

CCNA VOICE 640-460

Describe the components of the Cisco Unified Communications Architecture

Describe the function of the infrastructure in a UC environment

Describe the function of endpoints in a UC environment

Describe the function of the call processing agent in a UC environment

Describe the function of messaging in a UC environment

Describe the function of auto attendants and IVRs in a UC environment

Describe the function of contact center in a UC environment

Describe the applications available in the UC environment, including Mobility, Presence, and Telepresence

Describe how the Unified Communications components work together to create the Cisco Unified Communications Architecture

Describe PSTN components and technologies

Describe the services provided by the PSTN

Describe time division and statistical multiplexing

Describe supervisory, informational, and address signaling

Describe numbering plans

Describe analog circuits

Describe digital voice circuits

Describe PBX, trunk lines, key-systems, and tie lines

Describe VoIP components and technologies

Describe the process of voice packetization

Describe RTP and RTCP

Describe the function of and differences between codecs

Describe H.323, MGCP, SIP, and SCCP signaling protocols

Describe and configure gateways, voice ports, and dial peers to connect to the PSTN and service provider networks

Describe the function and application of a dial plan

Describe the function and application of voice Gateways

Describe the function and application of voice ports in a Gateway

Describe the function and operation of call-legs

Describe and configure voice dial peers

Describe the differences between PSTN and Internet Telephony Service Provider circuits

Describe and configure a Cisco network to support VoIP

Describe the purpose of VLANs in a VoIP environment

Describe the environmental considerations to support VoIP

Configure switched infrastructure to support voice and data VLANs

Describe the purpose and operation of PoE

Identify the factors that impact voice quality

Describe how QoS addresses voice quality issues

Identify where QoS is deployed in the UC infrastructure

Implement UC500 using Cisco Configuration Assistant

Describe the function and operation of Cisco Configuration Assistant

Configure UC500 device parameters

Configure UC500 network parameters

Configure UC500 dial plan and voicemail parameters

Configure UC500 SIP trunk parameters

Configure UC500 voice system features

Configure UC500 user parameters

Implement Cisco Unified Communications Manager Express to support endpoints using CLI

Describe the appropriate software components needed to support endpoints

Describe the requirements and correct settings for DHCP, NTP, and TFTP

Configure DHCP, NTP and TFTP

Describe the differences between key system and PBX mode

Describe the differences between the different types of ephones and ephone-dns

Configure Cisco Unified Communications Manager Express endpoints

Configure call-transfer per design specifications

Configure voice productivity features, including hunt groups, call park, call pickup, paging groups, and paging/intercom

Configure Music on Hold

Implement voicemail features using Cisco Unity Express

Describe the Cisco Unity Express hardware platforms

Configure the foundational elements required for Cisco Unified Communications Manager Express to support Cisco Unity Express

Describe the features available in Cisco Unity Express

Configure Auto Attendant services using Cisco Unity Express

Configure basic voicemail features using Cisco Unity Express

Perform basic maintenance and operations tasks to support the VoIP solution

Describe basic troubleshooting methods for Cisco Unified Communications Manager Express

Explain basic troubleshooting methods for Cisco Unity Express

Explain basic maintenance and troubleshooting methods for UC500