



## Ansible 203 - Windows Server Automation

- 5 Days
- Lecture and Hands-on Labs

### Course Overview

Continue your studies of Ansible, with a focus on automating servers and applications. In addition to Ansible, students will study enough Python to understand Ansible's plugin architecture.

Lessons and labs focus on using both Python and Ansible to interact with and configure your Windows servers, as well as common applications. At the conclusion of this course you will return to work empowered with skills necessary to create or improve Ansible solutions. This class is a combination of live demonstrations and hands-on labs with virtual network devices and endpoints as targets for your configuration.

For many of the lessons, we will focus on tasks targeting Windows.

- Students looking for Ansible for network applications should see: Ansible 201 (Networking)
- Students looking for Ansible for Linux server applications should see: Ansible 202 (Linux Server)

### Who Should Attend

- Network Administrators
- Ansible Developers
- Python Developers
- Administrators interested in Automation
- Individuals interested in devops, specifically for networking

### What You'll Learn



- Version controlling code with Git
- Controlling winrm sessions and passing commands to remote servers
- Basic Python for automation applications
- Ansible collections for server automation
- Understanding plugin architecture of Ansible modules written with Python
- Best practices for automation
- AI LLM prompt engineering for generating Ansible solutions applicable to Windows scenarios

### Outline




#### LLM AI Toolkit

-  Lecture + Lab: Large Language Model toolkit for AI Solution Assistance







#### Software Control Management

-  Lecture + Lab: SCM Option #1 - GitHub
-  Lecture + Lab: SCM Option #2 - GitLab



## Ansible and Windows Setup

-  Lecture + Lab: Ansible Windows Ping and Inventory
-  Lecture + Lab: Ansible Windows gather\_facts
-  Lecture + Lab: ansible.cfg setup

## Ansible and Windows

-  Lecture + Lab: Update Windows with Ansible
-  Lecture + Lab: Ansible Windows and Downloading Resources
-  Lecture + Lab: Checking Windows Services with Ansible
-  Lecture + Lab: Automating Windows MSI Files
-  Lecture + Lab: Ansible Module - ansible.builtin.uri
-  Challenge: Write a Windows Playbook

## Ansible and Windows Scripting

-  Lecture + Lab: Ansible and Windows Commands
-  Lecture + Lab: Ansible and Windows PowerShell




## Jinja Templating and Files

-  Lecture: Templating with Jinja
-  Lecture + Lab: Jinja Templating for Windows
-  Lecture + Lab: Using Ansible to Copy Files to Windows

## Prechecks and Postchecks

-  Lecture + Lab: Windows Assertions and Prechecks


## Windows System

-  Lecture + Lab: Ansible and Windows Environmental Variables
-  Lecture + Lab: Automating Windows Users with Ansible
-  Lecture + Lab: Ansible and Windows Registry Editor

## Ansible and Windows Chocolatey

-  Lecture + Lab: Ansible and Windows Chocolatey

## Increasing Complexity and Maintainability

-  Lecture + Lab: Organizing Playbooks with import\_tasks







## Cloud and Hypervisors

-  Lecture + Lab: Ansible for VMWare VCenter
-  Lecture + Lab: VMWare ESXi and Dell PowerStore



## Security

-  Lecture + Lab: Complete Ansible Vault

## CI CD Tools

-  Lecture: Ansible Workflow
-  Lecture + Lab: Ansible and CI CD
-  Lecture + Lab: Ansible Runner
-  Lecture + Lab: ansible-builder
-  Lecture + Lab: Building Custom Ansible Execution Environments
-  Lecture + Lab: Windows Scripting

## Customizing Ansible

-  Lecture + Lab: Dynamic Inventory Plugins - VMWare
-  Lecture + Lab: Writing an Ansible Module with Python

## Prerequisites

## Next Courses

- Ansible 301 - Customizing Ansible
- Git and GitHub
- Git and GitLab CI/CD