

Red Hat Enterprise Linux Automation with Ansible (AU294)

Duration: 5 weeks @ 1.5 hr./day (**M/W/F** OR **T/T/S**)

Learn how to automate Linux system administration tasks with Ansible.

Red Hat Enterprise Linux Automation with Ansible (**AU294**) is designed for Linux administrators and developers who need to automate repeatable and error-prone steps for system provisioning, configuration, application deployment, and orchestration.

This course is based on **Red Hat® Enterprise Linux® 10**, Ansible Core 2.16 and Ansible development tools in alignment with **Red Hat Ansible Automation Platform 2.5** and **2.6**.

Audience

This course is geared toward Linux system administrators, DevOps engineers, Site Reliability Engineers, infrastructure automation engineers, and developers who are responsible for repeatable tasks such as:

- ⌘ 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

Chapter 1. An Introduction to Ansible

Goal: Describe the fundamental concepts of Ansible and how it is used, install and configure Ansible development tools in VS Code, and configure Ansible settings.

- ★ Automating Tasks with Ansible
- ★ Configuring Your Ansible Development Environment
- ★ Guided Exercise: Configuring Your Ansible Development Environment
- ★ Configuring Ansible Settings
- ★ Guided Exercise: Configuring Ansible Settings

Chapter 2. Introduction to Developing Automation Content

Goal: Describe the fundamental concepts of Ansible and how it is used, and install and configure Ansible Development Tools in VS Code.

- ★ Building an Ansible Inventory
- ★ Guided Exercise: Building an Ansible Inventory
- ★ Developing Playbooks
- ★ Guided Exercise: Developing Playbooks
- ★ Developing Playbooks with Multiple Plays
- ★ Guided Exercise: Developing Playbooks with Multiple Plays
- ★ Troubleshooting Playbooks and Managed Hosts
- ★ Guided Exercise: Troubleshooting Playbooks and Managed Hosts
- ❖ Lab: Developing Automation Content

Chapter 3. Developing Automation Content: Variables

Goal: Write playbooks that use variables to simplify management of the playbook, protect sensitive data in variables, and use facts and magic variables to reference information about managed hosts.

- ★ Using Variables
- ★ Guided Exercise: Using Variables
- ★ Gathering Host Information from Facts
- ★ Guided Exercise: Gathering Host Information from Facts
- ★ Protecting Sensitive Data with Ansible Vault
- ★ Guided Exercise: Protecting Sensitive Data with Ansible Vault

- ❖ Lab: Developing Automation Content: Variables

Chapter 4. Developing Automation Content: Task Control

Goal: Write plays that use task control features to specify a task that must run once for each item in a list, or that only runs if certain conditions are met

- ★ Using Loops and Conditional Tasks
- ★ Guided Exercise: Using Loops and Conditional Tasks
- ★ Implementing Handlers
- ★ Guided Exercise: Implementing Handlers
- ★ Handling Task Failure
- ★ Guided Exercise: Handling Task Failure
- ❖ Lab: Developing Automation Content: Task Control

Chapter 5. Developing Automation Content: Deploying Files

Goal: Deploy, customize, and adjust files on hosts managed by Ansible.

- ★ Automating File Management Tasks
- ★ Guided Exercise: Automating File Management Tasks
- ★ Using Jinja2 Templates and Filters
- ★ Guided Exercise: Using Jinja2 Templates and Filters
- ❖ Lab: Developing Automation Content: Deploying Files

Chapter 6. Developing Automation Content at Scale

Goal: Manage complex Ansible Playbooks by importing or including other playbooks and tasks, as well as by using advanced host patterns to efficiently select specific hosts from your inventory.

- ★ Including and Importing Files
- ★ Guided Exercise: Including and Importing Files
- ★ Selecting Hosts by Using Host Patterns
- ★ Guided Exercise: Selecting Hosts by Using Host Patterns
- ❖ Lab: Developing Automation Content at Scale

Chapter 7. Reusing Code with Ansible Roles and Content Collections

Goal: Use Ansible Roles and Ansible Content Collections to develop playbooks more quickly and to reuse Ansible code.

- ★ Defining Role Structure
- ★ Creating Roles
- ★ Guided Exercise: Creating Roles
- ★ Deploying Roles from External Content Sources
- ★ Guided Exercise: Deploying Roles from External Content Sources
- ★ Obtaining Roles and Modules from Ansible Content Collections
- ★ Guided Exercise: Obtaining Roles and Modules from Ansible Content Collections
- ❖ Lab: Reusing Code with Ansible Roles and Content Collections

Chapter 8. Automating Linux Administration Tasks

Goal: Automate common Linux system administration tasks with Ansible.

- ★ Using System Roles
- ★ Guided Exercise: Using System Roles
- ★ Automating Software and Subscription Tasks
- ★ Guided Exercise: Automating Software and Subscription Tasks
- ★ Automating User Management and Authentication Tasks
- ★ Guided Exercise: Automating User Management and Authentication Tasks
- ★ Automating the Boot Process and Scheduled Processes
- ★ Guided Exercise: Automating the Boot Process and Scheduled Processes
- ★ Automating Storage Tasks
- ★ Guided Exercise: Automating Storage Tasks
- ★ Automating Network Configuration Tasks
- ★ Guided Exercise: Automating Network Configuration Tasks
- ❖ Lab: Automating Linux Administration Tasks

Chapter 9. Comprehensive Review

Goal: This lesson tests the knowledge acquired in the Red Hat Enterprise Linux Automation with Ansible (AU294) course

- ❖ Lab: Deploying Ansible
- ❖ Lab: Creating Playbooks
- ❖ Lab: Managing Linux Hosts and Using System Roles
- ❖ Lab: Creating Roles

Recommended next exam or course

Red Hat Certified Engineer (RHCE) exam (EX294) @ 4 hrs. Exam

Developing Advanced Automation with Red Hat Ansible Automation Platform (AU374)

Course duration: 20 days Course Fees: ₹ 15,000/-

