Administering Cisco Unified Communications Manager 7.0 (ACUCM) + Administering Unified Messaging 5.0 (AUM)

Course Summary

Description

Administering Cisco Unified Communications Manager (ACUCM) v7.0 provides system administrators and networking professionals with an understanding of the Cisco Unified Communication Manager System from a Level One support perspective. ACUCM teaches the concepts of IP telephony using the Cisco Unified Communication Manager server, including its function, features, and configuration. This is an entry-level course that begins with the basic concepts of IP telephony and very quickly moves the learner forward into an understanding of the Cisco Unified Communication Manager concepts: clustering, route plans, digit manipulation, call admission control, survivability, media resource, and Cisco Unified Communication Manager features, which are all important to supporting IP telephony in the enterprise network.

ACUCM is intended for individuals who will be using Cisco Unified Communication Manager Administration to perform basic administration-level tasks and provide level one support. The course focus is on Cisco Unified Communications Manager version 7.x.

Objectives
At the end of this course, students will be able to:

- Discuss Cisco Unified Communication Manager and how it is deployed in the IP telephony network
- Use the basic administrative functions to set up the Cisco Unified Communications Manager server, add users, and perform a backup and restore
- Describe the parameters that affect phones and devices in the network, their configuration, and registration
- Develop a basic route plan, explain its purpose, and configure in the IP telephony network
- Explain the use of transformation masks, route filters, DDI, and translation patterns to accomplish specific types of digit manipulation and call routing
- Describe partitions and CSSs and their use, function, and configuration
- Describe CAC and Cisco Unified SRST
- Describe the various media resources as well as their use and configuration in Cisco Unified Communications Administration
- Describe the basic features and services of Cisco Unified Communications Manager and their configuration in Cisco Unified Communications Manager Administration
- Describe the available phone and directory number options, user web pages, and BAT

Topics

- Introduction to IP Telephony
- Defining the CUCM Basic Configuration
- Preparing for Phone Registration
- Configuring a Basic Route Plan
- Discovering Route Filters and Digit Manipulation
- Exploring Class of Control
- Explaining Call Admission Control (CAC) and Survivable Remote Site Telephony (SRST)
- Understanding Media Resources
- Describing CUCM Features
- Exploring Moves, Adds, Changes and Administration

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Course Summary (cont'd)

Audience

- Network Administrators
- System Administrators
- Entry-level Network Engineers

Prerequisites

- Basic knowledge of IP and networking is suggested, but not required.

Duration

Five days

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Course Outline

I. Introduction to IP Telephony

A. Exploring IP Telephony
1. Traditional Voice vs. IP Telephony
2. CUCM Platform Requirements
3. Clustering Overview
4. Intra-Cluster
5. Communications
6. Cisco Unified CM Clusters
7. Clustering Options

B. Describing the CUCM Deployment Models
1. Single-site Deployment
2. Centralized Call Processing Deployment
3. Distributed Call Processing Deployment
4. Business Edition
5. Distributed Single Cluster Deployment
6. Hybrid Call Processing Deployment

II. Defining the CUCM Basic Configuration

A. Logging into Cisco Unified Communication Manager
1. Navigation Menu
2. Command Line Interface
3. Logging In to CUCM Administration and Serviceability
4. Logging in CUCM OS Administration and Disaster Recovery System

B. Performing the CUCM Server Configuration
1. Configuring Enterprise Parameters
2. Server Configuration – Eliminating Reliance on DNS

C. Describing Multi-Level Administration
1. Creating End Users
2. Creating Roles
3. Creating User Groups
4. Assigning Users to User Groups
5. Step to Configuring Multi-Level Administration

D. Configuring the Disaster Recovery System – Backup and Restore Procedures
1. DRS – Backup Procedures
2. DRS – Restore Procedures – Restore Wizard

III. Preparing for Phone Registration

A. Configuring CUCM System Parameters
1. Unified CM Configuration
2. Unified CM Group Configuration
3. Phone NTP Configuration
4. Date/Time Group
5. Codecs and Regions
6. Location Configuration
7. Device Pool Configuration
8. DHCP Server Configuration
9. Clusterwide Enterprise and Service Parameters
10. Licensing

B. Supporting Cisco IP Phones
1. Cisco IP Phone Models
2. CUCM Phone Support
3. SCCP
4. SIP
5. Phone Button Templates
6. Softkey Templates

C. Exploring Phone Registration and IP Phone Communications
1. Cisco IP Phone Registration
2. Manual Registration
3. Auto- Registration
4. Phone Configuration
5. CUCM to Cisco IP Phone Communications

IV. Configuring a Basic Route Plan

A. Exploring Gateways
1. Cisco Access Gateways
2. Gateway Protocols
3. SGCP
4. MGCP
5. H.323
6. Core Gateway Requirements
7. Network Modules

B. Creating a Route Plan
1. Dial Plan Overview
2. Route Pattern Overview
3. Digit Collection
4. Call Routing
5. Call Routing Configuration

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V. Discovering Route Filters and Digit Manipulation
- A. Configuring Route Filters and Translation Patterns
  1. The 9 @ Pattern
  2. Route Filters
  3. Translation Patterns
- B. Explaining Digit Manipulation
  1. Discard Digit Instruction
  2. Transformation Masks
  3. Route Plan Report

VI. Exploring Class of Control
- A. Explaining Class of Control
  1. Partitions
  2. Calling Search Space
  3. PLAR Application
- B. Configuring Advanced Class of Control Features
  1. Call Restriction
  2. Class of User
  3. Geographic Location
  4. Time of Day Routing

VII. Explaining Call Admission Control (CAC) and Survivable Remote Site Telephony (SRST)
- A. Understanding Call Admission Control
  1. Overview & Need for Call Admission Control
  2. Call Admission Control in a Centralized Deployment
  3. Deploying Automated Alternate Routing (AAR)
  4. Call Admission Control in a Distributed Deployment
  5. Bandwidth Considerations in Call Admission Control
- B. Explaining Survivable Remote Site Telephony (SRST)
  1. SRST Failover
  2. SRST Configuration

VIII. Understanding Media Resources
- A. Explaining Media Resources
  1. Conference Bridge
  2. Media Termination Point (MTP)
  3. Transcoder
  4. Music on Hold
  5. Enunciator
- B. Exploring Media Resource Management
  1. Media Resource Management
  2. Configuring Media Resource Groups
  3. Configuring Media Resource Group Lists

IX. Describing CUCM Features
- A. Understanding Basic CUCM Features
  1. Call Park
  2. Call Pickup
  3. Callback
  4. Shared Lines with Barge and Privacy
- B. Exploring Hunt Groups
  1. Line Group Configuration
  2. Hunt List Configuration
  3. Hunt Pilot Configuration
  4. Final Forwarding
- C. Describing Phone Services
  1. Cisco IP Phone Services
  2. IP Phone Service Configuration

X. Exploring Moves, Adds, Changes and Administration
- A. Understanding Phone Moves, Adds and Changes
  1. Phone and Directory Number Options
  2. Copy with Lines
- B. Describing User Configuration
  1. Adding a User
  2. Addociate Devices to a User
  3. User Group Configuration
  4. User Web Pages
- C. Explaining the Bulk Administration Tool (BAT)
  1. Overview of the Bulk Administration Tool (BAT)
  2. Bulk Administration Tool (BAT) Procedures
  3. Overview of the Auto-Register Phone Tool (formerly TAPS)

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