



Implementing Cisco IP Telephony and Video, Part 2 - CIPTV2 (Professional)

Course Details

Course Outline

Module 1: Multisite Deployment Implementation

- Multisite Deployment Issues
 - Quality Issues
 - Bandwidth Issues
 - Availability Issues
 - Overview of Dial Plan Issues
- Fixed-Length vs. Variable-Length Numbering Plans
- Optimized Call Routing and PSTN Backup
- Overlapping and Nonconsecutive Numbers
- PSTN Requirements
- Dial Plan Scalability Issues
- NAT and Security Issues
- Multisite Deployment Solution Overview
- Quality of Service
- Overview of Solutions to Bandwidth Limitations
- Low-Bandwidth Codecs and RTP-Header Compression
- Local Conference Bridges
- Transcoders
- Mixed Conference Bridge
- Multicast MOH from Branch Router Flash
- Call Admission Control
- Availability Overview
- PSTN Backup
- MGCP Fallback: Normal Operation
- Fallback for IP Phones: Normal Operation
- Call Forward Unregistered
- Automated Alternate Routing
- Mobility Solutions
- Overview of Dial Plan Solutions
- NAT and Security Solutions
- Overview of Multisite Connection Options
- SIP Trunk Review



- H.323 Trunks
- Trunk Implementation Overview
- Multisite Dial Plan Overview
- Implementing Site Codes for On-Net Calls
- Implementing PSTN Access
- Implementing Selective PSTN Breakout
- Implementing PSTN Backup for On-Net Intersite Calls
- Implementing TEHO
- Globalized Call Routing Overview
- Globalization of Localized Call Ingress on Gateways
- Localized Call Egress
- Globalized Call Routing Examples
- URI Dialing
 - Endpoint Addressing Review
 - Partitions and CSSs Review
 - Call Sources Review
 - Blended Addressing
 - FQDNs in Directory URIs
 - Call Routing

Module 2: Centralized Call-Processing Redundancy Implementation

- Remote Site Redundancy Overview
- MGCP Fallback Operation
- Cisco Unified SRST Operation
- CUCM Express in SRST Mode
- Dial Plan Requirements for MGCP Fallback and Cisco Unified SRST Scenarios

Module 3: Bandwidth Management and CAC Implementation

- Bandwidth Management Options
- Cisco Unified Communications Manager Codec Configuration
- Local Conference Bridge Implementation
- Transcoder Implementation
- Multicast MOH from Branch Router Flash Implementation
- CAC Overview
- Enhanced Location CAC Characteristics
- Intracluster Enhanced Location CAC
- Intercluster Enhanced Location CAC
- Enhanced Location CAC Considerations
- Automated Alternate Routing

Module 4: Implementation of Features and Applications for Multisite Deployments

- Issues with Devices Roaming Between Sites



- Device Mobility
 - Configuration Elements
 - Operation
 - Considerations
 - Interaction with Globalized Call Routing
 - Configuration
- Issues with Users Roaming Between Sites
- Cisco Extension Mobility
 - Configuration Elements
 - Operation
 - Considerations
 - Configuration
- Cisco Unified Mobility
 - Call Flows
 - Implementation Requirements
 - MGCP or SCCP Gateway PSTN Access
 - CSS Handling
 - Access-List Functions
 - Configuration

Module 5: Cisco VCS and Cisco Expressway

- Overview
- Deployment Options
- Platforms, Licenses, and Features
- Clustering
- Initial Configuration
- User Authentication Options
- Endpoint Registration
- Endpoint Authentication
- Cisco TMS Provisioning
- Zones
- Links
- Pipes
- CUCM and Cisco VCS Interconnection Overview
- Call Flow between CUCM and Cisco VCS
- Cisco VCS Dial Plan Components
- Configuration of CUCM and Cisco VCS Interconnections
- FindMe Configuration Procedure
- Unified Communications Mobile and Remote Access
 - Components



- Operations
- Configuration Procedure

Module 6: GDPR and CCD

- ILS Networking
- GDPR Overview
- ILS Network Configuration Procedure
- Exchange of Directory URIs
- Configuration of Directory URI Exchange
- Exchange of Numbers and Patterns
- Configuration of Number and Pattern Exchange
- Import and Export of Global Dial Plan Catalogs
- SAF and CCD
 - SAF Characteristics
 - CCD Characteristics
 - CCD Operation
- Monitoring Learned Routes
- Cisco Unified SRST Considerations
- Considerations When Using Globalized Call Routing
- Trunk Considerations
- Considerations When Using Clustering Over the WAN
- SAF and CCD Implementation Overview
- Configure SAF and CCD

Labs

- Implementing a +E.164-Based Dial Plan for International Multisite Deployments
- Implementing a URI-Based Dial Plan for Multisite Deployments
- Implementing SRST and MGCP Fallback
- Implementing Bandwidth Management
- Implementing Enhanced Location CAC
- Implementing Device Mobility
- Implementing Extension Mobility
- Implementing Cisco Unified Mobility
- Configuring Cisco VCS Control to Register Endpoints
- Implementing a Dial Plan in Cisco VCS Control to Interconnect with CUCM
- Implementing Mobile and Remote Access via Cisco Expressway