5 Days | 20487: Developing Windows Azure and Web Services

Developing Windows Azure & Web Services Training is a five-day course that help participants learn how to design and develop services that take access local and remote data from various data sources.

Through this course, participants will also attain the essential skill set to develop and deploy services to hybrid environments, including on-premises servers and Windows Azure.

This training will prepare the candidates for the 70-487: Developing Windows Azure & Web Services certification exam.

Course Details

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Course Outline

Module 1: Overview of service and cloud technologies

This module introduces service and cloud technologies using the Microsoft .net Framework and the Windows Azure cloud.

Lessons

- Service Technologies

- Cloud Computing

- Key Components of Distributed Applications

- Data and Data Access Technologies

- Exploring the Blue Yonder Airlines' Travel Companion Application

Module 2: Querying and Manipulating Data Using Entity Framework

This module explains the Entity Framework data model, and how to create, read, update, and delete data.

Lessons

- Overview of ADO.NET

- Creating an Entity Data Model

- Querying Data

- Manipulating Data

Module 3: Creating and Consuming ASP.NET Web API Services

This module explains HTTP-based services that are developed, hosted, and consumed by using ASP.NET Web API.

Lessons

- HTTP Services
- Creating an ASP.NET Web API Service
- Hosting and Consuming ASP.NET Web API Services
- Handling HTTP Requests and Responses

Module 4: Extending and Securing ASP.NET Web API Services

This module explains in detail the ASP.NET Web API architecture and how to extend and secure ASP.NET Web API services.

Lessons

- Creating OData Services
- Injecting Dependencies into Controllers
- The ASP.NET Web API Pipeline
- Implementing Security in ASP.NET Web API Services

Module 5: Creating WCF Services

This module describes Windows Communication Foundation (WCF) and explains how to create, host, and consume a WCF service.

Lessons

- Creating and Implementing a Contract
- Advantages of Creating Services with WCF
- Configuring and Hosting WCF Services
- Consuming WCF Services

Module 6: Hosting Services

This module explains how to host web services both on-premises and in Windows Azure. It explains various components of Windows Azure Cloud Services: Web Role, Worker Role, and Windows Azure Web Sites.

Lessons

- Hosting Services On-Premises and in Windows Azure

Module 7: Windows Azure Service Bus

This module explains web-scale messaging patterns and the infrastructures provided by Windows Azure Service Bus.

Lessons

- Windows Azure Service Bus Relays, Queues, and Topics

Module 8: Deploying Services

This module explains the different techniques for deploying web applications.

Lessons

- Creating and Deploying Web Application Packages
- Web Deployment with Visual Studio 2012

- Command-Line Tools for Web Deploy

- Continuous Delivery with TFS and Git

- Best Practices for Production Deployment

- Deploying Web and Service Applications to Windows Azure

Module 9: Windows Azure Storage

This module explains Windows Azure Storage, the services it provides, and the best way to use these services.

Lessons

- Windows Azure Storage Introduction

- Windows Azure Blob, Table and Queue Storage

- Restricting Access to Windows Azure Storage

Module 10: Monitoring and Diagnostics

This module explains how to perform monitoring and diagnostics in Windows Azure services.

Lessons

- Performing Diagnostics by Using Tracing

- Collecting Windows Azure Metrics

- Configuring Service Diagnostics

- Monitoring Services Using Windows Azure Diagnostics

Module 11: Identity Management and Access Control

This module explains the basic principles of modern identity handling and demonstrates how to use infrastructures such as Windows Azure Access Control Service (ACS).

Lessons

- Claims-based Identity Concepts

- Using the Windows Azure Access Control Service

- Configuring Services to Use Federated Identities

Module 12: Scaling Services

This module explains the ways in which you can ensure that services can handle increasing workloads and user demand.

Lessons

- Introduction to Scalability

- Windows Azure Caching

- Load Balancing

- Scaling On-Premises Services with Distributed Cache

- Scaling Globally

Module 13: Appendix A: Designing and Extending WCF Services

This module focuses on designing Windows Communication Foundation (WCF) service contracts, creating services that support distributed transactions, and extending the WCF pipeline with custom runtime components and custom behaviors.

Lessons

- Apply Design Principles to Service Contracts

- Handle Distributed Transactions

- Extend the WCF Pipeline

Module 14: Appendix B: Implementing Security in WCF Services

This module focuses on the various considerations you have to take into account when you design a secure web service, such as encryption, input validation, authentication, and authorization, and the various techniques deployment while applying these considerations to services developed with WCF.

Lessons

- Introduction to Web Services Message, and Transport Security

- Configuring Service Authentication and Authorization

Who Should Attend

This course targets both novice and experienced .net developers who possess a minimum of six months programming experience and seek to learn how to develop services and deploy them to hybrid environments.

Pre Requisite

Before attending this course, candidates must have:

- Understanding the concepts of n-tier applications.

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

- Knowledge of XML data structures.

- Experience with querying and manipulating data with ADO.NET.

Exams

Microsoft Certified Professional (MCP) [70-487]

464, Udyog Vihar Phase

Date - Apr 27, 2024