

## Agenda

### 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: Templating
- Variable Substitution
- Looping

## Ansible Workshop 2 Day Overview and Agenda

### Module 4: Ansible Demo(s)

- Demo 1 – Single Device Provisioning
- Demo 2 – Multi-Vendor Provisioning
- Demo 3 – Third-Party Integration
- Demo 4 – Templating
- 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 Workshop 2 Day Overview and Agenda**

## **Agenda**

### **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 Workshop 2 Day Overview and Agenda**

### **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