BOOST
THE LEADING TRAINING PROVIDER

Information Technology

Automating Infrastructure with Ansible

Course Introduction

Welcome to "Automating Infrastructure with Ansible," a five-day course designed to equip professionals with the skills needed to automate IT infrastructure using Ansible on Red Hat platforms. As organizations increasingly adopt automation to streamline operations, mastering Ansible's capabilities becomes essential for managing servers, networks, and cloud environments efficiently. This course provides a comprehensive understanding of Ansible's architecture, playbooks, and modules, enabling you to design and implement automation workflows that meet organizational needs.

Through interactive sessions and hands-on labs, you will explore advanced topics such as playbook design, inventory management, and role-based automation. You will also learn how to integrate Ansible with Red Hat platforms, ensuring seamless collaboration between development and operations teams. The course emphasizes practical application, enabling you to design scalable, secure, and maintainable automation workflows that align with modern DevOps practices.

By the end of this course, you will have the expertise to automate IT infrastructure effectively, fostering a culture of automation, collaboration, and continuous improvement. Whether you are a system administrator, DevOps engineer, or IT professional, this course provides the knowledge and skills necessary to excel in automation implementation and optimization. With Ansible as your foundation, you will be prepared to tackle complex challenges in IT operations.

Target Audience

This course is ideal for system administrators, DevOps engineers, and IT professionals involved in automation. It is particularly beneficial for individuals looking to gain a foundational understanding of Ansible and its practical applications.

Learning Objectives

- Understand the principles of automation and their role in Red Hat environments.
- Design and implement Ansible playbooks for various use cases.
- Manage inventory files and configure role-based automation.
- Integrate Ansible with Red Hat platforms for automated workflows.
- Troubleshoot common Ansible issues and optimize performance.

Course Outline

- **Day 01**

  Foundations of Ansible on Red Hat
  Introduction to Automation

  - Definition and importance of automation in IT environments.
  - Benefits of implementing automation with Ansible on Red Hat.
  - Overview of Ansible's architecture and components.

  Setting Up Ansible on Red Hat

  - Installing Ansible on Red Hat systems.
  - Configuring inventory files and SSH connections.

  Interactive Session

  - Hands-on exercise: Run a simple Ansible playbook on Red Hat.
- **Day 02**

  Building Playbooks for Red Hat
  Understanding Playbook Syntax

  - YAML basics and Ansible playbook structure.
  - Writing and debugging Ansible playbooks for Red Hat.

  Managing Tasks

  - Defining tasks, handlers, and templates.

- Using variables and conditionals in playbooks.

Practical Exercise

- Create a playbook to configure a Red Hat server.

- **Day 03**

Inventory and Roles
Inventory Management

- Organizing hosts and groups in inventory files.
- Using dynamic inventories for Red Hat environments.

Role-Based Automation

- Creating reusable Ansible roles.
- Organizing roles for scalability.

Role Play

- Build an Ansible role and apply it to multiple Red Hat hosts.

- **Day 04**

Integrating Ansible with Red Hat Platforms
Automating Workflows

- Integrating Ansible with Red Hat platforms.
- Automating server provisioning and configuration.

Multi-Environment Deployments

- Deploying configurations across development, staging, and production.
- Managing environment-specific variables.

Group Activity

- Automate server provisioning using Ansible and Red Hat platforms.

- **Day 05**

Advanced Topics and Best Practices
Securing Ansible

- Protecting sensitive data with Ansible Vault.
- Enforcing access controls for playbooks.

Scaling Ansible

- Optimizing performance with parallel execution.
- Handling large-scale automation workflows.

Best Practices and Real-World Examples

- Reviewing best practices for Ansible usage on Red Hat.
- Discussing real-world case studies and success stories.

Final Project Presentation: Comprehensive Ansible Automation Workflow

- Closing Remarks

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 28, 2025	May 2, 2025	5 days	4250.00 $	UAE - Dubai
July 28, 2025	Aug. 1, 2025	5 days	2150.00 $	Virtual - Online
Oct. 19, 2025	Oct. 23, 2025	5 days	4250.00 $	KSA - Riyadh