

AZ-103: MICROSOFT ADMINISTRATOR

Please open **About Azure Course at Deccansoft.docx** attached in same email.

COURSE OVERVIEW

This course teaches IT Professionals how to manage their Azure Infrastructure including Manage Subscriptions and Resources, Configure and Manage Virtual Network, Implement and Manage Storage, Deploy and manage with VM, Manage Identities using Azure Active Directory

This, Microsoft Azure training is targeted for ANYONE who wants to move their current skillset to Microsoft Azure cloud, taking the benefit of unlimited computing, storing and networking power, for the personal career growth.

PREREQUISITES:

This course is an essential for all those I.T Professionals or Administrators who either directly or indirectly work on or provides solutions on Microsoft Platform for building, maintaining and monitoring enterprise scale applications using latest Cloud Computing features and services.

Applicable careers include

- Solution Architects / Enterprise Architects / Team Leads
- Storage Administrators / Security Administrators
- Network Engineers / Server Engineers / Virtualization Engineers

WHAT YOU'LL LEARN / COURSE OBJECTIVE

- Manage Azure subscriptions and billing, and implement Azure policies.
- Implement access management with Azure users, groups, and role-based access control.
- Use Azure Monitor to configure Azure alerts and review the Azure Activity Log.
- Query and analyze Log Analytics data.
- Deploy resources with ARM templates and organize Azure resources.
- Optimize your use of Azure tools like the Azure portal, Azure PowerShell, Cloud Shell and the Azure CLI.
- Create Azure storage accounts for different data replication, pricing, and content scenarios.
- Implement virtual machine storage, blob storage, Azure files, and structured storage.
- Secure and manage storage with shared access keys, Azure backup, and Azure File Sync.
- Store and access data using Azure Content Delivery Network, and the Import and Export service.
- Monitor Azure storage with metrics and alerts, and the Activity Log.
- Understand virtual networking components, IP addressing, and network routing options.
- Implement Azure DNS domains, zones, record types, and resolution methods.
- Configure network security groups, service endpoints, logging, and network troubleshooting.

- Use Azure Migrate to discover and assess on-premises virtual machine migration to Azure.
- Use Azure Site Recovery to migrate Hyper-V infrastructures to Azure.
- Review migration strategies for VMWare and System Center VMM virtual machines.
- Implement use cases and configuration options for Azure App Services and App Service Environments.
- Manage and secure web apps with backup, restore, snapshot, and cloning.
- Optimize your web app performance with Scale Up, Scale Out, Autoscale, and Grow out strategies.
- Deploy serverless computing features like Azure Functions, Event Grid, and Service Bus.
- Implement and configure Azure Load Balancer, Azure Traffic Manager, and Azure Application Gateway.
- Implement and configure Site-to-Site VPN connections and ExpressRoute.
- Implement and configure Network Watcher and troubleshooting common network issues.
- Implement site connectivity schemas including VNet-to-VNet connections and virtual network peering.
- Explain virtual machine usage cases, storage options, pricing, operating systems, networking capabilities, and general planning considerations.
- Create Windows virtual machines in the Azure Portal, with Azure PowerShell, or using ARM Templates.
- Deploy custom server images and Linux virtual machines.
- Configure virtual machine networking and storage options.
- Implement virtual machine high availability, scalability, and custom scripts extensions.
- Backup, restore, and monitor virtual machines.
- Implement Azure Active Directory, Self-Service Password Reset, Azure AD Identity Protection, and integrated SaaS applications.
- Configure domains and tenants, users and groups, roles, and devices.
- Implement and manage Azure Active Directory integration options and Azure AD Application Proxy.
- Use Azure RBAC to grant a granular level of access based on an administrator's assigned tasks.
- Use Azure Multi-Factor Authentication to configure a strong authentication for users at sign-in.
- User Azure AD Privileged Identity Management to configure access rights based on just-in-time administration.

CERTIFICATION



Part of requirements for: Azure Administrator

With Microsoft Certification, technology professionals are more likely to get hired, demonstrate clear business impact, and advance their careers.

[ABOUT THE CERTIFICATION](#)

COURSE SYLLABUS

Cloud Computing Introduction

- What is Cloud Computing

Deccansoft Software Services – <http://www.deccansoft.com> / <http://www.bestdotnettraining.com>

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- Cloud Characteristics
- Cloud Computing Service Models
- Deployment Models in Cloud Computing
- Advantages and Disadvantages of Cloud Computing
- Cloud Computing Job Roles.
- Cloud Computing Platforms and Certifications.

Getting Starting with Azure

- Introduction to Azure
- Why, What and Benefits of Azure
- Azure Hosting Models
- Azure Services
- Subscribing to Microsoft Azure
- Azure Portals
- Azure Key Concepts
- Azure Resource Group
- Installing Microsoft Azure SDK

Configure and Manage Azure Virtual Networks

- Overview of Azure Networking
- Virtual Network Benefits
- Understanding Network Resources
- Implement and manage virtual networking
 - Create a VNet using Azure Portal
 - Create a Subnet
 - Configure private and public IP addresses
 - Create Network Interface Card with public, and private IP addresses
 - Create a Virtual Machine
- Setup Network Security Group
 - Create security rules
 - Associate NSG to a subnet or network interface
 - Identify required ports
 - Evaluate effective security rules
- Understanding Azure DNS
 - Configure Azure DNS

- Public and Private DNS Zones
- Create connectivity between virtual networks
 - Create and configure VNET peering
 - Create and configure VNET to VNET
 - Verify virtual network connectivity

Managing Azure with Windows PowerShell and Azure CLI.

- Installing the required modules
- Login to Azure Portal
- Managing Resource Group and Resources
- Azure CLI Introduction and Setup
- Creating Resources
- Listing and Formatting output
- Connect a Web App to SQL Database
- Deleting Resources
- Interactive Mode

Azure Storage

- Importance of Azure Storage Service
- **Configure network access to the storage account**
- Creating Storage Account
- Install and use Azure Storage Explorer
- Manage access keys
- Implement Storage Replication Models
 - Locally Redundant Storage
 - Zone Redundant Storage
 - Geo Redundant Storage
 - Read Access Geo Redundant Storage
- Implement Azure storage blobs
 - Read data, change data, set metadata on a container, store data using block and page blobs, stream data using blobs, access blobs securely, implement async blob copy, configure a Content Delivery Network (CDN), design blob hierarchies, configure custom domains, scale blob storage
- Configure Azure Files
 - Create Azure file share
 - Create Azure File Sync service

- Create Azure sync group
 - Troubleshoot Azure File Sync
- Manage Access
 - Create and manage shared access signatures, use stored access policies, regenerate keys.
 - Configure and use Cross-Origin Resource Sharing (CORS)
- Azure Table Storage
- Azure Queue Storage
- Monitor activity log by using Log Analytics

Deploy and Manage Virtual Machines

- About Virtual Machine Workloads
- Create and configure VM
 - Create a Virtual Machine using Portal
 - Create a Virtual Machine using PowerShell
 - Understand and Capture VM Images
 - Upload an on-premise VHD to Storage Account
 - Deploy a New VM from the Captured Image
 - **Configure high availability**
 - Virtual Machine Scale Sets
- Automate deployment of VMs
 - Modify ARM Templates
 - Configure Location of new VMs
 - Configure VHD template
 - Save and Deploy from template
- Manage Azure VM
 - Virtual Machine Sizes
 - Virtual Machine Disks
 - **Redeploy VMs**
- Perform configuration management
 - VM Extensions & VM Agents
 - Custom Script Extensions
 - Desired State Configuration (DSC)
- Monitoring, Debugging and Diagnosis
 - Retrieve Diagnostics data
 - View Streaming Logs

- Configure endpoint monitoring
- Configuring Alerts
- Configure diagnostics
- Use remote debugging
- Monitor Web App resources
- Azure Application Insights
- Configure serverless computing
 - Create and manage objects;
 - Manage a Logic App resource;
 - Manage Azure Function app settings
 - Manage Event Grid
 - Manage Service Bus

Manage resource groups

- Use Azure policies for resource groups
- Configure resource locks
- Configure resource policies
- Implement and set tagging on resource groups
- Move resources across resource groups
- Remove resource groups

Manage Azure Subscriptions

- Assign administrator permissions
- Configure cost center quotas and tagging
- Configure Azure subscription policies at Azure subscription level

Analyze resource utilization and consumption

- Configure diagnostic settings on resources
- Create baseline for resources
- Create and test alerts.
- Analyze alerts across subscription
- Analyze metrics across subscription
- Create action groups
- Monitor for unused resources
- Monitor spend; report on spend;

- Utilize Log Search query functions
- View alerts in Log Analytics

Implement Azure backup

- Configure VM backup
- Perform backup operation
- Create Recovery Services Vault
- Create and configure backup policy
- Perform a restore operation
- Configure and review backup reports

Managing Identities

- Manage Azure Active Directory (AD)
 - Azure AD Introduction
 - Adding a custom domain name to Azure AD
 - Multiple Active Directories
 - Configure Azure AD Identity Protection
 - Azure AD Join, and Enterprise State Roaming
 - Configure self-service password reset
 - Implement conditional access policies
 - Perform an access review
- Manage Azure AD Objects
 - Managing Users, Groups and Devices
 - Manage user and group properties
 - Manage device settings
 - Perform bulk user updates
- Implement and manage hybrid identities
 - Synchronizing On-Premise AD Identities with Azure AD Connect
 - Using Single Sign-On with Azure AD
 - Manage Azure AD Connect
 - Manage Password Sync and Writeback
- Integrating Gallery Applications with Azure AD

Implement Advanced Virtual Networking

- Load Balancing

- Configure external and internal Azure Load balancer
- Load Balancing Rules
- Implement front end IP configuration
- Azure Application Gateway
- Azure Traffic Manager
- Integrate on-premises network with Azure virtual network
 - Point-to-Site Network using Azure VPN Gateway
 - Site-to-Site VPN
 - Express Route Solution
- Monitor and Manage Networking
 - Verify, Manage and Monitor on-premises connectivity;
 - Use network resource monitoring and Network Watcher
 - Manage external networking and virtual network connectivity

Implement and Manage Application Services

- Introduction
- App Service - Application Types
- Deploy Web Apps
 - Deploying Web App directly from Visual Studio
 - Automate deployment from Dropbox and One Drive
 - Create, configure and deploy packages
 - Implement pre- and post-deployment actions;
- App Service plans;
 - Create App Service Plan
 - Migrate Web Apps between App Service plans;
 - Create a Web App within an App Service plan
- Configuring Web Apps
 - Application Settings Configuration,
 - Database Connection Strings,
 - Configuring Handlers and Virtual Directories,
- Manage App Services
 - Configure a custom domain name
 - Enable SSL for your custom domain
 - Understanding Deployment Slots and Rollback deployments;
 - App Service Protection
 - Manage Roles for an App service

- Configure Web Apps for scale and resilience
 - Horizontal and Vertical Scaling of a Web App
 - Configure auto-scale
 - Change the size of an instance
- Monitoring, Debugging and Diagnosis
 - Retrieve Diagnostics data
 - View Streaming Logs
 - Configure endpoint monitoring
 - Configuring Alerts
 - Configure diagnostics
 - Use remote debugging
 - Monitor Web App resources
- Azure Traffic Manager to Scale out Globally
- Manage Azure Logic App resource
- Manage Azure Functions App Settings
- Manage Event Grid
- Manage Service Bus

Secure Identities

- Implement Multi-Factor Authentication
 - Enable MFA for an Azure AD tenant
 - Configure user accounts for MFA
 - Configure fraud alerts
 - Configure bypass options
 - Configure trusted IPs
 - Configure verification methods
- Configuring Role Based Access Control
 - Create a custom role
 - Configure access to Azure resources by assigning roles
 - Configure management access to Azure
 - Troubleshoot RBAC
 - Implement RBAC policies
 - Assign RBAC roles
- Implement Azure Active Director (AD) Privileged Identity Management (PIM)
 - Activate a PIM role

- Configure just-in-time access, permanent access, PIM management access, and time-bound access
- Create a Delegated Approver account
- Enable PIM
- Process pending approval requests

Migrate Servers to Azure

- Managing Azure Active Directory
 - Overview of Cloud Migration
 - Azure Migrate: The Process
- Azure Site Recovery
 - Overview of ASR
 - Preparing the Infrastructure
 - Completing the Migration Process
- Additional Migration Scenarios
 - VMWare Migration
 - System Center VMM Migration

Azure Automation

- Introduction
- Azure Automation Account
- New Automation Runbook
- PowerShell Runbook
- Graphical Runbook
- Runbook Input Parameters
- Azure Automation DSC