# Implementing Automation for Cisco Data Center Solutions (DCAUI)

## Description

This course teaches you how to implement Cisco® Data Center automated solutions including programming concepts, orchestration, and automation tools. Through a combination of lessons and hands-on practice, you will manage the tools and learn the benefits of programmability and automation in the Cisco-powered Data Center. You will examine Cisco Application Centric Infrastructure (Cisco ACI®), Software-Defined Networking (SDN) for data center and cloud networks, Cisco Nexus® (Cisco NX-OS) platforms for device-centric automation, and Cisco Unified Computing System (Cisco UCS®) for Data Center compute. You will study their current ecosystem of Application Programming Interfaces (APIs), software development toolkits, and relevant workflows along with open industry standards, tools, and APIs, such as Python, Ansible, Git, JavaScript Object Notation (JSON), Yaml Ain't Markup Language (YAML), Network Configuration Protocol (NETCONF), Representational State Transfer Configuration Protocol (RESTCONF), and Yet Another Generation (YANG).

**Course Content**

- Describing the Cisco ACI Policy Model
- Describing the Cisco APIC REST API
- Using Python to Interact with the ACI REST API
- Using Ansible to Automate Cisco ACI
- Introducing Cisco NX-OS Programmability
- Describing Day-Zero Provisioning with Cisco NX-OS
- Implementing On-Box Programmability and Automation with Cisco NX-OS
- Implementing Off-Box Programmability and Automation with Cisco NX-OS
- Automating Cisco UCS Using Developer Tools
- Implementing Workflows Using Cisco UCS Director
- Describing Cisco DCNM
- Describing Cisco Intersight

**Lab / Exercises**

- Official CISCO Labs

**Documentation**

- Official digital CISCO courseware

**Exam**

- This course prepares you for the "300-635 Automating Cisco Data Center Solutions (DCAUTO)" certification exam. "Introducing Automation for Cisco Solutions (CSAU)" is required prior to enrolling this training because it provides crucial foundational knowledge essential to success

**Participant profiles**

- Network engineer
- Systems engineer

- Wireless engineer
- Consulting systems engineer
- Technical solutions architect
- Network administrator
- Wireless design engineer
- Network manager
- Site reliability engineer
- Deployment engineer
- Sales engineer
- Account manager

**Prerequisites**

- Basic programming language concepts
- Basic understanding of virtualization and VMware
- Ability to use Linux and Command Line Interface (CLI) tools, such as Secure Shell (SSH) and bash
- CCNP level data center knowledge
- Foundational understanding of Cisco ACI

**Objectives**

- Leverage the tools and APIs to automate Cisco ACI powered data centers
- Demonstrate workflows (configuration, verification, healthchecking, monitoring) using Python, Ansible, and Postman
- Leverage the various models and APIs of the Cisco Nexus OS platform to perform day 0 operations, improve troubleshooting methodologies with custom tools, augment the CLI using scripts, and integrate various workflows using Ansible and Python
- Describe the paradigm shift of Model Driven Telemetry and understand the building blocks of a working solution
- Describe how the Cisco Data Center compute solutions can be managed and automated using API centric tooling, by using the Python SDK, PowerTool, and Ansible modules to implement various workflows on Cisco UCS, Cisco IMC, Cisco UCS Manager, Cisco UCS Director, and Cisco Intersight

**Niveau**
Avancé
**Virtual Classroom Registration Price (CHF)**
2850
**Duration (in Days)**
3
**Reference**
CIS-DCAUI