

Network Automation with Ansible Fast Track

Days: 3

LANTEC
CORPORATE TRAINING

ALTA
RESEARCH **3**

Prerequisites: Basic Keyboard Proficiency: Ability to efficiently navigate and use a keyboard, including typing, copy-pasting, and basic text editing in terminal and/or text editors.

Audience: This course is for anyone in the role of: Network Engineer/Administrator, IT/Network Manager or Team Lead, Systems Administrator or DevOps Engineer, Security and Compliance Analyst, or Aspiring Network Architect/Consultant.

Description: This course provides a comprehensive introduction to using Ansible for network automation and management. Ansible's agentless nature and human-readable YAML syntax lower the barrier to entry, enabling teams to achieve immediate ROI in configuration management and multi-vendor consistency. It teaches the principles of Infrastructure as Code by focusing on the desired outcome rather than a step-by-step process.

Course Objectives: In this course, you will learn:

- Automate at Scale: Develop and run Ansible playbooks to automate common network administration tasks.
- Manage Multi-Vendor Environments: Use Ansible's core modules and advanced features to manage configurations on a variety of network devices.
- Build Reusable Solutions: Apply Jinja2 templates and Ansible Roles to create scalable, maintainable automation code.
- Secure Your Workflows: Implement secure automation practices using Ansible Vault and robust error-handling techniques.

OUTLINE:

ANSIBLE FOUNDATIONS

- Lecture: Introduction to Ansible
- Lecture: Introduction to YAML
- Lecture + Lab: Making an Inventory
- Lecture + Lab: Running a Playbook
- Lecture + Lab: ansible.cfg Setup
- Lecture + Lab: Looping Tasks
- Lecture + Lab: Setting Variables
- Lecture + Lab: When Condition

CORE MODULES AND NETWORK COLLECTIONS

- Lecture + Lab: Ansible Module - copy
- Lecture + Lab: Ansible Module - file
- Lecture + Lab: Ansible Module - get_url and uri
- Lecture + Lab: Ansible Module - template
- Lecture: Collections, Roles, and Ansible Galaxy
- Lecture + Lab: Using Collections
- Lecture + Lab: Exploring Switches with Ansible
- Lecture + Lab: Backup Cisco, Juniper, Arista, and More

AGNOSTIC AND VENDOR-SPECIFIC MODULES

- Lecture + Lab: Agnostic Network Modules
- Lecture + Lab: Simplifying Network Playbooks with Agnostic Modules
- Lecture + Lab: Network Playbooks and Vendor-Specific Modules
- Lecture + Lab: Ansible Get Switch Config and Archive
- Lecture + Lab: network_cli Playbook

DYNAMIC FACTS AND APIS

- Lecture + Lab: Using Ansible Facts
- Lecture + Lab: Network API Calls
- Lecture + Lab: Jinja2 Templating for Network Configurations

REUSABILITY AND SECURITY

- Lecture + Lab: Using Roles
- Lecture + Lab: Making Roles
- Lecture + Lab: Ansible Vault

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ROBUSTNESS AND ERROR HANDLING

- Lecture + Lab: Ansible Error Handling
- Lecture + Lab: Network Playbook Error Handling
- Lecture + Lab: Network Playbook Precheck
- Lecture + Lab: Network Playbooks with Roles and Rollbacks