

Troubleshooting Cisco IP Telephony and Video (CS-CTCOLLAB)

Modality: Virtual Classroom

Duration: 3 Days

CLC: 28 Units

About this course:

This five-day trainer drove troubleshooting course of Cisco telephony has been intended to acquaint understudies with multisite voice and video networks, and assist them to troubleshoot the Expressway Series of Cisco, Cisco Unified Communications Manager, and Cisco VCS-C. Being a thorough troubleshooting course, the Troubleshooting course of Cisco IP Video and Telephony targets furnishing understudies with the information to perform integrated system fixes and outfits them with significant data and insights about troubleshooting resources, methodologies, and tools.

This course is an intermediate-level preparation that covers a range of areas including troubleshooting for Call Setup issues, Cisco Unified Communications Manager Mobility Features, Cisco Unified Communications Manager, Cisco Telepresence Management Suite, and VCS Expressway and VCS Control making it the perfect IT operations preparing for troubleshooting voice issues and media resources. The preparation program can also assist learners with planning for the exam of Cisco 300-080 CTCOLLAB.

Course objectives:

Learners will be able to perform the following upon finishing this course:

- Develop solutions of troubleshooting for collaboration deployment issues of Cisco.
- Develop solutions for issues relating to media resources and voice quality.
- Troubleshoot the issues of Cisco VCS, call setup, Cisco Unified Communications Manager, Cisco Unified Communications Manager Mobility Feature, ILS, GDPR, and Cisco Telepresence Management Suite.

Targeted Audience:

This training course of IT ops is planned for network engineers and administrators. Learners keen on gaining the certifications of Cisco Certified Network Professional and systems engineers can choose for the course as well.

Prerequisites:

- Converged video, data, and voice network working information are suggested.
- Knowledge of the working mechanism of Cisco switches and routers.
- Information on how Cisco Unified Communications Manager can be operated and configured in several kinds of environments
- Knowledge of different protocols including SIP, H.323, and MGCP, and the usage of them

with Cisco IOS gateways

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