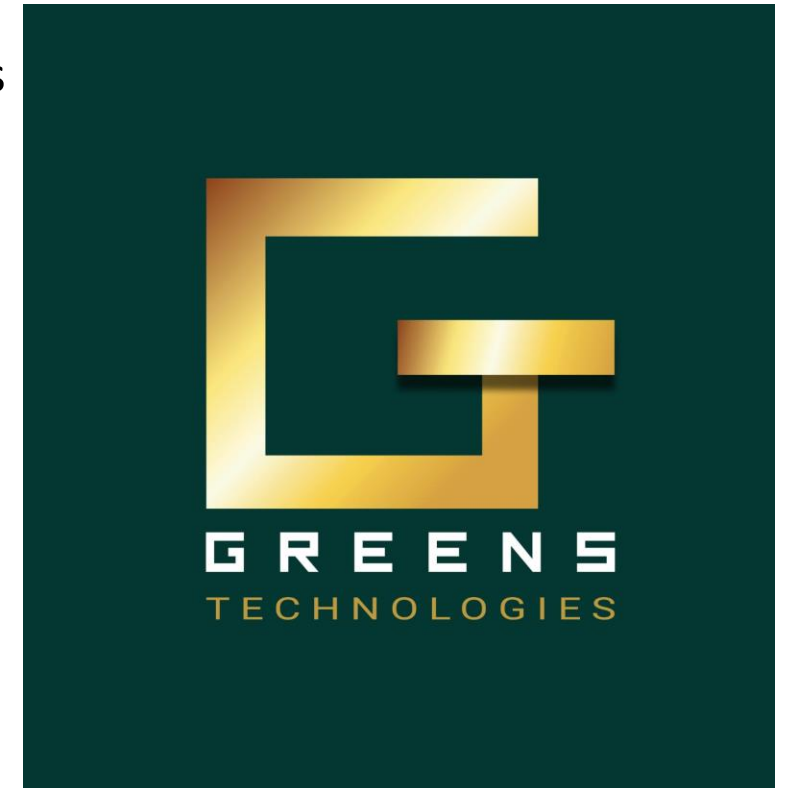


Azure DevOps



GREENS TECHNOLOGIES

- Greens Technologies is the name that signifies the best training institute with placement in the field of software testing and programming in the IT sector. We are recognized as the best institute for software and languages course with the most advanced and high-quality trainers. We are always being a channel for many students as well as IT professionals where we take them to the next level and as a result, they get placed in good MNC companies. Apart from the regular learning and training courses we offer language training by good experts to make you as a good masterpiece.
- Our core competency lies with the advanced and real time experience we have with the current real time experience we have with the current trends in the IT industry. We not only train, but also transform you into a perfect sculpture with our IT development courses for delivering a world class best proven technical solution for various companies.
- Greens Technologies is One – Stop – Solution for all those who are looking for training and learning programs of all types with placements.



COMPUTE MODULE

Azure Virtual Machines (VMs)

Virtual Machine Scale Sets (VMSS)

Azure Kubernetes Service (AKS)

Azure Container Instances (ACI)

Azure Web App

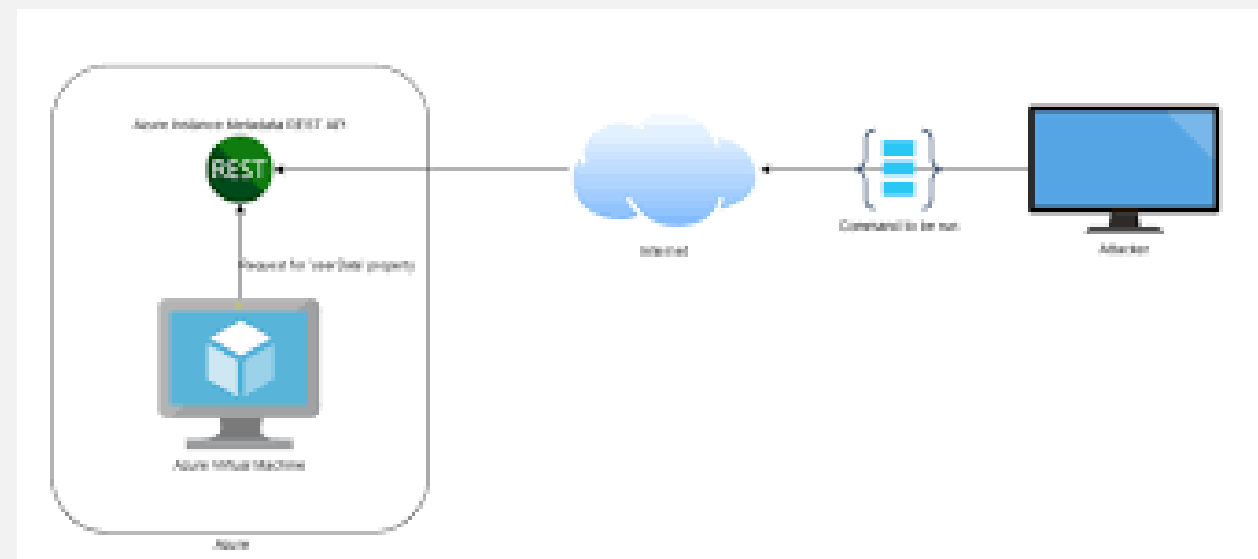
Azure Functions

1. Azure Virtual Machines (VMs)

- ❖ Azure Portal Overview
- ❖ Introduction to Azure VMs
- ❖ Creating and configuring Azure VMs
- ❖ Best practices for Azure VMs

2. Virtual Machine Scale Sets (VMSS)

- ❖ Overview of VMSS
- ❖ Creating and configuring VMSS
- ❖ Autoscaling in VMSS
- ❖ Integrating VMSS with Azure Load Balancer

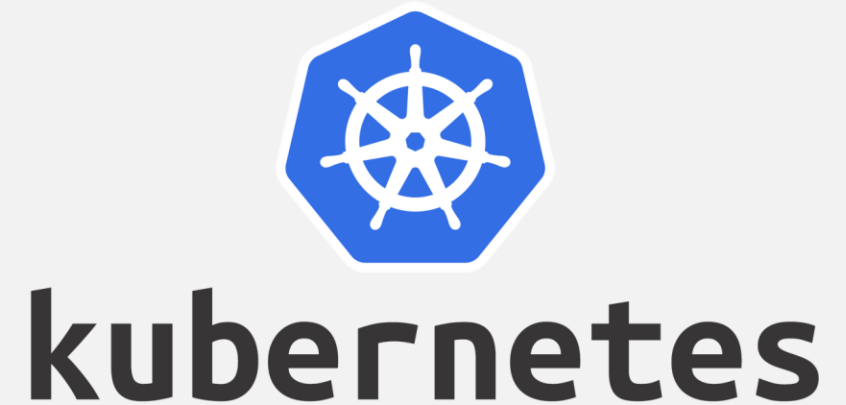


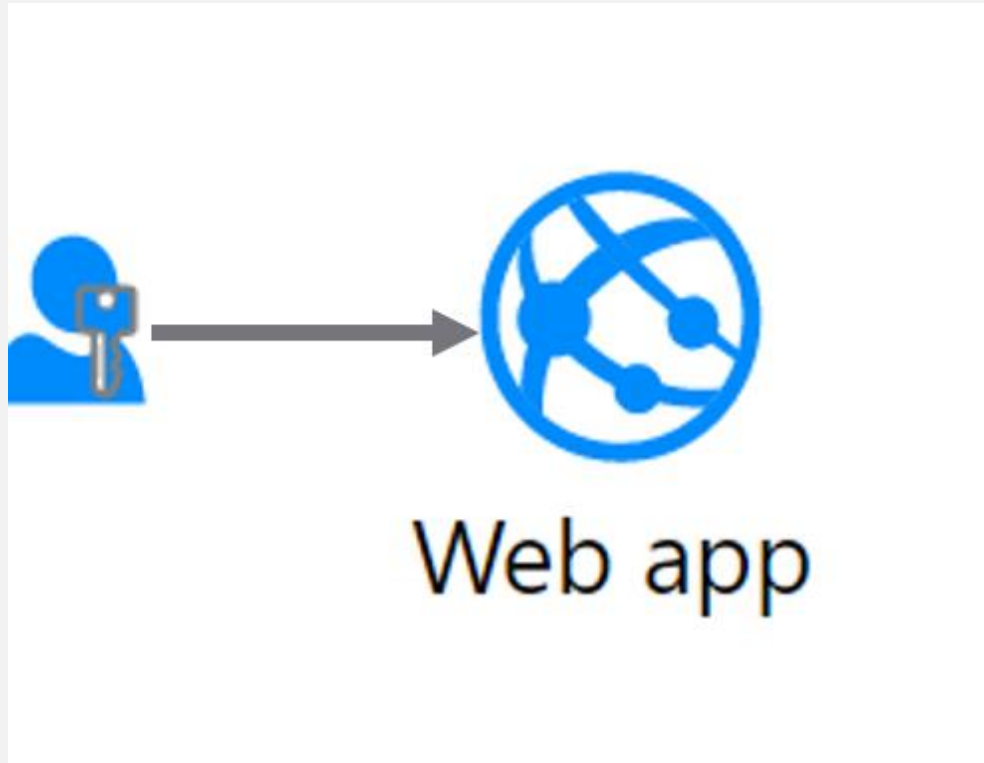
3. Azure Kubernetes Service (AKS)

- ❖ Introduction to AKS
- ❖ Creating and managing AKS clusters
- ❖ Kubernetes Overview - pods, Containers, Services, deployment, replicaset.
- ❖ Kubernetes Architecture
- ❖ Deploying and managing containerized applications
- ❖ Integrating AKS with Azure Container Registry

4. Azure Container Instances (ACI)

- ❖ Overview of Azure Container Instances
- ❖ Creating and deploying containers in ACI
- ❖ Best practices for Azure Container Instances





5. Azure Web App

- ❖ Introduction to Azure Web Apps
- ❖ Creating and configuring web apps
- ❖ Deployment slots in Azure
- ❖ Azure Web App security best practices

6. Azure Functions

- ❖ Serverless computing overview
- ❖ Creating and deploying Azure Functions
- ❖ Trigger types and bindings

STORAGE MODULE

Introduction to Azure Storage

Azure Blob Storage

Azure Queue Storage

Azure Table Storage

Azure Files

Introduction to Azure Storage

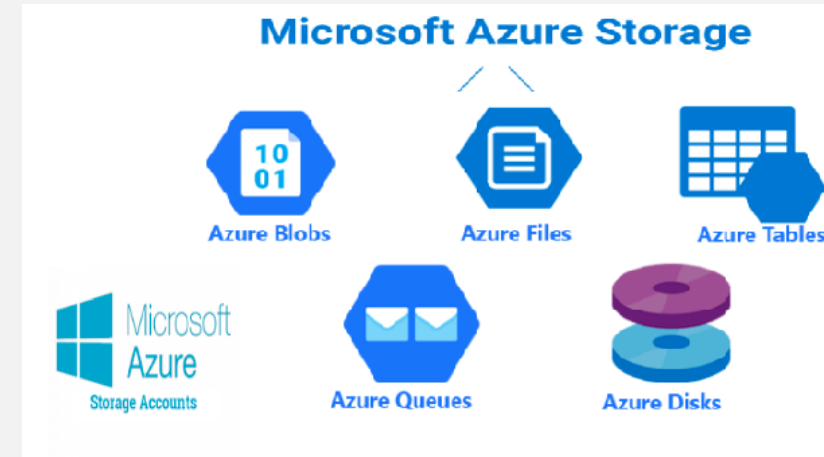
- Key benefits of using Azure Storage
- Overview of storage account types (General Purpose v1, General Purpose v2, Blob Storage)

Azure Blob Storage

- Blob Storage concepts (Containers, Blobs)
- Blob Types (Block Blobs, Append Blobs, Page Blobs)
- Blob Storage security (Shared Access Signatures)
- Blob Storage lifecycle management
- Blob Storage versioning and soft delete

Azure Queue Storage

- Queue Storage concepts (Queues, Messages)
- How to create and manage queues





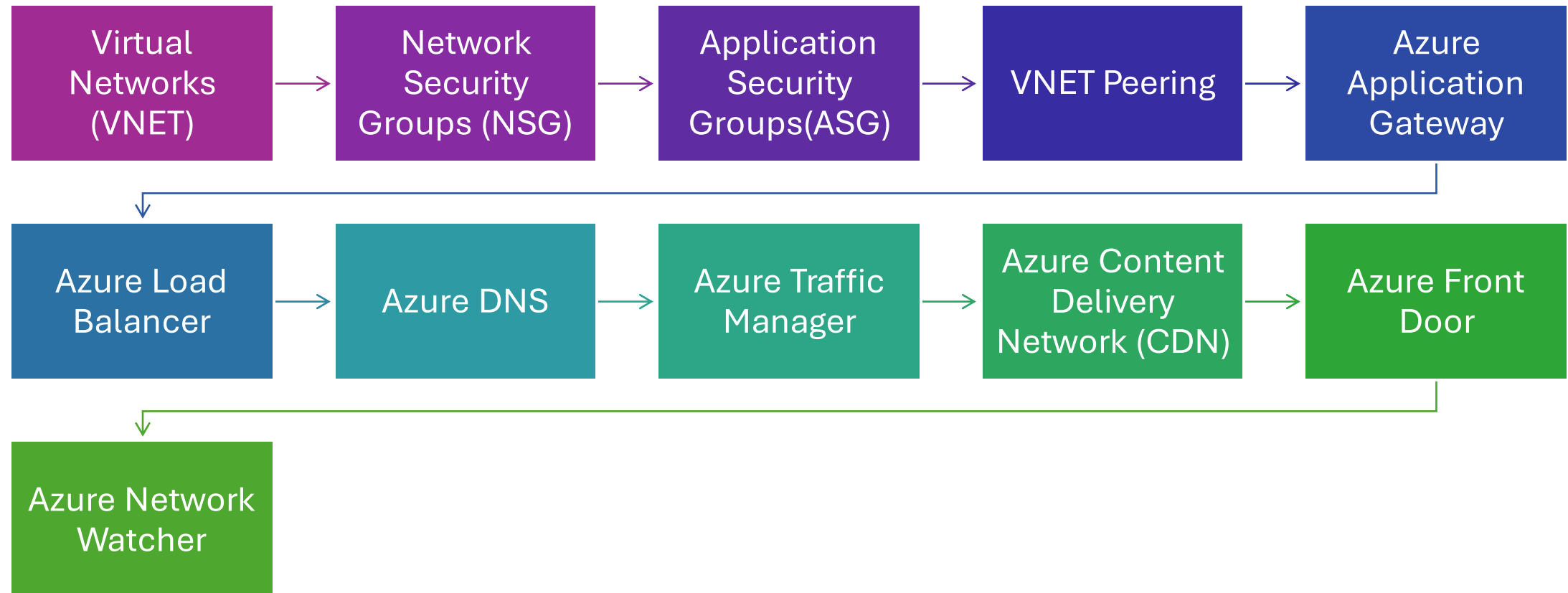
Azure Table Storage

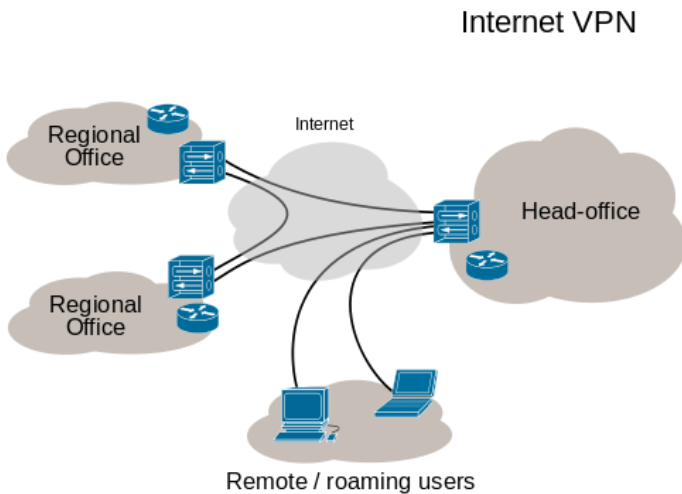
- Introduction to Table Storage
- Table Storage concepts (Tables, Entities, Properties)
- How to create and manage tables

Azure Files

- Introduction to Azure Files
- Azure Files concepts (Shares, Directories, Files)
- How to create and manage Azure Files
- Practical exercises for Blob, Queue, Table, and Files Storage

NETWORKING MODULE





Virtual Networks (VNET)

Introduction to Microsoft Azure Networking

Basics of networking concepts in Azure

Creating and configuring Virtual Networks

Subnetting and address spaces

Network Security Groups (NSG)

Introduction to Network Security Groups

Creating and configuring NSGs

Implementing security rules and restrictions

Best practices for NSG usage

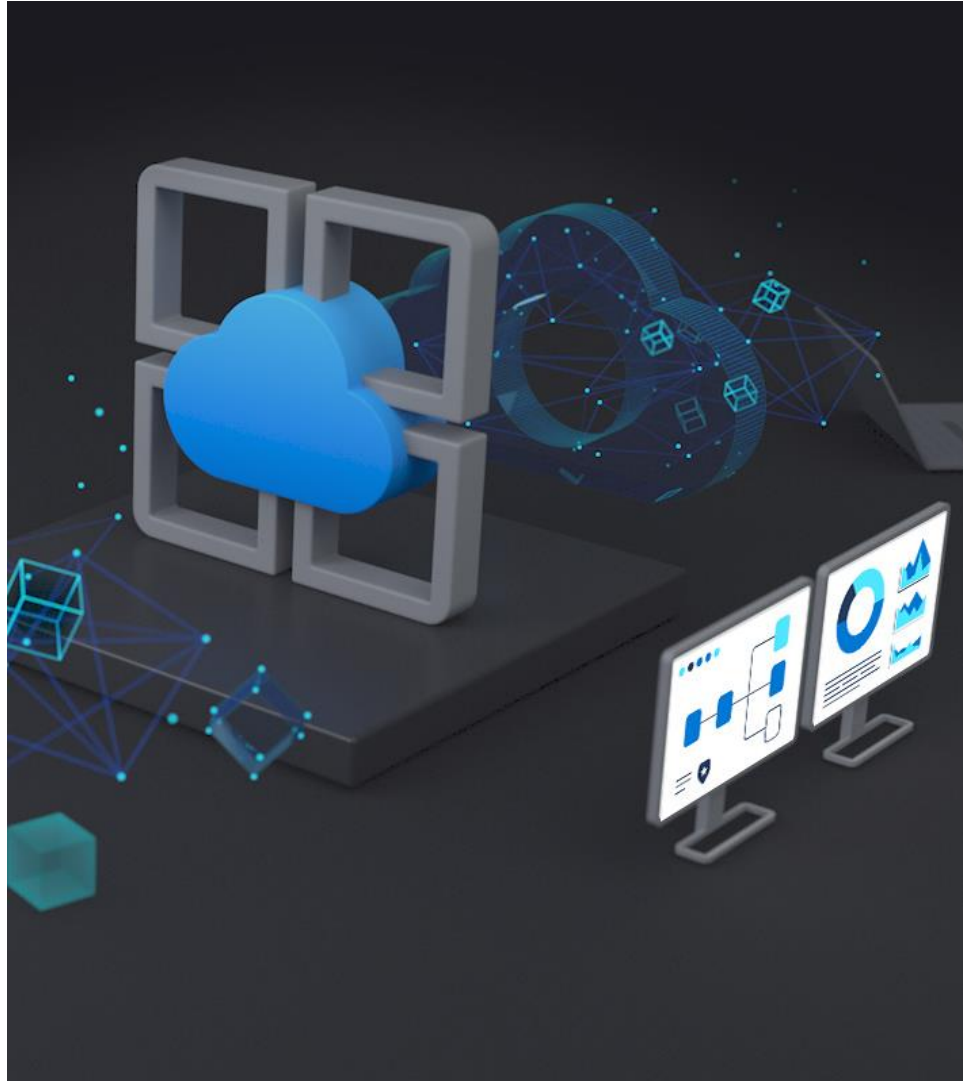
Application Security Groups(ASG)

Introduction to (ASG)

Creating and configuring ASG

Implementing security rules and restrictions

Best practices for ASG usage



VNET Peering

- Introduction to VNET Peering:
- Understanding Virtual Network Peering
- Establishing VNET peering connections

Azure Application Gateway

- Overview of Azure Application Gateway
- Configuration and deployment of Application Gateway
- Load balancing techniques and routing methods
- SSL termination and web application firewall (WAF) integration

Azure Load Balancer

- Understanding Azure Load Balancer
- Configuring Load Balancer for high availability
- Types of Load Balancing (Internal and External)
- Health probes and traffic distribution methods

Azure DNS

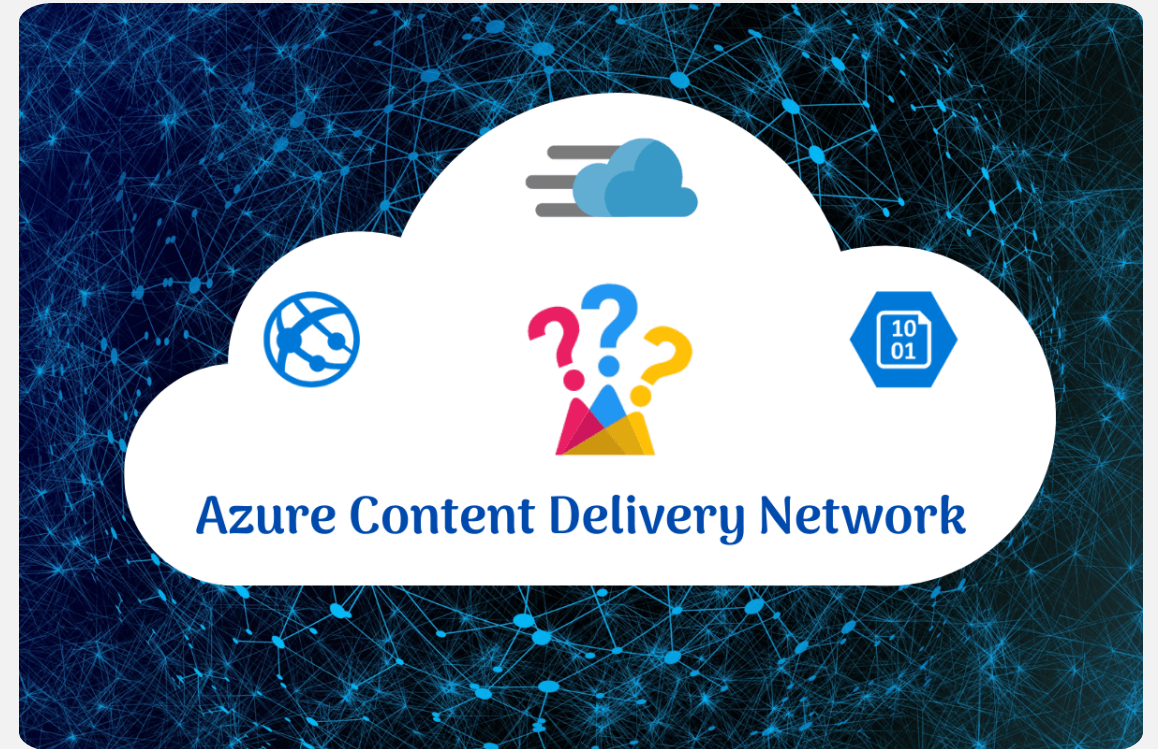
- Introduction to Azure DNS
- Configuring DNS zones and records
- DNS resolution

Azure Traffic Manager

- Implementing DNS-based traffic routing
- Traffic routing methods (Priority, Weighted, Geographic, Performance)

Azure Content Delivery Network (CDN)

- Understanding Content Delivery Networks
- Configuring Azure CDN endpoints
- Content caching and delivery optimizations
- Monitoring and analytics for CDN performance

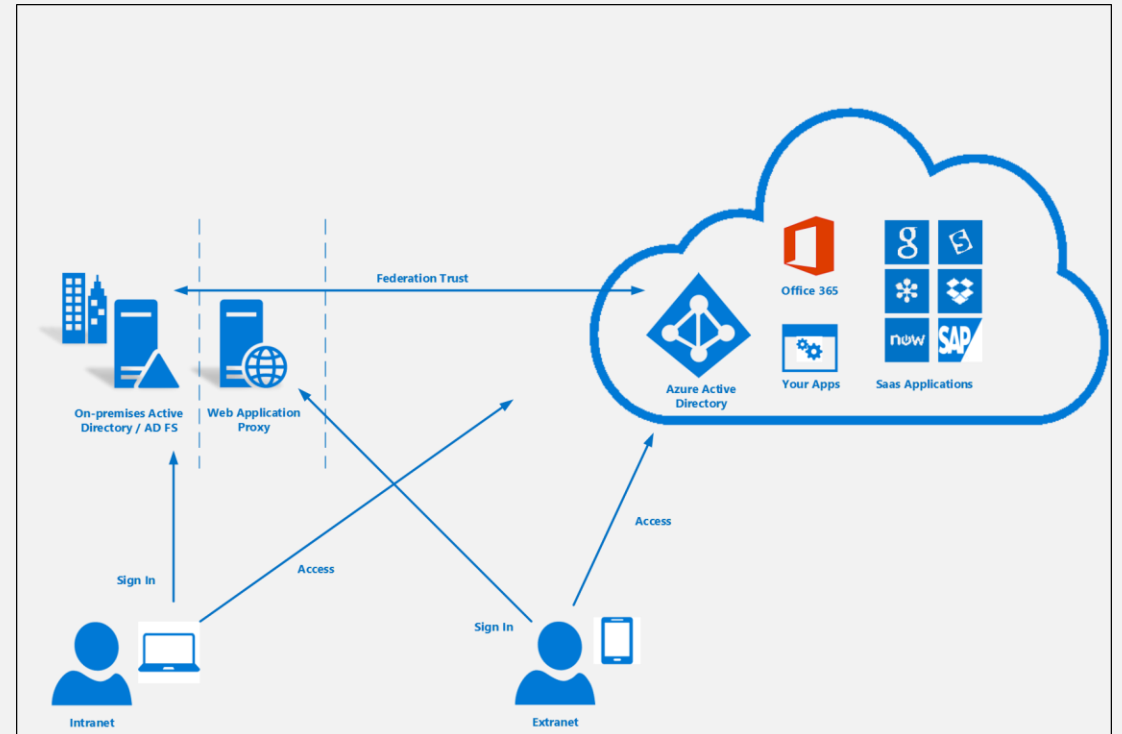


Azure Front Door

- Introduction to Azure Front Door service
- Configuring and managing Front Door for global load balancing
- Security features and routing policies

Azure Network Watcher

- Monitoring and diagnosing network performance
- Troubleshooting network connectivity issues
- Implementing security recommendations and best practices





SECURITY & COMPLIANCE MODULE

Azure Key
Vault

Azure Active
Directory
(Azure AD)

Azure Web
Application
Firewall (WAF)

Azure Policies

Azure Advisor

Azure Key Vault

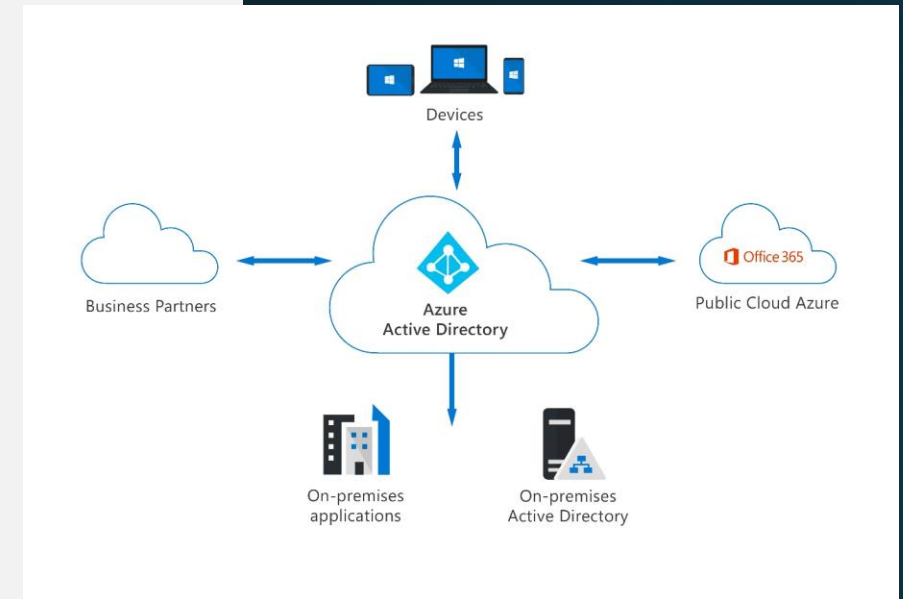
- Importance of Security and Compliance in Cloud
- Introduction to Azure Key Vault
- Key Vault Architecture and Components
- Key Vault Access Control
- Key Vault Secrets

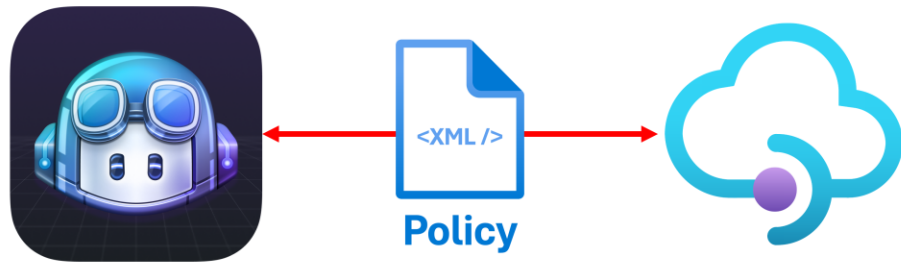
Azure Active Directory (Azure AD)

- Overview of Azure AD
- Azure AD Identity and Access Management
- Azure AD Multi-Factor Authentication

Azure Web Application Firewall (WAF)

- Introduction to Azure WAF
- WAF Policies and Rules
- Configuring WAF for Application Security





Azure Advisor

- Introduction to Azure Advisor
- Advisor Recommendations for Security

Azure Policies

- Introduction to Azure Policies
- Defining and Assigning Azure Policies
- Custom Policy Definitions
- Remediation Actions with Azure Policies

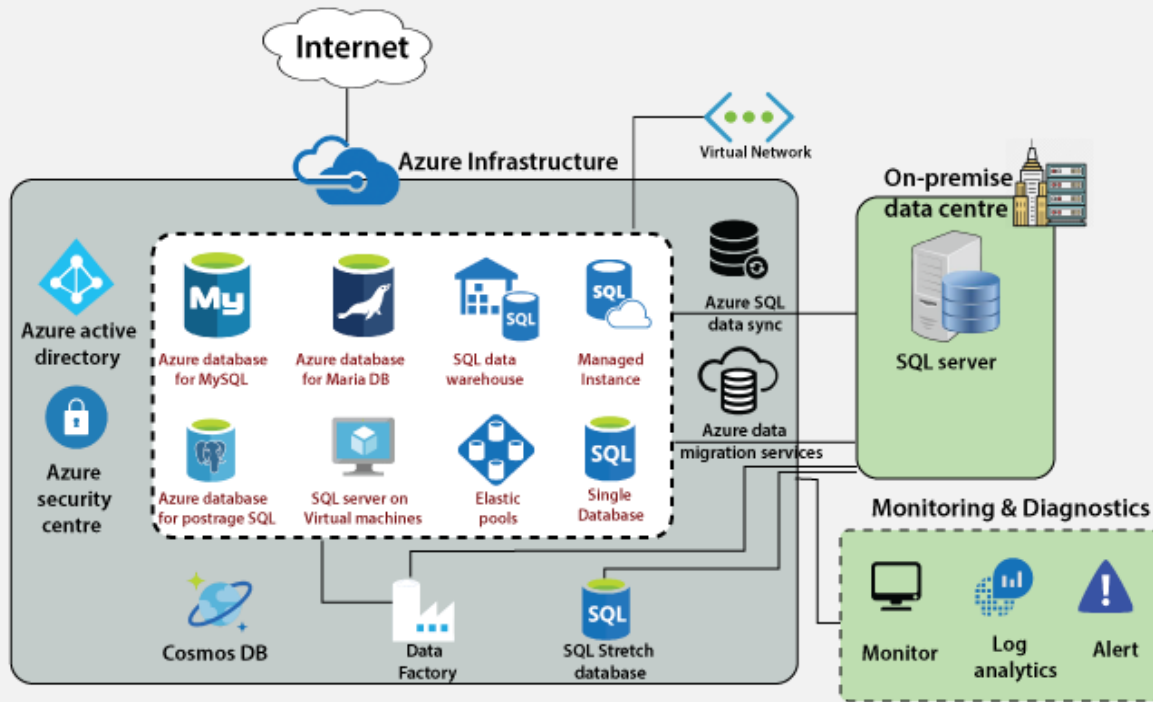
DATABASE MODULE

Understanding the Basics of Databases

Relational Databases and SQL Basics

Azure Redis

Data Storage and Retrieval



Understanding the Basics of Databases

- Types of Databases: SQL vs. NoSQL
- Overview of SQL Database and Cosmos DB

Relational Databases and SQL Basics

- Introduction to Relational Databases
- Overview of NoSQL databases
- Introduction to Azure Cosmos DB
- SQL Language Fundamentals
- Data Types, Operators, and Expressions
- Basic SQL Queries: SELECT, INSERT, UPDATE, DELETE
- To create SQL database

Azure Redis:

- Introduction to Azure Redis
- Overview of Azure Redis Cache service.
- Key features and benefits.
- Creating and Managing Redis Cache:
- Steps for creating and managing a Redis cache in Azure.
- Configuration options and considerations.

Data Storage and Retrieval:

- Storing and retrieving data in Azure Redis.
- Scaling and Performance Optimization:
- Security in Azure Redis:
- Configuring security features for Azure Redis.



CONTAINERIZATION



Docker

The diagram consists of three identical rectangular boxes arranged horizontally. Each box has a dark blue header and a light blue body. The first box contains the text 'Docker', the second 'Azure Container Registry', and the third 'Podman'. The boxes are slightly offset to the right, creating a layered effect.

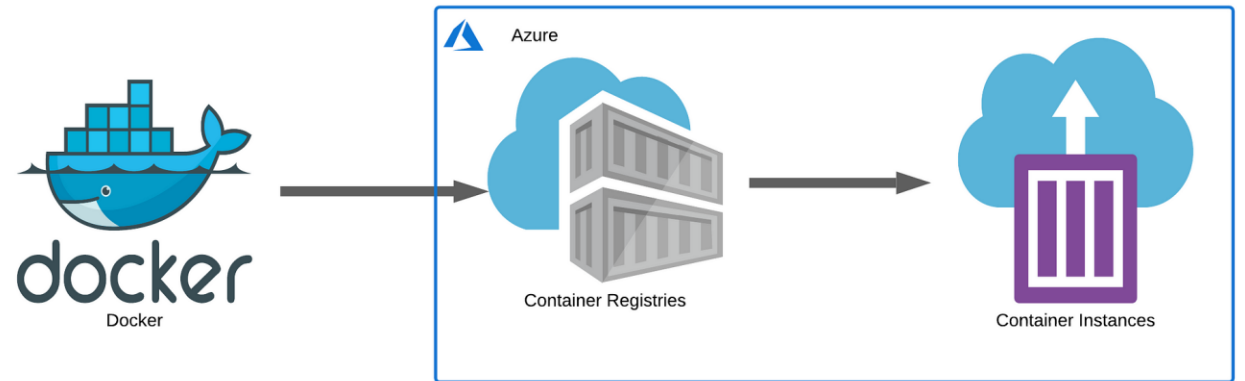
Azure
Container
Registry

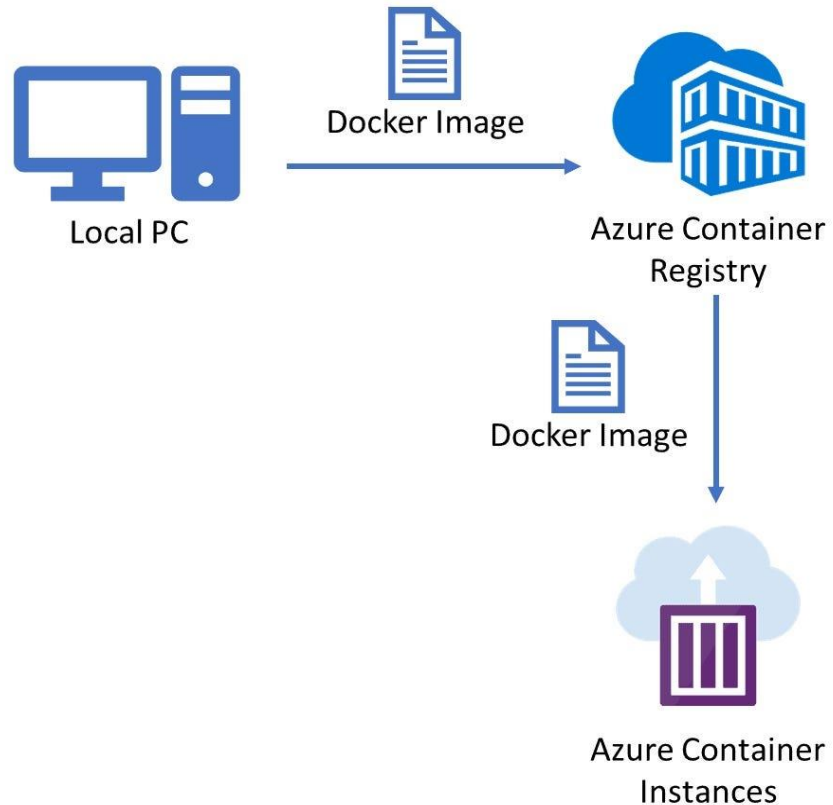
Podman

- ❖ Introduction to Containerization
- ❖ What are containers?
- ❖ Benefits of containerization
- ❖ Docker vs. traditional virtualization

DOCKER:

- ❖ Getting Started with Docker
- ❖ Installing Docker
- ❖ Docker architecture overview
- ❖ Docker images and containers
- ❖ Running your first container
- ❖ Dockerfile basics
- ❖ Docker networking concepts
- ❖ Managing network connections between containers





- Introduction to Docker volumes
- Sharing data between containers using volumes
- Docker Compose
- Overview of Docker Compose
- Writing a basic Docker Compose file
- Managing multi-container applications with Docker Compose

ACR:

Introduction to Azure Container Registry (ACR)

What is Azure Container Registry (ACR)?

Benefits of ACR

Creating an ACR instance

Pushing Docker images to ACR

Module 7:

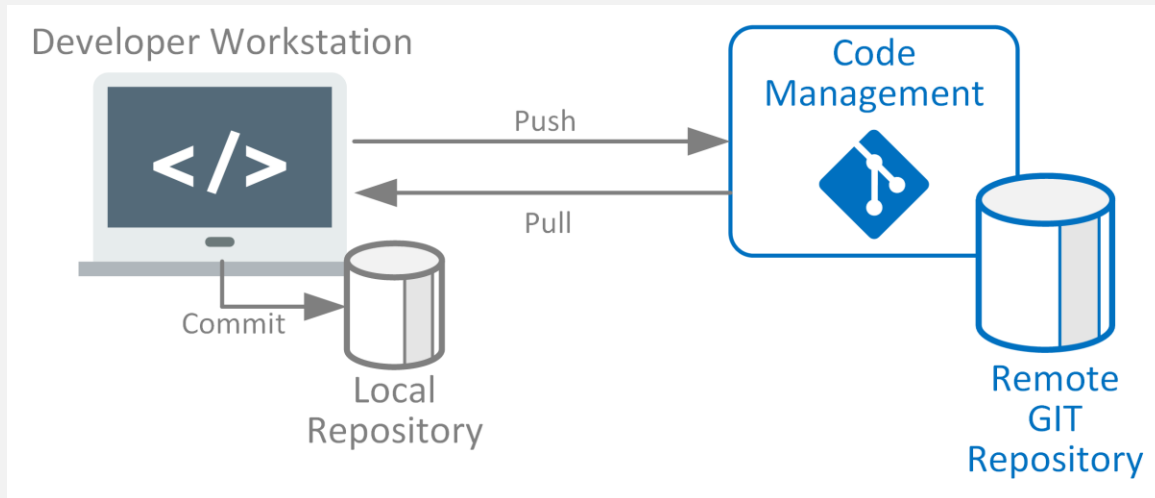
- Integrating Docker with ACR
- Authentication and authorization in ACR
- Securing Docker images in ACR
- Pulling Docker images from ACR

PODMAN:

- Introduction to Podman
- What is Podman?
- Key differences between Docker and Podman
- Container Security best Practices



Source Code Management



- What is Version Control?
- Basics of Git
- Git Workflow
- Installing Git
- `git init`, `git add`, `git commit`
- `git status`, `git log`, `git diff`
- Branching and Merging
- Creating branches
- Merging branches
- Handling merge conflicts
- Remote Repositories
- Cloning repositories
- Pushing and pulling changes
- Forks and upstream repositories

GitHub:

- Working with GitHub Repositories
- Creating repositories
- Issues and Pull Requests
- GitHub Actions



Github

VS



Bitbucket

Bitbucket:

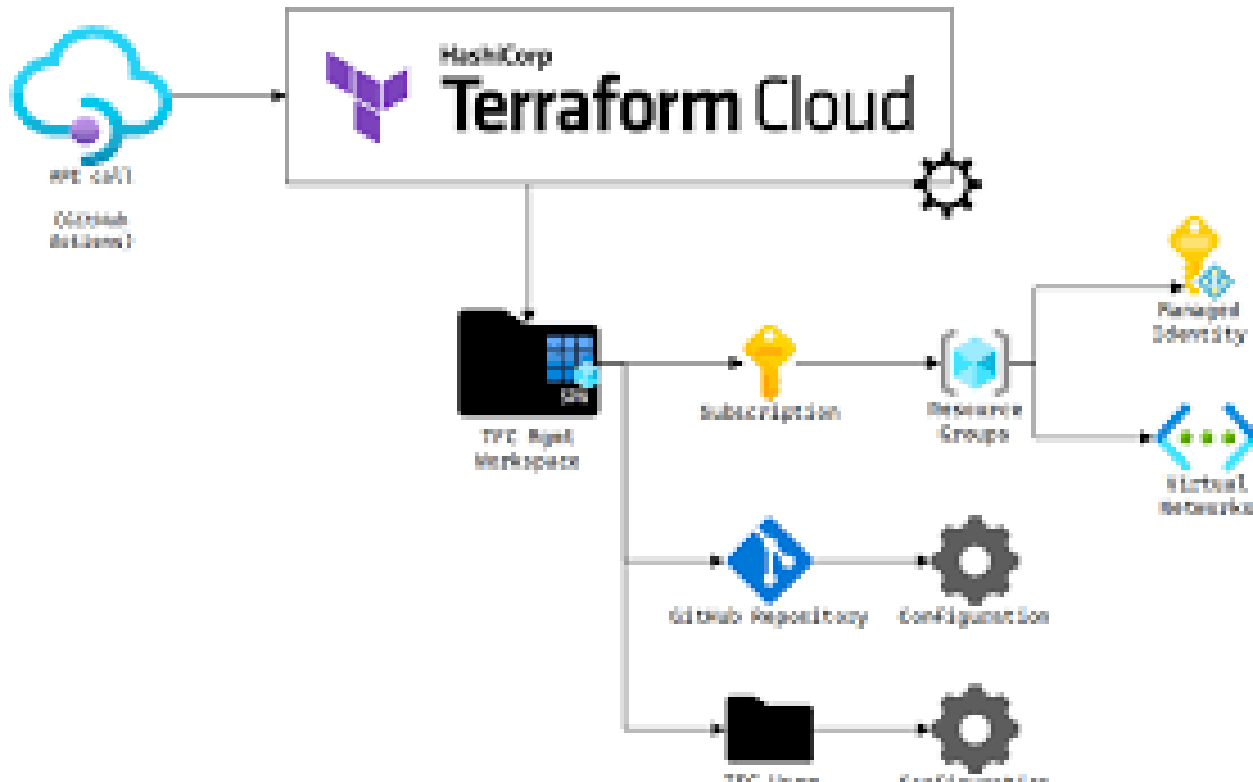
- Working with Bitbucket Repositories
- Branch permissions
- Pull requests and code review

TERRAFORM MODULE



- Introduction to Infrastructure as Code (IaC)
- Introduction to Terraform
- Basic Terraform Commands
- Understanding Terraform Configuration Language (HCL)
- Creating and Initializing a Terraform Project
- Providers in Terraform
- Resources and Data Sources
- Variables and Data Types
- Output Values
- Terraform State

TERRAFORM MODULE

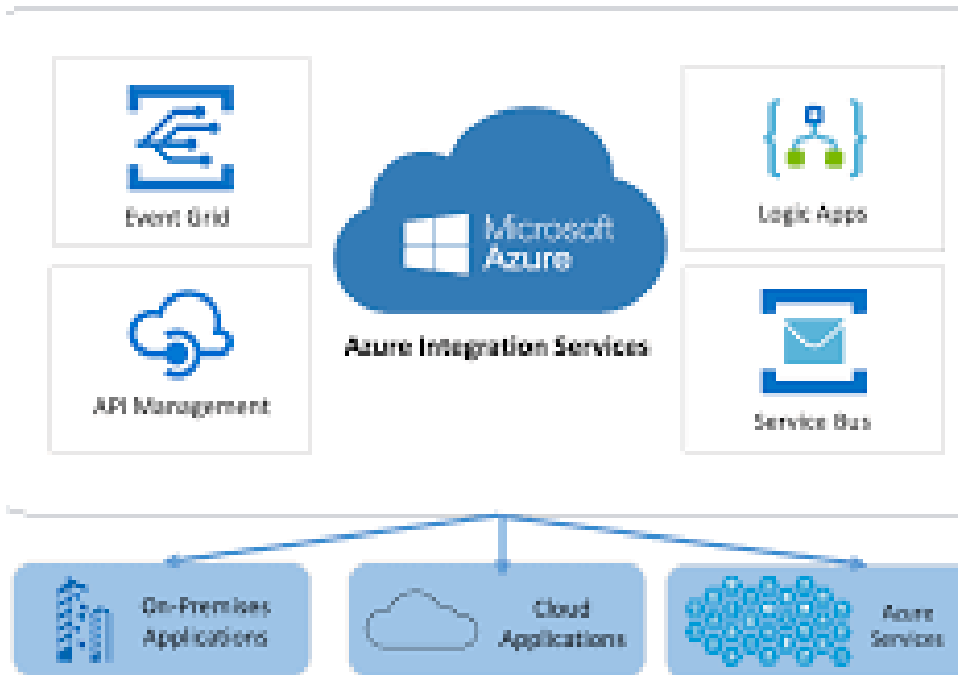


- Terraform Workspaces
- Importing Existing Infrastructure
- Provisioners and their use cases
- Creating Modules
- Publishing Modules to the Terraform Registry
- Using Modules from the Registry
- Remote Backends for State Management
- Exploring Terraform Modules

MONITORING & ALERTING

Splunk:

- What is Log Monitoring
- Understanding Log Data
- Introduction to Splunk
- Splunk Architecture
- Forwarder/Receiver Architecture
- Splunk Components Overview (Indexer, Search Head, Universal Forwarder, etc.)
- Backend working process of Splunk Forwarder
- Integrating Splunk Forwarder with the master Machine
- Indexing best practices
- Application monitoring with Splunk
- Creating dashboards and visualizations
- Customizing dashboards for specific use cases
- Setting up Alerts and Notifications



Azure Monitoring with Azure Service Bus Integration Course Content:

- Introduction to Azure Monitoring
- Overview of Azure Monitoring
- Configuring Azure Monitor
- Understanding Azure Metrics
- Log analytics and Azure Log Query
- Alerts and Notifications
- Creating alerts in Azure Monitor

Azure Service Bus Overview

- Introduction to Azure Service Bus
- Service Bus components
- Enabling diagnostics for Service Bus
- Metrics and logs specific to Service Bus
- Service Bus Explorer and troubleshooting

AZURE DEVOPS



Azure Repos,



Azure Pipelines,



Azure Boards,



Azure Test Plans

- Setting up Azure DevOps
- Creating an Azure DevOps account
- Organization and Project setup
- Access control and permissions

Azure Repos & Artifacts:

- Source Code Management with Azure Repos
- Overview of Azure Repos & Artifacts
- Working with Repos
- Cloning repositories
- Creating and managing branches

Azure DevOps



Azure Boards



Azure Repos



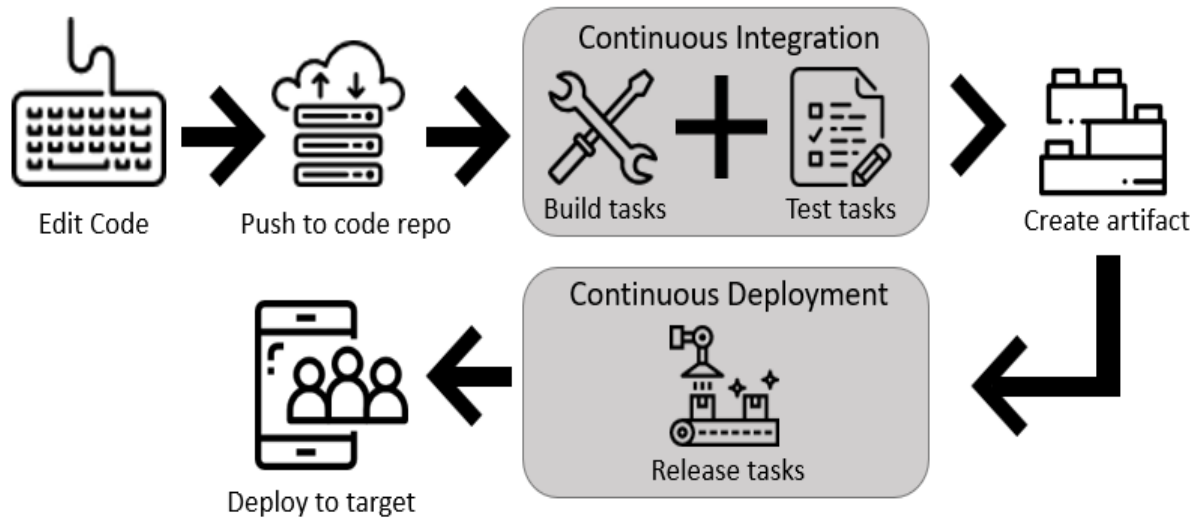
Azure Pipelines



Azure Test Plans



Azure Artifacts



Azure Pipelines:

- Continuous Integration with Azure Pipelines
- Introduction to CI/CD
- Configuring Build Pipelines
- Continuous Deployment with Azure Pipelines
- Introduction to Deployment
- Creating Release Pipelines
- Configuring stages and tasks

Azure Boards:

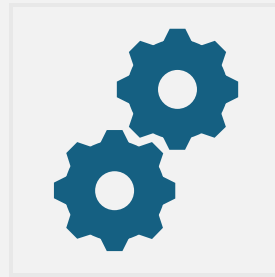
- Overview of Azure Boards
- Customizing boards
- Dashboards and reports
- CI/CD Integration project using Azure DevOps.

Azure DevOps CI integration with AKS

Complimentary Session



Linux Session



Powershell scripting
Basics



SQL basics



THANK YOU



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TECHNOLOGIES