

**Azure Automation with Ansible**

**Course Number:** ANS-110
**Duration:** 2 days

**Overview**

This Azure Automation with Ansible training course teaches attendees how to automate and manage Microsoft Azure resources using Ansible. This course is suitable for IT professionals, DevOps engineers, and system administrators who want to harness the power of Ansible to streamline their Azure workflows, improve efficiency, and ensure consistent deployments.

**Prerequisites**

Participants must know cloud computing basics and be familiar with Azure services. Familiarity with the Linux command line and scripting is beneficial but not mandatory.

**Materials**

All Ansible/Azure training students receive comprehensive courseware covering all topics in the course.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will be fine

**Objectives**

* Understand the fundamentals of Azure cloud computing and Ansible automation
* Set up and configure Ansible for Azure automation
* Discover and interact with Azure resources using Ansible modules
* Create, modify, and delete Azure resources through Ansible playbooks
* Implement best practices for managing secrets and credentials in Ansible
* Use variables, templates, and loops to create dynamic Azure deployments
* Employ Ansible roles for organizing and reusing automation tasks
* Integrate Azure Automation with Ansible Tower for centralized management
* Implement continuous integration and deployment (CI/CD) with Azure and Ansible
* Monitor and troubleshoot Ansible automation in Azure environments
* Ensure security and compliance when automating Azure resources with Ansible

**Outline**

* Introduction to Azure Automation and Ansible
	+ Understanding cloud computing and its benefits
	+ Introduction to Ansible and its advantages for automation
	+ Azure services that can be automated with Ansible
* Setting Up Ansible for Azure
	+ Installing Ansible and its dependencies
	+ Configuring Ansible for Azure authentication
	+ Testing connectivity to Azure from Ansible
* Managing Azure Resources with Ansible Modules
	+ Exploring Ansible Azure modules for different Azure services
	+ Creating and managing virtual machines with Ansible
	+ Automating storage, networking, and other Azure resources
* Ansible Playbooks for Azure Automation
	+ Understanding Ansible playbooks and their structure
	+ Creating basic Azure automation playbooks
	+ Implementing conditional statements and error handling
* Managing Secrets and Credentials
	+ Best practices for handling sensitive data in Ansible
	+ Using Ansible Vault for secure storage of secrets
	+ Integrating Azure Key Vault for managing credentials
* Dynamic Deployments with Ansible
	+ Working with variables and facts in Ansible
	+ Using templates and loops for dynamic resource creation
	+ Employing Jinja2 templates for Azure deployments
* Organizing Automation with Ansible Roles
	+ Introduction to Ansible roles and their benefits
	+ Creating and structuring Ansible roles for Azure automation
	+ Reusing and sharing Ansible roles in different projects
* Ansible Tower for Azure Automation
	+ Overview of Ansible Tower for centralized automation management
	+ Configuring Ansible Tower for Azure environments
	+ Creating and scheduling job templates for Azure automation
* CI/CD with Azure and Ansible
	+ Integrating Ansible with Azure Pipelines for CI/CD
	+ Automating application deployment using CI/CD pipelines
	+ Monitoring and troubleshooting CI/CD pipelines
* Security and Compliance in Azure Automation
	+ Implementing security best practices in Azure and Ansible.
	+ Ensuring compliance with regulatory requirements.
	+ Auditing and logging Ansible automation activities in Azure.
* Conclusion