

# MICROSOFT AZURE

## MICROSOFT AZURE FUNDAMENTALS

### 1. Cloud Concepts

- ❖ Introduction
- ❖ The language of Cloud Computing
- ❖ The Economy of Cloud Computing
- ❖ Cloud Service Models
- ❖ Azure Market Place
- ❖ Cloud Architect Models

### 2. Azure Architecture

- ❖ Regions and Availability Zones
- ❖ Resource Groups and ARM
- ❖ Demo: Creating Azure Resources

### 3. Compute options on Azure

- ❖ Virtual Machines
- ❖ Demo: Create a VM
- ❖ Scale Sets

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ App Services
- ❖ Azure Container Instances
- ❖ Azure Kubernetes Service
- ❖ Azure Virtual Desktop
- ❖ Azure Functions
- ❖ Demo: Azure App Services

#### 4. Azure Networking

- ❖ Virtual Network
- ❖ Demo: Create a Virtual Network
- ❖ Load Balancer
- ❖ VPN Gateway
- ❖ Application Gateway
- ❖ Content Delivery Network
- ❖ Express Route

#### 5. Storage options in Azure

- ❖ Blob
- ❖ Disk
- ❖ File
- ❖ Archive
- ❖ Demo: Create a Storage account

#### 6. Database options in Azure

- ❖ Cosmos DB

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ Azure SQL
- ❖ Azure Database for MySQL
- ❖ Azure Database for PostgreSQL
- ❖ Database Migration Services

## 7. Azure – Authentication and Authorization

- ❖ Identity Services
- ❖ Azure Active Directory
- ❖ Multi-Factor Authentication
- ❖ Single Sign-On

## 8. Other Azure Services and Solutions

- ❖ Internet of Things
- ❖ Big Data
- ❖ Machine Learning
- ❖ Serverless
- ❖ DevOps

## 9. Azure Security

- ❖ Defence in Depth
- ❖ Securing Network Connectivity
- ❖ Public and Private Endpoints
- ❖ Microsoft Defender for Cloud
- ❖ Key Vault
- ❖ Azure Information Protection

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ Microsoft Defender for Identity
- ❖ Azure Sentinel
- ❖ Azure Dedicated Hosts
- ❖ Demo: Azure Key Vault

## 10. Azure – Privacy, Compliance and Trust

- ❖ Governance
- ❖ Azure Monitor
- ❖ Monitoring Tools
- ❖ Azure Service Health
- ❖ Azure Arc

## 11. Azure Pricing

- ❖ Subscriptions
- ❖ Cost Management
- ❖ Pricing Factor
- ❖ Demo: Using the pricing Calculator

## 12. Azure Support

- ❖ Plans
- ❖ Tickets
- ❖ Channels
- ❖ SLAs

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

## ❖ Service Life Cycle

### AZURE ADMIN

#### 1. Cloud Concepts

- ❖ Introduction
- ❖ The Language of Cloud Computing
- ❖ The Economy of Cloud Computing
- ❖ Cloud Service Models
- ❖ Azure Market Place
- ❖ Cloud Architect Models

#### 2. Azure Architecture

- ❖ Regions and Availability Zones
- ❖ Resource Groups and ARM
- ❖ Demo: Creating Azure Resources
- ❖ Azure Resource Manager
- ❖ Azure Portal and Azure Cloud Shell

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ Azure CLI and Powershell
- ❖ Using ARM Templates
- 3. Azure Networking
  - ❖ Virtual Network
  - ❖ Demo: Create a Virtual Network
  - ❖ Load Balancer
  - ❖ VPN Gateway
  - ❖ Application Gateway
  - ❖ Content Delivery Network
  - ❖ Express Route
  - ❖ NSGs
  - ❖ Azure DNS
  - ❖ Azure Firewall
  - ❖ Service Endpoints and Private EndPoints
  - ❖ Intersite Connectivity
  - ❖ Vnet Peering
- 4. Azure Storage
  - ❖ Storage Accounts
  - ❖ Blob
  - ❖ Disk
  - ❖ File
  - ❖ Archive
  - ❖ Blob Object Replication
  - ❖ Blob Life Cycle Management
  - ❖ Azure File Sync

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

5. Azure Compute Options
  - ❖ Virtual Machines
  - ❖ Demo: Create a VM
  - ❖ Scale Sets
  - ❖ App Services
  - ❖ Azure Container Instances
  - ❖ Azure Kubernetes Service
  - ❖ Azure Virtual Desktop
  - ❖ Azure Functions
  - ❖ Demo: Azure App Services
6. Identity and RBAC
  - ❖ Azure Active Directory
  - ❖ Users, Tenants, Groups
  - ❖ Multi-Factor Authentication
  - ❖ Single Sign-On
  - ❖ SSPR
  - ❖ AD Device Management
  - ❖ Roles in Azure
  - ❖ Assigning Access to Resources
  - ❖ Custom Roles
7. Monitoring
  - ❖ Azure Monitor
  - ❖ Setting up Alerts and Actions
  - ❖ Azure Monitor Logs
  - ❖ Monitor Insights

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ Application Insights
- ❖ Network Watcher
- 8. Backup and Recovery
  - ❖ Disaster Recovery
  - ❖ Azure Backup
  - ❖ Azure Site Recovery
  - ❖ Backup Reports
- 9. Database options in Azure
  - ❖ Cosmos DB
  - ❖ Azure SQL
  - ❖ Azure Database for MySQL
  - ❖ Azure Database for PostgreSQL
  - ❖ Database Migration Services
- 10. Azure Security
  - ❖ Defence in Depth
  - ❖ Securing Network Connectivity
  - ❖ Public and Private Endpoints
  - ❖ Microsoft Defender for Cloud
  - ❖ Key Vault
  - ❖ Azure Information Protection
  - ❖ Microsoft Defender for Identity
  - ❖ Azure Sentinel
  - ❖ Azure Dedicated Hosts
  - ❖ Demo: Azure Key Vault
- 11. Azure – Privacy, Compliance and Trust

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)



- ❖ Governance
- ❖ Azure Monitor
- ❖ Monitoring Tools
- ❖ Azure Service Health
- ❖ Azure Arc

## 12. Azure Pricing

- ❖ Subscriptions
- ❖ Cost Management
- ❖ Pricing Factor
- ❖ Demo: Using the pricing Calculator

## 13. Azure Support

- ❖ Plans
- ❖ Tickets
- ❖ Channels
- ❖ SLAs
- ❖ Service Life Cycle

## AZURE DEVOPS

### 1. Introduction

- ❖ What is DevOps
- ❖ A brief history about DevOps
- ❖ Goals of DevOps

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ DevOps Vs Traditional Silos
- 2. DevOps Concepts and Practices
  - ❖ Build Automation
  - ❖ Continuous Integration
  - ❖ Continuous Delivery and Continuous Deployment
  - ❖ Infrastructure as a Code
  - ❖ Configuration Management
  - ❖ Orchestration
  - ❖ Monitoring
  - ❖ Microservices
- 3. DevOps Tools
  - ❖ Tools for Build Automation and Continuous Integration
  - ❖ Tools for Continuous Integration
  - ❖ Tools for Virtualization and Containerization
  - ❖ Tools for Monitoring
  - ❖ Tools for Orchestration
- 4. DevOps and the Cloud
  - ❖ DevOps and GCP
  - ❖ DevOps and AWS
  - ❖ DevOps and Azure
- 5. Continuous Planning
  - ❖ Introduction to Agile
  - ❖ Various agile practices with Azure DevOps

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

- ❖ Azure Project Wiki
- 6. Continuous Versioning with Azure Repos
  - ❖ Source Control
  - ❖ Exploring Azure Repos
  - ❖ Configuring branches
  - ❖ Branching Strategies
  - ❖ Pull Request Workflow
  - ❖ Using Git tags to Organise a repository
  - ❖ Exploring Repository Permissions
- 7. Continuous Build with Azure Pipelines
  - ❖ Azure pipelines
  - ❖ Understanding Build Agents
  - ❖ Self Hosted Build Agents vs Microsoft hosted Agents
  - ❖ Agent Pools
  - ❖ Parallel Jobs
  - ❖ Classic Vs YAML pipelines
  - ❖ Pipeline as a Code (YAML)
  - ❖ Agent Demands
  - ❖ Multi Agent Builds
- 8. Continuous Integration with Azure Pipelines
  - ❖ Create a Release pipeline
  - ❖ Setting up Stages
  - ❖ Build and Release Tasks
  - ❖ Release approvals

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)

9. Continuous code analysis
  - ❖ Static Code Analysis
  - ❖ Dynamic code Analysis
10. Deployment Strategies and Miscellaneous topics
  - ❖ Deployment Patterns
  - ❖ Microservices vs Monolithic
  - ❖ Blue-Green deployment
  - ❖ Canary Releases and dark launching
  - ❖ A/B testing

SkillCentre Technologies Pvt Ltd

Hyderabad || Bengaluru

**Hyderabad:** Meghana Estates Block II, Arunodaya Colony, Madhapur, Hyderabad Pin:- 500081

**Bengaluru:** Sri Balaji Layout, Chandra Layout, Marathahalli, Bengaluru, Karnataka 560037

Contact no: Hyderabad: [7842266111](tel:7842266111) || Bengaluru: [9542266111](tel:9542266111)

<https://skill-centre.com/> || [info@skill-centre.com](mailto:info@skill-centre.com)