Course Content

Course Description:

Integrating Cisco Unified Communications Applications (CAPPS) v1.0 is a 5-day training program that prepares the learner for integrating Cisco Unity Connection, Cisco Unity Express, Cisco Unified IM and Presence, and video into a Collaboration deployment. It describes voice messaging deployment scenarios, Cisco Unified Presence features, and troubleshooting mechanisms as well as Cisco Unified IM and Presence and Cisco Jabber integration options with Cisco Unified Communications Manager.

At Course Completion:

Upon completing this course, you will be able to meet these objectives:

- Implement Cisco Unity Connection in a Cisco Unified Communications Manager deployment
- Describe how to implement Cisco Unity Express in a Cisco Unified Communications Manager Express deployment
- Implement Cisco Unified IM and Presence and Cisco Jabber Desktop and Mobile using BYOD
- Integrate Cisco VCS and Cisco TMS into a Cisco collaboration deployment

Prerequisites:

- Working knowledge of fundamental terms and concepts of computer networking, including LANs, WANs, switching and routing
- Ability to configure and operate Cisco routers and switches and to enable VLANs and DHCP
- Basics of digital interfaces, PSTN, and VoIP
- Fundamental knowledge of converged voice and data networks and Cisco Unified Communications Manager deployments

Deliver Method:

This course is delivered through a mix of instructor-led training (ILT) and hands-on labs.

Topics:

Module 1: Cisco Unity Connection

Lesson 1: Designing and Deploying Cisco Unity Connection
- Physical Server Choices for Cisco Collaboration System Applications
- VMware vSphere ESXi Versions and Licensing
- Physical and Virtual Architecture Comparison
- Virtual Machine Encapsulation and Files
- Typical Versus Custom Virtual Machine Creation
- OVA Template for Cisco Unity Connection
- Resizing Virtual Machine Resources
- Shares and Reservations
- Virtual Switch and NIC Teaming
- Storage Overview
- Sizing and Scaling Cisco Unity Connection Servers
- Active-Active, High-Availability Deployment
- Cisco Unity Connection Deployment Options
- Traffic-Pattern Evaluation Example
- Cisco Unity Connection Networking
- HTTPS Networking
- Voice Profile for Internet Mail
- Cisco MediaSense Overview
- Cisco MediaSense Virtualization and Platform Overlays
- Video Compatibility Matrix and Network Topology
- Design Guidelines for Video Greetings
- Call Flows
- Voice-Messaging Call Flows in SRST and AAR Mode

Lesson 2: Integrating Cisco Unity Connection with Cisco Unified Communications Manager
- Cisco Unity Connection Administration
- Cisco Unified RTMT
- Cisco Prime Licensing for Voice Messaging
- Add Cisco Unity Connection in Cisco PLM
- Cisco Unity Connection Integration Options
- Cisco Unity Connection SCCP Integration
- Cisco Unity Connection SIP Integration
- Cisco Unity Connection Integration Troubleshooting Tools
- On-Net and Off-Net Calls
- Call Forward Options
- Cisco Unity Connection Call Routing
- Port Monitor
- Default Call-Routing Behavior
- Integration Considerations

Lesson 3: Configuring Cisco Unity Connection Users, Templates, and Class of Service
- Cisco Unity Connection Class of Service
- Cisco Unity Connection User Templates
- User-Creation Options
- Cisco Unity Connection User
- Password Settings and Roles
- User Transfer Rules
- Greetings
- TUI Experience
- Alternate Extensions
- Voice Mailbox
- Mailbox Stores and Membership
- Message Aging Policy and Mailbox Quotas
- Private Distribution Lists
- Notification Devices

Lesson 4: Configuring the Cisco Unity Connection System

- Cisco Unity Connection System Settings Overview
- General Settings vs. User Settings
- General Configuration
- Time Zone Usage
- Cisco Unity Connection Distribution Lists
- Cisco Unity Connection Authentication
- Roles
- Cisco Unity Connection Restriction Tables
- Cisco Unity Connection LDAP Integration
- Import of Users from LDAP Server
- Phone Number Conversion
- Search Base
- LDAP Filter
- Import of Users from Cisco Unified Communications Manager

Lesson 5: Implementing Cisco Unity Connection Dial Plan and Call Management

- Cisco Unity Connection Dial Plan Components
- Dial Plan Example
- Cisco Unity Connection Call Handler Types
- Call Handler Reachability
- Auto-Attendant Example
- Call Handler Templates
- Call Handler Template Options
- Caller Input
- Default Call Handler Flow
- Greeting Analysis
- Caller Input Analysis
- Operator Call Handler
- Goodbye Call Handler
- Directory Handler
- Interview Handler

Lesson 6: Configuring Unified Messaging

- Unified Messaging Terminology
- Single Inbox High-Level Architecture
- Single Inbox Functionality
- Unified Messaging Benefits
- Exchange Integration Options
- Cisco Unity Connection Deployment Options
- Security, Compliance, and Discoverability
- Message Synchronization Architecture
- Configure Integrated Messaging
- Task List to Set Up Unified Messaging Single Inbox
- Exchange Mailbox Moves
- Backup and Restore of Mailboxes

Lesson 7: Troubleshooting Cisco Unity Connection

- Troubleshooting Cisco Unity Connection
- Reorder Tone
- Call Forward to Cisco Unity Connection
- Route Pattern Affecting Call Forward
- Login Not Working
- PIN Not Accepted
- MWI Issues
- MWI Status
- Wrong Greeting
- Time Schedule
- Voice Messages
- Call Handler Transfer Issues
- Call Handler Issues
- AAR and Cisco Unified SRST Issues
- Cisco Unified RTMT
- Cisco Unity Connection Performance Counters
- Alert Properties
- Reporting in Cisco Unity Connection
- MWI Troubleshooting
- Macro Traces

Lesson 8: Deploying Voice Mail Redundancy in Branch Offices

- Introduction to Cisco Unity Connection SRSV
- Specifications for Virtual Platform Overlay
- Cisco Unity Connection SRSV Solution
- Cisco Unity Connection SRSV Licensing
- Limitations in Cisco Unity Connection SRSV Mode
- SRSV Configuration Checklist for Branch Sites
- Activate Cisco Unity Connection SRSV
- DNS, Domains, and Self-Signed Certificates
- Cisco Unity Connection SRSV Menu Overview
- SRSV Configuration Checklist for Headquarters Site
- Set Up Headquarters Cisco Unity Connection
- Automatic Provisioning and Polling
- Monitor the Provisioning and Polling Status
- Replicate System Distribution List
- Troubleshooting Issues in Provisioning

Module 2: Cisco Unity Express

Lesson 1: Designing and Deploying Cisco Unity Express

- Cisco Unity Express
- Cisco Services-Ready Engine
- User Access
- Cisco Unity Express Auto-Attendant
- Schedules
- Integrated Messaging
- Distribution Lists
- Notifications
- Notification for Scheduled Backup
- Cisco Unity Express Integration
- Deployment Models
- Voice Messaging System Comparison

Lesson 2: Integrating Cisco Unity Express with Cisco Unified Communications Manager Express

- Voicemail Integration on Cisco Unified Communications Manager Express
- Service Module
- Dial Peer Configuration
- Voicemail Access for SCCP Phones
- MWI for SIP-Controlled IP Phones
- MWI Options
- MWI Outcall
- MWI Using SIP Notification Messages
- MWI SIP for Ephone-dns
- Transcoding
- Connecting and Initiating Cisco Unity Express Module
- Software Installation
- Software Versions and Licenses
- Configure SIP Triggers for Default Applications: Voicemail
- Configure MWI Outcall Directory Numbers
- Configure MWI Using SIP Notify

Lesson 3: Configuring Cisco Unity Express User Accounts and Features

- System Settings
- Authentication Rules
- Subscribers
- User Import
- Mailboxes
- Mailbox Defaults
- Adding Mailboxes
- Distribution Lists
- Schedules and Holidays
- Web Inbox
- Message Notification
- Privilege Levels
- Cisco Unity Express VoiceView Express
- Integrated Messaging

Lesson 4: Configuring Call Routing with Cisco Unity Express Auto-Attendant

- Cisco Unity Express Auto-Attendant Overview
- Cisco Unity Express Auto-Attendant Operation Example
- Cisco Unity Express Auto-Attendant Features
- Cisco Unity Express Windows Editor for Auto-Attendant Interactive Voice Response Script
- Comparison
- Cisco Unity Express Auto-Attendant Configuration Checklist
- Prompts
- Administration Via Telephone
- Default System Scripts
- Call Flow
- Application Ports
- Editor Express
- Cisco Unity Express Windows Editor for Auto-Attendant Interactive Voice Response Scripts
- Scripts

Lesson 5: Troubleshooting Cisco Unity Express

- Call Processing to Messaging System Call Flow
- Cisco Unified Communications Manager Express
- Cisco Unity Express Troubleshooting
- Logging
- Cisco Unity Trace Tool
- Using trace Commands via CLI
- GUI Macro Feature
- SIP Troubleshooting
- SIP Call Flow
- Troubleshooting SIP Issues
- Troubleshooting MWI Issues
- Troubleshooting Mailbox Issues
- Interpreting TUI Sessions

Module 3: Cisco Unified IM and Presence Implementation

Lesson 1: Designing and Deploying Cisco Unified IM and Presence

- Cisco Unified Communications Manager Presence Introduction
- Cisco Unified Communications Manager Presence
- Indicators for Speed-Dial Presence
- Cisco Unified Communications Manager Call History Presence
- Cisco Unified Communications Manager Subscribe CSS
- Cisco Unified Communications Manager Presence Groups
- Cisco Unified Communications IM and Presence Introduction
- Microsoft Integration
- OVA Template for Cisco Unified Communications IM and Presence
- Cisco Unified Communications IM and Presence Cluster
- Cisco Unified Communications Manager Deployment Options
- Service Discovery
- Quality of Service
- Cisco Jabber Port Usage
- Enterprise Instant Messaging
- Multicluster Deployment
- Federated Deployment
- Microsoft OCS Federation
- Mapping of Presence Status
- Federation Preparation

Lesson 2: Describing Cisco Unified Communications IM and Presence Components and Communication Flows
- Cisco Jabber Information Flow in Deskphone Mode
- Cisco Jabber Information Flow in Softphone Mode
- Cisco Jabber in Phone-Only Mode
- Cisco Jabber and Voicemail
- Cisco Jabber and Conferencing
- Integration with LDAP for Cisco Jabber
- Cisco Unified Communications IM and Presence, Active Directory, and Exchange
- Cisco Unified Communications IM and Presence Architecture
- Cisco Unified Communications IM and Presence Cluster
- Cisco Jabber Login Flow
- Access for Cisco Jabber without VPN

Lesson 3: Integrating Cisco Unified Communications IM and Presence
- Set Up Cisco Unified Communications Manager for Presence
- Checklist for Cisco Unified Communications Manager Setup
- Cisco Jabber UC Services
- Implementing Cisco Unified Communications IM and Presence
- Checklist for Cisco Unified Communications IM and Presence Setup
- Cisco Unified Communications IM and Presence Services
- Cisco Jabber Service Discovery
- Service Discovery: Domain
- Service Discovery: Operating Mode
- Cisco UDS SRV Record
- SRV Records
- DNS SRV Record Priorities and Weights

- Troubleshoot DNS SRV Entries
- Methods of Installation
- Create a Custom Installer

Lesson 4: Configuring Cisco Unified Communications IM and Presence Features and Implementing Cisco Jabber
- Cisco Jabber in Phone-Only Mode
- Configure Cisco Jabber in Softphone Mode
- Legacy Client Settings
- Cisco Jabber UC Services
- Upload Jabber-Config File to TFTP Server
- Visual Voicemail Interface for Cisco Jabber
- Cisco Jabber in Softphone Mode
- Cisco Jabber Account Options
- Connection Status
- LDAP Profile Test
- Voicemail Profile Test
- Enable End Users and Devices for CTI
- Cisco Jabber in Deskphone Mode

Lesson 5: Configuring Cisco Jabber Mobile and Integrating Directory Servers
- Cisco Jabber Framework Alignment
- Configuration URL
- Legacy Client Settings
- Video Features
- Dial-via-Office Reverse Calling
- Low-Bandwidth Mode
- URL Handlers
- Secure Cisco Jabber on Mobile
- Add Cisco Jabber in Cisco Unified Communications Manager
- Cisco Jabber User Configuration XML File
- Cisco Jabber Configuration Sources
- Cisco Jabber Contact Sources
- Contact Lookup
- Cisco UDS Directory Access

Lesson 6: Verifying and Troubleshooting Tools for Cisco Unified IM and Presence Components
- System Dashboard
- Cisco Unified IM and Presence Reporting
- Presence Viewer
- System Troubleshooter
- Cisco Jabber Connection Status
- Troubleshoot Common Cisco Jabber Issues
- Cisco Unified IP Phone Cannot Be Selected
- In Softphone Mode, Telephony Is Not Possible
- Users Are Not Shown as On the Phone During an Active Call
- End User Cannot Log into Cisco Jabber
- Search for Contacts Returns No Results
- End User Cannot Control the Cisco Unified IP Phone 9971
- Trace Filter Settings
- Troubleshoot SIP Integration

Module 4: Video Provisioning and Integration in a Unified Communications Deployment

Lesson 1: Deploying Cisco Collaboration Systems Applications with Cisco Prime Collaboration
- Cisco Prime Collaboration Overview
- Complete Lifecycle Management
- Cisco Prime Collaboration Standard and Advanced
- Automated System Provisioning
- Domains, Service Areas, and Subscriber Types: Example
- Administration Levels
- LDAP Import
- Subscriber Roles

- Deployment Aspects in Cisco Prime Collaboration
- Day-1 Services Infrastructure
- Day-2 Services
- Single Provisioning Interface
- Multilanguage Support
- Dashboard
- Cisco Prime Telephone Self-Care

Lesson 2: Describing Video Infrastructure
- Collaboration Infrastructure
- Architectural Evolution
- Combined Model and Methods
- Cisco Prime Collaboration Manager
- High-Level Function of Collaboration Infrastructure
- Dual Approach
- Cisco TelePresence VCS Characteristics
- Cisco VCS Cluster Size
- Call Control Terminology
- Connecting Cisco Unified Communications Manager and VCS Clusters
- Dial Plans
- Conferencing
- Multiparty Conferencing
- Cisco TelePresence Conductor
- Cisco Jabber Video for TelePresence (Movi)
- DNS SRV Records
- Automated Provisioning with Cisco VCS and TMS
- Portfolio Simplification

Lesson 3: Describing Cisco TMS

- Cisco TMS Introduction
- Business Needs for Cisco TMS
- Cisco TMS Platform Overview
- Cisco TMS Overview
- Endpoint and Infrastructure Support
- Cisco TMS Scale and Management
- Cisco TMS Conference Call Routing
- Cisco TMS Conference Port Reservation
- Call Launch Options
- Calendaring Options
- Cisco TelePresence Conductor Support
- Recommended Cisco TMS Scheduling Deployment Mode
- Adding Cisco VCS Endpoints to Cisco Unified Communications Manager
- Integration of Cisco TMSXE with Microsoft Exchange
- Cisco TMS Provisioning Extension