Installing and Configuring SIP Gateways / Trunking and Cisco Cube with CUCM v2 - ICGCC

Course Details

Course Outline

Module 1: Introduction to Voice Gateways
- Cisco UC Networks and the Role of Gateways
- Gateway Call Routing and Call Legs
- Configuring Gateway Voice Ports
- DSP Functionality, Codecs, and Codec Complexity
- Router Requirements for CUBE
- SIP Protocol Overview

Module 2: VoIP Call Legs
- VoIP Call Legs and VoIP Media Transmission
- SIP Signaling Protocol
- Requirements for VoIP Call Legs
- Configuring VoIP Call Legs

Module 3: Dial Plan Implementation
- Call Routing
- Dial Plan Basics
- Digit Manipulation
- Configuring Path Selection

Module 4: Configuring Cisco Unified Communication Manager 11.x
- Cisco UCM Audio Codec Preference List
- Cisco UCM Region Configuration
- Device Pool Configuration
- Annunciator Configuration
- Conference Bridge Configuration
- Media Termination Point Configuration
- Music on Hold Server Configuration
- Music on Hold Service (IP Voice Media Streaming App) Parameter Settings
- Music on Hold Service (Duplex Streaming) Parameter Settings
- Media Resource Group Configuration
- Media Resource Group List Configuration
- UC Service Configuration
- Service Profile Configuration
- End User Configuration
- SIP Trunk Security Profile Configuration used by SIP trunk to Cisco UBE
- SIP Profile Configuration used by SIP trunk to Cisco UBE
- SIP Trunk to Cisco UBE Configuration
- Route Pattern Configuration

Module 5: Deploying Cisco VCUBE

- Overview CSR1000v
- CSR1000v Requirements
- Deploying a CSR1000v as a CUBE

Module 6: Cisco Unified Border Element Implementation

- CUCM to CUBE Integration Configuration
- Steps to connecting to a SIP Trunk Provider
- Interworking
- Security and Call Admission Control
- Media Manipulation, Enhancement & Optimization
- SIP UA
- Translation Rules
- VoIP Dial Peer
- SIP Registration
- CUBE dial-plan interpretation and call routing
- SIP attributes of CUBE
- Transcoding services
- Creating and configuring Sip Trunks
- Cisco Unified Border Element Configuration

Module 7: Cisco Unified Border Element High Availability

- High availability on ISR G2
- High availability on ISR 4k
- High availability on ASR

Module 8: Cisco Unified Border Element Security

- IP Trust Lists
- CALL Threshold
- Media Policing
- Define Voice Policies
- SRTP

Module 9: Cisco Unified Border Element Monitoring and Troubleshooting

- CLI Commands to Monitor and Troubleshoot
- CALL Prime Assurance Manager
- SIP Debugs

Labs

- Configuring SIP Gateways
- Configuring CUCM for CUBE
- Deploying and Configuring CSR1000v
- Deploying and Configuring the Cisco CUBE on ISR G2
- Configuring SIP Normalization
- Configuring CUBE Transcoding
- Troubleshooting the Cisco CUBE