

# 20487: Developing Windows Azure and Web Services (Visual Studio 2012)

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## Course Details

### Course Outline

- 1. Overview of service and cloud technologies**
  - Key Components of Distributed Applications
  - Data and Data Access Technologies
  - Service Technologies
  - Cloud Computing
  - Exploring the Blue Yonder Airlines' Travel Companion Application
  - Lab : Exploring the work environment
- 2. Querying and Manipulating Data Using Entity Framework**
  - ADO.NET Overview
  - Creating an Entity Data Model
  - Querying Data
  - Manipulating Data
  - Lab : Creating a Data Access Layer by Using Entity Framework
- 3. Creating and Consuming ASP.NET Web API Services**
  - HTTP Services
  - Creating an ASP.NET Web API Service
  - Handling HTTP Requests and Responses
  - Hosting and Consuming ASP.NET Web API Services
  - Lab : Creating the Travel Reservation ASP.NET Web API Service
- 4. Extending and Securing ASP.NET Web API Services**
  - The ASP.NET Web API Pipeline
  - Creating OData Services
  - Implementing Security in ASP.NET Web API Services
  - Injecting Dependencies into Controllers
  - Lab : Extending Travel Companion's ASP.NET Web API Services
- 5. Creating WCF Services**
  - Advantages of Creating Services with WCF

- Creating and Implementing a Contract
- Configuring and Hosting WCF Services
- Consuming WCF Services
- Lab : Creating and Consuming the WCF Booking Service

## **6. Hosting Services**

- Hosting Services On-Premises
- Hosting Services in Windows Azure
- Lab : Hosting Services

## **7. Windows Azure Service Bus**

- Windows Azure Service Bus Relays
- Windows Azure Service Bus Queues
- Windows Azure Service Bus Topics
- Lab : Windows Azure Service Bus

## **8. Deploying Services**

- Web Deployment with Visual Studio 2012
- Creating and Deploying Web Application Packages
- Command-Line Tools for Web Deploy
- Deploying Web and Service Applications to Windows Azure
- Continuous Delivery with TFS and Git
- Best Practices for Production Deployment
- Lab : Deploying Services

## **9. Windows Azure Storage**

- Introduction to Windows Azure Storage
- Windows Azure Blob Storage
- Windows Azure Table Storage
- Windows Azure Queue Storage
- Restricting Access to Windows Azure Storage
- Lab : Windows Azure Storage

## **10. Monitoring and Diagnostics**

- Performing Diagnostics by Using Tracing
- Configuring Service Diagnostics
- Monitoring Services Using Windows Azure Diagnostics

- Collecting Windows Azure Metrics
- Lab : Monitoring and Diagnostics

### **11. Identity Management and Access Control**

- Claims-based Identity Concepts
- Using the Windows Azure Access Control Service
- Configuring Services to Use Federated Identities
- Lab : Identity Management and Access Control

### **12. Scaling Services**

- Introduction to Scalability
- Load Balancing
- Scaling On-Premises Services with Distributed Cache
- Windows Azure Caching
- Scaling Globally
- Lab : Scalability