Linux Server Automation with Ansible Fast Track

- 3 Days
- Lecture and Hands-on Labs

Course Overview

This course is designed to bring IT professionals up to speed with Ansible, a tool that automates routine Linux system administration tasks efficiently and consistently. This leads to configuration consistency, reduced maintenance windows, and the elimination of human error in critical provisioning and management tasks. ## Who Should Attend

- Linux System Administrator
- DevOps/Platform Engineer
- Infrastructure/IT Manager
- Security/Compliance Analyst
- Cloud Engineer

What You'll Learn

- Standardize Server Management: Automate the provisioning and configuration of server fleets at scale.
- Apply IaC Principles: Use Ansible's declarative philosophy to manage servers as code, reducing human error.
- Secure and Structure: Leverage Ansible Vault to secure sensitive data and Ansible Roles to organize code for reusability.
- Solve Real-World Problems: Develop and maintain Ansible-based automation for common administration tasks.

Outline

Ansible Foundations

- 💬 Lecture: Introduction to Ansible
- 💬 Lecture: Introduction to YAML
- 💻 Lecture + Lab: Making an Inventory
- 💻 Lecture + Lab: Running a Playbook
- 💻 Lecture + Lab: ansible.cfg setup
- 💻 Lecture + Lab: Looping Tasks
- 💻 Lecture + Lab: Setting Variables
- 💻 Lecture + Lab: When Condition

Core Modules and System Tasks

- 💻 Lecture + Lab: Ansible Module - copy
- 💻 Lecture + Lab: Ansible Module - file
- 💻 Lecture + Lab: Ansible Module - get_url and uri
- 💬 Lecture: Templating with Jinja
- 💻 Lecture + Lab: Ansible Module - template
- 💻 Lecture + Lab: Managing Services

- 💻 Lecture + Lab: Ansible Module - dnf

User and Group Management

- 💻 Lecture + Lab: Managing Users and Groups
- 💻 Lecture + Lab: User and Group Assignment
- 💻 Lecture + Lab: File Permissions with Ansible
- 💻 Lecture + Lab: SSH Key Management

Jinja2 Templating for Configuration

- 💻 Lecture + Lab: Editing Files with lineinfile and blockinfile
- 💻 Lecture + Lab: Jinja2 Configuration Templates

Reusability and Security

- 💬 Lecture: Collections, Roles, and Ansible Galaxy
- 💻 Lecture + Lab: Using Roles
- 💻 Lecture + Lab: Making Roles
- 💻 Lecture + Lab: Ansible Vault

Linux Hardening and Advanced Modules

- 💻 Lecture + Lab: Managing Firewall Rules
- 💻 Lecture + Lab: SELinux and Auditd Management
- 💻 Lecture + Lab: Ansible Module - archive and unarchive
- 💻 Lecture + Lab: Linux Hardening Automation

Scheduling and Conversion

- 💻 Lecture + Lab: Scheduled Tasks with cron
- 🏆 Challenge: CHALLENGE: Convert Shell Scripts to Playbooks

Prerequisites

- Basic Keyboard Proficiency: Ability to efficiently navigate and use a keyboard, including typing, copy-pasting, and basic text editing in terminal and/or text editors.

Next Courses

- Ansible 203: Windows Automation with Ansible (https://alta3.com/courses/ans203)
- Ansible 204: Enterprise Server Automation with Ansible (https://alta3.com/courses/ans204)
- Git and GitHub (2 days) (https://alta3.com/courses/github)
- Git and GitLab CI/CD (2 days) (https://alta3.com/courses/gitlab)
- Terraform 101: Infrastructure as Code (3 days) (https://alta3.com/courses/terraform)