Cloud-Based Integration Using Azure App Service

Course Summary

Description

Attendees of this course will learn how to build cloud-hosted integration solutions that utilize the power of Microsoft Azure. The Azure cloud platform offers a vast variety of diverse services to help enterprises build powerful solutions.

In this course, students learn how to create enterprise-grade integration solutions using Logic Apps, API Apps, the Enterprise Integration Pack, and Azure Service Bus.

At the core of the course is Logic Apps and how to use this cutting-edge technology to build integration workflows. However, Logic Apps primarily provide process orchestration and API integration. In order to build well-rounded enterprise integrations, you may desire publish-subscribe capabilities, hybrid connectivity, and VETER pipelines. As a result, you will see how to interact with other Azure services such as Azure Service Bus, as well as on-premises systems like SQL Server, and how you can add to the out-of-the-box tools in Logic Apps with the Enterprise Integration Pack.

This 5-day course offers the full picture for developers who need to build integration solutions using the Azure platform, and gives students about 20 hours of hands-on lab time in which they will build several integration solutions.

In this course, attendees will receive live instruction from one of our expert trainers, in-classroom demonstrations, challenging hands-on labs, and an electronic copy of the presentation materials and lab guide with hands-on activities.

Participants in this course will need an Azure subscription, or the ability to create a free trial subscription.

Objectives

After taking this course, students will be able to:

- Manage the Application Lifecycle using Azure Resource Groups
- Create Azure resources using the Azure Resource Manager and Azure Portal
- Connect to on-premises systems using the on-premises data gateway
- Create schemas for Azure API Apps
- Build maps for the BizTalk Transform Service API App
- Manage Enterprise Integration Pack assets using an Integration Account
- Interact with Azure Service Bus topics, subscriptions, and queues manually and programmatically
- Build complex workflows using Logic Apps to perform forking, merging, loops, parallel execution, and exception handling
- Build custom API Apps including triggers and actions
- Included is a full day workshop where attendees will build a complete end-to-end integration using Logic Apps, API Apps, and Azure Service Bus

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Course Summary (cont'd)

Topics

- Introduction to Logic Apps and Cloud-Based Integration
- Setting Up an Azure App Service Development Environment
- Introduction to Logic Apps
- Using Azure Resource Groups as an Application Lifecycle Container
- Advanced Logic Apps
- Building Enterprise Application Integration (EAI) Apps Using Azure App Service
- Creating Schemas
- Mapping Data Using Transforms
- Introduction to Microsoft Azure Service Bus
- Implementing a Publish/Subscribe Model Using Service Bus
- Architecting Cloud Integration Solutions
- Building Custom API Apps
- Building Custom Triggers

Audience

This course is designed for experienced .NET developers with a strong desire to learn about Microsoft's new Integration options using Azure Logic Apps.

Prerequisites

Before taking this course, attendees should be proficient with C# and have some familiarity with ASP.NET, MVC, and Web API.

Duration

Five days

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Course Outline

I. Introduction to Logic Apps and Cloud-Based Integration
- A. Microsoft Integration Platform Vision
- B. Logic App Technology Primer
- C. Building a Simple Logic App

II. Setting Up an Azure App Service Development Environment
- A. Components of Hybrid Integrations
- B. Setting Up a Development Environment

III. Introduction to Logic Apps
- A. Logic App Fundamentals
- B. Anatomy of a Logic App
- C. Intro to Logic Apps Expressions
- D. Manual Testing and Troubleshooting

IV. Using Azure Resource Groups as an Application Lifecycle Container
- A. Resource Groups Fundamentals
- B. Working with Resource Groups
- C. Managing Resource Deployments Using Team Foundation Server

V. Advanced Logic Apps
- A. Conditional Execution
- B. Calling External Logic
- C. Exception Handling
- D. Looping Through Data
- E. Tracking

VI. Building Enterprise Application Integration (EAI) Apps Using Azure App Service
- A. EAI Concepts
- B. Implement VETERO Using Logic Apps
- C. Enabling Hybrid Integrations
- D. Introducing the Enterprise Integration Pack

VII. Creating Schemas
- A. Introduction to Schemas
- B. Creating XML Schemas
- C. Schemas for Non-XML Messages

VIII. Mapping Data Using Transforms
- A. Introduction to Maps
- B. Manipulating Data Using Functoids
- C. Getting the Most out of the Mapper

IX. Introduction to Microsoft Azure Service Bus
- A. What Is Service Bus?
- B. Working with Queues
- C. How Service Bus Handles Failures

X. Implementing a Publish/Subscribe Model Using Service Bus
- A. Theory of Topics and Subscriptions
- B. Interacting with Topics and Subscriptions Programmatically

XI. Architecting Cloud Integration Solutions
- A. Reviewing Core Technologies
- B. Workshop: Full Day Workshop

Lab: Building EAI Apps Using Azure App Service

Lab: Advanced Apps with Azure App Service

Lab: Building Request/Response Logic Apps

XII. Building Custom API Apps
- A. Anatomy of an API App
- B. Fundamentals of Web API
- C. Hello API App World
- D. Debugging API Apps
- E. Creating Deployment Templates for Custom APIs

XIII. Building Custom Triggers
- A. Concepts of Triggers
- B. Creating Polling Triggers