

Azure DevOps with Identity Solutions

Duration: 3 days

Module: 1 Introduction to Azure DevOps

- What is Azure DevOps?
- Services Used in Azure DevOps
- Azure DevOps Benefits
- Tools of Azure DevOps
- How to Create the Azure DevOps Project?

Module: 2 Azure Pipeline

- Select a deployment automation solution, including GitHub Actions and Azure Pipelines
- Design and implement a GitHub runner or Azure DevOps agent infrastructure, including cost, tool selection, licenses, connectivity, and maintainability
- Design and implement integration between GitHub repositories and Azure Pipelines
- Develop and implement pipeline trigger rules
- Develop pipelines by using YAML
- Design and implement a strategy for job execution order, including parallelism and multi-stage pipelines
- Develop and implement complex pipeline scenarios, such as hybrid pipelines, VM templates, and self-hosted runners or agents
- Create reusable pipeline elements, including YAML templates, task groups, variables, and variable groups
- Design and implement checks and approvals by using YAML-based environments

Module: 3 DevOps Security

- Design a strategy for security and compliance scanning, including dependency, code, secret, and licensing scanning
- Configure Microsoft Defender for Cloud DevOps Security
- Configure GitHub Advanced Security for both GitHub and Azure DevOps
- Integrate GitHub Advanced Security with Microsoft Defender for Cloud
- Automate container scanning, including scanning container images and configuring an action to run CodeQL analysis in a container

Module: 4 implement a strategy for managing sensitive information in automation

- Implement and manage secrets, keys, and certificates by using Azure Key Vault
- Implement and manage secrets in Azure Pipelines
- Design and implement a strategy for managing sensitive files during deployment, including Azure Pipelines secure files (App Services Security)
- Design pipelines to prevent leakage of sensitive information

Module: 5 Kubernetes and Containerization with Azure DevOps

- What is AKS
- Benefits of using AKS
- Create an Azure Container Registry (ACR), AKS and Azure SQL server
- Provision the Azure DevOps Team Project with a .NET Core application using the Azure DevOps Demo Generator tool.
- Configure application and database deployment, using Continuous Deployment (CD) in the Azure DevOps
- Initiate the build to automatically deploy the application

Module:6 Jenkins with Azure DevOps

- What is Jenkins
- how to use Jenkins in DevOps environment
- Provision Jenkins on Azure VM using the Jenkins template available on the Azure Marketplace
- Configure Jenkins to work with Maven and Azure DevOps
- Create a build job in Jenkins
- Configure Azure Pipeline to integrate with Jenkins
- Configure a CD pipeline in the Azure Pipelines to deploy the build artifacts

Module: 7 Azure Enterprise applications and App Registration

- Plan your line of business application registration strategy
- Implement application registration
- Register an application
- Configure permission for an application
- Grant tenant-wide admin consent to applications
- Implement application authorization
- Manage and monitor application by using app governance