



Implementing Cisco Unified Communications Manager Part 1

Length
5 days

Format
Lecture/lab

Track
CCVP

Version
6.0

Course Description

CIPT 1 v6.0 prepares you to configure Cisco Unified Communications Manager for a single site solution. This course focuses on Cisco Unified Communications Manager, the call routing and signaling component for the Cisco Unified Communications solution.

This course includes lab activities in which you will configure Cisco Unified Communications Manager and switches, implement MGCP gateways, and build dial plans for on-net and off-net calls. You will also implement media resources, LDAP, and voice mail integration.

Who Should Attend

CIPT1 is designed for Cisco customers and Channel Partners who deploy, install, and maintain Cisco IP Telephony solutions.

Recommended Prerequisites

- Computer networking, to include LANs, WANs, and IP switching and routing
- Enable VLANs and DHCP
- Working knowledge of the Media Gateway Control Protocol (MGCP) and its implementation on Cisco IOS gateways

Related Training

- Interconnecting Cisco Network Devices Part 1 (ICND1)
- Interconnecting Cisco Network Devices Part 2 (ICND2)

CIPT1

Learning Objectives

After you complete this course, you will be able to:

- Describe Cisco Unified Communications Manager including its functions, architecture, deployment and redundancy options, and how to install or upgrade.
- Perform Cisco Unified Communications Manager platform and general administration, initial configuration, and user management.
- Configure Cisco Unified Communications Manager to support on-cluster calling in a single site deployment.
- Implement a dial plan in Cisco Unified Communications Manager to make internal calls and place calls to the PSTN.
- Configure Cisco Unified Communications Manager media resources, features and voice mail integration.



Learning Solutions



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Course Outline

Module 1: Introduction to Cisco Unified Communications Manager

Lesson 1: Cisco Unified Communications Manager Architecture

- Cisco Unified Communications
- Cisco Unified Communications Manager
- Hardware Requirements
- Cisco Unified Communications Operating System
- Cisco Unified Communications Manager Database
- Licensing Model
- Licensing Tools

Lesson 2: Deployment and Redundancy Options

- Deployment Options
- Single-Site Deployment
- Multisite Deployment with Centralized Call Processing
- Multisite Deployment with Distributed Call Processing
- Multisite Deployment with Clustering Over the WAN
- Call-Processing Redundancy

Lesson 3: Installing and Upgrading

- Installation and Upgrade Overview
- Basic Installation
- Upgrade During Installation
- Windows Upgrade
- Cisco Unified Communications Manager Upgrade

Lab 1-1: Cisco Unified Communications Manager Installation and Upgrade Discovery

Module 2: Administration

Lesson 1: Administration Options

- Administration and User Interfaces
- User Web Interface
- Administration Web Interface
- Serviceability Web Interface
- Disaster Recovery Web Interface
- Operating System Web Interface
- Administration CLI

Lesson 2: Managing Services and Initial Configuration

- Initial Configuration
- Network Configuration Options
- NTP and DHCP Considerations
- DNS Reliance of IP Phones
- Network and Feature Services
- Enterprise Parameters
- Service Parameters

Lesson 3: Managing User Accounts

- User Accounts
- Managing User Accounts Using the Administration GUI
- The Batch Administration Tool (BAT)
- Managing User Accounts Using the BAT
- LDAP Overview
- Using LDAP for User Provisioning
- Using LDAP for User Authentication

Lab 2-1: Exploring Administration Options

Lab 2-2: Configuring Initial Settings

Lab 2-3: Managing User Accounts



Learning Solutions



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Module 3: Single-Site On-Net Calling

Lesson 1: Endpoints

- Endpoints
- Endpoint Feature Support
- Cisco IP Phones Boot Sequence
- H.323 Endpoint Support
- SIP Third-Party IP Phone Support

Lesson 2: Configuring Cisco Catalyst Switches for Endpoints

- Cisco LAN Switch Essentials
- Providing Power to IP Phones
- Configuring Cisco LAN Switches to Provide Power to IP Phones
- Voice VLAN Support in Cisco IOS LAN Switches
- Limiting VLANs on Trunk Ports
- Configuring Voice VLANs in Cisco IOS Switches
- Configuring Voice VLANs in Cisco CATOS Switches

Lesson 3: Implementing and Hardening IP Phones

- Endpoint Configuration Tools and Elements
- IP Phone Autoregistration
- Configuring Autoregistration
- BAT and Auto-Register Phone Tool
- Using BAT for Adding Phones
- Manually Adding Phones
- Hardening Cisco IP Phones

Lab 3-1: Configuring Voice VLANs

Lab 3-2: Implementing IP Phones

Lab 3-3: Hardening IP Phones

Module 4: Single-Site Off-Net Calling

Lesson 1: Implementing MGCP Gateways

- MGCP Gateways
- MGCP Gateway Support
- MGCP Gateway Configuration
- Cisco IOS Gateway MGCP Configuration

Lesson 2: Configuring Call Routing Components

- Endpoint Addressing
- Call Routing
- Digit Analysis
- Path Selection
- Path Selection Configuration
- Special Call Routing Features

Lesson 3: Implementing Digit Manipulation

- Essentials of Digit Manipulation
- Digit Manipulation Flow
- Digit Manipulation Configuration Elements
- External Phone Number Mask
- Digit Prefix and Stripping
- Transformation Masks
- Translation Patterns
- Significant Digits
- Digit Manipulation

Lesson 4: Implementing Calling Privileges

- Calling Privileges Fundamentals
- Partitions and Calling Search Spaces
- Time Schedules and Time Periods
- Understanding CMC and FAC
- Calling Privileges Applications Overview
- Implementing CoS
- Implementing 911 and Vanity Numbers
- Implementing Time of Day-Based Carrier Selection
- Implementing PLAR





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Module 4 (continued)

Lesson 5: Implementing Call Coverage

- Call Coverage Features
- Call Forwarding, Shared Lines, and Call Pickup
- Call Hunting Components
- Call Hunt Options and Distribution Algorithms
- Call Hunting Flow
- Call Hunting Configuration

Lab 4-1: Implementing MGCP Gateways

Lab 4-2: Configuring Call Routing Components

Lab 4-3: Implementing Digit Manipulation

Lab 4-4: Implementing Calling Privileges

Lab 4-5: Implementing Call Coverage

Module 5: Implementation of Media Resources, Features, and Applications

Lesson 1: Implementing Media Resources

- Understanding Media Resources
- Media Resources Support
- Conferencing Resources
- Conferencing Media Resource Configuration
- Meet-Me Conference Configuration
- MOH Essentials
- MOH Configuration
- Annunciator Essentials
- Media Resources Access Control Essentials
- Media Resource Access Control Configuration

Lesson 2: Configuring User Features

- User Features
- Call Park and Directed Call Park
- Call Pickup and Hold Reversion
- Do Not Disturb, Intercom, and Cisco Call Back
- Barge and Privacy
- User Options Web Pages
- Cisco IP Phone Services

Lesson 3: Configuring Cisco Unified Presence-Enabled Speed Dials and Lists

- Cisco Unified Presence Essentials
- Support in Cisco Unified Communications Manager
- Cisco Unified Presence Configuration Policies
- Policy Configuration

Lesson 4: Integrating with Voice-Mail Systems

- Voice-Mail Integration Essentials
- Cisco Unity Integration Using SCCP
- Cisco Unity Components
- Configuration for Voice-Mail Integration
- Phone Configuration for Voice-Mail Usage
- Cisco Unity Configuration
- Cisco Unity Subscriber Configuration

Lesson 5: Implementing Cisco Unified Video Advantage

- Cisco Unified Video Advantage Overview
- Communication Flows
- Configuration in Cisco Unified Communications Manager
- Installation
- Verification Tools

Lab 5-1: Implementing Media Resources

Lab 5-2: Configuring User Features

Lab 5-3: Configuring Presence-Enabled Speed Dials and Lists

Lab 5-4: Integrating with Voice-Mail Systems

Lab 5-5: Enabling Cisco Unified Video Advantage

