ProTech Professional Technical Services, Inc.

Ansible

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, networking, and troubleshooting.

Topics

- Ansible Overview
- Deploying Ansible
- Playbooks Basics
- Variables And Inclusions
- Jinja2 Templates

- Task Control
- Roles
- Optimizing Ansible
- Network Automation

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

Course Outline

I. *Ansible Overview*
  A. Why Ansible?
  B. Overview of Architecture
  C. Architecture
  D. Inventory
  E. Inventory Patterns
  F. Inventory Plugins
  G. Inventory and Patterns
  H. Introducing Ansible

II. *Deploying Ansible*
  A. Installing
  B. Installing Ansible
  C. Configuration Files
  D. Module Syntax Help
  E. Running Ad-Hoc Commands
  F. Ad-Hoc Commands
  G. Dynamic Inventory
  H. LAB TASKS
    1. Deploying Ansible
    2. Ad-Hoc Commands
    3. Dynamic Inventories

III. *Playbooks Basics*
  A. Writing YAML Files
  B. Playbook Structure
  C. Host and Task Execution Order
  D. Command Modules
  E. Significant Module Categories
  F. File Manipulation
  G. Network Modules
  H. Packaging Modules
  I. System Storage
  J. Account Management
  K. Security
  L. Services
  M. Playbooks
  N. LAB TASKS
    1. Playbook Basics
    2. Playbooks: Command Modules
    3. Playbooks: Common Modules

IV. *Variables And Inclusions*
  A. Variables
  B. Variables – Playbooks
  C. Variables – Inventory
  D. Variables – Registered
  E. Variables – Magic
  F. Facts
  G. Inclusions

  H. LAB TASKS
    1. Variables and Facts
    2. Inclusions

V. *Jinja2 Templates*
  A. Jinja2
  B. The template Module
  C. Expressions
  D. Jinja2 Templates
  E. Filters
  F. Methods
  G. Tests
  H. Lookups
  I. Control Structures
  J. Jinja2 Templates
  K. LAB TASKS
    1. Jinja2 Templates Basics
    2. Jinja2 Templates

VI. *Task Control*
  A. Loops
  B. Loops and Variables
  C. Constructing Flow Control
  D. Conditionals
  E. Handlers
  F. Tags
  G. Handling Errors
  H. LAB TASKS
    1. Task Control

VII. *Roles*
  A. Roles
  B. Role Usage Details
  C. Creating Roles
  D. Role Structure
  E. Deploying Roles with Ansible Galaxy
  F. Deploying Roles with Ansible Galaxy
  G. LAB TASKS
    1. Converting Playbooks to Roles
    2. Creating Roles from Scratch
    3. Ansible Galaxy Roles

VIII. *Optimizing Ansible*
  A. Connection Types
  B. Delegation
  C. Parallelism
  D. Callback Plugins
  E. LAB TASKS
    1. Optimizing Ansible

Course Outline

Course Outline (cont'd)

IX. Ansible Vault
- A. Configuring Ansible Vault
- B. Vault IDs
- C. Executing with Ansible Vault
- D. Configuring Ansible Vault
- E. LAB TASKS
    - 1. Ansible Vault

X. Network Automation
- A. Network Automation
- B. Simple Network Module Examples
- C. Network Modules: Gotchas
- D. Simple IOS Modules Examples
- E. General Purpose ios Modules