

Red Hat Advanced Automation with Ansible Best Practices (DO447)

Course Overview

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This is a 5-day class

As an experienced Red Hat® Ansible® Automation users, you are ready to take your Ansible skills to the next level, enabling scalable design and operation of Ansible Automation in the enterprise. In this course, you will explore better ways to automate tasks and use Red Hat Ansible Engine effectively, as well as how to leverage advanced features of Ansible to perform more complex tasks. You will also become skilled in installing and using Red Hat Ansible Tower to centrally coordinate your use of Ansible, control access to hosts and systems, and manage Ansible workflows through the web interface and the Red Hat Ansible Tower API.

This course is based on Red Hat Ansible Automation (Red Hat Ansible Engine 2.8 / Red Hat Ansible Tower 3.5) and Red Hat Enterprise Linux® 8.

Who Should Attend

This course is designed for users who need to set recommended design patterns and operate automation practices at scale, including these roles: DevOps engineers, Linux system administrators, developers, Release engineers, Other IT professionals with basic expertise using Ansible or Red Hat Ansible Engine to automate, provision, configure, and deploy applications and services in a Linux environment, Be a Red Hat Certified System Administrator (RHCSA®), or demonstrate equivalent Red Hat Enterprise Linux knowledge and experience, Be a Red Hat Certified Specialist in Ansible Automation or Red Hat Certified Engineer (RHCE®) on Red Hat Enterprise Linux 8, or demonstrate equivalent Ansible experience.

Course Objectives

As a result of taking this course, you should be able to use Red Hat Ansible Tower to centrally manage your Red Hat Ansible Automation projects in a way that scales to large teams and complex enterprise installations. You should be able to demonstrate these skills:

- Follow recommended practices to write and manage Ansible Automation.
- Use Git to effectively manage playbooks and inventories as part of a DevOps workflow.
- Control and optimize the performance of task execution by Ansible Playbooks.
- Use filters and plugins to populate, manipulate, and manage data used by Ansible Playbooks.
- Delegate tasks for one managed host to other hosts and manage rolling updates with Ansible.
- Deploy and use Red Hat Ansible Tower to manage existing Ansible projects, playbooks, and roles at scale.
- Use the Red Hat Ansible Tower API to launch jobs from existing templates and integrate Red Hat Ansible Tower into a simple CI/CD pipeline.

Course Outline

1 DEVELOP WITH RECOMMENDED PRACTICES

Demonstrate and implement recommended practices for effective and efficient use of Ansible for automation.

2 MANAGE INVENTORIES

Use advanced features of Ansible to manage inventories.

3 MANAGE TASK EXECUTION

Control and optimize the execution of tasks by Ansible Playbooks.



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4 TRANSFORM DATA WITH FILTERS AND PLUGINS

Populate, manipulate, and manage data in variables using filters and plugins.

5 COORDINATE ROLLING UPDATES

Minimize downtime and ensure maintainability and simplicity of Ansible Playbooks by using the advanced features of Ansible to manage rolling updates.

6 INSTALL AND ACCESS RED HAT ANSIBLE TOWER

Explain what Red Hat Ansible Tower is and demonstrate a basic ability to navigate and use its web user interface.

7 MANAGE ACCESS WITH USERS AND TEAMS

Create user accounts and organize them into teams in Red Hat Ansible Tower, then assign the users and teams permissions to administer and access resources in the Ansible Tower service.

8 MANAGE INVENTORIES AND CREDENTIALS

Create inventories of machines to manage, then configure credentials necessary for Red Hat Ansible Tower to log in and run Ansible jobs on those systems.

9 MANAGE PROJECTS AND LAUNCHING ANSIBLE JOBS

Create projects and job templates in the web UI, using these tools to launch Ansible Playbooks that are stored in Git repositories in order to automate tasks on managed hosts.

10 CONSTRUCT ADVANCED JOB WORKFLOWS

Use advanced features of job templates to improve performance, simplify customization of jobs, launch multiple jobs, schedule automatically recurring jobs, and provide notification of job results.

11 COMMUNICATE WITH APIS USING ANSIBLE

Interact with REST APIs with Ansible Playbooks and control Red Hat Ansible Tower using its REST API.

12 MANAGE ADVANCED INVENTORIES

Administer inventories that are loaded from external files or generated dynamically from scripts or the Ansible Tower smart inventory feature.

13 CREATE A SIMPLE CI/CD PIPELINE WITH ANSIBLE TOWER

Build and operate a proof-of-concept CI/CD pipeline based on Ansible Automation and integrating Red Hat Ansible Tower.

14 MAINTAIN ANSIBLE TOWER

Perform routine maintenance and administration of Red Hat Ansible Tower.

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15 PERFORM A COMPREHENSIVE REVIEW

Demonstrate skills learned in this course by configuring and operating a new organization in Ansible Tower using a provided specification, Ansible projects, and hosts to be provisioned and managed.