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Administering Cisco Unified Communications 15.0 (ACUCC15)

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This is a 5-day hands-on comprehensive course on Administering Cisco Unified Communications Manager (CUCM) version 15 and Unity Connection (CUC) version 15 equips IT professionals with essential skills to effectively manage, secure, and troubleshoot Cisco's Unified Communications solutions, ensuring seamless voice, video, and messaging services within organizations. Student will discover Cisco Unified Communication Management, initial endpoint and user configuration to a solution deployment using Cisco UC Features and Components. Students will have extensive labs in which they will Administer and Troubleshoot a Cisco 15.0 UC Deployment, including Cisco Unity connection for voicemail and Cisco IM and Presence, and Cisco Expressways for Mobile and Remote Access.

How you'll benefit

This class will help you:

- Develop the skills to confidently manage and secure a Cisco UC 15.0 environment, including CUCM and Unity Connection
- Perform endpoint provisioning, user setup, and feature configuration using CUCM and CUC administrative tools
- Troubleshoot common voice, video, and messaging issues within enterprise deployments
- Implement voicemail, presence, and remote access functionality using Cisco Unity Connection, IM and Presence, and Expressways
- Gain practical experience through hands-on labs simulating real-world UC deployment and maintenance scenarios

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- Network Administrators and Engineers
- Meeting Administrators and Engineers
- Collaboration Administrators and Engineers
- Voice / UC / Collaboration / Communications Engineers
- Collaboration Sales / Systems Engineers

Course Duration
5 days
Course Price
$4,395.00 or 44 CLCs
Methods of Delivery
- Instructor Led
- Virtual ILT
- On-Site

OUTLINE

Module 1: Cisco Unified Communications Manager (CUCM) Management
- Cisco Unified Communications Manager Bulk Administration Tool (BAT)
    - o Automate provisioning of users and devices.
- Migrating Phones
    - o Move phone configurations across systems or clusters.
- Cisco Unified Communications Manager Self-Provisioning
    - o Enable end users to self-assign devices.
- Cisco Unified Communication Manager OS Command Line Tools
    - o Use CLI tools for diagnostics and admin tasks.
- Cisco Unified Communications Manager Loading Cisco Option Packages (COP)
    - o Install patches or add-ons via COP files.
- Cisco Unified Communications Disaster Recovery Tools
    - o Backup and restore CUCM configurations.

Module 2: User Administration
- Creating and Importing User Accounts
    - o Add and manage users via manual, bulk, or LDAP methods.
- User Roles and Access Control
    - o Assign permissions through roles and service profiles.
- User Groups and Organizational Structure
    - o Create user groups and apply access rules.
- Device Association and Management
    - o Associate users with phones and configure mobility.
- Advanced User Management and Customization
    - o Manage directories and user portal features.
- User Administration Best Practices
    - o Ensure consistency and security in user admin.

Module 3: Deploying and Managing Cisco Collaboration Endpoints
- Planning and Preparing for Deployment
    - o Assess network and license needs for deployment.
- Overview of CUCM-supported endpoints (IP phones, softphones, video endpoints)
    - o Identify supported IP phones and collaboration tools.Video Endpoints
- Endpoint Registration and Configuration
    - o Register and configure devices manually or in bulk.
- Configuring Device Pools, Regions, and Locations
    - o Use logical groupings to manage devices and bandwidth.
- Adding and Configuring IP Phones
    - o Deploy phones using templates and customize features.
- Deploying Softphones and Video Endpoints
    - o Cisco Jabber and video conferencing devices.
- Extension Mobility and Device Profiles
    - o Enable user mobility with personalized device profiles.
- Endpoint Security and Compliance
    - o Secure endpoint communication and manage certificates.
- Endpoint Monitoring and Troubleshooting
    - o Monitor devices and analyze performance data.

Module 4: Call Routing and Dial Plan
- Introduction to Call Routing and Dial Plans
    - o Understand core dial plan elements and design tips.
- Route Patterns, Route Lists, and Route Groups

- o Configure call paths using patterns and groups.
- Partitions and Calling Search Spaces (CSS)
  - o Restrict and manage call permissions.
- Translation Patterns and Digit Manipulation
  - o Modify and normalize dialed digits.
- Configuring Call Routing for On-Net and Off-Net Calls
  - o Differentiate internal and external call routing.
- Time-of-Day (ToD) Routing
  - o Apply call routing rules based on time schedules.
- Implementing Advanced Call Routing Features (optional)
  - o Use CAC and AAR for bandwidth-aware routing.
- Centralized and Distributed Call Processing
  - o Design call routing for centralized or distributed sites.

Module 5: Media Resources
- Introduction to Media Resources
  - o Overview of conferencing, music, and codec services.
- Configuring Media Resource Groups and Media Resource Group Lists
  - o Prioritize and allocate media services.
- Configuring Music on Hold (MoH)
  - o Set up and manage hold music sources.
- Conference Bridges and Conferencing Resources
  - o Enable multi-user calling with bridge resources.
- Transcoding and Media Termination Points (MTP)
  - o Support codec changes and call control.
- Quality of Service (QoS) for Voice and Video Traffic
  - o Ensure priority treatment for media traffic.
- Voice Quality Monitoring and Troubleshooting Tools
  - o Monitor voice quality and diagnose issues.
- Bandwidth Management and Call Admission Control (CAC)
  - o Control media usage based on capacity.
- Media Resource and Voice Quality Optimization
  - o Maximize quality and efficiency of media use.

Module 6: Cisco CUCM Gateways and SIP Trunks Overview
- Introduction to Gateways and SIP Trunks in CUCM
  - o Explore gateway types and trunking options.
- PSTN Gateway Options and Configurations
  - o Configure analog and digital connectivity.
- MGCP Gateway Configuration and Management
  - o Deploy MGCP protocol gateways.
- SIP Gateway Configuration and SIP Trunks
  - o Set up SIP trunks and gateway routing.
- Troubleshooting Gateways and SIP Trunks
  - o Identify and resolve connectivity issues.

Module 7: CUCM Security and Compliance
- Introduction to CUCM Security and Compliance
  - o Understand the framework for system security.
- Certificate Management and CUCM Trust Store
  - o Manage system and device certificates.
- Transport Layer Security (TLS) and Secure Real-Time Protocol (SRTP)
  - o Encrypt signaling and media streams.
- Endpoint Security and Access Control

- o Control endpoint access and user permissions.
- Call Restriction and Fraud Prevention
  - o Prevent unauthorized calling activity.
- Secure Network Configuration and Firewall Settings
  - o Harden network paths and management access.
- Auditing, Logging, and Monitoring for Compliance
  - o Track and report system activities.
- CUCM Security and Compliance Best Practices
  - o Follow guidelines for secure and reliable operations.

Module 8: CUCM Disaster Recover System
- Introduction to the CUCM Disaster Recovery System
  - o Overview of CUCM backup tools.
- Planning the Disaster Recovery Strategy
  - o Define goals for data protection and availability.
- Configuring Backup Devices and Locations
  - o Select and configure storage targets for backups.
- Scheduling Backups in CUCM DRS
  - o Automate and retain scheduled backups.
- Performing Manual (On-Demand) Backups
  - o Run backups manually as needed.
- Understanding and Configuring Clustering and Redundancy
  - o Enable failover for HA environments.
- Performing System Restoration and Recovery
  - o Recover CUCM from previous configurations.
- Monitoring and Troubleshooting the Disaster Recovery System
  - o Track and log backup processes.
- CUCM Disaster Recovery Best Practices
  - o Follow established guidelines for DR success.

Module 9: Administering Cisco Unity Connection
- Cisco Unity Connection Overview
  - o Understand Unity as a voicemail solution.
- Cisco Unity Connection Integration
  - o Connect Unity to CUCM, LDAP, and email systems.
- User and Mailbox Management
  - o Manage users, mailboxes, and access levels.
- Mailbox Features and Voice Messaging Options
  - o Customize voicemail settings and delivery.
- Call Management and Call Handlers
  - o Route incoming calls via Unity handlers.
- Configuring Unified Messaging Features
  - o Enable voicemail access through multiple channels.
- Unity Connection Security and Compliance
  - o Secure voicemail and meet audit requirements.
- Unity Connection Integration with Cisco Unified Communications
  - o Connect Unity to Jabber, Webex, and more.
- Monitoring, Reporting, and Troubleshooting
  - o Use RTMT and reports to maintain Unity.
- Unity Connection Backup, Restore, and Disaster Recovery
  - o Protect and recover Unity data.
- Unity Connection Unified Messaging
  - o Set up integrated voice messaging solutions.

LAB OUTLINE

- Module 1: Configuring Cisco Unified Communications Manager Initial Settings
- Module 2: Deploying Endpoints and Users
- Module 3: Implementing Endpoint Addressing and Call Routing
- Module 4: Implementing Calling Privileges
- Module 5: Implementing Call Coverage
- Module 6: Configure Extension Mobility
- Module 7: Connecting Enterprise Network to SIP Trunk Provider
- Module 8: Integrating Cisco Unity Connection with Cisco Unified Communications Manager
- Module 9: Configuring Cisco Unity Connection Users
- Module 10: Configuring Cisco Unity Connection System Settings
- Module 11: Integrate Cisco Unified Communications IM and Presence with Cisco Unified Communications Manager
- Module 12: Configure Cisco Unified Communications IM and Presence Features and Implement Cisco Jabber
- Module 13: Configure Alarms and Traces in Cisco Unified Serviceability
- Module 14: Collecting and Inspecting Traces files
- Module 15: Using Performance Monitor and Reporting in CUCM
- Module 16: Troubleshooting Database Replication