

Troubleshooting Cisco IP Telephony and Video - On Demand (CTCOLLAB 1.0)

Modality: On Demand

Duration: 40 Hours

CLC: 10 Units

About the course:

Increase your knowledge of the technologies of Cisco and products with e-learning offerings from Cisco and Cisco's approved learning collaborators. Courses of E-learning targets around a range of Cisco innovations to set you up for the certification exams of Cisco, and to pick up Cisco product information. The e-learning offerings are created to be engaging and interactive for students who favor self-study.

Some Cisco Self-paced courses give access to the exercises of the hands-on virtual lab, providing you the chance to run through troubleshooting and configuration on real platforms of Cisco.

Course Objective:

- Introduction to Troubleshooting Cisco Collaboration Solutions.
- Introduction to Cisco VCS Expressway and VCS Control Troubleshooting.
- Introduction to GDPR and ILS Issues.
- Introduction to Cisco Telepresence Management Suite Issues.

Targeted Audience:

- Network administrators
- Network engineers
- CCNP Collaboration candidates

Secondary Targeted Audiences:

Systems engineers

Course Outline:

Module 1: Introduction to Troubleshooting Cisco Collaboration Systems Solutions

Lesson 1: Identifying Cisco Collaboration Deployments

- Overview of Cisco Collaboration Systems Solution Components
- Network Infrastructure
- Call Control Systems in Cisco Collaboration Systems Solutions
- Endpoints in Cisco Collaboration Systems Solutions

- Media Resources in Cisco Collaboration Systems Solutions
- Applications in Cisco Collaboration Systems Solutions

Lesson 2: Using Troubleshooting Methodology

- Analyze the Troubleshooting Process
- Troubleshooting Methodology in Complex Environments
- Define the Problem
- Gather Facts
- Consider Possibilities
- Create an Action Plan
- Implement an Action Plan
- Observe Results
- Restart the Problem-Solving Process
- Document Facts

Lesson 3: Using Troubleshooting and Monitoring Tools

- Overview of Troubleshooting and Monitoring Tools
- Cisco Unified Serviceability
- Cisco Unified Communications Manager Traces
- Trace Output Example
- Session Trace Log View
- Cisco Unified RTMT Performance Monitor and Data Logging
- Generic Call Filter Module
- Sniffer Traces

Module 2: Cisco Unified Communications Manager Troubleshooting

Lesson 1: Troubleshooting Common Gateway and Endpoint Registration Issues

- IP Phone Initialization
- Common DHCP-Related and TFTP-Related Issues
- Using Ping to Cisco IP Phones
- Verify TFTP Server Configuration
- Cisco Unified IP Phone Status Messages
- Cisco Unified IP Phone Network Configuration
- Cisco IOS MGCP Gateway Communications
- Cisco IOS MGCP Gateway and Endpoint
- Cisco IOS MGCP Gateway Configuration Elements
- Cisco IOS MGCP Gateway Registration
- Cisco IOS MGCP Gateway Registration Issues
- Verify Cisco IOS MGCP Gateway Status
- Cisco IOS MGCP Gateway Monitoring Commands
- Cisco IOS MGCP Gateway Unsuccessful Registration
- Cisco IOS H.323 Gateway and SIP Trunk Communications

Lesson 2: Troubleshooting Cisco Unified Communications Manager Availability Issues

- Cisco Unified Communications Manager Is Not Responding
- Cisco Unified Communications Manager Administration Web Page Is Not Displayed
- Slow Response of Cisco Unified Communications Manager Server

Lesson 3: Troubleshooting Database Replication Issues

- Review of Cisco Unified Communications Manager Database Replication
- Identification of Cisco Unified Communications Manager Database Replication Issues
- Resolving Cisco Unified Communications Manager Database Replication Issues

Lesson 4: Troubleshooting LDAP Integration Issues

- LDAP Integration Options with Cisco Unified Communications Manager
- LDAP Integration Considerations
- Resolving Synchronization Issues
- Resolving LDAP Authentication Issues

Module 3: Cisco VCS Troubleshooting

Lesson 1: Troubleshooting Endpoint Registration Issues

- Overview of Endpoint Registration Issues
- Troubleshooting Endpoints on Cisco VCS
- Troubleshooting Cisco TelePresence Endpoints

Lesson 2: Troubleshooting Cisco VCS Control and Cisco VCS Expressway Availability Issues

- Cisco VCS Is Not Responding
- Cisco VCS Administration Web Page Is Not Displayed
- Slow Response of Cisco VCS Server

Lesson 3: Troubleshooting Database Replication Issues

- Database Replication Review
- Identifying Database Replication Issues
- Fixing Cisco VCS Database Replication Issues

Lesson 4: Troubleshooting LDAP Integration Issues

- Review of LDAP Integration Options
- General LDAP Integration Issues
- Troubleshooting of Device Authentication Issues
- Troubleshooting of Account Authentication Issues

Module 4: Call Setup Issues

Lesson 1: Describing Call Setup Issues and Causes

- Cisco Unified Communications Manager Call Setup Issues
- Cisco VCS Control Call Setup Issues
- Cisco Expressway Series Call Setup Issues
- Call Setup Issues Between Call Control Systems

Lesson 2: Troubleshooting On-Net Single-Site Calling Issues

- Review of Digit Analysis in Cisco Unified Communications Manager
- Review of Partitions and CSSs
- Troubleshoot Call Setup Issues in Cisco Unified Communications Manager
- Troubleshoot One-Way Calling Issues
- Troubleshoot Call-Forwarding Issues
- Review of SIP and H.323 Endpoint Registration in Cisco VCS
- Review of Subzones, Links, Pipes, and Search Rules
- Troubleshoot Call Setup Issues in Cisco VCS
- Troubleshoot Unified Communications Mobile and Remote Access Issues

Lesson 3: Troubleshooting On-Net Multisite Calling Issues

- Multisite Dial Plan Issues
- Cisco Unified Communications Manager Issues
- Cisco Unified Border Element Issues

Lesson 4: Troubleshooting Off-Net Calling Issues

- Common Off-Net Calling Issues
- Troubleshoot MGCP Gateway Issues
- Troubleshoot H.323 Gateway Issues
- Troubleshoot SIP Trunk Issues

Module 5: ILS and GDPR Issues

Lesson 1: Troubleshooting ILS and GDPR

- Review of ILS
- Review of GDPR
- Review of URI Call Routing When Using ILS
- Review of Numbered Call-Routing When Using ILS
- Common ILS-Related Issues and Their Causes
- Troubleshoot ILS-Related Issues

Module 6: Cisco Unified Communications Manager Mobility Issues

Lesson 1: Troubleshooting Device Mobility Issues

- Device Mobility Review
- Call-Routing Implementation Options
- Common Device Mobility-Related Issues and Their Causes

- Troubleshoot Device Mobility Configuration Mismatches
- Troubleshoot Device Mobility Call-Routing Problems
- Troubleshoot Device Mobility Call Privilege Problems

Lesson 2: Troubleshooting Cisco Extension Mobility issues

- Cisco Extension Mobility Review
- Overview of Cisco Extension Mobility Issues
- Troubleshooting Cisco Extension Mobility Login and Logout Issues
- Troubleshoot Cisco Extension Mobility Call-Routing Issues

Lesson 3: Troubleshooting Cisco Unified Mobility Issues

- Review of Cisco Unified Mobility
- Review of Unified Mobility Configuration Elements
- CSS Implementation in Cisco Mobile Connect
- Cisco Unified Mobility Access List Functions
- Overview of Cisco Unified Mobility Issues
- Troubleshoot Cisco Mobile Connect
- Troubleshoot Cisco Unified Mobile Voice Access

Module 7: Cisco TelePresence Management Suite Issues

Lesson 1: Troubleshooting Cisco TMS Issues

- Review of Cisco TMS
- Troubleshoot Cisco TMS
- FindMe Review
- Common FindMe Issues

Module 8: Voice Quality and Media Resources Issues

Lesson 1: Troubleshooting MTP issues

- MTP Review
- Troubleshoot MTP Registration and Nonresponsive Software Issues
- MTP Allocation Issues

Lesson 2: Troubleshooting Transcoder Issues

- Transcoder Review
- Troubleshoot Transcoder Registration Issues

Lesson 3: Troubleshooting Audio and Video Conferencing Issues

- Cisco Unified Communications Manager Conference Bridges
- Troubleshoot Conference Bridges Registered with Cisco Unified Communications Manager
- Troubleshoot Conference Bridges Accessible via SIP Trunks

Lesson 4: Troubleshooting Audio and Video Quality Issues

- Voice Quality Issues in Cisco Collaboration Systems
- Identify and Isolate Voice and Video Quality Problems
- Troubleshoot Layer 2 Quality Problems
- Troubleshoot Voice Quality Issues on a Gateway
- Troubleshoot Quality Issues at Endpoints
- One-Way Audio and Video Issues

Labs

- Lab1: Troubleshooting Gateway and Endpoint Registration Issues
- Lab 2: Troubleshooting LDAP Integration Issues
- Lab 3: Troubleshooting Endpoint Registration Issues
- Lab 4: Troubleshooting LDAP Integration Issues
- Lab 5: Troubleshooting On-Net Single-Site Calling Issues
- Lab 6: Troubleshooting On-Net Multisite Calling Issues
- Lab 7: Troubleshooting Off-Net Calling Issues
- Lab 8: Troubleshooting ILS and GRDR
- Lab 9: Troubleshooting Device Mobility Issues
- Lab 10: Troubleshooting Extension Mobility Issues
- Lab 11: Troubleshooting Cisco Unified Mobility Issues
- Lab 12: Troubleshooting Cisco TMS Issues
- Lab 13: Troubleshoot Transcoder Issues
- Lab 14: Troubleshooting Issues with Audio and Video