial Plan Configuration
- Lesson 3: Implementing Cisco Unified Communications Manager Express in SRST Mode
- Cisco Unified Communications Manager Express Overview
 - Cisco Unified Communications Manager Express Features
 - General Configuration of Cisco Unified Communications Manager Express
 - Configuration of Cisco Unified Communications Manager Express in SRST Mode

Module 3: Bandwidth Management and CAC Implementation

Lesson 1: Managing Bandwidth

- Bandwidth Management Overview
- Cisco Unified Communications Manager Codec Configuration
- Local Conference Bridge Implementation
- Transcoder Implementation
- Multicast MOH from Branch Router Flash Implementation

Lesson 2: Implementing CAC

- CAC Overview
- Standard Locations
- RSVP-Enabled Locations
- Automated Alternate Routing
- SIP Preconditions
- H.323 Gatekeeper CAC

Module 4: Implementation of Features and Applications for Multisite Deployments

Lesson 1: Implementing Device Mobility

- Issues with Devices Roaming Between Sites
- Device Mobility Overview
- Device Mobility Configuration Elements
- Device Mobility Operation
- Device Mobility Interaction with Globalized Call Routing
- Device Mobility Configuration

Lesson 2: Implementing Cisco Extension Mobility

- Issues when Users Roam Between Sites
- Cisco Extension Mobility Overview
- Cisco Extension Mobility Configuration Elements
- Cisco Extension Mobility Operation
- Cisco Extension Mobility Configuration

Lesson 3 Video Integration with CUCM

- Telepresence
- Lab 9971 Features and Video Integration

Module 5: Call Control Discovery

Lesson 1: Implementing SAF and CCD

- SAF and CCD Overview
- SAF Characteristics
- CCD Characteristics
- CCD Operation
- SAF and CCD Implementation
- CCD Considerations

Delivery Method

Instructor-Led with numerous Hands-On labs and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

5 Days