

CCIE Collaboration Lab Exam Revision 3.1

Blueprint Revisions

Today, products and technologies are evolving faster than ever before. To keep up with the fast pace, we are introducing a new agile process that will allow us to align our exams faster with these changes: *minor revisions*. Minor revisions will provide us with the agility and speed that are necessary to adjust our programs to match industry changes and the evolution of technologies. They will do so, by allowing us to update track details (exam blueprint, equipment list, and software) more frequently while keeping overall changes to a minimum (smaller than 20%). This not only allows us to ensure our content stays relevant but also, minimizes learning curves in between revisions.

The main objective of a minor revision is to:

- Further scope out the exam blueprint, by ensuring exam objectives are clear.
- Introduce new blueprint tasks to ensure exam relevancy as relevant today.
- Phase out old(er) products and/or technology solutions that are less relevant today.
- Update equipment and/or software.

Today we are revising the CCIE Collaboration Exam.

CCIE Collaboration Lab Exam, minor revision 3.1

The CCIE Collaboration lab exam will be updating through a *minor revision* (changes are small and incremental). Although the overall domains within the exam blueprint might look similar at first sight, with this minor revision we both added and removed technology solutions to ensure exam relevancy.

Please, refer to www.cisco.com/go/CertRoadmap for the list of exam topics covered in the updated CCIE Collaboration lab exam and for more information regards to the CCIE Collaboration certification program. Candidates can expect to be tested on the new exam material for CCIE Collaboration starting July 20, 2023.

CCIE Collaboration Lab Exam Revision 3.1

CCIE Collaboration Lab Exam (v3.1) – Executive Summary

The new minor revision for CCIE Collaboration allows us to keep the domains and topics closely aligned with today's Cisco Collaboration technologies and solutions. In today's modern workplace, organizations are looking to leverage the cloud to provide flexibility, scalability, and real-time integrations to meet their collaboration needs and business requirements. The v3.1 lab exam blueprint introduces hybrid and cloud collaboration topics such as Webex Calling and Meeting. There is also an increased focus on security as it remains as a top priority for Cisco's on-premises and cloud Collaboration solutions. Numerous older topics, such as ISDN, MGCP, JTAPI, have been removed from the v3.1 blueprint to make room for more relevant topics.

Below is a comprehensive summary of the CCIE Collaboration v3.1 lab exam blueprint.

CCIE Collaboration Lab Exam Revision 3.1

Exam Topics Changes Highlights: (Please note these are highlights only therefore are not all-inclusive, refer to the actual Exam Topics list for details)

V3.0	V3.1
1. Protocols and APIs (10%)	1. Protocols and APIs (10%)
1.1. IP collaboration signaling protocols <ul style="list-style-type: none"> 1.1.a. SIP 1.1.b. MGCP 1.7. Messaging protocols <ul style="list-style-type: none"> 1.7.a. XMPP 1.7.b. SIP/SIMPLE 	1.1 SIP signaling protocol <ul style="list-style-type: none"> 1.1.a SIP Theory (Request and Respond) 1.1.b Identity headers (Name, number, URI, Privacy) 1.1.c Route headers 1.1.d Diversion headers 1.1.e CallID, SessionID, and CiscoGUID 1.7 Security protocols <ul style="list-style-type: none"> 1.7.a TLS negotiation 1.7.b TLS certificate verification
2. Infrastructure and Quality of Services (10%)	2. Infrastructure and Quality of Services (10%)
2.4 Troubleshoot voice and video quality issues <ul style="list-style-type: none"> 2.4.a Media stream packet loss, jitter, and latency 2.4.b Endpoint media quality metrics 2.4.c One-way or no-way media 2.6 Certificate management <ul style="list-style-type: none"> 2.6.a CUBE 2.6.b UCM and IM&P 2.6.c Cisco Expressway Series 2.6.d Cisco Meeting Server 	2.4 Troubleshoot voice and video quality issues <ul style="list-style-type: none"> 2.4.a Media stream packet loss, jitter, and latency 2.4.b Endpoint media quality metrics 2.4.c One-way or no-way media 2.4.d Media quality troubleshooting tools in Webex Control Hub 2.6 Certificate management <ul style="list-style-type: none"> 2.6.a Premise based PSTN gateway 2.6.b UCM, IM&P, Cloud Connected UC 2.6.c Cisco Expressway Series
3. Call Control and Dial plan (20%)	3. Call Control and Dial plan (20%)
3.3 Advanced dial plan features on Unified CM <ul style="list-style-type: none"> 3.3.a Global dial plan replication 3.3.b Local route groups 3.3.c Emergency Location Groups 	3.3 Dial plan features on Webex Calling <ul style="list-style-type: none"> 3.3.a Location and numbers, Routing prefix 3.3.b Interworking dial plan, route list, route groups, trunks, call typing, unknown extension dialing 3.3.c Outgoing and incoming permissions

CCIE Collaboration Lab Exam Revision 3.1

<p>3.12 SIP-SRST and E-SRST</p>	<p>3.3.d Transfer and forwarding restrictions</p> <p>3.6 Telephony features on Webex Calling</p> <ul style="list-style-type: none"> 3.6.a Call Park 3.6.b Auto attendant 3.6.c Call queuing and hunting 3.6.d Receptionist and paging 3.6.e Single Number Reach 3.6.f Voicemail <p>3.11 Survivability Features</p> <ul style="list-style-type: none"> 3.11.a SIP-SRST 3.11.b Webex Calling Survivability Gateway
<p>4. Endpoint and User Management (10%)</p>	<p>4. Endpoint and User Management (10%)</p>
<p>4.3 Securing endpoints</p> <p>4.7 Self-provisioning</p>	<p>4.3 Securing endpoints</p> <ul style="list-style-type: none"> 4.3.a SIP OAuth 4.3.b CAPF and LSC <p>4.6 Cloud clients</p> <ul style="list-style-type: none"> 4.6.a Privacy features 4.6.b Analytics and troubleshooting 4.6.c Proximity 4.6.d Security and compliance
<p>5. Edge Services (20%)</p>	<p>5. Edge Services (20%)</p>
<p>5.1 ISDN PRI gateways</p> <p>5.11 Webex Edge and Webex Hybrid Services</p> <ul style="list-style-type: none"> 5.11.a Extending cloud services using on premise resources 5.11.b Cloud service management 	<p>5.2 Multi-tenancy on Cisco Unified Border Element (CUBE)</p> <p>5.11 Cloud-based PSTN for Webex Calling</p> <ul style="list-style-type: none"> 5.11.a Cloud Connected PSTN Provider 5.11.b Cisco Calling Plan <p>5.12 Premises-based PSTN for Webex Calling</p> <ul style="list-style-type: none"> 5.12.a Registration-based Local Gateway 5.12.b Certificate-based Local Gateway <p>5.13 Edge Audio for Webex</p>

CCIE Collaboration Lab Exam Revision 3.1

6. Media Resources and Meetings (15%)	6. Media Resources and Meetings (15%)
<p>6.2 Rendezvous conferencing</p> <ul style="list-style-type: none"> 6.2.a Unified CM Conference Now 6.2.b Cisco Meeting Server Spaces <p>6.4 Scheduled meetings</p> <ul style="list-style-type: none"> 6.4.a On-premise 6.4.b Cloud <p>6.5 CallBridge and WebBridge on Cisco Meeting Server</p> <ul style="list-style-type: none"> 6.5.a Internal user access 6.5.b External user access <p>6.6 High availability on Cisco Meeting Server</p> <p>6.7 Secure conferencing on Cisco Meeting Server</p>	<p>6.3 Webex meetings</p> <ul style="list-style-type: none"> 6.3.a Meeting scheduling 6.3.b Webex meeting Features <p>6.4 Media quality troubleshooting</p> <p>6.5 Meeting Security</p> <ul style="list-style-type: none"> 6.5.a Planning a secured meeting 6.5.b End-to-end encryption plus identity 6.5.c Personal meeting room security 6.5.d Participant roles <p>6.6 Video Mesh</p>
7. Collaboration Applications and Services (15%)	7. Collaboration Applications and Services (15%)
<p>7.2 Presence</p> <ul style="list-style-type: none"> 7.2.a Busy Lamp Field (BLF) 7.2.b Soft client <p>7.3 IM&P server integration with external database for Persistent Chat and Group Chat</p> <p>7.11 Cisco Unified Contact Center Express (UCCX)</p> <ul style="list-style-type: none"> 7.11.a Integration 7.11.b Scripting <p>7.12 Contact Center agent desktop (Finesse)</p>	<p>7.5 Webex Contact Center</p> <p>7.6 Webex Bot (Implement from a provided Python code skeleton)</p>

CCIE Collaboration Lab Exam Revision 3.1

Hardware and Software Equipment

In support of the updated CCIE Collaboration revision 3.1 the lab exam environment, changes were made to both the equipment and software releases used. Candidates who want to prepare for the exam are now advised to use the following Cisco equipment and Software releases. Visit CCIE Collaboration Lab Exam Equipment and Software v3.1 <link to new page> for a complete overview.

V3.0	V3.1
1. Core Collaboration Applications <ul style="list-style-type: none"> • Cisco Unified Communications Manager 12.5 • Cisco Unified IM & Presence 12.5 • Cisco Unity Connection 12.5 • Cisco Meeting Server 2.5** • Cisco Meeting Management 2.5** • Cisco Unified Contact Center Express 12.0 	1. Core Collaboration Applications <ul style="list-style-type: none"> • Cisco Unified Communications Manager 14.0 • Cisco Unified IM & Presence 14.0 • Cisco Unity Connection 14.0 • Webex Control Hub
2. Collaboration Edge <ul style="list-style-type: none"> • Cisco Expressway Series 12.5 • CSR1000v: IOS XE 16.6 	2. Collaboration Edge <ul style="list-style-type: none"> • Cisco Expressway Series 14.2 • Cisco Catalyst 8000V: IOS XE 17.6
3. Client PCs and Applications <ul style="list-style-type: none"> • Active Directory: Windows Server 2016 • Test PC: Windows 10 • Cisco Jabber for Windows 12.5 	3. Client PCs and Applications <ul style="list-style-type: none"> • Active Directory: Windows Server 2016 • Test PC: Windows 10 • Cisco Jabber for Windows 14.1 • Webex App

Exam format

No changes have been made to the lab exam format in this minor revision. Visit CCIE Collaboration Lab Exam format. <link to new page> for more information about the lab exam format.