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Learning Style: Virtual Classroom

Technology: Cisco

Difficulty: Beginner

Course Duration: 4 Days

Administering Cisco Unified Communications Manager v14.x (ACUCM)



About this course:

Administering Cisco Unified Communications Manager (ACUCM) v12.0 is a 4-day training program that provides system administrators and networking professionals with an understanding of the Cisco Unified Communications Manager System. The Cisco IT training course teaches the concepts of IP telephony based in system administration, including its function, features, and configuration. This is an entry-

level IP telephony course that begins with the basic concepts of IP telephony and very quickly moves the learner forward into an understanding of system concepts: clustering, creation of phones and users, route plans, digit manipulation, media resources, and phone features, which are all important to supporting IP telephony in the enterprise network. The course focuses on Cisco Unified Communications Manager version v12.x.

The course is geared to individuals that will be using and managing the system and performing administration for Level 1 and Level 2 support. Level 1 support is geared toward supporting phone users and making moves, adds, and changes to the desktop phone environment. Level 2 support is oriented to supporting changes in the organization, such as opening new office locations or relocating departments. The Cisco training course does not cover issues of initial deployment, new cluster deployment or international deployments. Also, the course does not cover issues with the underlying network that involve routers, switches, or Cisco IOS software configuration.

This information technology course includes various lab exercises to apply what was learned in each preceding lesson. Labs begin with a newly installed publisher and subscriber. The only element that is pre-configured is two MGCP gateways, for the headquarters (HQ) and branch (BR), and an intercluster trunk pointing to the neighbor’s pod. Therefore, the student will become familiar with all the various concepts through configuration of the elements in the lab environment.

Course Objective:

- Describe the Cisco Unified Communications Manager network, service, and features
- Understand the importance of and configuration of redundancy and high availability in the enterprise network
- Describe user configuration and the user web interface
- Explain basic phone options and the use of BAT
- Explain the route plan and on-net/off-net calling
- Describe the various media resources, including conferencing and MOH
- Describe the basic phone features and use of hunt groups

Audience:

The primary audience for this course is as follows:

- Phone Network Administrators
- Phone Network Engineers
- Data System Administrators
- Entry-level Network Engineers
- Channel Partners/Resellers, Customers, Employees

Prerequisite:

- Basic Knowledge of IP and networking or voice networks is suggested but

not required
- Basic Knowledge of the Windows desktop environment

Course Outline:

Module 1: Introduction to IP Telephony

- Lesson 1: Exploring IP Telephone
    - Traditional Voice versus IP Telephony
    - Clustering Overview
    - Intracluster Communications
    - Cisco Unified Communications Manager Clusters
    - Clustering Options
    - Platform Requirements

- Lesson 2: Describing Deployment Models
    - Single-Site Deployment
    - Centralized Call-Processing Deployment
    - Distributed Call-Processing Deployment
    - Distributed Single-Cluster Call-Processing Deployment
    - Hybrid Call-Processing Deployment
    - New Advanced Multicluster Options

- Lesson 3: Understanding Advanced Multisite Features
    - Need for CAC
    - Deploying AAR
    - Survivable Remote Site Telephony
    - SRST Failover

Module 2: Defining the Basic Configuration

- Lesson 1: Logging in to Cisco Unified Communications Manager
    - Logging In to Cisco Unified CM Administration and Cisco Unified Serviceability
    - Logging In to Cisco Unified Operating System Administration and the DRS
    - Navigation Menu
    - Command-Line Interface

- Lesson 2: Examining Basic Server Configuration

    - Server Configuration?Eliminating DNS Reliance
    - Configuring Enterprise Parameters

- Lesson 3: Describing Multilevel Administration

    - Configuring Multilevel Administration
    - Creating End Users
    - Creating Roles
    - Creating User Groups
    - Assigning Users to User Groups

- Lesson 4: Configuring DRS Backup and Restore Procedures

    - DRS Backup Procedures
    - DRS Restore Procedures

Module 3: User Administration

- Lesson 1: Understanding User Configuration

    - Understanding User Management
    - Configuring Users

- Lesson 2: Using the User Web Pages

    - Understanding the User Web Pages
    - Using the User Web Pages

Module 4: Exploring Phone Registration and Cisco Unified IP Phones

- Lesson 1: Configuring System Parameter

    - Cisco Unified CM Configuration
    - Cisco Unified Communications Manager Group Configuration
    - Phone NTP Configuration
    - Date/Time Group
    - Codecs and Regions
    - Location Configuration
    - Device Pool Configuration
    - DHCP Service Configuration
    - Device Defaults Configuration
    - Clusterwide Parameters
    - Licensing

- Lesson 2: Supporting Cisco Unified IP Phones

- Cisco Unified IP Phones Overview
- Specialized Cisco Unified IP 7900 Series Phones
- Phone Button Templates
- Softkey Templates

- Lesson 3: Exploring Phone Registration and IP Phone Communications

  - Cisco Unified IP Phone Registration
  - Cisco Unified IP Phone Configuration

- Lesson 4: Utilizing the Bulk Administration Tool (BAT)

  - Overview of Cisco Unified Communications Manager BAT
  - Cisco Unified Communications Manager TAPS

Module 5: Basic Route Plan Configuration

- Lesson 1: Implementing Dial Plan Connectivity

  - Organizational Dial Plan
  - Trunks
  - Gateways

- Lesson 2: Creating Route Plans

  - Dial Plan Overview
  - Route Pattern Overview
  - Digit Collection
  - Call Routing

Module 6: Route Filters and Digit Manipulation

- Lesson 1: Configuring Transition Patterns and Route Filters

  - Translation Patterns
  - The 9.@ Pattern
  - Route Filters

- Lesson 2: Implementing Digit Manipulation

  - Discard Digits Instruction
  - Transformation Masks
  - Route Plan Report

Module 7: Class of Control

- Lesson 1: Defining Class of Control
    - Overview of Class of Control
    - Partitions
    - CSS Configuration
    - PLAR Application
- Lesson 2: Using Class of Control Features
    - Call Restriction
    - Time of Day Routing
    - Traditional vs. Line/Device Approach

Module 8: Understanding Media Resources

- Lesson 1: Defining Media Resources
    - Overview of Media Resources
    - Conference Bridge
    - Media Termination Points
    - Transcoder
    - Music on Hold
    - Annunciator
- Lesson 2: Exploring Media Resource Management
    - MRG Management
    - Configuring MRGs
    - Configuring MRGLs

Module 9: Features and Services

- Lesson 1: Describing Basic Features
    - Call Park
    - Call Pickup
    - Cisco Call Back
    - Shared Lines with Barge and Privacy
- Lesson 2: Exploring Hunt Groups
    - Hunt Group Overview
    - Line Group Configuration
    - Hunt List Configuration
    - Hunt Pilot Configuration
    - Final Forwarding

- Lesson 3: Describing Phone Services
    - Cisco IP Phone Services
    - Cisco Phone Services Configuration

Lab Outline

- Performing General Administration
- Configuring Basic Settings
- Backing Up and Restoring the Publisher
- Creating and Associating Users
- Configuring the System to Support Cisco IP Phones
- Using the Cisco Unified Communications Manager BAT
- Configuring Basic Dial Plan Elements
- Configuring Complex Dial Plan Elements
- Implementing Calling Privileges and Restrictions
- Configuring Media Resources
- Configuring User Features
- Configuring Hunt Groups and Call Coverage

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