CompTIA AutoOps+

Course Duration: 5 Days
Exam Reference: AT0-001

Course Overview

CompTIA AutoOps+ validates your skills to automate, secure, and optimize IT operations across cloud and hybrid environments. As part of CompTIA's new Expansion Series, this course is designed to augment your core IT competencies with specialized expertise in automation, scripting, and Infrastructure as Code (IaC), allowing you to bridge traditional IT roles with modern DevOps practices.

Prerequisites

Recommended experience: 2–3 years in a core IT operations role (e.g., Network+, Linux+, or Cloud+ level knowledge recommended).

Course Objectives

Upon completion, you will be able to:

- Use scripting and automation to streamline IT workflows and manage enterprise systems efficiently.
- Automate configuration, provisioning, and maintenance using Infrastructure-as-Code and modern toolchains.
- Build and manage CI pipelines to automate testing, ensure quality, and improve collaboration between teams.
- Implement secure, compliant delivery pipelines that enable rapid, reliable deployment and operational efficiency.

APPLIED TECHNOLOGY ACADEMY

Contact Us

800.674.3550

2151 W. Hillsboro Blvd., Ste 210
Deerfield Beach, FL 33442

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CompTIA AutoOps+

Course Outline

Module 1: Automation Coding Concepts

- Use code to support automation: Write, test, and maintain automation scripts using variables, functions, and loops to streamline IT operations.
- Apply source control techniques: Version and manage code using Git commands, branching strategies, and semantic versioning.
- Explain concepts related to Infrastructure as Code (IaC): Define and apply IaC principles such as reusability, immutability, and idempotency.
- Troubleshoot common issues with the code life cycle: Identify and resolve syntax, runtime, and merge errors that occur during development.

Module 2: System Configuration

- Use configuration management techniques: Deploy solutions and manage configuration drift using automation tools and state management.
- Compare and contrast approaches to automation: Distinguish between remote vs. local, declarative vs. imperative, and push vs. pull methods.
- Interact with RESTful systems: Perform create, read, update, and delete (CRUD) operations using REST APIs and associated tools.
- Troubleshoot common configuration issues: Resolve API communication failures, certificate problems, and syntax errors in configuration files.

Module 3: Continuous Integration

- Explain environmental factors related to CI management: Apply concepts of secrets management, artifact management, and task runners.
- Explain workflow management concepts in CI: Use orchestration, dependency handling, and automated rollback techniques to manage CI pipelines.
- Analyze configurations to manage basic automation pipelines: Configure hooks, triggers, and pipeline definitions using CI tools such as Jenkins or GitHub Actions.

Module 4: Continuous Delivery

- Implement techniques of continuous delivery: Apply deployment strategies such as canary, blue-green, rolling, and in-place releases.
- Explain concepts related to application service levels: Interpret SLOs, SLAs, uptime, MTTR, and feedback loops in delivery environments.
- Compare and contrast methods to secure connections to providers: Configure CLI, SDK, and Identity & Access Management (IAM) settings to protect automated delivery pipelines.