

ANS-101 Ansible Essentials

Course Description:

Ansible has become the most popular configuration management system in the past few years.

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, roles as well as dealing with sensitive data via Ansible Vault.

Structure: 50% theory 50% hands on lab exercises.

Target audience: system's administrators desiring to automate provisioning, configuration management, service deployment and operational processes.

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

Duration: 3 days

Detailed Course Outline

1. ANSIBLE OVERVIEW

1. Why Ansible?
2. Overview of Architecture
3. QUIZ: Architecture
4. Inventory
5. Inventory Patterns
6. QUIZ: Inventory and Patterns
7. DEMO: Introducing Ansible

2. DEPLOYING ANSIBLE

1. Installing
2. DEMO: Installing Ansible
3. Configuration Files
4. DEMO: Configuration Files
5. Module Syntax Help
6. Running Ad Hoc Commands
7. DEMO: Running Ad Hoc Commands
8. Dynamic Inventory
9. DEMO: Dynamic Inventory

LAB TASKS

10. Deploying Ansible
11. Ad Hoc Commands
12. Dynamic Inventories

3. PLAYBOOKS BASICS

1. Writing YAML Files
2. Modules
3. Command Modules
4. Significant Module Categories
5. File Manipulation
6. Network Modules
7. Packaging Modules
8. System Storage

9. Account Management
10. Security
11. Services
12. Network Automation
13. Simple Network Module Examples
14. Gotchas
15. Simple IOS Modules Examples
16. General Purpose ios Modules
17. DEMO: Playbooks

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18. Playbook Basics
19. Playbooks: Command Modules
20. Playbooks: Common Modules

4. VARIABLES AND INCLUSIONS

1. Variables
2. Variables - Playbooks
3. Variables - Inventory
4. Variables - Registered
5. Facts
6. DEMO: Facts
7. Inclusions

LAB TASKS

8. Variables and Facts
9. Inclusions

5. TASK CONTROL

1. Loops
2. Loops and Variables
3. DEMO: Constructing Flow Control
4. Conditionals
5. DEMO: Conditionals
6. Handlers
7. Tags
8. Handling Errors

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9. Task Control

6. JINJA2 TEMPLATES

1. Jinja2
2. Expressions
3. QUIZ: Jinja2 Templates
4. Filters
5. Tests
6. Lookups
7. DEMO: Jinja2 Templates

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8. Jinja2 Templates

7. ROLES

1. Roles
2. Role Usage Details
3. QUIZ: Role Structure
4. Creating Roles
5. Deploying Roles with Ansible Galaxy
6. DEMO: Deploying Roles with Ansible Galaxy

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7. Converting Playbooks to Roles
8. Creating Roles from Scratch
9. Ansible Galaxy Roles

8. ANSIBLE VAULT

1. Configuring Ansible Vault
2. Vault IDs
3. Executing with Ansible Vault
4. DEMO: Configuring Ansible Vault

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5. Ansible Vault

APPENDIX A. NETWORK AUTOMATION

1. Network Automation
2. Simple Network Module Examples
3. Network Modules: Gotchas
4. Simple IOS Modules Examples
5. General Purpose ios Modules