Designing, Deploying and Managing Network Automation Systems (AUTOCOR) Training

Duration: **5 Day**

BILGINÇ IT Academy
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The Designing, Deploying and Managing Network Automation Systems (AUTOCOR) course equips network professionals with the skills required to design, build, deploy, and manage modern network automation solutions using Cisco technologies and industry-standard automation tools. The course combines software development principles with infrastructure automation, enabling learners to automate configuration management, streamline operations, and improve the reliability of enterprise networks.

Throughout the course, learners develop practical skills in Python, REST APIs, Ansible, Terraform, Infrastructure as Code (IaC), Git, GitLab CI/CD pipelines, Cisco Modeling Labs (CML), pyATS, model-driven telemetry, Docker Compose, secure automation practices, and the integration of Generative AI and Large Language Models (LLMs) into network automation workflows. The course also prepares learners for the Cisco 350-901 AUTOCOR v2.0 certification exam while developing practical skills that can be applied immediately within enterprise environments.

Prerequisites

Participants should have:

- A solid understanding of enterprise networking concepts and Cisco networking technologies.
- Experience configuring and managing Cisco network devices.
- Basic Python programming knowledge.
- Familiarity with REST APIs and network programmability concepts.
- Experience using the command line in Linux or similar operating systems is recommended.
- Knowledge equivalent to Cisco CCNA and introductory network automation training is beneficial.

Target audience

This course is designed for:

- Network automation engineers.
- Network engineers moving into automation and programmability roles.
- DevOps engineers working with network infrastructure.
- Systems engineers responsible for network deployment and operations.
- Infrastructure architects implementing Infrastructure as Code practices.
- Professionals preparing for the Cisco Certified Specialist - Automation Core certification or the CCNP Automation certification pathway.

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What You Will Learn

By the end of this course, learners will be able to:

- Evaluate modern network automation frameworks, tools, and deployment approaches.
- Develop Python scripts to automate operational networking tasks.
- Build automation workflows using REST APIs, RESTCONF, and YANG data models.
- Create Ansible playbooks to automate network configuration and operational tasks.
- Develop Infrastructure as Code solutions using Terraform.
- Implement version control and collaborative workflows using Git.
- Design automated CI/CD pipelines using GitLab for network testing and deployment.
- Integrate Cisco Modeling Labs into automated validation workflows.
- Validate network configurations using pyATS.
- Configure and use model-driven telemetry for operational monitoring.
- Troubleshoot common automation failures using structured logging and debugging techniques.
- Apply secure coding practices to protect automation solutions.
- Deploy containerised automation environments using Docker Compose.
- Explain how Generative AI, AI agents, and MCP servers can support intelligent network automation workflows.
- Prepare for the Cisco 350-901 AUTOCOR v2.0 certification exam.