

## **[RH294]: Red Hat System Administration III: Linux Automation with Ansible**

Length : 4 days  
Delivery Method : Instructor-led (Classroom)

### **Course Overview**

Red Hat System Administration III: Linux Automation with Ansible (RH294) teaches the skills needed to manage large numbers of systems and applications efficiently and consistently. You will learn the techniques needed to use Ansible® to automate provisioning, configuration, application deployment, and orchestration. This course is based on Red Hat® Enterprise Linux® 8 and Red Hat Ansible Engine 2.8.

### **Audience Profile**

This course is geared toward Linux system administrators, DevOps engineers, infrastructure automation engineers, and systems design engineers who are responsible for these tasks:

- Automating configuration management
- Ensuring consistent and repeatable application deployment
- Provisioning and deployment of development, testing, and production servers
- Integrating with DevOps continuous integration/continuous delivery workflows

### **At Course Completion**

#### **Impact on the organization**

IT automation is key to managing large numbers of systems and applications efficiently and consistently at scale. This course develops the skills needed to efficiently operate and more easily scale the organization's dynamic IT infrastructure, accelerate application time to value, and rapidly adapt and implement needed innovation through DevOps practices.

#### **Impact on the individual**

As a result of attending this course, you should be able to use Ansible for the purpose of automation, configuration, and management. You should be able to demonstrate these skills:

- Install and configure Ansible or Red Hat Ansible Engine on a control node.
- Create and manage inventories of managed hosts, as well as prepare them for Ansible automation.
- Run individual ad hoc automation tasks from the command line.
- Write Ansible Playbooks to consistently automate multiple tasks and apply them to managed hosts.
- Parameterize playbooks using variables and facts, and protect sensitive data with Ansible Vault.
- Write and reuse existing Ansible roles to simplify playbook creation and reuse code.

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- Automate common Red Hat Enterprise Linux system administration tasks using Ansible

*\*\*Red Hat has created this course in a way intended to benefit our customers, but each company and infrastructure is unique, and actual results or benefits may vary. \*\**

### You should be able to demonstrate these skills:

- Install Ansible / Red Hat Ansible Engine on control nodes.
- Create and update inventories of managed hosts and manage connections to them.
- Automate administration tasks with Ansible Playbooks and ad hoc commands.
- Write effective playbooks at scale.
- Protect sensitive data used by Ansible with Ansible Vault.
- Reuse code and simplify playbook development with Ansible roles.

### Pre-Requisites

- Pass the Red Hat Certified System Administrator (RHCSA) exam (EX200), or demonstrate equivalent Red Hat Enterprise Linux knowledge and experience.

### Course Outline

#### Module 1: Introduce Ansible

##### Lessons

- Describe Ansible concepts and install Red Hat Ansible Engine

#### Module 2: Deploy Ansible

##### Lessons

- Configure Ansible to manage host and run ad hoc Ansible commands.

#### Module 3: Implement playbooks

##### Lessons

- Write a simple Ansible Playbook and run it to automate tasks on multiple managed hosts.

#### Module 4: Managed variables and facts

##### Lessons

- Write playbooks that use variables to simplify management of the playbook and facts to reference information about managed host.

#### Module 5: Implement task control

##### Lessons

- Manage task control, handlers, and task errors in Ansible Playbooks.

#### Module 6: Deploy files to managed hosts

##### Lessons

- Deploy, manage, and adjust files on hosts managed by Ansible.

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## **Module 7: Managed large project**

### **Lessons**

- Write playbooks that are optimized for larger, more complex projects.

## **Module 8: Simplify playbooks with roles**

### **Lessons**

- Use Ansible roles to develop playbooks more quickly and reuse Ansible code.

## **Module 9: Troubleshoot Ansible**

### **Lessons**

- Troubleshoot playbooks and managed hosts.

## **Module 10: Automate Linux Administration tasks**

### **Lessons**

- Automate common Linux system administration tasks with Ansible.

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