



Implementing and Operating Cisco Collaboration Core Technologies v2.0 (350-801)

Exam Description: Implementing and operating Cisco Collaboration Core Technologies v2.0 (CLCOR 350-801) is a 120-minute exam associated with the CCNP and CCIE Collaboration Certifications. This exam certifies a candidate's knowledge of implementing core collaboration technologies including infrastructure and design, protocols, and endpoints, Cisco IOS XE gateway and media resources, Call Control, QoS, and collaboration applications. The course, Implementing Cisco Collaboration Core Technologies, helps candidates to prepare for this exam.

The following topics are general guidelines for the content likely to be included on the exam. However, other related topics may also appear on any specific delivery of the exam. To better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

- 15%** **1.0 Infrastructure and Design**
 - 1.1 Describe the Cisco on-premises, hybrid, and cloud collaboration solution design elements described in the CSR/PA
 - 1.1.a Deployment offerings
 - 1.1.b Sizing
 - 1.1.c Bandwidth
 - 1.1.d Audio/video codecs features
 - 1.1.e High availability (excludes SRST)
 - 1.1.f Disaster recovery
 - 1.1.g Dial plan
 - 1.1.h Security (certificates, SRTP, TLS, OAuth, SSO, and default security features)
 - 1.1.i QoS
 - 1.2 Describe the purpose of edge devices in the Cisco collaboration architecture such as Expressway and Cisco Unified Border Element
 - 1.3 Describe the cluster upgrade process for communications manager
 - 1.4 Troubleshoot security components of Cisco collaboration solutions
 - 1.4.a SSO integration
 - 1.4.b x.509 certificates
 - 1.4.c OAuth
 - 1.4.d TCP/TLS handshake
 - 1.4.e SRTP
 - 1.5 Troubleshoot network components in a Cisco collaboration solution
 - 1.5.a DNS (A/AAAA, SRV, Reverse Pointer Record (PTR))

- 1.5.b NTP
 - 1.5.c LDAP
 - 1.5.d DHCP
 - 1.5.e CDP/LLDP
- 10% 2.0 Protocols and Endpoints**
- 2.1 Deploy endpoints and soft clients (*on-premises and cloud, no Skinny, no Jabber)
 - 2.1.a Manual
 - 2.1.b Self-provisioning
 - 2.1.c Bulk provisioning
 - 2.1.d Device onboarding via activation codes
 - 2.1.e Webex App (desktop and mobile)
 - 2.2 Troubleshoot elements of a SIP
 - 2.2.a Call setup and tear down
 - 2.2.b SDP (audio and video) (*including SRTP)
 - 2.2.c DTMF (RFC 2833/4733)
 - 2.2.d Hold/Resume/Transfer
 - 2.3 Troubleshoot endpoint registration (*CUCM and CUBE)
- 30% 3.0 On-Premises Call Control**
- 3.1 Describe the call routing process in Cisco UCM
 - 3.2 Implement toll fraud prevention in Cisco UCM
 - 3.3 Configure globalized call routing in Cisco UCM
 - 3.3.a Route patterns (traditional and +E.164), route groups, route lists
 - 3.3.b Translation patterns, transformations, and transformation patterns
 - 3.3.c Local route group
 - 3.3.d Time-of-day routing
 - 3.3.e Partitions and Calling Search Space (CSS)
 - 3.3.f Forced authorization code (FAC)
 - 3.3.g Urgent priority
 - 3.4 Troubleshoot misconfigured dial plan issues using monitoring tools
 - 3.5 Describe Cisco UCM APIs
 - 3.5.a API type
 - 3.5.b Authentication
 - 3.5.c Capabilities
 - 3.6 Configure Cisco Unity Connection
 - 3.6.a Mailbox and MWI
 - 3.6.b SIP integration options for call control
 - 3.6.c Call handlers and routing rules
 - 3.7 Configure on-premises user management
 - 3.7.a UCM LDAP sync and authentication
 - 3.7.b RBAC

- 10% 4.0 Voice Gateways and Session Border Controllers**
 - 4.1 Configure voice gateway and session border controller elements for on-premises and cloud calling
 - 4.1.a DTMF (RFC 2833/4733)
 - 4.1.b Voice translation rules and profiles
 - 4.1.c Codec preference list
 - 4.1.d VoIP and POTS dial peers (excludes H.323)
 - 4.1.e Redundancy features (server groups, options keepalive, DNS SRV)
 - 4.2 Troubleshoot IOS XE dial plans such as dial peer matching, translation rules, SIP profiles, and tenants
 - 4.3 Describe IOS XE media resources
- 25% 5.0 Cloud and Hybrid Services**
 - 5.1 Describe Webex Suite such as calling, meetings, and messages
 - 5.2 Describe call routing process in Webex Calling
 - 5.3 Implement toll fraud prevention on Webex Calling
 - 5.4 Configure call routing in Webex Calling
 - 5.4.a Operating modes
 - 5.4.b Locations
 - 5.4.c Numbers
 - 5.4.d Translation patterns
 - 5.4.e Trunks and route groups
 - 5.4.f Dial plans
 - 5.4.g Call permissions
 - 5.5 Configure cloud meetings
 - 5.6 Configure cloud messaging
 - 5.7 Describe cloud collaboration APIs (including webhooks)
 - 5.7.a API type
 - 5.7.b Authentication
 - 5.7.c Capabilities
 - 5.8 Configure cloud user management (Control Hub directory connector, SCIM, and RBAC)
 - 5.9 Describe Cloud Connected UC
 - 5.10 Describe Webex Hybrid Services
- 10% 6.0 Media and QoS**
 - 6.1 Troubleshoot media quality issues such as one-way, choppy audio, video artifact
 - 6.2 Describe the QoS considerations for signaling and media over wired and wireless networks

- 6.3 Describe QoS trust boundaries and their significance in LAN-based classification and marking
- 6.4 Configure LLQ (class map, policy map, service policy)