

CCNA VOICE

Welcome to the world of CCNA Voice! As technology continues to evolve, the realm of voice, which was traditionally kept completely separate from data, has now begun to merge with the data network. This brings together two different worlds of people: One data technicians who are historically accustomed to working with routers, switches, servers and the like, two the voice technicians who are historically accustomed to working with PBX systems, digital handsets, and trunk lines. Regardless of your background. One of the primary goals of The new CCNA Voice certification is to bridge these two worlds together.

Course Outline

- ☞ Where It All Began: Analog Connections
- ☞ Understanding the PSTN
- ☞ The New Yet Not-So-New Frontier: VoIP
- ☞ Understanding CUCME, CUCM, CUC & CUPS.
- ☞ Understanding the Cisco IP Phone Concepts and Registration
- ☞ Understanding and Configuring Ephone-DNs
- ☞ Configuring Call Features
- ☞ Enabling Telephony Features with CUCM
- ☞ Management and Troubleshooting of Cisco Unified Communications Manager

CCNA
VOICE
(640-461)

Course available at Ameerpet Office
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Course Details

Voice Perspectives

Traditional Voice versus Unified Voice

- Where It All Began: Analog Connections
- The Evolution: Digital Connections
- Moving from Analog to Digital/ CAS, CCS
- Understanding the PSTN, PBX and Key Systems
- The New Yet Not-So-New Frontier: VoIP
- The Process of Converting Voice to Packets
- Understanding RTP and RTCP

Understanding pieces of Cisco Unified Communication

- Cisco Unified Communications Manager Express
- CME Key Features and Interaction with Cisco IP Phones
- Cisco Unified Communications Manager/Key Features
- Cisco Unity Connection and Key Features
- Cisco Unified Presence
- Cisco Unified Personal Communicator

Understanding the Cisco IP Phone Concepts and Registration

- Connecting and Powering Cisco IP Phones
- Understanding Voice VLANs
- Understanding the Cisco IP Phone Boot Process
- Configuring a Router-Based DHCP Server
- Setting the Clock of a Cisco Device with NTP
- IP Phone Registration

Cisco Unified Communications Manager Express

Managing Endpoint and End Users with CME

- Ensuring the Foundation
- Base CME Configuration
- Ephone and Ephone-DN—The Keys to Ringing Phones
- Adding Directory Numbers, Phones, and Users with CCP

Understanding the CME Dial-Plan

- Configuring Physical Voice Port Characteristics
- Understanding and Configuring Dial Peers
- Voice Call Legs/Using Dial Peer Wildcards
- Private Line Automatic Ringdown
- Understanding Router Call Processing and Digit Manipulation
- Matching Inbound and Outbound Dial Peers
- Using Digit Manipulation
- Using CCP to Configure a CME Dial-Plan
- Understanding and Implementing CME Class of Restriction
- Quality of Service/Applying QoS

Configuring Cisco Unified CME Voice Productivity Features

- Configuring a Voice Network Directory
- Configuring Call Forwarding
- Forwarding Calls from the IP Phone
- Forwarding Calls from the CLI
- Using the call-forward pattern Command to Support H.450.3
- Configuring Call Telephony Features

Cisco Unified Communications Manager

Administrator and End-User Interfaces

- Describe the CUCM GUI and CLI
- Administration Interface
- Disaster Recovery System Interface
- Cisco Unified Reporting Interface
- User Management in CUCM: Roles and Groups
- Describe the CUC GUI and CLI
- Describe the Cisco Unified Presence Server GUI and CLI

Managing Endpoints and End Users in CUCM

- Implementing IP Phones in CUCM
- Special Functions and Services Used by IP Phones
- Preparing CUCM to Support Phones
- Adding Phones in CUCM
- End Users versus Application Users
- Features Interacting with User Accounts
- User Locale/Device Association
- Implementing End Users in CUCM
- Bulk Import Using BAT/LDAP Integration

Understanding CUCM Dial-Plan Elements and Interactions

- CUCM Call Flows
- Centralized Remote Branch Call Flow
- Centralized Deployment PSTN Backup Call Flow
- Distributed Deployment Call Flow
- Call-Routing Behavior/Class of Control

Enabling Telephony Features with CUCM

- Describe Extension Mobility in CUCM
- Enable EM in CUCM
- Describe Telephony Features in CUCM
- Call Coverage/Intercom/CUCM Native Presence

Enabling Mobility Features in CUCM

- Understanding CUCM Mobility Features
- Unified Mobility Architecture
- Configuring Mobile Connect/MVA

Voicemail and Presence Solutions

Voicemail Integration with Cisco Unity Connection

- Describe Cisco Unity Connection
- Single-Site and Multisite Deployment Considerations
- Describe Cisco Unity Connection Users and Mailboxes
- CUC End Users/User Creation Options
- CUC Voicemail Boxes
- Implement Cisco Unity Connection Users and Mailboxes
- Configure End User Templates/CUC End Users

Enabling Cisco Unified Presence Support

- Describe Cisco Unified Presence Features
- Cisco Unified Personal Communicator
- Integration with LDAP
- Integration with Cisco Unity Connection
- Integration with Conferencing Resources
- Architecture and Call Flow: Softphone Mode
- Architecture and Call Flow: Deskphone Control Mode
- Enabling End Users for CUPC in Cisco Unified Presence

Voice Network Management and Troubleshooting

- Common CME Management and Troubleshooting Issues
- Management and Troubleshooting of CUCM