

## Ansible

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### Course Summary

#### Description

This course covers all the core Ansible features including: installing and configuring, running ad-hoc commands, understanding modules, creating and using playbooks, variables and inclusion, task control, templates, and roles. The course also covers: dealing with sensitive data via Ansible Vault, integration with Docker and Vagrant, and troubleshooting. Version: B01.

#### Topics

- Ansible Overview
- Deploying Ansible
- Playbooks Basics
- Variables And Inclusions
- Task Control
- Jinja2 Templates
- Roles
- Ansible Vault

#### Audience

The audience for this course is system's administrators desiring to automate provisioning, configuration management, service deployment, operational processes.

#### Prerequisites

Experience with Linux shell, text editing, and basic systems administration needed.

#### Duration

Three Days

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### Course Outline

- I. *Ansible Overview*
  - A. Why Ansible?
  - B. Overview of Architecture
  - C. Quiz: Architecture
  - D. Inventory
  - E. Inventory Patterns
  - F. Quiz: Inventory and Patterns
  - G. Demo: Introducing Ansible
- II. *Deploying Ansible*
  - A. Installing
  - B. Demo: Installing Ansible
  - C. Configuration Files
  - D. Demo: Configuration Files
  - E. Module Syntax Help
  - F. Running Ad Hoc Commands
  - G. Demo: Running Ad Hoc Commands
  - H. Dynamic Inventory
  - I. Demo: Dynamic Inventory Lab Tasks
    - Deploying Ansible
    - Ad Hoc Commands
    - Dynamic Inventories
- III. *Playbooks Basics*
  - A. Writing Yaml Files
  - B. Modules
  - C. Command Modules
  - D. Significant Module Categories
  - E. File Manipulation
  - F. Network Modules
  - G. Packaging Modules
  - H. System Storage
  - I. Account Management
  - J. Security
  - K. Services
  - L. Network Automation
  - M. Simple Network Module Examples
  - N. Gotchas
  - O. Simple Ios Modules Examples
  - P. General Purpose Ios Modules
  - Q. Demo: Playbooks Lab Tasks
    - Playbook Basics
    - Playbooks: Command Modules
    - Playbooks: Common Modules
- IV. *Variables and Inclusions*
  - A. Variables
  - B. Variables - Playbooks
  - C. Variables - Inventory
  - D. Variables - Registered
  - E. Facts
  - F. Demo: Facts
  - G. Inclusions Lab Tasks
    - Variables and Facts
    - Inclusions
- V. *Task Control*
  - A. Loops
  - B. Loops and Variables
  - C. Demo: Constructing Flow Control
  - D. Conditionals
  - E. Demo: Conditionals
  - F. Handlers
  - G. Tags
  - H. Handling Errors Lab Tasks
    - Task Control
- VI. *Jinja2 Templates*
  - A. Jinja2
  - B. Expressions
  - C. Quiz: Jinja2 Templates
  - D. Filters
  - E. Tests
  - F. Lookups
  - G. Demo: Jinja2 Templates Lab Tasks
    - Jinja2 Templates
- VII. *Roles*
  - A. Roles
  - B. Role Usage Details
  - C. Quiz: Role Structure
  - D. Creating Roles
  - E. Deploying Roles with Ansible Galaxy
- VIII. *Ansible Vault*
  - A. Configuring Ansible Vault
  - B. Vault IDs
  - C. Executing with Ansible Vault
  - D. Lab Tasks
    - Ansible Vault