

AZURE COURSE CONTENTS

(Preparation of AZ-900: Microsoft Azure Fundamentals Exam)

Cloud Concepts

- What is Cloud Computing
- benefits of cloud computing
- Key Concepts and Terminology
- Economies of Scale
- Capex vs. Opex
- Public cloud
- Characteristics of Public Cloud
- Private Cloud
- Characteristics of Private Cloud
- Hybrid Cloud
- Characteristics of Hybrid Cloud
- Review and what next
- IAAS , PAAS, SAAS
- Use cases IAAS , PAAS, SAAS

Azure Pricing and Support

- Azure Subscriptions
- Create your Free Azure Account
- What are Management Groups
- Purchase Azure Product & Available Options
- Usage Metrics
- Factors Affecting Costs
- The concept of Zones for Billing
- Azure Pricing Calculator
- Azure Total Cost of Ownership
- Ways to Minimize Costs in Azure
- Azure Cost Management

Hands-On:

- - Create a free tier Azure account
 - Create a web app service using Azure Portal Create and Deploy ARM templates
 - Manage Azure Storage account using Storage Explorer Manage Azure Cost and Billing Service
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Core Azure Services

- Azure Regions
- Feature Availability Region Wise
- Availability Zones
- Availability Sets
- What is Azure Management Group
- What are Resource Groups
- Azure Resource Manager
- Azure App Service Web Apps

Hands-On:

- - How To Create Resource Group (Lab) – portal.azure.com
 - How to Host ASP.NET Website on Azure (Lab) – portal.azure.com
 - Create an App Service Plan Create a Web App Instance
 - Use shell commands to create an App Service Web App

- Azure Core Services and Products
- What is Azure Compute Service?
- Azure Virtual Machines – Audio cast

- **Creating Virtual Machines - Lab**

- What are Containers
- What Are Virtual Networks
- Virtual Networks Lab
- Azure Load Balancer
- VPN Gateway
- Azure Application Gateway
- Azure Content Delivery Network (CDN)
- Traditional Hosting Server Vs. Azure Server

Hands-On:

- - Traditional Hosting Server & Azure Server Demo
 - Hosting Web Portal On Cloud (Lab)

- Hosting .NET Framework & .NET Core Web Portal on AZURE (Lab)
- Configuring Domain on AZURE Server & Hosting the Website (Lab)

- Azure Storage Services
- Structured Data
- Semi-Structured Data
- Unstructured Data
- Azure Database Services
- Azure SQL
- Azure Marketplace
- What is the Internet of Things
- Azure Management Tools
- Creating Resources with PowerShell
- Creating Resources with Azure CLI

Hands-On: portal.azure.com

- - Cloud CLI Lab
 - Create Resource Group & Web App Using Cloud Shell (Lab)
 - Host Static Website on Azure (Lab)
 - Azure SQL - Lab Demo

Azure Kubernetes Service

This module provides an in-depth knowledge of Azure Service Fabric as a distributed systems platform that makes it easy to package, deploy,

and manage scalable and reliable microservices and containers.

You will also explore Kubernetes Service (AKS) in Azure.

Topics:

- Application Environment Components

- Docker
- DockerFile
- Docker Image
- Azure Container Instance
- Orchestration
- Azure Kubernetes Service
- Diagnostics Logs

Hands-On:

- - Create and Deploy Docker Image from DockerFile
 - Deploy an Application in ACI
 - Deploy an Application in AKS

AZURE DEVOPS

- What Is DevOps?
- Agile Vs. DevOps
- DevOps Stages
- DevOps Benefits
- DevOps Tools
- The evolution of Visual Studio Team Services (VSTS)
- What is Azure DevOps?
- Azure DevOps Services
- Azure Boards- Project Management
- Azure Repos – For Source/Version Control
- Azure Test Plans – Automation Testing
- Azure Pipelines- CI –CD (Continuous Integration & Continuous Delivery)
- Azure Artifacts-Package Management
- Cloud Concept – DevOps-CI/CD
- Tools for Azure DevOps

Hands-On: dev.azure.com

- - Azure DevOps Lab Work

Azure Monitoring and Insights Service

In this module you will learn about Monitoring Azure Services.

You will learn about Azure alerts, metrics services. You will also get an overview on Azure Log analytics, App Insights service, Azure Activity Log and Azure Service Health.

Topics:

- Azure Monitoring
- Azure Analytics
- Azure Alerts
- Azure Resource Metrics
- Azure Activity Log Service Health
- Azure Log Analytics
- Azure App Insights

Hands-On:

- - Create and Deploy Alert Rules for Azure Resources
 - Analyze the data in your metric database
 - Create and Configure Azure Log Analytics
 - Deploy Azure App Insights Service

Case Study & Live Project Deployment using Azure DevOps