دوره جامع ۲۰۲۰ Cisco Collaboration

مروری بر دوره

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این دوره یک پکیج کامل بر اساس سیلابس جدید سیسکو می باشد. سطح دوره مقدماتی تا پیشرفته می باشد و دانشجویان در طی دوره با جدیدترین تکنولوژی های سیسکو در زمینه Collaboration آشنا خواهند شد از مزایای این دوره می توان به جزوات فارسی و فیلم دوره اشاره کرد.

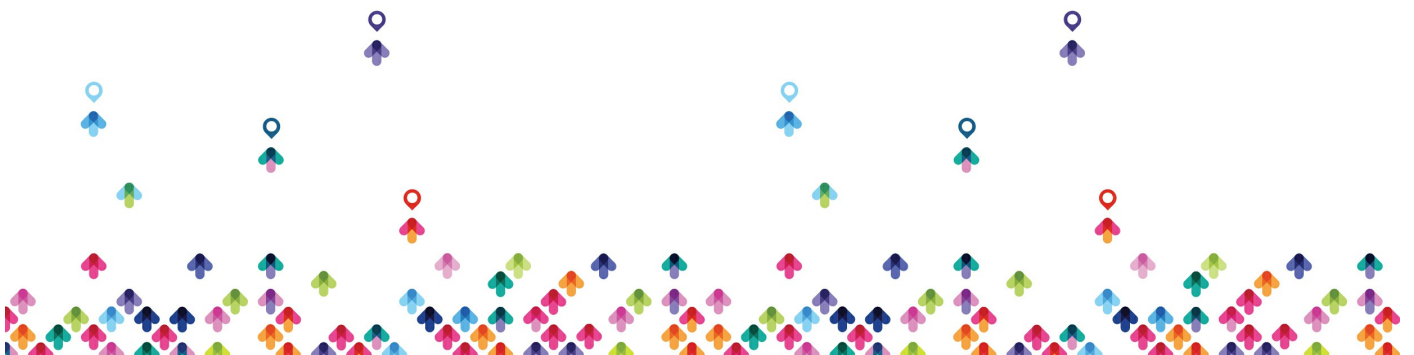## سرفصل ها (حضوری)

سرفصل ها

Protocols and APIs

۱.۱ IP collaboration signaling protocols

- ۱.۱.a SIP
- ۱.۱.b MGCP

۱.۲ Media Negotiation

- ۱.۲.a SDP Offer/Answer model
- ۱.۲.b SDP Early offer, delayed offer, early media
- ۱.۲.c SDP Payload type interworking

۱.۳ Media Path Optimization

- ۱.۳.a Interactive Connectivity Establishment (ICE)
- ۱.۳.b TURN and STUN

۱.۴ SIP headers

- ۱.۴.a Identity headers (Name, number, URI, Privacy)
- ۱.۴.b Route headers
- ۱.۴.c Diversion headers
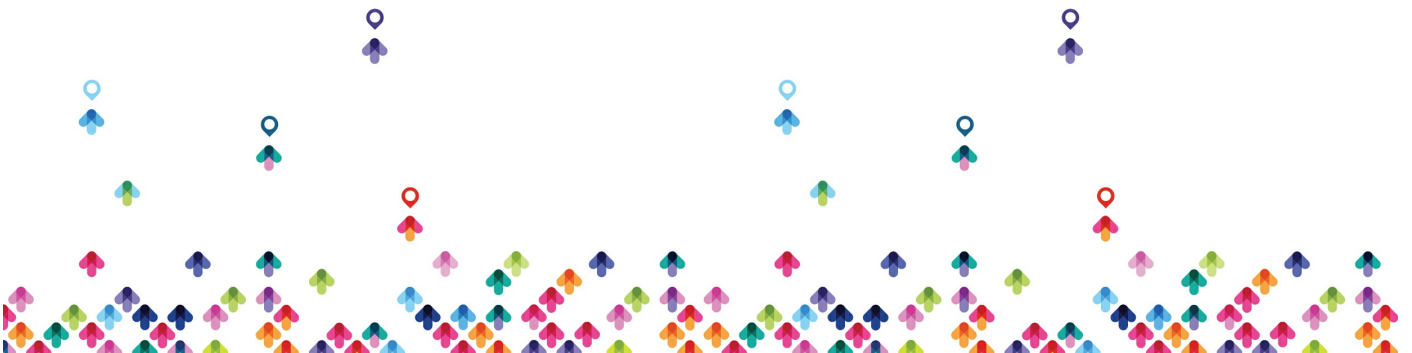- ۱.۴.d CallID, SessionID, and CiscoGUID

۱.۵ Media protocols

- ۱.۵.a RTP/RTCP, SRTP/SRTCP
- ۱.۵.b Binary Floor Control Protocol (BFCP)
- ۱.۵.c ActiveControl (iX)

۱.۶ DTMF relay

- ۱.۶.a In-band vs out-of-band
- ۱.۶.b RFC ۲۸۳۳
- ۱.۶.c Key Pad Markup Language (KPML)
- ۱.۶.d Unsolicited NOTIFY
- ۱.۶.e Interworking

۱.۷ Messaging protocols

- ۱.۷.a XMPP
- ۱.۷.b SIP/SIMPLE

۱.۸ Collaboration APIs

- ۱.۸.a Unified CM Administrative XML (AXL) API
- ۱.۸.b Webex REST API
- ۱.۸.c Cisco Meeting Server
- ۱.۸.d Unified CM User Data Service API
- ۱.۸.e Java Telephony Application Programming Interface (JTAPI)

۱. Infrastructure and Quality of Services

۲.۱ Network services

- ۲.۱.a DHCP
- ۲.۱.b NTP
- ۲.۱.c DNS
- ۲.۱.d CDP/LLDP

۲.۲ Troubleshoot layer ۲ and layer ۳ network connectivity issues

۲.۳ Quality of Service for Collaboration applications and endpoints on LAN/WAN/WLAN (Cisco IOS-XE and AireOS)

- ۲.۳.a Identification
- ۲.۳.b Classification and marking
- ۲.۳.c Queuing and scheduling
- ۲.۳.d Congestion management
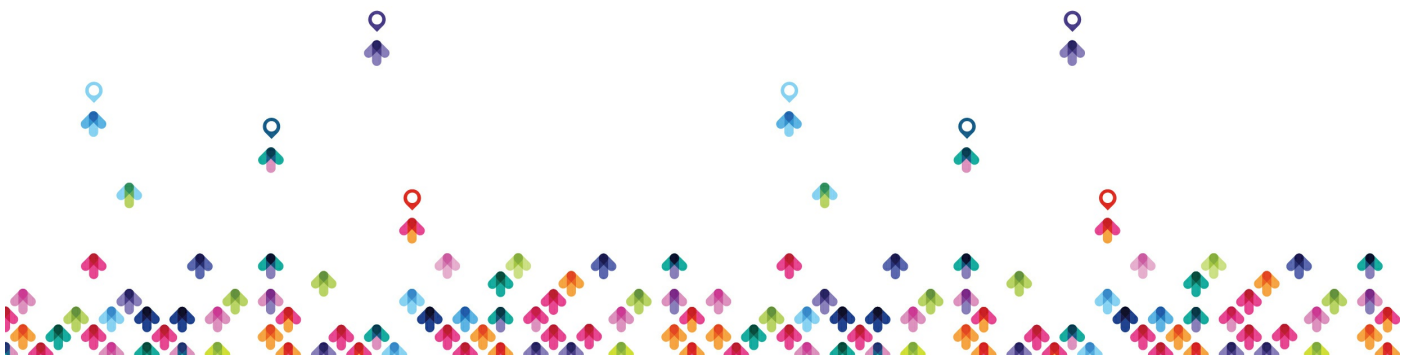
۲.۴ Troubleshoot voice and video quality issues

- ۲.۴.a Media stream packet loss, jitter, and latency
- ۲.۴.b Endpoint media quality metrics
- ۲.۴.c One-way or no-way media

۲.۵ Call Admission Control

- ۲.۵.a CUBE
- ۲.۵.b UCM
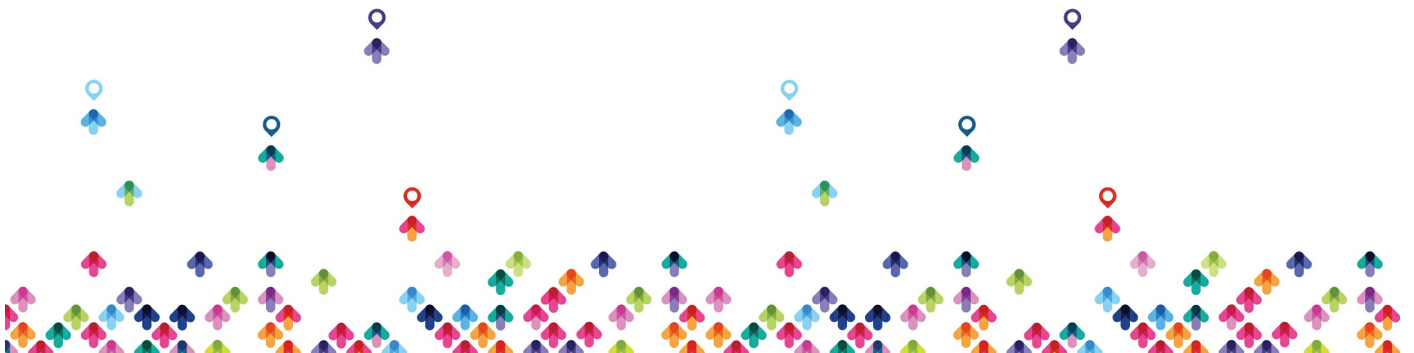- ۲.۵.c Cisco Expressway Series

۲.۶ Certificate management

- ۲.۶.a CUBE
- ۲.۶.b UCM and IM&P
- ۲.۶.c Cisco Expressway Series
- ۲.۶.d Cisco Meeting Server

۱. Call Control and Dial plan

۳.۱ Global dial plans

- ۳.۱.a Localization and globalization
- ۳.۱.b Numbering schemes
- ۳.۱.c Dialing habits
- ۳.۱.d Interdigit timeouts

- ۳.۱.e Calling privileges
- ۳.۱.f Number presentation

۳.۲ Fundamental dial plan features on Unified CM

- ۳.۲.a Partitions and calling search spaces
- ۳.۲.b Translation and transformation patterns
- ۳.۲.c Urgent priority
- ۳.۲.d Path selection

۳.۳ Advanced dial plan features on Unified CM

- ۳.۳.a Global dial plan replication
- ۳.۳.b Local route groups
- ۳.۳.c Emergency Location Groups

۳.۴ URI and domain-based routing

۳.۵ Unified CM telephony features

- ۳.۵.a Call Pickup
- ۳.۵.b Barge/privacy
- ۳.۵.c Native call queuing
- ۳.۵.d Busy Lamp Field (BLF)

۳.۶ Audio and video codec selection

۳.۷ SIP trunking

- ۳.۷.a SIP profiles

- ۳.۷.b SIP trunk security profiles
- ۳.۷.c Resiliency
- ۳.۷.d Mid-call signaling
- ۳.۷.e Session refresh

۳.۸ Securing SIP trunks on UCM

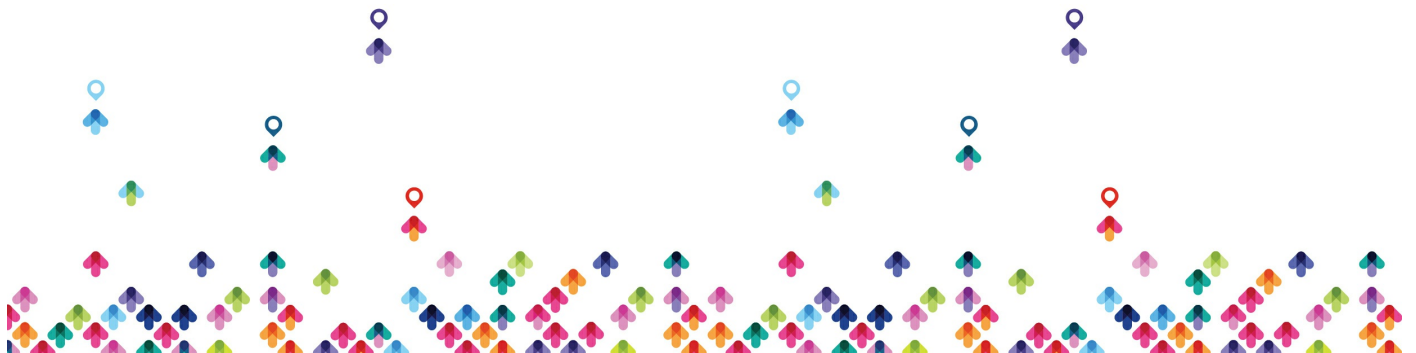۳.۹ UDS in a multi-cluster environment

- ۳.۹.a Service discovery
- ۳.۹.b ILS
- ۳.۹.c User search
- ۳.۹.d LDAP proxy

۳.۱۰ Unified CM database replication

۳.۱۱ Dial plans on CUBE

- ۳.۱۱.a Inbound and outbound dial-peers
- ۳.۱۱.b Voice translation rules and profiles
- ۳.۱۱.c Dial-peer provisioning policy
- ۳.۱۱.d Destination server groups
- ۳.۱۱.e Destination dial-peer groups
- ۳.۱۱.f E.۱۶۴ pattern maps
- ۳.۱۱.g URI-based dialing
- ۳.۱۱.h VRF-aware call routing

۳.۱۲ SIP-SRST and E-SRST

۳.۱۳ Dial plans on Expressway Series

- ۳.۱۳.a Transforms
- ۳.۱۳.b Search rules
- ۳.۱۳.c Zones

۱. Endpoints and User Management

۴.۱ Hardware and software endpoint registration in a multi-cluster environment

- ۴.۱.a On-premise (local or proxy TFTP)
- ۴.۱.b Mobile and Remote Access (Service Discovery)
- ۴.۱.c Cloud

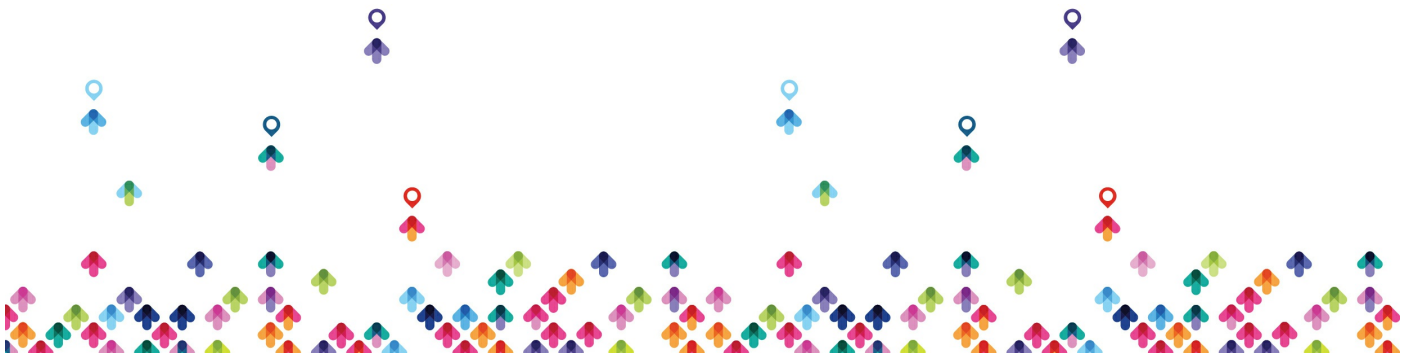۴.۲ Mixed mode and Security By Default (SBD) on Unified CM

- ۴.۲.a Certificate Trust List (CTL) and Identity Trust List (ITL)
- ۴.۲.b Token-less
- ۴.۲.c Trust Verification Service (TVS)

۴.۳ Securing endpoints

۴.۴ Collaboration endpoints and infrastructure using IPv۶

۴.۵ Endpoint features

- ۴.۵.a Directory integration and search
- ۴.۵.b Product specific configuration

- ۴.۵.c Multistream

۴.۶ User authentication and authorization

- ۴.۶.a Directory synchronization On-premise
- ۴.۶.b Directory synchronization Cloud
- ۴.۶.c Single-Sign-On (SSO)
- ۴.۶.d OAuth

۴.۷ Self-provisioning

۱. Edge Services
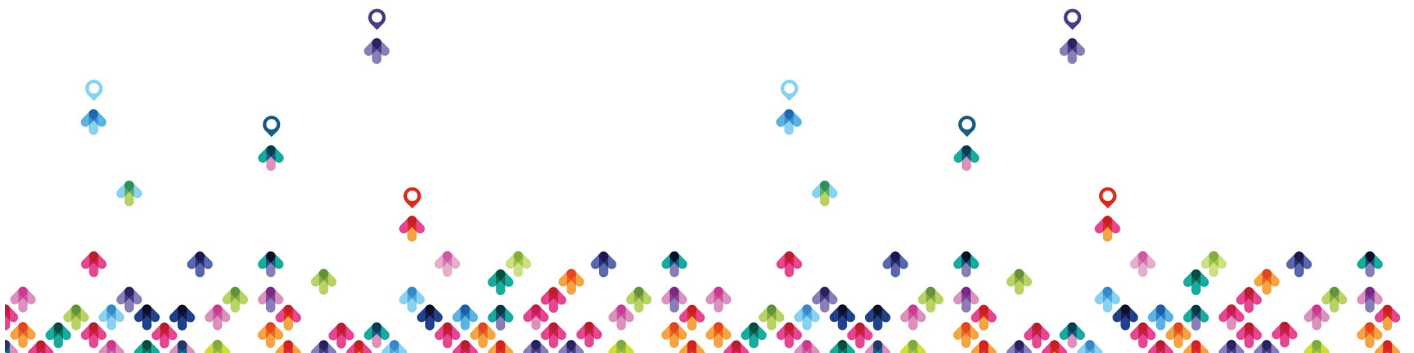
۵.۱ ISDN PRI gateways

۵.۲ SIP trunks using CUBE

۵.۳ SIP normalization and SDP normalization

- ۵.۳.a Normalization and transparency scripts (Lua)
- ۵.۳.b Cisco IOS-XE SIP profiles

۵.۴ Securing SIP trunks on CUBE

- ۵.۴.a SRTP to RTP interworking
- ۵.۴.b SRTP pass-through
- ۵.۴.c SRTP to SRTP interworking

۵.۵ Stateful box‑to‑box redundancy on CUBE (Cisco IOS‑XE)

۵.۶ Network and application level security on Cisco IOS‑XE

- ۵.۶.a IP Trust List
- ۵.۶.b Call spike protection
- ۵.۶.c Media policing
- ۵.۶.d Call thresholds
- ۵.۶.e RTP port ranges
- ۵.۶.f Telephony denial of service attacks

۵.۷ Firewall traversal in a Collaboration solution

- ۵.۷.a Port numbers and transport
- ۵.۷.b NAT
- ۵.۷.c Web proxy servers
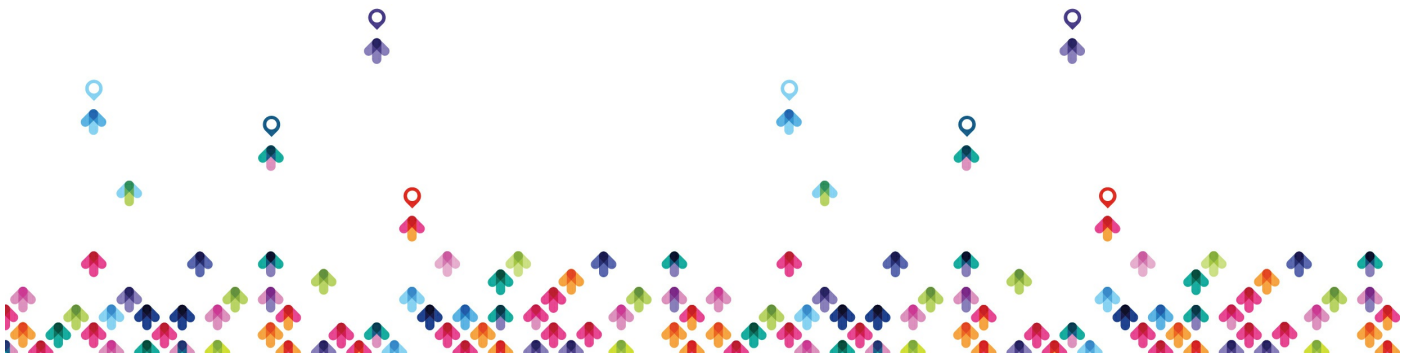- ۵.۷.d Deep Packet Inspection considerations

۵.۸ Expressway Series traversal communications

- ۵.۸.a Traversal zones
- ۵.۸.b SSH tunnels
- ۵.۸.c Encryption interworking

۵.۹ Mobile and Remote Access (MRA)

۵.۱۰ Network and application level security on Expressway Series

- ۵.۱۰.a Toll fraud prevention (CPL)

- ۵.۱۰.b Zone authentication
- ۵.۱۰.c Automated intrusion protection
- ۵.۱۰.d Mutual TLS

۵.۱۱ Webex Edge and Webex Hybrid Services

- ۵.۱۱.a Extending cloud services using on premise resources
- ۵.۱۱.b Cloud service management

۵.۱۲ Third-party interoperability and federation

- ۵.۱۲.a Voice and video calling
- ۵.۱۲.b IM&P
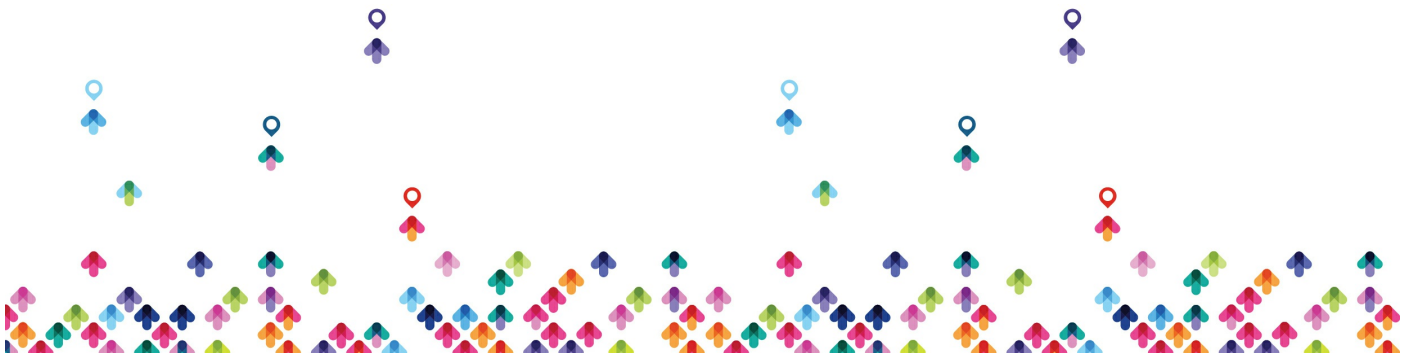
۱. Media Resources and Meetings

۶.۱ Media resources

- ۶.۱.a Transcoding and transrating
- ۶.۱.b MTP
- ۶.۱.c Music on hold (unicast and multicast)

۶.۲ Rendezvous conferencing

- ۶.۲.a Unified CM Conference Now
- ۶.۲.b Cisco Meeting Server Spaces

۶.۳ Ad-hoc conferencing

- ۶.۳.a Cisco IOS-XE conferencing
- ۶.۳.b Cisco Meeting Server

۶.۴ Scheduled meetings

- ۶.۴.a On-premise
- ۶.۴.b Cloud

۶.۵ CallBridge and WebBridge on Cisco Meeting Server

- ۶.۵.a Internal user access
- ۶.۵.b External user access

۶.۶ High availability on Cisco Meeting Server

۶.۷ Secure conferencing on Cisco Meeting Server

۱. Collaboration Applications and Services

۷.۱ On premise IM&P servers and clients

۷.۲ Presence

- ۷.۲.a Busy Lamp Field (BLF)
- ۷.۲.b Soft client

۷.۳ IM&P server integration with external database for Persistent Chat and Group Chat

۷.۴ Cisco Unity Connection voicemail integration

۷.۵ Cisco Unity Connection voicemail features

- ۷.۵.a Call and directory handlers
- ۷.۵.b Voicemail access from soft clients
- ۷.۵.c Video greetings and messaging

۷.۶ Cisco Unity Connection voicemail dial plan

- ۷.۶.a Partitions and search spaces
- ۷.۶.b Routing rules

۷.۷ Mobility features

- ۷.۷.a Mobile Connect (Single Number Reach)
- ۷.۷.b Device Mobility
- ۷.۷.c Mobile Identity
- ۷.۷.d Extend and Connect
- ۷.۷.e Extension Mobility

۷.۸ Extension Mobility Cross Cluster (EMCC)

- ۷.۸.a Emergency dialing considerations
- ۷.۸.b Certificate exchange

۷.۹ Audio and video call recording architectures

- ۷.۹.a SIP-based Media Recording (SIPREC)
- ۷.۹.b Network-Based Recording

- ۷.۹.c Built-in bridge
- ۷.۹.d CUBE Media Proxy
- ۷.۹.e Cisco Meeting Server

۷.۱۰ Secure call recording

۷.۱۱ Cisco Unified Contact Center Express (UCCX)

- ۷.۱۱.a Integration
- ۷.۱۱.b Scripting

۷.۱۲ Contact Center agent desktop (Finesse)

مخاطبان دوره

مخاطبان دوره

- کارشناسان مخابرات و شبکه

پیش نیاز ها

پیش نیازها

- CCNA