KOENIG step forward

Microsoft Solutions Partner
Microsoft Cloud Training Services

KOENIG SOLUTIONS · COURSE OUTLINE

# Architect API Integration Services

Learn to architect, secure and integrate API solutions across Azure using API Management, Functions, Logic Apps, Service Bus and Event Grid.

| 20 Days | 20 | 95 |
| --- | --- | --- |
| DURATION | MODULES | TOPICS |

## COURSE OVERVIEW

This course covers building and managing API solutions on Azure, beginning with API Management fundamentals, gateway setup, caching, security and authentication. It then addresses integrating APIs with Azure Functions, Logic Apps, Service Bus, Event Grid and the Developer Portal, alongside API gateway architecture and advanced management services. Later modules cover supporting Azure services including Data Factory, Key Vault, Monitor, Log Analytics, DevOps, Active Directory, App Registrations, Resource Groups and Storage, and how these integrate with API-based architectures.

## WHO THIS COURSE IS FOR

- **API Developers**
- **Integration Architects**
- **Cloud Solution Architects**
- **Azure Developers**
- **DevOps Engineers**
- **Backend Developers**

## LEARNING OBJECTIVES

- Create and publish APIs through an API Gateway
- Configure caching and performance policies for APIs
- Apply security measures such as throttling and URL masking
- Implement authentication using API keys and client certificates
- Expose Azure Functions and Logic Apps as managed APIs
- Configure Service Bus queues, topics and subscriptions
- Set up Event Grid subscriptions, topics and monitoring
- Integrate supporting services such as Key Vault and Azure AD

COURSE SYLLABUS

# 20 Modules, 95 Topics

## DAY 1 API Management Fundamentals & Gateway

**01**

**TOPICS**

Introduction to API Management · Create an API Gateway · Import and publish an API · Call API with subscription key

## DAY 2 API Performance & Caching

**02**

**TOPICS**

API Management policies · Choosing caching policy · Configure response caching · Performance improvement under load

## DAY 3 API Security & Protection

**03**

**TOPICS**

Remove technical headers · Mask URLs using transformation policies · Throttling and rate limiting · Protect backend APIs

## DAY 4 Authentication & Access Control in APIM

**04**

**TOPICS**

API keys and subscriptions · Client certificate authentication · Secure API access

## DAY 5 Azure Functions with API Management

**05**

**TOPICS**

Exposing Function Apps as APIs · Import Azure Function apps into APIM · Unified API surface

## DAY 6 Logic Apps & Integration Account

**06**

**TOPICS**

Logic Apps overview · Logic Apps workflow model · Logic Apps V2 · Triggers, actions and conditions · Integration with Blob & SQL · Developing Logic Apps in VS Code

## DAY 7 Azure Service Bus (Queues & Topics)

**07**

**TOPICS**

Service Bus concepts · Queue implementation · Topics and subscriptions · Connection strings · Service Bus vs Storage queues · Use cases and best practices

## DAY 8 Event Grid – Subscriptions & Domains

**08**

**TOPICS**

Event Grid introduction · Register Event Grid subscription · Logging and monitoring in Functions · Use cases and case studies

## DAY 9 API Management Advanced Services

**09**

**TOPICS**

Need and benefits of APIs · OpenID Connect & OAuth2 · Create managed APIs · Apply policies · Logging and monitoring

## DAY 10 Developer Portal & API Discovery

**10**

**TOPICS**

Azure Developer Portal architecture · Publishing and discovering APIs

## DAY 11 API Gateway Architecture

11

TOPICS

API Gateway concepts · Authentication and SSL termination · Routing · Load balancing · Monitoring and billing

## DAY 12 Event Grid Topics & Events

12

TOPICS

Built-in and custom events · Register Event Grid topics · Logging and monitoring

## DAY 13 Azure Data Factory

13

TOPICS

Data Factory concepts · Pipelines, activities, datasets · Linked services · Triggers and Data Flows · User properties and monitoring

## DAY 14 Azure Key Vault

14

TOPICS

Azure Key Vault overview · Permissions and RBAC · Accessing secrets through APIs

## DAY 15 Azure Monitor/Log Analytics (Merged)

15 +

TOPICS

Azure Monitor architecture · Alerts and diagnostics · Log Analytics concepts · Log Analytics workspace · Scoping monitored resources

## DAY 16 Azure Function Apps

**17**

**TOPICS**

Azure Functions overview · Triggers and bindings · Supported languages · Function pipeline · Building serverless pipelines

## DAY 17 Azure DevOps

**18**

**TOPICS**

Azure DevOps architecture · Boards, Repos, Pipelines, Artifacts · Test Plans · YAML pipeline basics · Git vs TFVC · Project management using DevOps

## DAY 18 Azure Active Directory & Managed Identity

**19**

**TOPICS**

Azure AD fundamentals · Identity management · Securing applications · SSO concepts · OpenID vs OAuth · Authentication flow · RBAC

## DAY 19 App Registrations & Resource Groups (Merged)

**20**

**APP REGISTRATIONS**

App registration configuration · Auth & authorization workflows · Integrating App Services with AAD

**RESOURCE GROUPS**

Resources and Resource Groups · ARM concepts · Policies · Cost and management best practices

## DAY 20 Azure Storage & Data Lake

**22**

**TOPICS**

- Azure Storage overview
- Blob, Table, File and Queue storage
- Block, page and append blobs
- Lifecycle management
- GPv1 vs GPv2
- Azure Data Lake security
- Organizing data using Blob storage
- Creating and accessing storage resources

WHAT IS INCLUDED

## Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

## Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

## Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

### Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com | info@koenig-solutions.com