

Implementing Automation for Cisco Collaboration Solutions (CLAUI)

Course Duration: 40 Hours

Course code: CLAUI

1. Course Overview

This five-day course focuses on implementing automation in Cisco Collaboration environments. You will learn how to automate provisioning, configuration, monitoring, and troubleshooting of collaboration solutions using APIs, scripting, and modern automation tools. The course covers Cisco Unified Communications Manager (CUCM), Webex, and other collaboration platforms, along with REST APIs, Python scripting, and DevOps practices.

2. What you'll learn?

By the end of the course, you will be able to:

- Describe automation concepts in Cisco Collaboration environments
- Understand APIs and their role in collaboration automation
- Use REST APIs to automate Cisco collaboration platforms
- Automate Cisco Unified Communications Manager (CUCM) tasks
- Use Python and scripting for automation workflows
- Implement Webex automation using APIs
- Use tools like Postman and Git for automation development
- Monitor and troubleshoot automated collaboration workflows
- Apply DevOps practices in collaboration automation

3. Target Audience

This course is ideal for:

- Collaboration Engineers
- Network Automation Engineers
- System Integrators

- DevOps Engineers
- UC Administrators
- IT Professionals working with Cisco Collaboration solutions

4. Pre-Requisites

Before taking this course, you should have:

- Basic knowledge of Cisco Collaboration technologies (CUCM, Webex)
- Understanding of networking fundamentals (IP, HTTP, REST)
- Basic programming knowledge (Python preferred)
- Familiarity with APIs and scripting concepts

5. Course content

Module 1: Course Introduction

- Course overview and objectives
- Automation trends in collaboration
- Course logistics and lab setup

Module 2: Introduction to Cisco Collaboration Automation

- Overview of Cisco Collaboration architecture
- Role of automation in collaboration solutions
- Introduction to DevNet and automation ecosystem

Module 3: Understanding APIs and Protocols

- API fundamentals (REST, SOAP)
- HTTP methods and status codes
- Authentication methods (Basic, OAuth, Tokens)
- Data formats (JSON, XML)

Module 4: Cisco Collaboration APIs Overview

- CUCM APIs (AXL, REST)
- Cisco Unity Connection APIs
- Webex APIs overview
- API documentation and DevNet resources

Module 5: Using Tools for API Interaction

- Using Postman for API testing
- API request creation and execution
- Parsing API responses
- Troubleshooting API calls

Module 6: Python for Automation

- Python basics for automation
- Using requests library for APIs
- Writing scripts for collaboration automation
- Handling API responses in Python

Module 7: Automating CUCM Operations

- Automating user provisioning
- Managing devices using APIs
- Bulk operations using AXL APIs
- Automating dial plan configuration

Module 8: Automating Cisco Unity Connection

- User and mailbox automation
- Voicemail configuration automation
- API-based management

Module 9: Automating Webex Platform

- Webex REST APIs
- Automating meetings and messaging
- Managing users and spaces
- Integrating bots and webhooks

Module 10: Webhooks and Event-Driven Automation

- Understanding webhooks
- Creating event-driven workflows
- Real-time notifications using Webex

Module 11: Data Handling and Parsing

- Working with JSON and XML
- Data extraction and manipulation
- Error handling in scripts

Module 12: Version Control and DevOps Practices

- Introduction to Git and version control
- Managing automation scripts
- CI/CD basics for automation

Module 13: Security in Automation

- Securing API communication
- Authentication and authorization best practices
- Handling sensitive data

Module 14: Monitoring and Troubleshooting Automation

- Logging automation processes
- Debugging scripts and API calls
- Performance monitoring

Module 15: Real-World Use Cases and Integration

- End-to-end automation scenarios
- Integration with third-party tools
- Best practices for enterprise automation

Module 16: Final Project and Use Case Implementation

- Design and implement automation workflow
- Automate collaboration deployment
- Project review and optimization