

Azure DevOps

1. Introduction to Microsoft Azure

- Introduction to cloud computing
- What is Microsoft Azure?
- Microsoft Azure Services
- Creating a Microsoft Azure Account
- Azure CLI, Azure PowerShell
- Microsoft Azure Architecture

2. Introduction to Azure Storage

- Azure Resources & Subscriptions
- Azure Resource Manager
- Managing Azure Resources
- Azure Tags
- Azure Storage Account & its types
- Azure Blob Storage
- Azure Files Storage
- Azure File Sync

3. Azure Virtual Machines

- Azure Virtual Machines
- Data Disks in Azure
- Azure VMs & Interfaces
- Custom Images of Azure VM

4. Azure Networking

- Azure Virtual Networks
- Azure Vnet Components
- IP Address – Public & Private IPs
- Azure Vnet Subnets
- Azure Network Interface Cards (NIC)
- Network Security Group (NSG)
- Azure DNS
- Private DNS

5. Introduction to DevOps

- What is Software Development
- Software Development Life Cycle
- Traditional Models for SDLC
- Why DevOps?
- What is DevOps?
- DevOps Lifecycle
- DevOps Tools

6. Project Management

- What PM?
- What is the importance of PM in the Org?
- What is Agile/Scrum?
- What is a backlog?
- What are Sprint/Iterations?

7. Software Version Control

- What is Version Control?
- Types of Version Control System
- Introduction to SVN
- Introduction to Azure Repo
- Introduction to Git
- Git Lifecycle
- Common Git Commands
- Working with Branches in Git
- Merging Branches
- Resolving Merge Conflicts
- Git Workflow

8. Build Tools

- AGENDA
- WHY Build tools
- WHAT IS MAVEN
- WHAT DOES MAVEN DO
- MAVEN REPOSITORIES
- MAVEN INSTALLATION

- Types of Build Tools
- Introduction to framework

9. Docker

- Introduction to Docker
- Understanding Docker Lifecycle
- Components of Docker Ecosystem
- Committing changes in a Container
- Pushing a Container Image to Docker Hub
- Creating Custom Docker Images using Dockerfile
- Docker Volumes
- Docker Networking

10. Azure DevOps and Azure Repos

- Azure DevOps architecture
- Key features
- Azure DevOps tools
- Azure DevOps organizations and projects
- Introduction to Azure Repos
- Compare TFVC and Git
- Key concepts in azure repos
- Search your code in Repos
- What is TFVC
- Azure Repos Integrations

11. Azure Pipelines

- Introduction to Azure Pipelines
- Why use Azure Pipelines
- Deploying to Azure
- Key concepts in Pipelines
- CI Triggers in pipelines
- YAML Basics
- Classic vs YAML
- Ecosystems and Integration
- Setting up CI build
- Adding Tests to the Pipeline
- Agents and Tasks
- Agent Pools
- Build and Release Pipelines

12. Azure Boards

- What is Azure Boards
- Why use azure boards
- Agile project management best practices
- Basic concepts of Azure Boards
- Work items
- Sprints

13. AKS

- Create-AKS-Cluster
- Ingress-Basic
- Ingress - Context Path Based Routing
- Kubernetes-Namespaces
- Azure-VirtualNodes-for-AKS
- Azure-VirtualNodes-MixedMode-Deployments
- Azure-Container-Registry-ACR

14. Azure Artifacts

- What are Azure artifacts
- Key concepts in artifacts
- Build Artifacts vs Pipeline artifacts
- working with packages
- Feeds
- views and upstream sources
- Connecting to azure pipelines