Introducing Automation for Cisco Solutions (CSAU)

Category: Software Development & Programming | **Vendor:** Cisco

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

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
- Earn 16 CE credits toward recertification

About This Course

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Who Should Attend

This course is designed primarily for customer engineers and systems engineers in the following job roles:

- 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

Prerequisites & Entry Requirements

General Prerequisites:

There are no formal 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 Administering Cisco Solutions (CCNA)

Learning Outcomes

Upon successful completion of this course, participants will be able to:

After taking this course, 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

Detailed Course Outline

- Examining Network Management and Operations
- Exploring Software Development Methodologies
- Using Python for Network Automation

- Describing NetDevOps: DevOps for Networking
- Managing Automation Development Environments
- Introducing HTTP Network APIs
- Reviewing Data Formats and Data Encoding
- Using Python Requests to Automate HTTP-Based APIs
- Exploring YANG
- Using YANG Tools
- Automating Model-Driven APIs with Python
- Introducing Ansible for Network Automation
- Templating Configurations with Jinja2

Skills You Will Learn:

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Frequently Asked Questions

Q: What delivery options are available for Introducing Automation for Cisco Solutions (CSAU)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Introducing Automation for Cisco Solutions (CSAU) course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Introducing Automation for Cisco Solutions (CSAU) training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Introducing Automation for Cisco Solutions (CSAU)?

Yes, we provide corporate training, dedicated training, and closed classes for Introducing Automation for Cisco Solutions (CSAU). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Introducing Automation for Cisco Solutions, Cisco Professional Level Automation, CSAU

Q: Why choose Nexus Human for Introducing Automation for Cisco Solutions (CSAU)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Introducing Automation for Cisco Solutions (CSAU) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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