Current Technologies
Computer Learning Centers

cisco Partner
Platinum Learning

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

WHERE GREAT TRAINING HAPPENS EVERYDAY!

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

Course Duration

3 Days

Course Price

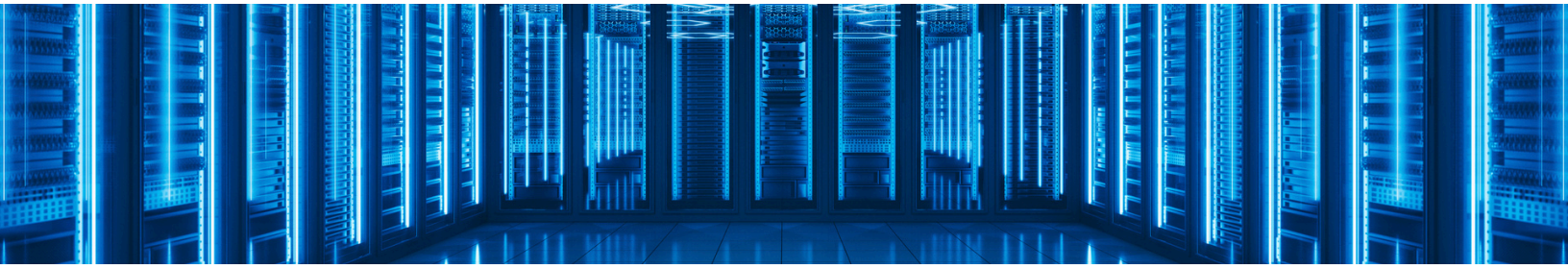
$2,995.00
30 CLCs

Methods of Delivery

In-Person ILT
Virtual ILT
Onsite ILT

About this Class

The Implementing Automation for Cisco Data Center Solutions (DCAUI) training shows you how to implement Cisco Data Center automated solutions, including programming concepts, orchestration, and automation tools. The goal of this 5-day training is to highlight the tools and benefits of leveraging programmability and automation in the Cisco-powered Data Center. Examined platforms include Cisco ACI (the controller-based Data Center environment), Cisco NX-OS on all Cisco Nexus platforms for device-centric automation, and Cisco UCS for Data Center compute. Their current ecosystem of APIs, software development toolkits, and relevant workflows is inspected in detail together with open industry standards, tools, and APIs, such as Python, Ansible, Git, JSON/YAML, NETCONF/RESTCONF, and YANG. This training 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 in Implementing Automation for Cisco Data Center Solutions (DCAUI) because it provides crucial foundational knowledge essential to success. This training also earns you 24 Continuing Education (CE) credits towards recertification.



Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

How you will benefit

This class will help you:

- Learn the tools and the benefits of leveraging programmability and automation in the Cisco-powered Data Center
- Examine platforms include Cisco ACI (the controller-based Data Center environment), Cisco NX-OS on all Cisco Nexus platforms for device-centric automation, and Cisco UCS for Data Center compute
- Inspect the current ecosystem of APIs, software development toolkits, and relevant workflows in detail together with open industry standards, tools, and APIs, such as Python, Ansible, Git, JSON/YAML, NETCONF/RESTCONF, and YANG

Why Attend with Current Technologies CLC

- Our Instructors are 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 job roles best suited to the material in this course are:

- Channel and Customer Engineers
- Channel Sales Engineers
- Channel Account Managers
- Network Engineers
- Network Engineers
- System Engineers
- Wireless Engineers
- Consulting Systems Engineers
- Technical Solutions Architects
- Network Administrators
- Wireless Design Engineers
- Network Managers
- Site Reliability Engineers
- Deployment Engineers

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

Prerequisites

Before taking this course, you should have the following knowledge and skills:

- 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

After taking this course, you should be able to:

- Review Cisco ACI fundamental concepts, GUI workflows, and create the case for implementing automation
- Introduce the Cisco ACI REST API, the tools already available on the Cisco APIC, and understand basic API interaction using Postman
- Understand the functionality provided by the Python ACI libraries and write scripts that apply configuration and verify state on the Cisco ACI fabric
- Understand Cisco ACI Ansible modules, build playbooks that apply Infrastructure-as-Code concepts to Cisco ACI tenant configuration, and generate a health report using Ansible
- Understand Cisco ACI Apps Center integration and the benefits of integrating Kubernetes infrastructure with Cisco ACI
- Understand the API types and capabilities available on Cisco Nexus product family
- Understand Day 0 operations and how ZTP, POAP, and iPXE fulfill these goals with their respective tooling

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

Cont. Objectives

After taking this course, you should be able to:

- Understand functionality provided by the on-box tooling on the Cisco Nexus series switches and implement simple solutions to improve daily operations
- Use Python and Ansible to leverage the NX-API to implement and verify configuration state using modern workflows
- Understand the paradigm shift of Model-Driven Telemetry and explore a fully set up pipeline for data collection and analysis
- Understand the Cisco UCS developer tools and implement management workflows leveraging Cisco UCS APIs, Python, and Ansible modules
- Review Cisco NDFC product capabilities and understand how its API can be leveraged to automate the Cisco Data Center
- Understand the advantages of using Cisco Intersight and how to implement automation tasks using its REST APIs via Python and Ansible
- Describe Terraform plans for Cisco ACI deployments

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

Course Outline

Module 1: Describing the Cisco ACI Policy Model

Module 2: Describing the Cisco APIC REST API

Module 3: Using Python to Interact with the ACI REST API

Module 4: Using Ansible to Automate Cisco ACI

Module 5: Introducing Cisco NX-OS Programmability

Module 6: Describing Day-Zero Provisioning with Cisco NX-OS

Module 7: Implementing On-Box Programmability and Automation with Cisco NX-OS

Module 8: Automating Cisco UCS Using Developer Tools

Module 9: Describing Cisco Intersight

+1 (219) 764-3800
6210 Central Ave, Portage IN
sales@ctclc.com
www.ctclc.com

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

Lab Outline

- Use Cisco APIC Web GUI
- Discover the Cisco APIC REST API
- Use Postman with the APIC REST API
- Use Python with the Cisco APIC REST API
- Configure and Verify Cisco ACI Using Acitoolkit
- Use Cobra and Arya to Recreate a Tenant
- Manage Configuration Using Ansible
- Set Up a New Tenant the NetDevOps Way
- Create an Infrastructure Health Report
- Set Up Power on Auto Provisioning on the Cisco Nexus 9000
- Use Bash and Guest-Shell on Cisco NX-OS
- Use Python to Enhance CLI Commands
- Trigger a Python Script Using Cisco Embedded Event Manager (EEM)
- Configure and Verify Using NX-API and Python
- Configure and Verify Using NETCONF/YANG
- Use Ansible with NX-OS

Implementing Automation for Cisco Data Center Solutions (DCAUI) V1.2

Lab Outline Cont.

- Streaming Telemetry
- Connect, Query, and Modify Cisco UCS Manager Objects Using Cisco UCS PowerTool
- Connect, Query, and Modify Cisco UCS Integrated Management Controller (IMC) Objects Using Cisco IMC PowerTool
- Utilize Cisco UCS Python Software Development Kit (SDK)
- Utilize Cisco IMC Python SDK
- Implement Ansible Playbooks to Modify and Verify the Configuration of Cisco UCS Manager