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Learning Style: Virtual Classroom

Technology: Cisco

Difficulty: Intermediate

Course Duration: 5 Days

Administering Cisco Unified Communications Manager and Unity Connection (ACUCM with AUC)



About this course:

Administering Cisco Unified Communications Manager (ACUCM with AUC) is a 5-day training program providing administrators and networking professionals an in-depth understanding of the Cisco Unified Communications Manager System. This course relays the concepts of IP telephony's systems, configuration, and features that are based in system administration.

This course is entry level and begins with basic IP telephony concepts, but moves the learner forward at a good pace into a detailed understanding of system concepts such as clustering, creation of phones and users, route plans, digit manipulation, media resources, and phone features – all of which are integral to IP telephony support in the enterprise network. The course focuses on Cisco Unified Communications Manager v11 x. All labs use CUCM v11.x.

The course is targeted at individuals who are meant to use and/or manage the system or administrate for Level 1 and Level 2 support. Level 1 support involves supporting phone users and adding, moving, and changing desktop phone environments. Level 2 support involves supporting changes in the overall organization, in the form of opening new office locations or the relocation of departments. However, this course does not involve covering the challenges of initial development, new cluster development, international developments, or underlying network issues involving routers, switches, or Cisco iOS software configuration.

This course includes a variety of lab exercises that can be applied to what has been taught in each preceding lesson. Labs start with a newly installed publisher and subscriber. The solitary elements to be preconfigured are two MCP gateways – one for the headquarters (HQ) and one for the branch (BR), and an inter-cluster trunk that points to the neighbor's pod. Hence, the learner will quickly familiarize themselves with all various concepts through the configuration of every element in the lab environment.

This course describes the administration features, options, and configuration settings of Administering Cisco Unity Connection (AUC) as they apply to the administrator, and presents Cisco Unity Connection with the primary goal of ensuring that administrators are provided with the requisite skills needed to perform their daily job functions by means of the Cisco Unity Connection system.

Students requiring skills beyond administration where engineering, integration, and networking skills are necessary should consider the Implementing Cisco Unity Connection (IUC) course.

The salary for Cisco Unified Communications Administrator averages **$72,762** per annum.

Course Objectives:

Upon the completion of this course, students will be able to:

- Comprehend the Cisco Unified Communications Manager network, service, and features
- Describe user configuration and the user web interface, the various media resources, including conferencing and MOH, basic phone features and use of hunt groups
- Describe the components that are required for user call processing by Cisco Unity Connection, the route plan and on-net/off-net calling
- Describe the functions of Cisco Unity Connection and the various interfaces that are used to access the system
- Describe basic phone options and the use of BAT
- Understand the significance of and configuration of redundancy and high availability in the enterprise network
- Enact the variety of features, applications, reports, tools, and options that are available to users in Cisco Unity Connection

Audience:

The primary audiences intended for this course are the following:

- Phone network administrators
- Data system administrators
- Entry-level network engineers
- Administrators
- IT support personnel
- Helpdesk support staff

The secondary audiences include the following:

- Learners looking to gain a technical overview of Cisco Unified Communications Manager
- Learners who need a preparatory course before taking Implementing Cisco Unified Communications IP Telephony Part 1 (CIPT1) and Implementing Cisco Unified Communications IP Telephony Part 2 (CIPT2)
- Introduction to Cisco Unity Connection for Network Engineering Staff Personnel

Prerequisites:

In order to fully benefit from this course, prospective learners should be well-versed in the following:

- Basic knowledge of IP and networking or voice networks is suggested, but not required
- Basic knowledge of the Windows desktop environment
- Basic understanding of fundamental terms and concepts of computer networking, including LANs, WANs, and IP switching and routing.
- Basic knowledge of traditional PSTN operations and technologies, including PBX and voice-mail administration tasks
- Basic understanding of Cisco Unified Communications Manager

Suggested prerequisite courses:

- Interconnecting Cisco Networking Devices Part 1 v3.x (ICND1)
- Cisco Unified Wireless Networking Boot Camp (CUWNBC)

Course Outline:

ACUCM Course Outline:

Module 1: Introduction to IP Telephony

Lesson 1: Exploring IP Telephony

- Traditional Voice versus IP Telephony
- Clustering Overview
- Intracluster Communications
- Traditional Voice versus IP Telephony
- Clustering Overview
- Intracluster Communications

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

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 Parameters

- 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 Translation Patterns and Route Filters

- Translation Patterns

- The 9.@ Pattern
- Route Filters

Lesson 2: Implementing Digit Manipulation

- Discard Digits Instruction
- Transformation Masks

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

ACUCM v10.x Lab Outline

This guide includes these activities:

Lab 0: Connection and Orientation to the NterOne Voice Lab Environment

Lab 1: Configuring Cisco Unified Communications Manager Initial Settings

Lab 2: Backing Up Cisco Unified Communications Manager Using the Disaster Recovery System

Lab 3. Managing User Accounts in Cisco Unified Communications Manager

Lab 4: Implementing IP Phones

Lab 5: Implementing PSTN Gateways

Lab 6: Configuring Cisco Unified Communications Manager Call-Routing Components

Lab 7: Implementing Digit Manipulation

Lab 8: Implementing Calling Privileges in Cisco Unified Communications Manager

Lab 9: Implementing Cisco Unified Border Element (CUBE) for calls to and from the Actual PSTN

Lab 10: Implementing Media Resources

Lab 11: Implementing Call Coverage in Cisco Unified Communications Manager

AUC Course Outline

Module 1: Introduction to Cisco Unity Connection

Lesson 1: Overview of Cisco Unity Connection

- Understanding Cisco Unity Connection
- Cisco Unity Connection Integration

- Active-Active, High-Availability Deployment
- Digital Networking Deployment Model

Lesson 2: Navigating Cisco Unity Connection

- Accessing Cisco Unity Connection
- Logging into Cisco Unity Connection Applications
- Cisco Unified Serviceability and Cisco Unity Connection Serviceability
- Cisco Unity Connection Administration
- Port Configuration for Telephony Integration
- General Configuration

Lesson 3: Understanding Call Handlers, Users, and Call Flow

- Call Processing
- Default Call Handlers
- Handlers—Function and Purpose
- Default Call Handler Flow
- Call Handler Configuration
- Incoming Call Flows
- Cisco Unity Connection Incoming Call Flow
- Message Retrieval
- Incoming Call Processing Components
- Call Routing—Direct or Forwarded
- Call Routing—Direct
- Call Routing—Forwarded
- Configuration of Users
- Implementation of Call Routing
- Implementation of Call Routing—Direct
- Implementation of Call Routing—Forwarded
- Directory Handlers
- Directory Handlers Configuration
- Interview Handlers
- Interview Handlers Configuration

Module 2: Configuration of Users and Contacts

Lesson 1: Explaining Users and Contacts

- Understanding Users
- Preparing to Configuring Users
- Configuring Authentication Rules
- Configuring CoS
- Configuring Schedules and Holidays

Lesson 2: Managing Multiple Users

- Configuring Multiple Users
- Importing Users Using AXL
- Importing Users Using LDAP

- Importing Users Using BAT
- Reviewing Users

Module 3: Implementation of Features

Lesson 1: Implementing the Dial Plan

- Dial Plan Components
- Dial Plan Configuration

Lesson 2: Understanding User Features

- Reviewing User Features

Lesson 3: Accessing Voice Messaging and User Features

- Accessing Voice Messaging
- Phone View
- Implementing Cisco Unity Connection VMO
- Accessing Voice Messaging Using RSS Feeds
- Implementing Secure Messaging

Module 4: Use of Cisco Unity Connection Applications, Tools and Reports

Lesson 1: Designing an Audiotext Application

- Audiotext Application Design
- Audiotext Application Configuration
- Greeting Administrator
- Greeting Administrator Configuration

Lesson 2: Using Cisco Unity Connection Tools and Reports

- Using the Bulk Edit Feature
- Using Task Management
- Cisco Unity Connection Reports

Lesson 3: Using the DRS

- Disaster Recovery System
- Configuring Backups
- Performing Restore Operations

AUC v10.x Lab Outline

This guide includes these labs:

Lab 0: Connection and Orientation to the NterOne Voice Lab Environment

Lab 1: Configuring Cisco Unified Communications Manager (CUCM) Initial Settings

Lab 2: Implementing Cisco Unified Border Element (CUBE) for calls to and from the Actual PSTN

Lab 3: Verifying Cisco Unity Connection Default Services

Lab 4: Integrating Cisco Unity Connection with Cisco Unified Communications Manager

Lab 5: Implementing Unity Connection Voice Mailboxes

Lab 6: Unity Connection User Features

Lab 7: Implementing the Unity Connection Dial Plan

Lab 8: Understanding User Features

Lab 9: Using Cisco Unity Connection Tools and Reports

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