Ansible 302 - Ansible Tower/Ansible AWX

- 4 Days
- Lecture and Hands-on Labs

Course Overview

In this course students will focus on controlling the latest version of Ansible Tower AWX. This begins with a deployment into a Kubernetes cluster, and moves quickly into exploring the configuration options of AWX. Students will learn to navigate the AWX GUI, trigger jobs with webhooks, build and deploy custom execution environments, and design workflow job templates. All enrolled students have the opportunity to earn an AWX certification at the conclusion of the course.

Note: The focus of this course focuses on using AWX, not writing Ansible playooks. Students looking to understand Ansible programming should enroll in the Ansible Essentials (Ansible 101) course.

Who Should Attend

- Ansible Engineers
- DevOps Engineers
- Software Developers
- System Administrators
- Managers

What You'll Learn

- AWX Web GUI
- AWX RESTful API
- Control / Execution Plane
- Integration with "your" SCM (GitLab, GitHub, etc.)
- "Big picture" workflows
- An understanding of containers and Execution Environments
- AI LLM prompt engineering for generating Dockerfile and other relevant configurations

Outline

Certification

- 🖥 Lecture + Lab: Alta3 Research Ansible Tower / AWX Certification

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

AWX on Kubernetes

- 🖳 Lecture: AWX on Kubernetes
- 🖥 Lecture + Lab: Deploying AWX on Kubernetes

Ansible AWX

- 🖳 Lecture: Ansible AWX

AWX Frontend

- 🖥 Lecture + Lab: Introduction to the AWX GUI
- 🖥 Lecture + Lab: Tower / AWX Projects
- 🖥 Lecture + Lab: Connecting Projects with SSH Keys
- 🖥 Lecture + Lab: Project Schedules
- 🖥 Lecture + Lab: Tower and AWX Job Templates
- 🖥 Lecture + Lab: Tower and AWX Job Template Schedules
- 🖳 Lecture: Role Based Access Controls in Tower AWX
- 🏆 Challenge: Running Jobs in Tower AWX

AWX Variables

- Template Surveys
- Template Prompt on Launch

Webhooks

- 🖳 Lecture: SCM to Tower AWX Webhooks
- 🖥 Lecture + Lab: Triggering AWX builds with WebHooks
- 🖥 Lecture + Lab: Pull Requests

Building

- 🖳 Lecture: Ansible Workflow
- 🖥 Lecture + Lab: Ansible and CI CD
- 🖳 Lecture: ansible-runner
- 🖥 Lecture + Lab: Ansible Runner
- 🖥 Lecture + Lab: ansible-builder
- 🏆 Challenge: Create an Execution Environment

Artifact Workflows

- 🖳 Lecture: AWX Tower gather_fact Artifacts
- 🖥 Lecture + Lab: Playbook Artifacts
- 🖥 Lecture + Lab: Configuring Tower AWX with Playbooks

Tower and AWX API

- 🖥 Lecture + Lab: Tower and AWX API
- 🖥 Lecture + Lab: Tower AWX CLI

AWX Tower Management

- 🖳 Lecture: Expand the AWX Cluster HA
- 🖥 Lecture + Lab: awx-manage
- 🖳 Lecture: Expand the AWX Execution Space
- 🖥 Lecture + Lab: ansible-navigator

Ansible and GitLab

- 🖥 Lecture + Lab: Ansible and CI Workflows with GitLab

AWX Tower and Kubernetes Deployments

- 💬 Lecture: Kubernetes Architecture
- 💬 Lecture: Pods and the Control Plane
- 💬 Lecture: Custom Resource Definitions
- 💬 Lecture: Helm
- 💬 Lecture: Kubernetes the Alta3 Way
- 🖥 Lecture + Lab: Installing AWX on Kubernetes with Helm

AWX Capstone Exercises

- 🏆 Challenge: Exec Envs and Env Vars
- 🏆 Challenge: Configure Tower AWX with a Playbook

Prerequisites

Students should have some understanding of Ansible, as the primary focus of this course is using AWX.

Certification

- CI/CD with AWX - Certification Project