



Infrastructure Automation Courses

Today, everything is programmable, even the network. As networks become software-defined and automated, now more than ever, IT teams need partnerships between network engineers, software developers, and cybersecurity professionals to create integrated, secure infrastructures, and new innovations.

Our Infrastructure Automation courses teach the software skills needed to become a vital part of these teams, including best practices of modern software development practices, DevOps, and how to securely interact with Application Programming Interfaces (APIs) to automate existing manual processes with only a few lines of code. Students learn practical career-ready skills that employers need in this expanding digital world.

Course	DevNet Associate
Course Overview	DevNet Associate introduces methodologies and tools of modern software development related to IT and Network operations. It covers a 360° view of the domain including microservices, testing, containers and DevOps, as well as securely automating infrastructures with Application Programming Interfaces (APIs).
Benefits	Gain practical hands-on lab experience, including programming in Python, using GIT and common data formats (JSON, XML and YAML), deploying applications as containers, using Continuous Integration/Continuous Deployment (CI/CD) pipelines, and automating infrastructure using code.
Target Audience	Secondary vocational students, 2-year and 4-year college students and participants of coding bootcamps
Prerequisites	Recommended Preparation: <ul style="list-style-type: none"> • Coding skills, equivalent to PCAP: Programming Essentials in Python • Fundamental skills of networking, equivalent to CCNA: Introduction to Networks
Badges & Certifications	<ul style="list-style-type: none"> • Cisco Certified DevNet Associate • Digital Badge
Additional Details	<ul style="list-style-type: none"> • ASC alignment required • Instructor training required • Instructor-led • 70 hours
Next Course(s)	CCNA courses, CCNP Enterprise , or CyberOps Associate

Networking Academy Infrastructure Automation Courses



Course	Emerging Technologies Workshop: Experimenting with REST APIs	Emerging Technologies Workshop: Model-Driven Programmability
Course Overview	Experimenting with REST APIs workshop introduces basic competencies to creates applications and automates tasks using REST APIs -- the most popular architecture for software integration in IT.	Model-Driven Programmability workshop introduces device level programmability. By defining standardized device models and APIs, network device configuration and management tasks can be automated, making it easier to manage and scale for network device growth.
Benefits	Builds Python programming expertise with hands-on practice culminating in live interactions with APIs on Cisco collaboration software, Webex Teams online platform.	Reinforces learnings for model-driven programmability concepts: YANG to model networking devices, RESTCONF and NETCONF for device-level APIs, and Python scripting to programmatically retrieve and update device configurations
Target Audience	Vocational, 2-year and 4-year college, 4-year university students	Vocational, 2-year and 4-year college, 4-year university students
Prerequisites	Basic programming	Basic programming, CCNA: Switching, Routing, and Wireless Essentials (SRWE)
Badges & Certifications	None	<ul style="list-style-type: none"> Digital Badge
Additional Details	<ul style="list-style-type: none"> ASC alignment required Instructor training required Instructor-led 8 hours 	<ul style="list-style-type: none"> ASC alignment required Instructor training required Instructor-led 8 hours
Next Course(s)	Recommended Insertion within: <ul style="list-style-type: none"> PCAP: Programming Essentials in Python IoT Fundamentals: Connecting Things IT Essentials CCNA: Introduction to Networks 	Recommended Insertion Points: <ul style="list-style-type: none"> After CCNA: Switching, Routing, and Wireless Essentials (SRWE) With Network Security or CCNP Enterprise: Core Networking (ENCOR)