

ANSIBLE FOR NETWORK AUTOMATION

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Day 1

Ansible Fundamentals

Introduction to Ansible

Ansible Overview

Describe Ansible concepts and install Red Hat Ansible Engine.

Inventory

YAML - this is not the indentation you are looking for

Ansible Playbook Structure

Deploy Ansible

Configure Ansible to manage hosts and run ad hoc Ansible commands.

Implement playbooks

Write a simple Ansible playbook and run it to automate tasks on multiple managed hosts.

Manage variables and facts

Write playbooks that use variables to simplify management of the playbook and facts to reference information about managed hosts.

Variables, Modules, Network Fact Gathering

Ansible Variables

Ansible Modules

Cisco IOS Modules (basics)

Arista EOS Modules (basics)

Using cli_command

Directly Passing Credentials

Privilege Escalation (Become/Enable)

Conditionals, Loops, and Configuration Templating

Idempotency - what the what

Tags/Limit/Check Mode

Conditionals
Loops

Day 2

Making Network Configuration Changes (Basics)

Ansible Network Configuration Overview
Collections and Collection Search Path
Feature Specific Modules (IOS)
Feature Specific Modules (EOS)
Feature Specific Modules (NX-OS)
Resource Modules
Write Mem and Ansible Handlers

Why Templating?

Jinja2 as part of Ansible
Configuration Templating Basics
Advanced Configuration Templating
Pushing Templates using Ansible Modules (Intro)

Simplify playbooks with roles

Use Ansible roles to develop playbooks more quickly and to reuse Ansible code.

Making Network Configuration Changes

Using ios_config
Using nxos_config
Using cli_config
Pushing Templates using Ansible Modules (Expanded)
Using SSH Keys

Day 3

Composition / How the Parts Fit Together

Importing Variables
Importing Tasks

Importing Plays
Include vs Import - Dynamic vs Static
Roles - What are they?
Roles - How to use them?

Parsers and Dynamic Inventory

Hostvars
Block/Rescue/Always
Ansible and Genie-Parsers
Ansible and RegEx
Dynamic Inventory - Some Python Required

Deploy files to managed hosts
Deploy, manage, and adjust files on hosts managed by Ansible.

Manage large projects
Write playbooks that are optimized for larger, more complex projects.

Additional Ansible Techniques and Debugging

Ansible Lookups
Ansible Filters
Ansible Plugins
Manipulating Complex Data-Structures
Ansible Debugging
Using Ansible Vault

Troubleshoot Ansible
Troubleshoot playbooks and managed hosts.