

# Cisco® Communication Manager Administration v11.0 (CMA)

## Course Overview

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This is a 3-day class

This course will introduce students to the CUCM 11.0 system, the basic procedures for administering IP Phones and Users, understanding the Dial Plan and implementing Features.



## Who Should Attend

The primary audience for this course is as follows:

- Customers who will be configuring and maintaining CUCM 8.x, 9.x, 10.x or 11.0
- PBX System Administrators transitioning to CUCM administration
- IP networking professionals taking on responsibility for CUCM administration
- Workers being cross-trained for CUCM administration coverage

## Course Objectives

Upon completing this course, the learner will be able to meet these overall objectives:

- Demonstrate an overall understanding of the CUCM 10.0 system and its environment
- Configure CUCM to support IP Phones in multiple locations
- Configure CUCM to route calls to internal, inter-cluster and PSTN destinations
- Configure User accounts and multi-level administration
- Understand User Web Page functionality
- Configure user features including Intercom, Hunt Groups, [Other Group] Call Pickup and Presence
- Understand Unified Mobility, Mobile Voice Access and Enterprise Feature Access
- Understand the capabilities of and demonstrate the Bulk Administration Tool
- Understand and configure the Disaster Recovery System
- Understand the revised Licensing model for Cisco Unified Communications
- Understand and demonstrate the use of the Unified Reporting tool
- Understand and demonstrate the use of the Dialed Number Analyzer

## Course Outline

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## 1 CUCM SYSTEM BASICS

- Introduction to IP Telephony
- Traditional Voice vs. IP Telephony
- Clustering Overview
- Intra-Cluster Communications
- CUCM Redundancy Options
- Deployment Models
  - Campus (Single Site) Deployment
  - Centralized Call Processing Deployment
  - Distributed Call Processing Deployment
  - Clustering over the IP WAN Call Processing Deployment
  - Hybrid Call Processing Deployment
- Basics of CUCM Configuration
- Administrative Interfaces
- Logging into Administration and Serviceability
- Logging into Unified Reporting and the Enterprise License Manager
- Logging into the Disaster Recovery System and Unified OS Administration
- Navigation Bar
- Command Line Interface
- Server Redundancy: CM Groups
- CM Group Configuration
  - Date/Time Group
  - Regions and Codecs
  - Locations
- Device Pool Configuration
- Service Parameters Configuration
- Enterprise Parameters Configuration

## 2 SUPPORTING PHONES & USERS

- Configuring CUCM to Support Phones
- Cisco Unified IP Phone Model Ranges
- Specialized Cisco IP 89xx and 99xx phones
- Cisco Jabber Client
- Phone Button Templates
- Softkey Template
- Cisco IP Phone Registration
- Device Defaults Configuration
- Phone Configuration
- Manual Phone Configuration
- Auto-Registration
- Using the Bulk Administration Tool (BAT)
- Deploying new phones and users
- Overview of the Auto-Register Phone Tool
- Configuring CUCM to Support Users
- Understanding CUCM Users
- Manual User Creation
- User Import with BAT
- Importing Users with LDAP Sync
- LDAP Authentication
- Understanding User Administration
- Configuring User Administration
- Working With Access Control Groups
- Assigning End Users to Access Control Groups
- User Web Pages

## 3 UNDERSTANDING THE DIAL PLAN

- Dial Plan Overview
- Introduction to the Dial Plan
- Understanding Dial Plan Components
- Route Lists, Route Groups and Devices
- Call Routing
- Understanding Digit Analysis
- Basics of Dial Plan Configuration
- Basics of Dial Plan Configuration
- Translation Patterns
- Route Plan Report
- Advanced Dial Plan Configuration
- Understanding Digit Manipulation
- External Phone Number Masks
- Transformation Masks
- Discard Digits Instructions: PreDot
- Call Admission Control
- Automated Alternate Routing (AAR)
- Survivable Remote Site Telephony (SRST)
- SRST Operation
- Class of Control
- Overview of Class of Control
- Traditional vs. Line/Device Approach
- Configuring Partitions and CSSs
- Partitions and Calling Search Space
- Time of Day Routing
- PLAR Application
- Forced Authorization Codes
- CUCM Features

## 4 CUCM FEATURES

- Media Resources
  - Overview of Media Resources
  - Conference Bridge
  - Transcoder
  - Music on Hold
  - Annunciator
  - Overview of Media Resource Management
  - Configuring Media Resources
  - User Features
  - Configuring Call Coverage in Cisco Unified Communications Manager
  - Call Coverage in Cisco Unified Communications Manager
  - Hunt Group Overview
  - Hunt Group Configuration
  - Final Forwarding
  - Shared Lines
  - Call Pickup
    - Directed and Group Call Pickup
    - Other Group Call Pickup
  - Call Park
  - Native Cisco Unified Communications Manager Presence
    - Presence Status on IP Phones
    - CSS versus Subscribe CSS
    - Configuring Native Cisco Unified Communications Manager Presence
    - Enable Presence-Enabled Call Lists
  - CUCM Mobility Features
    - Mobile Connect in Cisco Unified Communications Manager
    - Cisco Unified Mobility Architecture
    - Mobile Connect Call Flow: Incoming Calls to Office Phone
    - Mobile Connect Call Flow: Internal Calls Placed from a Remote Phone
    - Configure Remote Destination Profile
    - Configure Remote Destinations
  - System Features
    - CUCM 10.0 Licensing
    - Enterprise License Manager Overview
    - Cisco Unified Reporting Tool

## 5 LAB OUTLINE

- Lab 2-1: Configuring the System to Support Cisco IP Phones
- Lab 2-2: Creating and Associating Users
- Lab 3-1: Configuring Basic Dial Plan Elements
- Lab 3-2: Configuring Complex Dial Plan Elements
- Lab 3-3: Implementing Class of Control
- Lab 4-1: Configuring Media Resources
- Lab 4-2: Configuring Hunt Groups and Call Coverage
- Lab 4-3: Configuring Call Pickup and Call Park
- Lab 4-4: Configuring Native Presence with Speed Dial BLF
- Lab 4-5: Configuring Mobile Connect
- Lab 4-6: Generating Cisco Unified Communications Manager Reports
- Lab 4-7: Configuring IP Phone Services