Network Automation with Red Hat Ansible Automation Platform and Exam

Course Duration: 40 Hours **Course Code: EX457**

1. Course Overview

The **Network Automation with Red Hat Ansible Automation Platform with Exam (DO457 + EX457)** course is designed for IT professionals who want to automate and manage network infrastructure across multi-vendor environments using **Ansible Automation Platform**. This program not only provides hands-on skills in writing and executing automation playbooks for network devices but also includes the **EX457 certification exam**, validating your expertise in enterprise-grade network automation.

2. What You'll Learn?

Participants will gain the ability to:

- Understand **network automation fundamentals** with Ansible.
- Automate device configuration for **routers, switches, firewalls, and load balancers**.
- Develop **playbooks and roles** for scalable and repeatable automation.
- Use **collections** from Ansible Galaxy for multi-vendor network devices.
- Automate **backups, rollbacks, and compliance enforcement**.
- Integrate Ansible workflows into **CI/CD pipelines**.
- Troubleshoot, validate, and optimize **network automation operations**.

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- Prepare for and pass the **EX457 Red Hat Certified Specialist in Network Automation exam**.

3. Target Audience

This course + exam bundle is best suited for:

- **Network engineers and administrators** managing complex networks.
- **Automation/DevOps engineers** implementing Infrastructure-as-Code (IaC).
- **IT professionals** aiming for Red Hat Certified Specialist in Network Automation.
- Anyone looking to automate **multi-vendor network environments**.

4. Pre-Requisites

- Familiarity with **network concepts (routing, switching, VLANs, ACLs)**.
- Basic understanding of **Ansible and Linux command line**.
- Completion of **DO374 (Ansible Basics)** is recommended but not mandatory.

5. Course Content

Module 1: Introduction to Network Automation

- Why automate network operations?
- Overview of Ansible for networking

Module 2: Environment Setup

- Installing and configuring Ansible Automation Platform
- Preparing inventories and managing credentials

Module 3: Playbooks for Network Devices

- Automating configurations on routers and switches
- Common playbook use cases

Module 4: Multi-Vendor Network Automation

- Cisco, Juniper, Arista, and other platforms
- Leveraging Ansible Collections

Module 5: Configuration Backups and Rollbacks

- Automating backups
- Rollback strategies

Module 6: Network Provisioning and Security Automation

- VLANs, interfaces, routing automation
- ACLs and firewall policies

Module 7: Compliance and Policy Automation

- Enforcing security standards
- Automated compliance reporting

Module 8: Roles, Collections, and Best Practices

- Writing reusable roles
- Structuring enterprise playbooks

Module 9: Advanced Troubleshooting and Integrations

- Debugging automation failures
- CI/CD integrations for networks