



IT EDUCATION
CENTRE

Azure Training



Introduction to Microsoft Azure

- Account Setup, Adding Subscription, Free and Paid Subscriptions
- Introduction to Console, General Settings.

Manage Resource Groups

- Concept and Regions of Resource Group,
- Creation and Deletion of Resource Group
- Use Azure policies for resource group
- Configure resource locks
- Configure resource policies
- Implement and set tagging on resource groups
- Network Watcher Resource Group

Virtual Machines (VM)

- Introduction to VM.
- VM purchase options in Azure.
- VM types and pricing in Azure.
- KeyPair concepts, creation on non-Azure tools, .ppk and .pem format.
- Deploy Windows and Linux Vms.

► Manage Azure VM:

- Manage VM Sizes.
- Add Data Disk.
- Add Network Interface.
- Opening Ports.
- Configuring Static IP to Instance.
- Configure Boot Scripts.
- Configure Monitoring VM
- Move VMs from one Resource Group to another

► VM Storage:

- Introduction to Managed Disks.
- Types of Disks.
- Creating Managed Disks.
- Attaching Managed Disks to Instances.
- Managed Disk Snapshots.
- Migration of Managed Disk Snapshots.
- Restoring Managed Disk Snapshots.

► Automate Deployment of VMs:

- Introduction to Load Balancer(LB).
- Public facing and Internal LB.
- Concepts of Availability Set, Fault Domains Update Domains.
- Configure and Implement LB.
- Backend Pool, Health Probe and Load balancing Rules Concepts.
- Adding VMs to Backend Pool.
- Test Load Balancing and High availability

► VM Load Balancing:

- Introduction to Load Balancer(LB).
- Public facing and Internal LB.
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- Adding VMs to Backend Pool.
- Test Load Balancing and High availability.

► VM Scale Sets:

- Introduction and concepts of Auto Scaling.
- Configure and deploy Scale Sets.
- Scale Out and Scale In
- Auto Scaling Policies.
- Testing Auto Scaling Configuration

► Manage VM backups:

- Configure VM backup
- Define and Implement backup policies
- Perform VM restore

► Migrating On-Prem VM to Azure:

- Migration concepts and Prerequisite.
- Migrate by using Azure Site Recovery (ASR).
- Migrate using P2V.
- Create a recovery services vault.
- Prepare source and target environments.
- Deploy Azure Site Recovery (ASR) agent, prepare virtual network.

Azure Storage

► Azure Storage Account:

- Introduction to Storage Accounts.
- Create and configure Storage Account.
- Storage Performance types.
- Types of Storage Accounts.
- Storage redundancy options.
- Storage Access Tiers.
- Azure Storage Services – Blobs, Files, Disks, Queues and Tables.
- Storage Secure Transfer, Allow Access and Data Protection
- Manage Access Keys.
- Storage account scale limits

► Azure Blob Storage:

- Create and Configure Blob Container.
- Blob Container Access level.
- Upload data in container.
- Access data from container.
- Manage snapshots of Blob Objects.
- Azure Storage Explorer
- Cloudberry Storage Explorer
- Configure Access Policy

► Azure Files Storage:

- Introduction to File shares.
- Configure File Share Quota.
- Mounting File Share on multiple Instances Simultaneously.
- Configure Access Policy.

► Azure Backup:

- Backup Concepts.
- Pricing of Azure Backup vs On-Prem Backup Technologies.
- Configure Recovery Service Vault.
- Perform backup operation
- Create and configure backup policy
- Perform a restore operation

DNS

- Introduction to Name Resolution.
- Domain Name Registration and Domain Name Registrars.
- Hosting Zones in Azure DNS zones.
- Public and Private Zones.
- Creating Records and testing them.
- Record Types, Load Balancing.

Azure App Services (Vapp)

- Introduction to On-Prem Application Hosting Technologies.
- Introduction to VAPP.
- App Service Pricing Tiers.
- Application Insights.
- Build and Deploy VApp using GitHub Repository.
- Build and Deploy VApp using Local Git Repository.
- Configuration of Application Environment.
- Deploy a Custom Application.
- Creating Application Clone.
- Swapping Application URL's
- Configure Azure content delivery network (CDN) integration

Azure Database

- Azure SQL Databases:
 - Introduction to MSSQL.
 - Create SQL Database.
 - Configure Compute and Storage tiers.
 - Disaster recovery – DB Backup.
 - Configure and use SQL Server Management Studio.
 - Configure and Manage SQL Database.

► Azure Databases for MySQL:

- Introduction to MySQL.
- Create MySQL Database.
- Configure Pricing Tiers.
- Disaster recovery – DB Backup.
- Configure and use MySQL Workbench.
- Configure and Manage SQL Database.

Azure Automation

- Introduction to Automated Provisioning.
- Azure Cloud Formation concepts.
- Introduction to Runbooks, Runbooks Library.
- Runbook Types – PowerShell, Python, Graphical
- Configure and Publish Runbooks templates from Library.

Manage Identities

- Introduction to AD, Adding custom Domain to Azure.
- Creating AD Users and Groups.
- Manage User and Group properties.
- Synchronizing AD tenants to Azure AD.
- Configure Azure AD Connect.
- Managing Azure AD with PowerShell.

Access Control (IAM)

- Introduction to Access Control (IAM)
- Manage role-based access control (RBAC)
- Adding Role Assignments.
- Implement Multi-Factor Authentication (MFA) for an Azure AD tenant.

Application Gateway

- Introduction to Application Layer Load Balancing.
- A web traffic load balancer.
- Application Gateway Profile, prepare web servers.
- Application Gateway backend pool.
- Prepare testing Environment.
- Application Gateway Pricing

Traffic Manager

- Introduction to DNS-based traffic load balancer.
- Traffic Manager Profile, Routing Methods.
- Prepare web servers, Traffic Manager endpoints.
- Prepare testing virtual machines.
- Check DNS based load balancing.
- Traffic Manager Pricing.

MONITOR AND TROUBLESHOOT VIRTUAL NETWORKING

- Virtual Network Troubleshooting
- Network watcher
- Connection Monitor
- IP Flow verify
- NSG Flow logs
- Network Diagnostic logs
- Overview of Azure Monitor
- Enabling Diagnostic for Resources
- Adding Guests OS Host Diagnostics
- Running Basic Kusto Queries on logs

POWERSHEET and CLZ

- Installing Powersheet and Azure CLI
- Memorizing Powersheet and CLI Commands
- Deploying resources with Azure CLZ

ARM

- What is ARM template
- Read ARM template
- Modify Arm template
- Create ARM template using VSCode
- Deploy Resources using ARM template

INTRODUCTION OF CONTAINERS AND ARCHEDTRIAN TOOLS

- What are microservices
- Containers
- Kubernetes and Kubernetes Cluster

GIT

- What is Git and GitHub
- Git commands
- Uploading project on GitHub
- GitHub settings
- Git branches