

# Introducing Automation for Cisco Solutions (CSAU)

**Price:** 250

**Duration** 365 Days

**Delivery Methods** eLearning

**URL** [Enroll](#) [Buy Now](#)

## Overview

**The duration of this course is 19 hours, and it is eligible for 16 CE credits towards recertification.**

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 training 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

## Who Should Enroll

- 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
- Application developers
- Collaboration developers
- Collaboration solutions architects
- IT directors
- Mobile developers
- Network Operations Center (NOC) managers
- Software architects
- Web developers

## **Learning Path Objectives**

After taking this training, you should be able to:

- Articulate the role network automation and programmability play in the context of end-to-end network management and operations
- Define and differentiate between waterfall and agile software development methodologies
- Interpret and troubleshoot Python scripts with fundamental programming constructs built for network automation use cases
- Describe how DevOps principles, tools, and pipelines can be applied to network operations
- Understand the role of network automation development environments and associated technologies such as Python virtual environments, Vagrant, and Docker
- Understand and construct HTTP-based application programming interface (API) calls to network devices
- Articulate the differences among and common use cases for XML, JSON, YAML, and protocol buffer (protobuf)
- Construct and interpret Python scripts using the Python requests module to automate devices that have HTTP-based APIs
- Understand the role YANG plays in network automation
- Understand that several tools exist to simplify working with YANG models
- Describe the functionality of RESTCONF and NETCONF and the differences between them
- Construct Ansible playbooks to configure network devices and retrieve operational state data from them
- Build Jinja2 templates and YAML data structures to generate desired state configurations

## **Learning Path 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

These skills can be found in the following Cisco Learning Offering:

- Implementing and Adminstrating Cisco Solutions (CCNA)

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## **FAQ**

### **What if I have to reschedule my class due to conflict?**

Ten (10) business days' notice is required to reschedule a class with no additional fees. Notify TOPTALENT LEARNING as soon as possible at 469-721-6100 or by written notification to [info@toptalentlearning.com](mailto:info@toptalentlearning.com) to avoid rescheduling penalties.

### **How do I enroll for this class?**

Please contact our team at 469-721-6100; we will gladly guide you through the online purchasing process.

### **What happens once I purchase a class?**

You will receive a receipt and an enrollment confirmation sent to the email you submitted at purchase. Your enrollment email will have instructions on how to access the class. Any additional questions our team is here to support you. Please call us at 469-721-6100.

### **What is your late policy?**

If a student is 15 minutes late, they risk losing their seat to a standby student. If a student is 30 minutes late or more, they will need to reschedule. A no-show fee will apply. Retakes are enrolled on a stand-by basis. The student must supply previously issued courseware. Additional fees may apply.

### **What happens when I finish my class?**

You will receive a 'Certificate of Completion' once you complete the class. If you purchased an exam voucher for the class, a team member from TOPTALENT LEARNING will reach out to discuss your readiness for the voucher and make arrangements to send it.