

Course Name : Azure

Course Content

Azure Basics

Starting with Azure

- Overview of Azure
- Azure Free Account
- Creating an Azure Free Account
- Concepts in Azure
- Tour of the Azure Portal

Deploy and Manage Azure compute resources

- The Virtual Machine Service
- Deploying a virtual machine
- Hands-on - Building a Windows virtual machine
- Common issues when deploying a virtual machine
- Connecting to the Virtual Machine
- Hands-on - Installing Internet Information Services
- Costs Associated with the Virtual Machine
- State of the Virtual Machine
- Hands-on - State of the Virtual Machine
- Hands-on - Build a Linux Virtual Machine
- Hands-on - Deploying a web server on the Linux virtual machine
- Hands-on - Deploying a Linux machine - SSH keys
- Azure Virtual Machines - Data Disks
- Hands-on - Adding data disks
- Hands-on - Creating a VM with Premium Disks
- Disks - Understanding IOPS and Throughput
- Hands-on - Data Disks Snapshot

- Hands-on - Custom Script Extensions
- Virtual Machine - Boot Diagnostics

Azure Web App

- Azure App Service Plans
- Hands-on - Azure Web Apps
- Hands-on - Making simple changes to the Web App
- Use case scenario - Azure App Service Plans
- Hands-on - Azure Web App logging
- Azure Web Apps - Deployment Slots
- Hands-on - Azure Web Apps - Deployment Slots
- Azure Web Apps - Autoscaling
- Hands-on - Auto scaling a web app

Configure and manage virtual networking

Network Security Groups

Virtual Network Peering

- Hands-on - Virtual Networking Peering - Setup
- Hands-on - Virtual Networking Peering – Implementation

Implement and manage storage

- What are storage accounts?
- Different types of storage accounts
- Hands-on - Creating an Azure storage account
- Azure Blob service
- Hands-on - Blob service - Uploading a blob
- Hands-on - Blob service - Accessing the blob
- Azure Storage Accounts - Different authorization techniques
- Hands-on - Using Azure Storage Explorer

- Hands-on - Using Access keys
- Hands-on - Shared Access Signatures - Blob Level
- Hands-on - Shared Access Signatures - At the Storage Account Level
- Azure Storage Accounts - Data Redundancy
- Azure File shares
- Hands-on - Working with File shares

Manage Azure identities and governance

- Azure Subscriptions
- Creating an Azure subscription
- What is Azure Active Directory
- Hands-on - Creating a user in Azure AD
- Introduction to Role Based Access Control
- Hands-on - Role-based assignments

Monitor

- What is the Azure Monitor Service?
- Quick look at Azure Monitor
- Hands-on - Azure Monitor - Alerts
- What is a Log Analytics Workspace
- Hands-on - Creating a Log Analytics workspace
- Hands-on - Connecting virtual machine to the workspace
- Hands-on - Log Analytics Queries
- What is Application Insights?
- Quick Look at Application Insights

Azure Functions

Azure Serverless

- What is Serverless?

- [Azure Serverless Services](#)
- [Azure Functions Documentation](#)
- [Serverless Use Case: ETL](#)
- [Serverless Use Case: Image Analysis](#)

Introducing Azure Functions

- [What are Azure Functions?](#)
- [Azure Functions Useful Resources](#)
- [Triggers and Bindings](#)
- [Triggers and Bindings Useful Resources](#)
- [Azure Functions Pricing](#)
- [Supported Languages in Azure Functions](#)
- [Benefits of Azure Functions](#)
- [When to use Azure Functions](#)
- [Development Environments](#)

Creating Azure Functions in Portal

- [Creating a Function App](#)
- [Creating Your First Azure Function](#)
- [Configure Azure Function](#)
- [Testing Azure Function](#)
- [Function Authorization Levels](#)
- [Function Invocation History](#)
- [Exploring Storage Account](#)

Creating Azure Functions Locally

- [Local Development Options](#)
- [Installing and Using Azure Functions Core Tools](#)
- [Setting Up Development Environment Using Visual Studio Code](#)

- Test and Debug Azure Functions
- Deploy Function App to Azure

Create Azure Functions in Different Languages

- Create Azure Functions in C#
- Create Azure Functions in Python

Real World Use Cases

- Triggers and Bindings
- Image Thumbnail (Blob Trigger - Blob Output)
- Analyze Images with Computer Vision API (Blob Trigger-Cosmos DB Output)
- Notify User of Image Analysis Result (Cosmos Trigger - Sendgrid Email)
- Delete Old Blob Files (Timer Trigger - Azure Storage Queue Output)
- Notify User of Deleted File (Azure Queue Trigger - Sendgrid Email Out)
- Creating a REST api with HTTP triggers
- Analyze Tweets with Azure Cognitive Analytics (HTTP Trigger-HTTP Output)

Deploy Functions to Azure

- Ways to Deploy Azure Functions
- Deploying Function App from Visual Studio Code
- Deploying Function App from GitHub

Working in Production

- Monitoring Azure Functions
- Securing Azure Functions
- Azure Functions Proxies