



5. Cloud Technologies

5.2 Microsoft Azure

Duration: 60 Lectures

Course Content:

1. Introduction

- 1.1. What Cloud Computing is
- 1.2. Cloud Characteristics
- 1.3. Cloud Computing Service Models
- 1.4. Deployment Models in Cloud Computing
- 1.5. Advantages and Disadvantages of Cloud Computing
- 1.6. Getting Starting with Azure

2. Introduction to Azure

- 2.1. Azure Hosting Models
- 2.2. Azure Services
- 2.3. Subscribing to Microsoft Azure
- 2.4. Azure Portals
- 2.5. Azure Resource Group
- 2.6. Installing Microsoft Azure SDK
- 2.7. Azure App Services-Web Apps

3. Introduction

- 3.1. App Types
- 3.2. Deploying Web App directly from Visual Studio
- 3.3. Automate deployment from Dropbox
- 3.4. Continuous Delivery using Visual Studio Team Service
- 3.5. Scaling a Web Apps
- 3.6. Traffic Manager
- 3.7. Application Settings Configuration



- 3.8. Understanding Deployment Slots
- 3.9. Configure a custom domain name
- 3.10. Enable SSL for your custom domain
- 3.11. Monitoring, Debugging and Diagnosis
- 3.12. Windows Azure SQL Database

4. Introduction/Overview

- 4.1. Comparing SQL Azure Database to Azure / OnPremise SQL Server
- 4.2. Creating and Using SQL Server and SQL Database
- 4.3. Azure SQL Database Tools
- 4.4. Using Azure SQL Database with EF Code First
- 4.5. Migrating on premise database to SQL Azure
- 4.6. Planning the Deployment
- 4.7. Elastic Storage.
- 4.8. Monitoring Azure SQL Database
- 4.9. Configure SQL Database Auditing
- 4.10. Manage Business Continuity
- 4.11. Azure SQL Database vs SQL Server in IaaS VM
- 4.12. DocumentDB Service

5. Understanding Document DB database Schema

- 5.1. Creating and Saving Documents
- 5.2. Reading Documents
- 5.3. Azure Storage

6. About Azure Storage

- 6.1. C# / MS.NET Azure Storage SDK
- 6.2. Working with Blob Storage
- 6.3. Working with Tables Storage
- 6.4. Working with Queues Storage
- 6.5. Working with Files Storage
- 6.6. REST API
- 6.7. Working with Storage Tables



6.8. Working with Azure Queues

6.9. Azure Web Jobs

7. Introduction

7.1. Developing and Hosting Web Jobs Application

7.2. Azure Web Jobs SDK

7.3. Sample Application including Web Apps and Web Jobs.

7.4. App Service –Mobile Apps

8. Mobile Apps Introduction

8.1. Creating Server and Client Projects

8.2. Working with Easy tables using Azure Portal

8.3. Developing Windows 8 Client Application

8.4. Mobile App Authentication

8.5. Facebook Authentication

8.6. Azure Active Directory Authentication

8.7. Enabling Offline Sync

8.8. Implementing Push Notification

8.9. App Service -API Apps

9. Introduction

9.1. Creating an API App

9.2. Deploying an API App

9.3. Consuming an API App

9.4. Using API App in Logic App

9.5. Azure App Service –Logic Apps

10. Introduction

10.1. Creating a Simple Logic App

10.2. Handling array of Items using for-each and condition

10.3. Understanding Triggers and Actions

10.4. Using Custom API App in Logic App

10.5. Azure Cloud Service



11. What is Cloud Service

- 11.1. Cloud Service vs App Service
- 11.2. Understand Cloud Service Roles
- 11.3. Developing Cloud Service Application with Web Role
- 11.4. Deploying Cloud Service Application
- 11.5. Production and Staging Slots
- 11.6. Using Azure Database in Cloud Service
- 11.7. Adding Worker Role to the Solution.
- 11.8. Delete deployments and a cloud service
- 11.9. Configure application for SSL
- 11.10. Configure Roles for Remote Desktop Login
- 11.11. Running Multiple Websites
- 11.12. Scaling a Cloud Service
- 11.13. Debugging an Azure Cloud Service
- 11.14. Transient Fault Handling
- 11.15. To Configure and Run Startup Tasks for a Cloud Service
- 11.16. Enable Communication for Role Instances in Azure
- 11.17. Using the .NET SDK to access an endpoint.
- 11.18. Network traffic rules to control role communication
- 11.19. Managing Azure with Windows PowerShell
- 11.20. Installing the required modules
- 11.21. Login to Azure Portal
- 11.22. Creating Resource Group
- 11.23. Managing Storage Accounts using PowerShell
- 11.24. Azure Service Bus

12. Service Bus Basics

- 12.1. Hosting WCF Service in Azure
- 12.2. Relayed Messaging
- 12.3. Service Bus Queues
- 12.4. Topics and Subscriptions
- 12.5. Handling Sessions



- 12.6. Handling Transactions
- 12.7. Azure Media Service

13. What is Media Services

- 13.1. Media Service in Azure Portal
- 13.2. Create an Azure Media Service Account
- 13.3. Upload and Encode Video/Audio
- 13.4. Publish and Play Content
- 13.5. Media Services Development with .NET
- 13.6. Uploading Media File Programmatically
- 13.7. Uploading .WMV Encoding to MP4 Format
- 13.8. Azure Virtual Networks

14. Overview of Azure Networking

- 14.1. Virtual Network Benefits
- 14.2. Understanding Network Resources
- 14.3. Create a VNet using Azure Portal
- 14.4. Create a Network Security Group
- 14.5. Create NIC and PublicIP
- 14.6. Understanding and Using Azure DNS
- 14.7. Using PowerShell Commands
- 14.8. Azure IAAS Virtual Machine

15. Introduction

- 15.1. Comparing VM with Web Apps and Cloud Services
- 15.2. Create a Windows Virtual Machine using Portal / PowerShell
- 15.3. Understanding and Capture VM Images
- 15.4. Deploy a New VM Instance from the captured Image
- 15.5. Deploy popular application frameworks by using Azure Resource Manager templates
- 15.6. Understanding and Creating Availability Sets.
- 15.7. Load Balancing between multiple Virtual machines
- 15.8. Redis Caching



16. Caching Overview

- 16.1. What is Redis Cache
- 16.2. Creating a Redis Cache
- 16.3. Developing Redis Cache Client
- 16.4. Controlling Expiration
- 16.5. Azure Active Directory

17. Azure AD Introduction

- 17.1. Relationship between AD DS and Azure AD
- 17.2. Managing Active Directories
- 17.3. Adding a custom domain name to Azure AD
- 17.4. Managing Users, Groups and Devices
- 17.5. Adding Co-Administrators for a Subscription
- 17.6. Configuring Role Based Access Control
- 17.7. Integrating On-Premise AD Identities with Azure AD
- 17.8. Integrating Gallery Applications with Azure AD
- 17.9. Integrating On-Premise Applications with Azure AD
- 17.10. Implementing Azure AD B2B Collaboration
- 17.11. Implementing Azure AD B2C Collaboration