

# **Azure Cloud Integration: A Complete AIS Guide**

**Duration: 40 Hours (5 Days)**

## **Course Syllabus**

### **Module 0: Introduction to Azure Integration Services**

- Overview of Azure Integration Services
- Integration Scenarios & Challenges
- Key Integration Services:
  - Logic Apps
  - Service Bus
  - API Management
  - Event Grid
  - Azure Functions
  - Data Factory
- Enterprise Integration Patterns

### **Module 1: Explore Microsoft Entra (Azure AD) & Azure App Service**

- Explore Microsoft Entra ID configuration options.
- Understanding
  - Users
  - Tenant
  - Subscriptions
  - RBAC
- Explore Azure App Service (PaaS)
- Hands-on Lab.

### **Module 2: Azure Functions**

- Overview of Azure Functions
- Benefits of Azure Function
  - Overview of plans
  - Scaling Options and limits in different plans
- Function app timeout duration in different plans
- Architecture of Azure Function
- Azure Function vs Web Jobs
- Developing Azure Functions
- Demo:
  - Creating Azure Function using Azure Portal
  - Creating Azure Function programmatically.

- Best practices for reliable Azure Functions
- Explore Durable Functions
- Benefit of Durable Function over Azure Function
- Components of Durable function
- Demo:
  - Creating Durable Function.
- Hands-on Lab.

## **Module 3: Azure Logic Apps and Integration Account**

- What are Logic Apps?
- Logic Apps vs Functions vs Power Automate
- Triggers & Actions
- Connectors
  - Control actions, conditional and parallel runs.
- Creating and Managing Logic Apps using:
  - Azure Portal
  - Visual Studio Code
  - CLI & PowerShell
- Integration Account
  - B2B Integration &
  - EDI Processing
- Hands-on Lab.

## **Module 4: Azure Service Bus**

- What is a Service Bus?
- Need of Azure Service Bus.
- Storage Account Queues Vs Service Bus Queues
- Enterprise integration using message broker.
- Explore Service Bus Features
- Working with Service Bus Queues
- Managing Service Bus Queues using Management Portal
- How Service Bus Handles Failures
- Configure Dead Letter Queue
- Demo:
  - Managing Service Bus Queues using Management Portal
  - How to work with Service Bus Queues and Topics programmatically.
- Hands-on Lab.

## **Module 5: API Management**

- Why we need APIMS
- Overview of Azure API Management

- Working with APIs in APIM
- Components of API Management Service
- Creating new API in API Management Service Instance.
- Adding and configuring methods in API
- Demo:
  - Import and publish your first API
- Configure policies
  - Configure authentication policies
  - Configure transformation policies
  - Explore all other policies
- Explore stages of policy implementation.
- Test the new API in the Azure portal
- Create and publish a product
- Monitor Published APIs
- Demo:
  - Working with products
  - Monitoring Published APIs
- Hands-on Lab.

## Module 6: Azure Event Grid

- Need of Event Grid Service?
- Scenario for using Event Grid
- Explore Event Grid
- Event Grid Components:
  - Topics
  - Subscriptions
- Event Grid vs Event Hub
- Creating and Capturing Events in Azure Event Grid
- Demo:
  - Handling Events using Event Grid.
  - Send notifications about Azure Storage account events to Webhook and
  - Send notifications using Event Grid to Logic Apps.
- Hands-on Lab.

## Module 7: Data Factory

- Understand the need for a Data Factory.
- Overview of Azure Data Factory
- Flow process of data factory
- Introduction to Data Lake
- Build ETL Pipelines using Azure data factory.
- Data Movement using Azure data factory.
- Demo:
  - Copying Data from Azure SQL to Data Lake

- Load Data from Data Lake to Power BI
  - Creating Pipeline using Data factory
- Introduction to Azure Data Lake Analytics
- Hands-on Lab.

## **Module 8: Explore integration services solution architecture**

- Enterprise Integration Solution Design
  - Hybrid Integration Scenarios
  - Best Practices for Secure & Scalable Integrations
- Monitoring & Troubleshooting
  - Azure Monitor, Application Insights
- DevOps & CI/CD for Integration Services
  - Automating Deployments with Azure DevOps