

Module 1: Introduction to CUCM

Lesson 1: Understanding CUCM

Architecture

- Cisco Unified Communications Overview
- CUCM Overview
- Hardware Requirements
- Operating System
- Database
- CUCM Licensing

Lesson 2: Understanding CUCM Deployment and Redundancy Options

- CUCM Deployment Options Overview
- Single-Site Deployment
- Multisite Deployment with Centralized Call Processing
- Multisite Deployment with Distributed Call Processing
- Multisite Deployment with Clustering over the WAN
- Deployment on Virtualized Servers
- Call-Processing Redundancy

Module 2: Administering CUCM

Lesson 1: Managing Services and Initial Configuration of CUCM

- CUCM Initial Configuration Overview
- Network Configuration Options Overview
- NTP and DHCP Considerations
- DNS Considerations
- Network and Feature Services
- Enterprise Parameters and Enterprise Phone Configuration
- Service Parameters

Lesson 2: Managing User Accounts

- User Accounts Overview
- Managing User Accounts Using the Administration GUI
- CUCM BAT Overview
- Managing User Accounts Using CUCM BAT
- LDAP Overview

Module 3: Enabling Single-Site On-Net Calling

Lesson 1: Understanding Endpoints

- CUCM Endpoints Overview
- Cisco IP Phone Boot Sequence
- H.323 Endpoint Support in CUCM
- SIP Third-Party IP Phone Support in CUCM

Lesson 2: Implementing IP Phones

- Endpoint Configuration Tools and Elements Overview
- IP Phone Autoregistration
- Configuring Autoregistration
- CUCM BAT and Auto-Register Phone Tool
- Using CUCM BAT for Adding Phones to CUCM
- Manually Adding Phones to CUCM

Module 4: Implementing Single-Site Off-Net Calling

Lesson 1: Implementing PSTN Gateways

- Gateway Review
- MGCP Gateway Implementation
- H.323 Gateway Implementation
- SIP Gateway Implementation

Lesson 2: Configuring CUCM Call-Routing Components

- Dial Plan Components
- Endpoint Addressing
- CUCM Call Routing
- CUCM Digit Analysis
- Special Call-Routing Features
- CUCM Path Selection
- CUCM Path Selection Configuration

Lesson 3: Using Partitions and CSSs to Implement Calling Privileges for On-Net Calls

- Calling Privileges Overview
- Partitions and CSSs
- Example of Partitions and CSSs
- Partition and CSS Considerations



Implementing Cisco Unified Communications Manager Part 1

Course Outline

Module 4 (Continued)

Lesson 4: Implementing CUCM Digit Manipulation

- CUCM Digit Manipulation Overview
- Digit-Manipulation Flow
- Digit-Manipulation Configuration Elements Overview
- External Phone Number Masks
- Translation Patterns
- Transformation Masks
- Digit Stripping and Digit Prefixes
- Significant Digits
- Global Transformations
- Incoming Number Settings

Lesson 5: Implementing Gateway Selection and PSTN-Access Features

- Calling-Privileges Applications Overview
- Implementing Time Schedules and Time Periods
- Implementing Gateway Selection and CoS
- Implementing 911 and Vanity Numbers
- Implementing Carrier Selection Based on Time of Day
- CMC and FAC
- Implementing CMC and FAC

Lesson 6: Implementing Call Coverage in CUCM

- CUCM Call-Coverage Support
- Shared Lines
- Call Hunting
- Call-Hunting Scenarios
- Call-Hunting Configuration

Module 5: Media Resources

Lesson 1: Implementing Media Resources in CUCM

- Media Resources Overview
- CUCM Media Resources Support
- Conference Bridge Overview
- Conference Bridge Media Resource Configuration
- Meet-Me Conference Configuration
- MOH Overview
- MOH Configuration
- Annunciator Overview and Configuration
- Media Resources Access-Control Overview
- Media Resources Access-Control Configuration

Module 6: Feature and Application Implementation

Lesson 1: Configuring Cisco IP Phone Services

- Cisco IP Phone Services Overview
- Phone Services Redundancy
- Phone Services Configuration
- Phone Services Subscriptions

Lesson 2: Configuring CUCM Native Presence

- CUCM Native Presence Overview
- Native Presence Operation
- Native Presence Access Control
- Native Presence Implementation

Lesson 3: Configuring Cisco Unified Mobility

- Cisco Unified Mobility Overview
- Cisco Unified Mobility Call Flows
- Cisco Unified Mobility Implementation Requirements
- Cisco Unified Mobility Considerations
- Cisco Unified Mobility Configuration



Learning Solutions



Implementing Cisco Unified Communications Manager Part 1

Course Labs

- Lab 1: Topology and Deployment
- Lab 2: CUCM Initial Setup
- Lab 3: Users: End Users
- Lab 4: Enhanced - Users: Application Users
- Lab 5: User Management: Bulk Administration Tool (BAT)
- Lab 6: Exclusive - HQ Common Device Configuration
- Lab 7: Enhanced - Basic Cisco IP Phone and IP Communicator Configuration
- Lab 8: IP Phone Hardening
- Lab 9: BAT: Phones
- Lab 10: Configuring SIP Endpoints (Optional)
- Lab 11: MGCP Gateway Lab: Global Protocol Configuration
- Lab 12: MGCP Gateway Lab: PRI Incoming
- Lab 13: Enhanced - H.323 Gateway Lab: Global Protocol Configuration
- Lab 14: Exclusive - H.323 Gateway Lab: FXO Incoming
- Lab 15: Enhanced - Dial Plan Lab: PRI Outgoing to PSTN
- Lab 16: Exclusive - Dial Plan Lab: FXO Backup for 911
- Lab 17: Enhanced - Dial Plan Lab: Line/Device - Geographic Routing
- Lab 18: Exclusive - Dial Plan Lab: European Branch Deployment
- Lab 19: Exclusive - Dial Plan Lab: European Branch Dial Plan
- Lab 20: Enhanced - Dial Plan Lab: E.164 and Globalization
- Lab 21: Enhanced - Dial Plan Lab: Line/Device Class of Service
- Lab 22: Enhanced - Class of Service Lab: Additional Applications
- Lab 23: Hunt Lists and Call Coverage (Optional)
- Lab 24: Music on Hold and Software Conference Resources
- Lab 25: DSP Resources
- Lab 26: Users Features: IP Phone Services
- Lab 27: Presence and BLF
- Lab 28: Unified Mobility

Optional Feature Labs

- Lab 29: Exclusive - Platform Administration
- Lab 30: Exclusive - Users Features 1: Softkeys and DND
- Lab 31: Exclusive - Users Features 2: Call Park and Pickup
- Lab 32: Exclusive - Users Features 3: Shared Lines and Barge
- Lab 33: Exclusive - Users: Managing Users via LDAP Integration

Optional Legacy Port Labs

- Lab 34: Exclusive - MGCP Gateway Lab 4: FXS Endpoints (Optional)
- Lab 35: Exclusive - MGCP Gateway Lab 5: T1-CAS Endpoints (Optional)
- Lab 36: Exclusive - Dial Plan Lab 4: MGCP T1-CAS (Optional)



Learning
Solutions