

Cisco 200-901 2026 Exam Prep

Cisco 200-901 2026. Network automation with Python, Cisco APIs, and DevOps principles.

[IT Certifications](#) Instructor: Jason Miller • 5 sections • 49 lessons • 14.75h total

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About this course

This course helps you pass the Cisco 200-901 2026 exam by focusing on the practical skills you need for modern network automation and programming. We will break down the exam objectives into manageable lessons, using hands-on labs and real examples to make the concepts stick.

You will learn how to work with Cisco APIs, understand Python for network automation, and apply DevOps principles to network management. The course includes video guides, downloadable templates for common tasks, and analysis of real case studies.

Course curriculum

Foundations and Exam Overview

- **Understanding the 200-901 2026 Exam Objectives (12m)**
Get a clear breakdown of the exam domains and learn how to structure your study plan effectively.
- **Setting Up Your DevNet Lab Environment (18m)**
Step-by-step guide to configuring your local lab with Cisco tools and virtual machines for hands-on practice.
- **Core Networking Concepts for Automation (15m)**
Review essential networking fundamentals that are critical for understanding network automation tasks.
- **Introduction to Python for Network Engineers (22m)**
Learn the Python basics you need for the exam, focusing on scripts and data structures used in networking.
- **Git and Version Control for Network Configs (10m)**
A practical walkthrough of using Git to manage network device configurations and automation scripts.
- **How to Approach Exam Questions (8m)**
Strategies for tackling multiple-choice and drag-and-drop questions on the 200-901 exam.
- **Creating a Personalized Study Schedule (9m)**
Downloadable template and advice for planning your study time to cover all exam objectives.

Core Concepts: APIs and Network Programming

- **How REST APIs Work in Network Devices (16m)**
Understand RESTful principles and how they apply to managing Cisco network equipment.
- **Working with Cisco DNA Center APIs (24m)**
Hands-on session using Postman to interact with Cisco DNA Center for device management.
- **Using Python Requests Library for API Calls (20m)**
Learn to write Python scripts that make API calls to network devices, with real code examples.
- **Parsing JSON and XML Data from Devices (17m)**
Practical techniques for handling API responses in Python for network data analysis.
- **Introduction to NETCONF and YANG Models (21m)**
Explore NETCONF protocol and YANG data models for structured network configuration.
- **Building a Simple Network Inventory Script (28m)**
Step-by-step project to create a Python script that gathers device information via APIs.
- **Troubleshooting Common API Issues (13m)**
Problem-solving session on debugging API calls and handling authentication errors.
- **Integrating APIs with Network Monitoring Tools (19m)**
How to combine API data with tools like Grafana for enhanced network visibility.
- **Security Best Practices for API Access (11m)**
Learn to secure your API scripts and manage credentials safely for network automation.

- **Real Case Study: Automating Device Configuration (30m)**
Analyze a real-world scenario where APIs automate device setup, with a downloadable script template.

Deep Dive: Python and Automation

- **Advanced Python Functions for Network Tasks (25m)**
Explore functions, decorators, and error handling tailored for network automation scripts.
- **Using Paramiko for SSH Connections (22m)**
Step-by-step guide to connecting to devices via SSH using Python for command execution.
- **Automating Network Device Backups (18m)**
Build a script to back up configurations from multiple devices, with a reusable template.
- **Working with Cisco IOS-XE and NX-OS APIs (26m)**
Hands-on labs comparing automation approaches for different Cisco operating systems.
- **Introduction to Ansible for Network Automation (20m)**
Learn how Ansible playbooks can simplify repetitive network tasks, with a basic playbook example.
- **Parsing CLI Output with Python (14m)**
Techniques to extract data from device CLI outputs for reporting and analysis.
- **Building a Network Health Check Script (27m)**
Real-world project to create a script that checks device status and sends alerts.
- **Error Handling in Network Automation Scripts (12m)**
Practical methods to make your scripts robust against network timeouts and failures.
- **Case Study: Automating VLAN Deployment (29m)**
Analyze a case study and build a script to automate VLAN creation across switches.

Advanced Application: DevOps and Cloud Integration

- **DevOps Principles for Network Teams (15m)**
How to apply CI/CD pipelines to network automation, with a focus on GitLab examples.
- **Using Cisco Meraki APIs for Cloud Management (23m)**
Hands-on session with Meraki dashboard API to manage wireless and switching.
- **Integrating Python with Cisco Webex Teams (19m)**
Build a bot that sends network alerts to a Webex space for team collaboration.
- **Containerizing Network Automation Scripts (21m)**
Step-by-step guide to Dockerizing your Python scripts for consistent deployment.
- **Working with Cisco ACI Programmability (26m)**
Explore ACI REST API and Python SDK for fabric automation in data centers.
- **Automating Network Testing with PyATS (24m)**
Learn to use PyATS for network device testing and validation in a lab environment.
- **Cloud Network Automation with AWS and Cisco (20m)**
Practical integration of Cisco tools with AWS for hybrid cloud networking.
- **Security Automation for Network Policies (17m)**
How to automate security group and ACL changes using Python and APIs.
- **Real Case Study: Multi-Vendor Network Automation (32m)**
Analysis of a complex environment with Cisco and other vendors, including a full script example.

- **Scaling Automation Across Large Networks (18m)**
Strategies and tools for managing automation at scale, with a focus on efficiency.

Implementation & Next Steps

- **Building Your Network Automation Portfolio (14m)**
How to showcase your skills with projects that impress employers and exam graders.
- **Creating a CI/CD Pipeline for Network Changes (22m)**
Step-by-step setup of a pipeline that tests and deploys network automation scripts.
- **Troubleshooting Real Network Automation Problems (16m)**
Problem-solving session on common issues faced in live network environments.
- **Using Cisco DevNet Sandbox for Practice (12m)**
Guide to accessing free Cisco sandboxes for hands-on exam preparation.
- **Final Exam Strategy and Review (10m)**
Last-minute tips and a review of key topics to focus on before your exam date.
- **Developing a Continuous Learning Plan (11m)**
Downloadable template to keep your skills updated after passing the exam.
- **Networking with the DevNet Community (9m)**
How to engage with forums, events, and resources to grow your career.
- **Case Study: From Exam to Production Network (25m)**
A detailed walkthrough of applying exam knowledge to a real production network scenario.
- **Preparing for Advanced Cisco Certifications (13m)**
Overview of next steps, like DevNet Professional, and how to plan your path.
- **Building a Home Lab for Ongoing Practice (20m)**
Cost-effective guide to setting up a lab for continuous skill development.
- **Automating Network Documentation (15m)**
Learn to use Python to generate and update network diagrams and reports automatically.
- **Ethics and Best Practices in Network Automation (8m)**
Important considerations for responsible automation, including compliance and safety.
- **Course Wrap-Up and Q&A Session (7m)**
Recap of all modules and answers to common questions from students.

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