



## D0447 - Advanced Automation: Ansible Best Practices

- **Develop with recommended practices**
  - Demonstrate and implement recommended practices for effective and efficient use of Ansible for automation.
- **Manage inventories**
  - Use advanced features of Ansible to manage inventories.
- **Manage task execution**
  - Control and optimize the execution of tasks by Ansible Playbooks.
- **Transform data with filters and plugins**
  - Populate, manipulate, and manage data in variables using filters and plugins.
- **Coordinate rolling updates**
  - Minimize downtime and ensure maintainability and simplicity of Ansible Playbooks by using the advanced features of Ansible to manage rolling updates.
- **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.
- **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.
- **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.



- **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.
- **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.
- **Communicate with APIs using Ansible**
  - Interact with REST APIs with Ansible Playbooks and control Red Hat Ansible Tower using its REST API.
- **Manage advanced inventories**
  - Administer inventories that are loaded from external files or generated dynamically from scripts or the Ansible Tower smart inventory feature.
- **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.
- **Maintain Ansible Tower**
  - Perform routine maintenance and administration of Red Hat Ansible Tower.
- **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.