Microsoft Azure Syllabus

Module-1: Cloud Computing & Microsoft Azure Fundamentals

- Introduction to Azure
- Different segments SaaS, PaaS, and IaaS
- Azure Regions and Data Centers
- Understanding of Microsoft Azure portal
- Introduction to all Azure services
- Windows Azure Subscription
- Setting Up a Trial Subscription

Lab:

Installation of Azure cmdlets on windows PowerShell

Module-2: Azure Virtual Machines

- Operating System Images Supported
- Virtual Machine instances
- Azure VM types and Pricing
- Types of Provisioning
- Disks & Images
- Virtual Machine management, automation and scripting
- Cloud Service and Resource Model Deployment
- Setting up VM in Availability set using Load Balanced Endpoint
- VM Availability using Availability Sets

Lab:

- Creation of VMs with portal, ARM Templates and PowerShell
- Deploying two VMs in Availability Set and load balancing it.

Module-3: Introduction to Azure Virtual Network and Services

- Types of Azure Virtual Network VNET to VNET, point-to-site and site-to-site, Express Route
- Creating Virtual Networks in Azure
- Azure Subnet and IP ranges
- Endpoints
- Load Balancing Endpoints
- Understanding Network ACL and Network Security Group Setting up Private and Public IP
- Introduction to Azure Traffic Manager
- Available options in Azure Traffic Manager
- Understanding of Deployment Traffic Manager

Lab:

- Create a VET-to-VNET virtual networks
- Create a point-to-site virtual network.
- Create a site-to-site virtual network.
- Load Balancing using Azure Traffic Manager.

Module-4: Microsoft Azure Storage

- Overview of Microsoft Azure Storage
- Storage Account
- Storage Account Replication Techniques
- Protocols and Consistency Model
- Type of Azure Storage Account
- Storage Services Blob, Table, queue, File
- Azure CDN Services, Managed and Unmanaged Disk

Lab:

- Provisioning Azure Storage services
- Create an Azure Storage Account
- Deploying Blob Storage
- Deploying Table Storage
- Deploying Queue Storage
- Deploying File Storage

Module-5: Manage AzureActive Directory (AD)

- Azure Active Directory Overview
- Self-Service Password Reset
- Azure AD Identity Protection
- Integrating SaaS Applications with Azure AD
- Azure Domains and Tenants
- Azure Users and Groups
- Azure Roles
- Managing Devices

Lab:

- Implement Azure Active Directory.
- Configure Self-Service Password Reset
- Implement Azure AD Identity Protection
- Configure integrated SaaS applications
- Configure domains and tenants, users and groups
- Manage roles and devices
- Migration of OnPrem AD Users to Azure AD
- Configure MFA

Module 6: Manage App Service Plans

- App Service Overview
- App Service monitoring overview
- Web Role and Worker Role

Lab:

- App Service Plan
- Deploy Web App
- App Service Diagnostics

Module 7: Azure SQL Database

- Understanding Database as a service
- Difference between SQL server and Azure SQL
- Advantage and Benefits of SQL database Scaling SQL database
- Backup and Performance Options Security in Azure
- SQL Pricing Model
- Azure SQL Data Warehouse

Lab:

- Migrate a database from on premise to SQL Azure

Module-8: Azure Backup and Site Recovery

- **Azure Vaults**
- Configuring backups
- Data Protection Manager
- Azure Site Recovery and Disaster Recovery
- On Premise Migration using Recovery Services

Lab:

- Configure a Recovery Service Vault and backup files from on premise to cloud
- Site Recovery of a VM
- Back up of a VM

BELOW Content is for Developing Solutions for Microsoft Azure – AZ -203 Exam [Will be conducted extra]

Module-9: Azure ARM Template

- Introduction to Azure ARM Templates and its content

Lab:

- Deploying ARM Template with PowerShell

Module 10: Configure Serverless Computing

- Serverless Computing, Functions and Logic Apps

Lab:

- Logic Apps
- Creating a Function App

Module 11: Manage App Services

- App Settings
- Deployment Slots

Labs:

- App Settings
- Deployment Slots

Module 12: Data Factory

- Introduction to Azure Data Factory
- Core Concepts – Data sets, Pipelines and activities, Scheduling and execution
- Run Samples – Customer Profiling

- Moving Data, Transformation and Analysis
- Monitoring and managing the Pipelines
- Common Use Cases and Samples

Lab:

- Orchestrating the On-Prem data from SQL DB to Azure DB by creating a data pipeline using Blob storage.

Module-13: Azure Container Service

- Introduction to Azure Container Service
- Overview of Containers
- Introduction to Azure Container Registry
- Azure Kubernetes Services
- Introduction

Lab:

- Deploy an Azure container registry
- Build a container image using Azure Container Registry Tasks
- Deploy the container to an Azure container instance
- Replicate the container image to multiple Azure datacenters
- Run Docker containers with Azure Container Instance
- Run Azure Container Instances
- Deploying AKS in Azure