



## About Us

NOVATEC, is founded by experienced information technology professionals and instructors and provides professional I.T. training courses in order to prepare qualified individuals to launch their careers in this ever changing technology world.

Our courses are focused on practical and in house trainings which gives the individual the confidence and exposure of real-world scenarios and problem-solving approach.

## Classroom Facility at Wakad, Pune





## **Azure Administrator AZ-104 Training**

### **What will Participants Learn?**

This training course provides you a beginner to advanced insight into different services of Microsoft Azure such as Storage, Virtual Machines, Websites, Cloud Services, Azure Active Directory, Virtual Networks, Backup & Site Recovery through a Hands-On. Participants will be able to Configure Application Integration with Azure AD and also Plan and Design ARM templates to deploy resources.

### **Course Description**

The training covers the complete offerings of Azure for Azure Infrastructure, how to use them. Theoretical discussion and hands-on demo on this will be done.

### **System Requirements:**

- Memory – Minimum – 8GB RAM
- Processor – Intel Core i3 CPU @ 2.0 GHz or above
- Storage – 250 GB HDD/SDD or above
- Operating System – Windows 10
- Open internet with no proxy blocks to connect for virtual machines.



## **Module-1: Microsoft Azure Fundamentals**

- Introduction to Microsoft Azure
- Azure Cloud Service Models - SaaS, PaaS, and IaaS
- Understanding Azure Regions and Availability Zones
- Walkthrough of Microsoft Azure portal
- Introduction to Azure services
- Overview of Microsoft Azure Subscriptions
- Setting Up a Azure Trial Subscription

### **Hands on Labs:**

- Creating Azure Free tier Account
- Installation of Azure PowerShell Module

## **Module-2: Azure Virtual Machines**

- Overview of Azure Virtual Machines
- Operating System Images
- Virtual Machine instances
- Azure VM types and Pricing
- Types of Provisioning
- Azure Virtual Machine - Data Disks (persistent storage)
- Virtual Machine management, automation and scripting
- Cloud Service and Resource Model Deployment
- Azure VM Extensions
- Azure VM Availability Sets



- Azure VM Load Balancers
- Azure VM - Pricing
- Azure VM - Real World Use-cases and Best Practices

#### Hands on Labs:

- Creating Azure VM using portal
- Creating Azure VM using CLI
- Creating Azure VM using ARM Template
- Deploying Load Balancing solution with Azure VM and Load Balancer

### **Module-3: Introduction to Azure Virtual Network and Services**

- Overview of Azure Virtual Network service
- Networking Basics Primer
- Creating Virtual Network and Subnet in Azure
- Azure Virtual Network Endpoints
- Azure Load Balancing Endpoints
- Understanding Network Security Group
- Setting up Private and Public IP for Network Resources
- Introduction to Azure Traffic Manager
- Available options in Azure Traffic Manager
- Understanding of Deployment Traffic Manager
- Azure Virtual Network connectivity types:
  - VNet to VNet
  - Point-to-Site
  - Site-to-Site
  - Express Route

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#### Hands on Labs:

- Creating an Azure Virtual Network and Subnets
- Configuring the security for Subnet with NSG
- Setting up VNet-to-VNet peering
- Setting up a point-to-site connectivity
- Setting up load Balancing using Azure Traffic Manager

#### **Module-4: Azure Storage Accounts**

- Overview of Azure Storage Account
- Type of Azure Storage Account
- Storage Services Blob, Table, queue, File
- Storage Account Replication Techniques
- Azure Storage - Shared Access Signature (SAS) and Access Token

#### Hands on Labs:

- Creating an Azure Storage Account
- Creating an Azure Blob Storage + Container and upload few files
- Configure SAS for Azure Storage Account



## **Module-5: Azure Authentication**

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

### Hands on Lab:

- Implementing Azure Active Directory
- Configuring Self-Service Password Reset (SSPR)
- Implementing Azure AD Identity Protection
- Configuring integrated SaaS applications
- Configuring domains and Tenants, Users and Groups
- Configuring AD Roles
- Configure MFA

## **Module-6: Azure APP Service**

- Overview of Azure App Service and App Service Plan
- Understanding the Azure App service configurations
- Azure App Service - Deployment Slots
- Azure App Service - Pricing
- Azure App Service Monitoring Overview
- Azure App Service - Real World Use-cases and Best Practices

### Hands on Labs:

- Creating a WebApp with Service Plan
- Deploying WebApp in Azure

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## **Module-7: Azure Backup and Site Recovery**

- Overview of Azure Backup service
- Conceptual Architecture of Azure Backup solution
- Azure Backup Vaults
- Configuring backups for Azure Resource
- Azure Site Recovery (ASR) and Disaster Recovery (DR)
- Real world use-case: On-premise Migration using Recovery Services
- Azure Backup - Pricing

### **Hands on Labs:**

- Enabling automatic backups for Azure resources (Azure VM, Data Disks etc.)

## **Module-8: Azure ARM Templates**

- Understanding the concept of Infrastructure-as-Code (IaC)
- Introduction to Azure ARM Templates
- Different ways of deploying ARM Templates
- Overview of other IaC tools
- Azure ARM Templates - Use-case, Best Practices and Pricing

### **Hands on Labs:**

- Provisioning Azure resources with the ARM templates





## **Module-9: Azure Container Services**

- Containerization concept Primer
- Introduction to Azure Container Service
- Introduction to Azure Container Registry
- Introduction to Azure Container Instances
- Introduction to Azure Kubernetes Services (AKS)
- Understanding AKS Conceptual Architecture

### **Hands on Lab:**

- Creating an Azure Container Instance
- Deploying a sample Application in Azure Container Instance

## **Module-10: Azure DevOps Services**

- DevOps Primer
- Understanding the basics of CI/CD and DevOps practices
- Introduction to Azure DevOps Services
- Azure Pipeline, Azure Repos, Azure Artifacts and Azure Boards
- Understanding the conceptual Architecture of Azure DevOps services
- Azure DevOps services - Real-world use-cases
- Azure DevOps Services - Pricing

### **Hands on Labs:**

- Creating an end-to-end Azure DevOps Pipeline to deploy an application to Azure VM/Storage Account



### **Module-11: Monitoring and Logging**

- Azure Virtual Machine Logging
- Function App Logging
- Azure Monitor

#### Hands on Lab:

- Monitoring and Logging to help troubleshooting

### **Module-12: Data Security**

- Data Encryption - Storage Account
- Azure Key Vault
- Hands on Labs

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