Introducing Automation for Cisco Solutions (CSAU) 1.2

Description

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.

Duration: 24 HRS

Prerequisite

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

The following recommended Cisco offering may help you meet these prerequisites:

Implementing and Administrating Cisco Solutions (CCNA)

Outline

1. Examining Network Management and Operations
2. Exploring Software Development Methodologies
3. Using Python for Network Automation
4. Describing NetDevOps: DevOps for Networking
5. Managing Automation Development Environments
6. Introducing HTTP Network APIs
7. Reviewing Data Formats and Data Encoding
8. Using Python Requests to Automate HTTP-Based APIs
9. Exploring YANG
10. Using YANG Tools
11. Automating Model-Driven APIs with Python
12. Introducing Ansible for Network Automation
13. Templating Configurations with Jinja2