Basic Linux with Ansible

Duration: 5 Days

Hands-On Format: This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

Module 1 – Linux Fundamentals

What is Linux

Basic Linux Commands

Understanding Linux File System Structure

Creating Files and Directories

Copying Files and Directories

Basics of VIM Editor

Managing Users

Understand Linux File System Permissions

Changing Permissions

Managing Services

Installing and Updating Software Packages with YUM

Module 2 - Introduc1on to Configura1on Management with Ansible

Introduction to Infrastructure as Code

Current IT Automation State

Configura9on Management

Ansible History

Introducing Ansible

How Ansible Works

Module 3 – Understanding of Ansible Framework

Case Study

Ansible Way of Configura9on Management

Infrastructure as a Code (IaC)

Idempotency

Ansible Terminology

Module 4 – Ansible Deployment

Pre-Requisites for Controller Node

Lab: Installa9on and Configura9on

Understanding Ansible Configura9on File

Lab: Crea9ng Ansible Configura9on File

Pre-Requisites for Managed Node

Understanding Ansible Inventory

Lab: Crea9ng Ansible Inventory

Ansible Communica9on

Ansible Architecture

Module 5 - Ad-Hoc Execution with Ansible

Understanding Ansible Modules

Lab: Ad-Hoc Remote Execu9ons

Lab: Ansible Commands

Connec9ons and Privilege Escala9ons

Module 6 - Ansible Playbooks

YAML Structure

Crea9ng Ansible Playbooks

Understanding Playbooks Structure

Lab: Playbooks Syntax Checks

Lab: Playbooks Smoke Test

Lab: Playbooks Real-Time Run

Lab: Playbook Examples

Module 7 – Variables in Ansible

Ansible Variables: An Introduc9on

Lab: Defining Variable in Ansible Code

Use Cases

Lab: Methods of Defining Variables

Understanding Variable Precedence

Understanding and Reading Ansible Facts

Lab: Using Facts in Playbooks

Disabling Facts Gathering

Module 8 – Condi1onals, Loops, Error Handling & Handlers

Understanding Condi9ons, Loops, Error Handling & Handlers

Lab: Using Condi9ons in Ansible

Lab: Using Loops in Ansible

Lab: Using ignore_errors

Lab: Using Handlers in Ansible

Module 9 – Ansible Roles

Introduction to Ansible Roles

Understanding Directory Structure of Roles

Lab: Manually Creating a Role

Understanding Include and Dependency Management

Lab: Using Roles in Playbooks

Module 10 - Ansible Vault

Introduction to Ansible Vault

Lab: Ansible Vault CLI Commands

Lab: Using Ansible-Vault with playbook

Module 11 - Ansible Galaxy

Ansible Galaxy: An Overview

Lab: Using Roles from Ansible Galaxy

Lab: Download Roles using requirements.yaml

Module 12 - Ansible Playbook Optimization

Lab: Difference in Copy and Fetch Modules

Understanding Forks

Understanding Serial

Lab: Using Forks and Serial in playbooks

Tags

Jinja2 Templates

Lab: Using Jinja2 to create hosts file