Azure Logic Apps & Integration Services – Detailed Guide

# 1. Introduction to Azure Logic Apps

Azure Logic Apps is a cloud-based service that helps you automate workflows and business processes.   
It enables integration with multiple services using triggers and actions without writing complex code.   
Logic Apps is part of Azure's integration services suite and offers low-code/no-code solutions for enterprise workflows.

# 2. Core Components of Logic Apps

* • Trigger: Starts the logic app workflow.
* • Action: Operations executed after trigger (e.g., send email, save file).
* • Connectors: Interfaces to external services (Outlook, SQL, SharePoint, etc.).
* • Workflows: The full sequence of logic and actions.
* • Scopes: Group multiple actions together, useful for error handling.

# 3. Commonly Used Connectors and Triggers

* • Outlook – Receive/send emails.
* • SQL Server – Query or update records.
* • Blob Storage – Upload/download files.
* • HTTP Webhook – Trigger from external system.
* • Timer Trigger – Recurring schedules (e.g., daily/hourly).

# 4. Real-World Use Case: Invoice Automation

Trigger: Receive email with attached invoice → Extract data using Form Recognizer → Save to SQL → Notify finance team via Teams or email.   
This end-to-end automation reduces manual work and increases accuracy.

# 5. Error Handling, Security & Monitoring

* • Use 'Run After' to control execution after success/failure.
* • Scope blocks can define success/failure actions as a group.
* • Managed Identity: Secure service-to-service authentication.
* • Azure Monitor & Application Insights: Track failures and performance.
* • Retry Policies: Define how failed actions retry automatically.

# 6. Azure Integration Services Overview

Azure offers several services for integration. Here's a breakdown:

|  |  |  |  |
| --- | --- | --- | --- |
| Service | Description | Best For | Code Required? |
| Azure Logic Apps | Workflow automation with connectors. | No-code integrations and scheduled tasks. | No |
| Azure Functions | Run small pieces of code in response to events. | Custom logic, event-driven apps. | Yes |
| Azure API Management | Publish, manage, and secure APIs. | API gateway and monetization. | No |
| Azure Event Grid | Event routing and pub/sub. | High-throughput event handling. | Minimal |
| Azure Service Bus | Enterprise messaging system. | Reliable messaging between services. | No |
| Power Automate | Business user-friendly automation tool. | Office 365 workflows. | No |

# 7. When to Use What?

• Use Logic Apps for visual workflow and integration-heavy scenarios.  
  
• Use Functions when you need custom logic (C#, JS, Python).  
  
• Use API Management when exposing APIs securely to external/internal users.  
  
• Use Event Grid for event distribution to multiple handlers.  
  
• Use Service Bus for message queueing and decoupled systems.

# 8. Interview Preparation Tips

* • Understand basic triggers, connectors, and workflows.
* • Be ready to explain use cases like approval flows or file automation.
* • Know the difference between Logic Apps and Azure Functions.
* • Practice creating a logic app in Azure Portal.
* • Use terms like managed identity, scope, run history, retry policy during answers.