

Introducing Automation for Cisco Solutions (CSAU) V1.2

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The Introducing Automation for Cisco Solutions (CSAU) training gives you a broad overview of network automation skills. Through a combination of lecture and hands-on labs, you will learn the fundamentals of automation such as working on model-driven programmability solutions with representational state transfer configuration protocol (RESTCONF) and network configuration protocol (NETCONF) protocols. The training also covers data formats and types, including Extensible Markup Language (XML), JavaScript Object Notation (JSON), Yaml Ain't Markup Language (YAML), and Yet Another Next Generation (YANG), and their value in network automation, along with DevOps tools such as Ansible and Git.

How you'll benefit

This class will help you:

- Gain an overview of the skills you need to become a next-generation engineer
- Prepare to accelerate network automation in your organization
- Increase collaboration across internal and external teams using version control systems
- Earn 16 CE credits toward recertification

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- Automation Architects
- Automation Engineers
- Consulting Systems Engineers
- DevOps Engineers
- Network Administrators
- Network Architects
- Network Consulting Engineers
- Network Design Engineers
- Network Engineers
- Network Operators
- Network Reliability Engineers
- Sales Engineers
- Site Reliability Engineers
- Systems Engineers
- Technical Solutions Architects

Course Duration

3 days

Course Price

\$3,995.00 or 29 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

- Application Developers
- Collaboration Developers
- Collaboration Solutions Architects
- IT Directors
- Mobile Developers
- Network Operations Center (NOC) Managers
- Software Architects
- Web Developers

Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Routing and switching including open shortest path first (OSPF), border gateway protocol (BGP), and basic configuration features such as interfaces, simple network management protocol (SNMP), and static routes
- Fundamentals of Python data structures and programming constructs, such as loops, conditionals, and classes, or the equivalent of 3–6 months of experience writing Python scripts
- Basic Linux commands for navigating the file system and executing scripts
- Knowledge of working with text editors

OUTLINE

Module 1: Examining Network Management and Operations

Module 2: Exploring Software Development Methodologies

Module 3: Using Python for Network Automation

Module 4: Describing NetDevOps: DevOps for Networking

Module 5: Managing Automation Development Environments

Module 6: Introducing HTTP Network APIs

Module 7: Reviewing Data Formats and Data Encoding

Module 8: Using Python Requests to Automate HTTP-Based APIs

Module 9: Exploring YANG

Module 10: Using YANG Tools

Module 11: Automating Model-Driven APIs with Python

Module 12: Introducing Ansible for Network Automation

Module 13: Templating Configurations with Jinja2

LAB OUTLINE

- Lab 1: Use Network Automation Scripts
- Lab 2: Enforce Python Fundamentals on the Interactive Interpreter
- Lab 3: Automate Networks with Netmiko
- Lab 4: Use the Git Version-Control System and Collaborate on an Internal Project
- Lab 5: Build Reproduceable Automation Environments
- Lab 6: Use HTTP-Based APIs with Postman
- Lab 7: Explore YAML and JSON Data
- Lab 8: Consume HTTP-Based APIs with Python Requests
- Lab 9: Explore YANG Tools
- Lab 10: Explore RESTCONF with Python
- Lab 11: Explore NETCONF with Python
- Lab 12: Configure Network Devices with Ansible
- Lab 13: Collect Network Data with Ansible
- Lab 14: Build and Deploy Configurations with Ansible