CCIE Collaboration Certification (Exam 400-051 CCIE Collaboration) (Coming Soon)

Modality: On Demand

Duration:

This course prepares you for the 400-051 CCIE Exam leading to 400-051 CCIE Certification. This course does not include the Official Exam Voucher, however, you can request to purchase the Official Exam Voucher separately.

About this course:

The certification is an expert-level certification that ensures that you gain knowledge and experience in collaboration solutions integration and interoperation, configuration, and troubleshooting in complex networks and the challenges of video, mobility, and presence as the foundation for workplace collaboration solutions.

Our expertise in providing voice, video, IM, presence, and call center solutions and training will prepare you to deploy collaboration systems and services that increase user productivity improve the experience for you customers and are adaptable and provide a seamless user experience.

The average salary of a CCIE Collaboration is **$128,181** per year.

Exam:

Once the course is complete, you will be ready to take the following exam;

- 400-051 CCIE Collaboration
- CCIE Collaboration Lab Exam

Prerequisite:

- There are no formal prerequisites for CCIE certification. Other professional certifications or training courses are not required. Instead, candidates must first pass a written qualification exam and then the corresponding hands-on lab exam. You are expected to have an in-depth understanding of the topics on the exams and strongly encouraged to have three to five years of job experience before attempting certification.

Course Outline:

Module 1: Protocols and APIs

- Capture, analyze, and troubleshoot IP collaboration signaling protocols
- Implement and troubleshoot SDP and media negotiation
- Analyze and troubleshoot SIP identity headers

- Capture, analyze, and troubleshoot media protocols
- Design, implement, and troubleshoot DTMF relay
- Capture, analyze, and troubleshoot messaging protocols
- Capture, analyze, and troubleshoot legacy telephony protocols
- Utilize and troubleshoot the following APIs
- Describe the functionality of the following APIs

Module 2: Infrastructure and Quality of Services

- Implement and troubleshoot network services
- Troubleshoot layer 2 and layer 3 network connectivity issues
- Identify key implications of running collaboration in a wireless environment
- Design, implement, and troubleshoot Quality of Service for Collaboration applications and endpoints on LAN/WAN/WLAN (Cisco IOS-XE and AireOS)
- Troubleshoot voice and video quality issues
- Collect and analyze packet captures on Cisco Collaboration platforms
- Design, implement, and troubleshoot Enhanced Locations Call Admission Control (ELCAC)
- Design, implement, and troubleshoot Call Admission Control on CUBE
- Describe APIC-EM integration with Cisco Collaboration solutions
- Design, implement, and troubleshoot Collaboration applications in a virtualized environment

Module 3: Call Control and Dial plan

- Design and analyze global dial plans
- Design, implement, and troubleshoot fundamental dial plan features on Unified CM
- Design, implement, and troubleshoot advanced dial plan features on Unified CM
- Design, implement, and troubleshoot URI and domain-based routing
- Implement and troubleshoot Unified CM telephony features
- Design, implement, and troubleshoot audio and video codec selection
- Implement and troubleshoot SIP trunking
- Implement and troubleshoot UDS in a multi-cluster environment
- Verify and troubleshoot Unified CM database replication
- Design, implement, and troubleshoot dial plans on Cisco IOS-XE
- Implement and troubleshoot SIP call control for Unified CME
- Implement and troubleshoot SIP-SRST and E-SRST
- Design, implement, and troubleshoot dial plans on Expressway Series
- Implement and troubleshoot Cisco Spark Services

Module 4: Endpoints, User Management, and Mobility

- Implement and troubleshoot hardware and software endpoint registration in a multi-cluster environment
- Implement and troubleshoot mixed mode and Security By Default (SBD) on Unified CM
- Implement collaboration endpoints and infrastructure using IPv6
- Implement and troubleshoot endpoint features
- Integrate and troubleshoot LDAP synchronization and authentication
- Integrate and troubleshoot Single-Sign-On (SSO)
- Implement and troubleshoot self-provisioning

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- Implement and troubleshoot mobility features
- Implement and troubleshoot Extension Mobility Cross Cluster (EMCC)

Module 5: Edge Services

- Implement and troubleshoot ISDN PRI gateways
- Implement and troubleshoot SIP trunks in a multi-tenant environment
- Implement and troubleshoot SIP normalization and SDP normalization
- Implement and troubleshoot encrypted signaling and media on trunks
- Implement and troubleshoot stateful box-to-box redundancy on CUBE (Cisco IOS-XE)
- Implement and troubleshoot network and application level security on Cisco IOS-XE
- Design, analyze, and troubleshoot firewall traversal in a Collaboration solution
- Implement and troubleshoot Expressway Series traversal communications
- Implement and troubleshoot Mobile and Remote Access (MRA)
- Implement and troubleshoot network and application level security on Expressway Series
- Implement and troubleshoot call routing for Spark hybrid services and Business-to-Business (B2B) calling
- Implement and troubleshoot Spark hybrid service connectors and containers
- Implement and troubleshoot third-party interoperability and federation

Module 6: Media Resources, Meetings, and Call Recording

- Design, implement, and troubleshoot media resources
- Implement and troubleshoot rendezvous conferencing
- Implement and troubleshoot ad-hoc conferencing
- Implement and troubleshoot scheduled meetings
- Implement and troubleshoot CallBridge and WebBridge on Cisco Meeting Server
- Implement and troubleshoot high availability on Cisco Meeting Server
- Design, implement, and troubleshoot audio and video call recording architectures

Module 7: Collaboration Applications

- Implement and troubleshoot on premise IM&P servers and clients
- Implement and troubleshoot presence
- Integrate IM&P server with external database to enable Persistent Chat and Group Chat
- Implement and troubleshoot voicemail integration
- Implement and troubleshoot voicemail features
- Implement and troubleshoot voicemail dial plan
- Implement and troubleshoot voicemail digital networking
- Design, implement, and troubleshoot Cisco Unified Contact Center Express (UCCX)
- Implement and troubleshoot Contact Center agent desktop (Finesse)

Module 8: Evolving Technologies v1.1

- Cloud
- Network programmability (SDN)
- Internet of things (IoT)

Lab

- Module 1: Troubleshooting
- Module 2: Diagnostic
- Module 3: Configuration

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