

Course Details

Course 20487A

Developing Windows Azure and Web Services

Length: 5 Days

Published: January 14, 2013

Language(s): English

Audience(s): Developers.

Level: 200

Technology: Microsoft Visual Studio 2012

Type: Course

Delivery Method: Instructor-led (classroom)

Prerequisites

Before attending this course, students must have:

Experience with C# programming, and concepts such as Lambda expressions, LINQ, and anonymous types.

Understanding the concepts of n-tier applications.

Experience with querying and manipulating data with ADO.NET.

Knowledge of XML data structures.

Course Outline

Module 1: Overview of service and cloud technologies

- Key Components of Distributed Applications
- Data and Data Access Technologies
- Service Technologies
- Cloud Computing
- Exploring Blue Yonder Airlines' Travel Companion Application

Module 3: Creating and consuming ASP.NET Web API services

- What are HTTP services?
- Creating an ASP.NET Web API service
- Handling HTTP requests and responses
- Hosting and consuming ASP.NET Web API services

Module 2: Querying and manipulating data using Entity Framework

- ADO.NET overview
- Creating an entity data model
- Querying data
- Manipulating data

Module 4: Extending and securing ASP.NET Web API services

- The ASP.NET Web API request pipeline
- The ASP.NET Web API response pipeline
- Creating OData services
- Implementing Security in ASP.NET Web API services
- Injecting dependencies into controllers

Module 5: Creating WCF services

- Advantages of creating services with WCF
- Creating and implementing a contract
- Configuring and hosting WCF services
- Consuming WCF services

Module 7: Implementing Security in WCF services

- Transport security
- Message security
- Configuring service authentication and authorization

Module 9: Hosting services

- Hosting services on-premises
- Hosting services in Windows Azure

Module 11: 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

Module 13: Identity management and access control

- Claim-based identity concepts
- Access Control Service
- Configuring services to use federated identities
- Handling federated identities in the client side

Module 6: Designing and extending WCF services

- Applying design principles to service contracts
- Handling distributed transactions
- WCF pipeline architecture
- Extending the WCF pipeline

Module 8: Windows Azure Service Bus

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

Module 10: Deploying Services

- Web Deployment with Visual Studio
- Creating and deploying Web Application packages
- Command-line tools for web deployment packages
- Deploying to Windows Azure
- Continuous delivery with TFS and GIT
- Best practices for production deployment

Module 12: Monitoring and diagnostics

- Performing diagnostics using tracing
- Configuring service diagnostics
- Monitoring IIS
- Monitoring services using Windows Azure diagnostics
- Debugging using IntelliTrace
- Collecting Windows Azure metrics

Module 14: Scaling Services

- Introduction to scalability
- Load balancing
- Scaling on-premises services with distributed cache
- Windows Azure caching
- Caveats of scaling services
- Scaling globally