

Introduction to cloud computing

- ➔ What is Cloud?
- ➔ History and evolution of cloud
- ➔ Cloud computing concepts
- ➔ Public, Private, Hybrid clouds
- ➔ IAAS,SAAS,PAAS Cloud Models
- ➔ Public Clouds
 - Azure, AWS, Oracle cloud, IBM.

Microsoft Azure Infrastructure and Deployment

1.Manage Subscriptions and Resources

Module 1: Managing Azure Subscriptions

Lessons

- Overview of Azure Subscriptions
- Billing
- Azure Policy

Module 2: Access Management for Cloud Resources

Lessons

- Azure Users and Groups
- Role-based Access Control

Module 3: Monitoring and Diagnostics

Lessons

- Exploring Monitoring Capabilities in Azure
- Azure Alerts
- Azure Activity Log

Module 4: Log Analytics

Lessons

- Introduction to Log Analytics
- Querying and Analyzing Log Analytics Data

2. Implementing and Managing Storage

Module 1: Overview of Azure Storage

Lessons

- Azure storage accounts
- Data replication
- Azure Storage Explorer

Module 2: Storage Services**Lessons**

- Virtual machine storage
- Blob storage
- Azure files
- Structured storage

Module 3: Securing and Managing Storage**Lessons**

- Shared access keys
- Azure backup
- Azure File Sync

Module 4: Storing and Accessing Data**Lessons**

- Azure Content Delivery Network
- Import and Export service

Module 5: Monitoring Storage**Lessons**

- Metrics and Alerts
- Activity Log

3.Deploying and Managing Virtual Machines**Module 1: Overview of Azure Machines****Lessons**

- Azure Virtual Machines Overview
- Planning Considerations

Module 2: Creating Virtual Machines**Lessons**

- Overview of the Virtual Machine Creation Overview
- Creating Virtual Machines in the Azure Portal
- Creating Virtual Machines (PowerShell)
- Creating Virtual Machines using ARM Templates

Module 3: Deploying Virtual Machine Images

Lessons

- Deploying Custom Images
- Deploying Linux Virtual Machines

Module 4: Configuring Virtual Machines

Lessons

- Overview of Virtual Machine Configuration
- Virtual Machine Networking
- Virtual Machine Storage

Module 5: Configuring Availability and Extensibility

Lessons

- Virtual Machine Availability
- Virtual Machine Scalability
- Applying Virtual Machine Extensions

Module 6: Managing and Monitoring Virtual Machines

Lessons

- Backup and Restore
- Monitoring Virtual Machines

Module 7: Scaling and Performance

Lessons

- Scale Up and Scale Out
- Autoscale and Grow out
- Optimizing Bandwidth and Web Traffic

4. Configuring and Managing Virtual Networks

Module 1: Azure Virtual Networks

Lessons

- Introducing Virtual Networks
- Creating Azure Virtual Networks
- Review of IP Addressing
- Network Routing

Module 2: Azure DNS

Lessons

- Azure DNS Basics
- Implementing Azure DNS

Module 3: Securing virtual Network Resources**Lessons**

- Introduction to Network Security Groups
- Implementing Network Security Groups and Service Endpoints

Module 4: Connecting Virtual Networks**Lessons**

- Inter site Connectivity (VNet-to-VNet Connections)
- Virtual Network Peering

5. Manage Identities**Module 1: Managing Azure Active Directory****Lessons**

- Azure Active Directory Overview
- Self-Service Password Reset
- Azure AD Identity Protection
- Integrating SaaS Applications with Azure AD

Module 2: Managing Azure Active Directory Objects**Lessons**

- Azure Domains and Tenants
- Azure Users and Groups
- Azure Roles
- Managing Devices

Module 3: Implementing and Managing Hybrid Identities**Lessons**

- Azure Active Directory Integration Options
- Azure AD Application Proxy

6. Secure Identities**Module 1: Introduction to Identity Protection in Azure**

Lessons

- Role-Based Access Control
- Azure Active Directory (Refresher)
- Protecting Privileged Access in the Environment

Module 2: Using Multi-Factor Authentication for Secure Access

Lessons

- Introducing Multi-Factor Authentication
- Implementing MFA

Module 3: Azure AD Privileged Identity Management

Lessons

- Getting Started with PIM
- PIM Security Wizard
- PIM for Directory Roles
- PIM for Role Resources

7. Introduction to Kubernetes using Docker:

Module 1: Working with Docker

Lessons:

- Deep Dive into architecture
- Running images with Docker
- Docker Hub pull
- Docker Build create own images

Module 2: All about kubernetes

Lessons:

- Creating Cluster
- Deploying app to cluster
- Push images container Registry

ADDITIONAL OVERVIEW

- ➔ Introduction to AWS
- ➔ AWS EC2
- ➔ EC2 Essentials
- ➔ Build EC2 instances
- ➔ Security Groups
- ➔ Key Pairs,AMI.