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Ansible Fundamentals
Course ID: ECSAF2D

Course Time:
2 Days

Course Content (continues on next page)

Module 0: Welcome!
+ Introductions

Module 1: Configuration Management Overview
+ Key Terms
+ Infrastructure as Code
+ Agent versus Agentless
+ Idempotency

Module 2: Why Ansible?
+ Industry
+ Networking
+ Usability
+ Reference Documentation

Module 3: Real World Use Cases
+ Use Case 1: Ansible Playbooks vs. Scripts
    + Configuration Changes
    + Impacts and Considerations
    + Change Validation
+ Use Case 2: Executing a Configlet
    + Single Device Execution
    + Multiple Device Execution
+ Use Case 3: Templatizing
    + Variable Substitution
    + Looping

Module 4: Ansible Demo(s)
+ Demo 1 – Single Device Provisioning
+ Demo 2 – Multi-Vendor Provisioning
+ Demo 3 – Third-Party Integration
+ Demo 4 – Templatizing
+ Demo 5 – Playbook Version Control

Module 5: Ansible Foundation
+ Ansible CLI
+ Inventory
+ Host Selection
+ Playbook
+ Loops and Conditionals
+ Playbook Execution

Module 6: Ansible Playbook Anatomy
+ Hosts
+ Tasks
+ Plays
+ Playbook Execution

Module 7: Ansible Network Modules
+ Cisco
+ Arista

Ansible Fundamentals
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Module 8: Ansible Network Modules - CLI
+ Using ios_config
+ Using nxos_config
+ Using eos_config

Module 9: Ansible Plugins
+ Filter and Test
+ Shell
+ Vars

Module 10: SSH Key and Credentials Management
+ SSH Keys
+ Securing Passwords Using Vault

Module 11: Advanced Execution
+ Limiting Execution by Hosts (limit)
+ Limiting Execution by Tasks (tag)
+ Adding and Meeting Conditionals

Module 12: Modular Configuration with Roles
+ Roles Overview
+ External Roles and Galaxy

Module 13: Troubleshooting, Testing, and Validation
+ Ordering Problems
+ Jumping to Specific Tasks
+ Retrying Failed Hosts
+ Syntax-Check and Dry-Run
+ Debugging

Module 14: Ansible Best Practices
+ Version Control
+ Content Organization
+ Staging versus Production and more...

Module 15: Advanced Ansible
+ Welcome to Jinja2
+ Welcome to NAPALM

Module 16: Wrap Up
+ Open Forum
+ Q and A

Ansible Fundamentals
(2 Days)

Labs

Lab 1

(Module 5: Ansible Foundation)
+ Installation using Linux
+ Your First Playbook
+ Ansible CLI Commands
+ Host Selection
+ Loops and Conditionals

Lab 2

(Module 7: Ansible Network Modules)
+ Working with Cisco network modules
+ Working with Arista network modules

Lab 3

(Module 8: Ansible Network Modules – CLI)
+ Using ios_config
+ Using nxos_config
+ Using eos_config

Lab 4

(Module 10: SSH Key and Credentials Management)
+ Managing SSH Keys
+ Securing Passwords Using Vault

Lab 5

(Module 11: Advanced Execution)
+ Limiting Execution by Hosts (limit)
+ Limiting Execution by Tasks (tag)

Lab 6

(Module 13: Troubleshooting, Testing, and Validation)
+ Jumping to Specific Tasks
+ Retrying Failed Hosts
+ Syntax-Check and Dry-Run
+ Debugging

Lab 7

(Module 14: Ansible Best Practices)
+ Version Control Using GitHub Enterprise

Lab 8

(Module 15: Advanced Ansible)
+ Jinja2 Basic Exercise
+ Jinja2 Tool Example

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