



## Ansible 301 - Customizing Ansible

- 4 Days Hands On

### Course Overview

This course is designed to move students beyond Ansible Essentials, and joins Ansible with other DevOps skill sets, including: Python scripting, utilizing Ansible Galaxy, running automated solutions with Jenkins, syncing code with Git and GitHub, continuous integration, debugging / linting, and much more! The lessons are built around current concepts observed within enterprises using Ansible.

Review this course online at <https://www.alta3.com/courses/mans>

### Who Should Attend

- DevOps Engineers
- System and Cloud Administrators
- Network Engineers and Developers
- Python Developers

### What You'll Learn

- Advanced Ansible skills and tools
- Creating your own collection
- Writing your own Ansible plugin module or other plugins
- Playbook and solution architecture including best practices and solutions throughout industry
- Creating Execution Environments
- ansible-builder
- ansible-runner
- AI LLM prompt engineering for relevant configuration snippets and solutions

### Outline




#### Certification

-  Lecture + Lab: Alta3 Research Customizing Ansible Certification

#### AI LLM 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
-  Lecture + Lab: Git Branching



#### Ansible Review

-  Lecture + Lab: Complete Playbook Design Guide


## Creating Ansible Plugins

-  Lecture + Lab: Getting dir(obj) help() and pydoc
-  Lecture + Lab: Dictionaries
-  Lecture + Lab: Lists
-  Lecture + Lab: Python Data to JSON file
-  Lecture + Lab: Python Data to YAML file
-  Lecture + Lab: Writing an Ansible Module with Python
-  Lecture + Lab: Ansible Lookup Plugin




## Collections

-  Lecture + Lab: Ansible Collections
-  Lecture + Lab: Ansible Galaxy









## Dynamic Inventory

-  Lecture: Ansible Dynamic Inventory
-  Lecture + Lab: YAML, JSON, Dynamic, and Cloud Inventories

## Testing

-  Lecture + Lab: Ansible Best Practice
-  Lecture + Lab: Roles and Molecule
-  Lecture + Lab: Ansible Lint

## 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: Triggering AWX builds with WebHooks
-  Lecture + Lab: Pull Requests
-  Lecture + Lab: AWX Playbooks

## Ansible and GitLab

-  Lecture + Lab: Ansible and CI Workflows with GitLab


## AWX Studies

-  Lecture + Lab: K8S Pods And Control Plane
-  Lecture + Lab: Deploying AWX on Kubernetes

## Kubernetes

-  Lecture + Lab: K8S Architecture
-  Lecture + Lab: Deploying Kubernetes using Ansible

## Enterprise

-  Lecture + Lab: Reverse Engineering Enterprise Playbooks

## Prerequisites

- Coding experience in another language serves as an adequate prerequisite
- Ansible 101 - Ansible Essentials
- Ansible 201 - Python and Ansible for Automation

## Certification

- Ansible 301 - Certification Project