Architect API Integration Services

Module 1 :- Publish and manage your API's with Azure API Management

Use API management to control who uses your APIs, to enforce usage policies, and to present a professional front-end to developers using the API Lessons

- Introduction
- Create an API gateway
Exercise: Create an API gateway
- Import and publish with an API
- Exercise: Import and publish with an API
- Call and API with an subscription key
- Summary

Module 2:- Improve the performance of an API by adding a caching policy in Azure API Management

API Management policies are configurable modules that you can add to APIs to change their behaviors. Policies can do things like cache responses, transform documents and values, call web hooks for notification or audit purposes, and retry requests after transient failures. This module will use policies to enable caching in order to improve API performance under load.

Overview:
- Introduction
- Choose the right API Management policy
- Knowledge check
- Configure a caching policy
- Exercise:- Configure a caching policy
- Summary

Module3 :- Protect your APIs on Azure API Management

Protect your back-end APIs from information exposure and implement throttling to prevent resource exhaustion with policies in Azure API Management.

Overview
- Introduction
- Remove technical information from API responses
- Exercise:- remove header information
- Mask URL's with a transformation Policy
- Exercise - Mask URLs with a transformation policy
- Throttle API request
- Exercise: Throttle API request

Module 4 :- Control authentication for your APIs with Azure API Management

Discover how to protect your APIs from unauthorized use with API keys and client certificate authentication.

Overview:
- Introduction
- What is API Management?
- Create subscription in Azure API Management
- Exercise: Create subscription in Azure API Management
- Use client certificate to secure access to an API
- Exercise: Use client certificate to secure access to an API
- Summary

Module 5 :- Expose multiple Azure Function apps as a consistent API by using Azure API Management

Combine multiple Azure Functions apps into a unified interface by importing them into a single Azure API Management instance.

Overview
- Introduction
- Create a New API in API Management from a function app
- Exercise: Create a New API in API Ma

Module 6 :- Logic Apps, Logic Apps custom connector & Integration Account

- What is Logic Apps
- How Logic Apps Works
- What is new in Logic Apps V2
- When to use Logic Apps
- Conditions
- Actions and Triggers
- Integration of logic apps with other services like blob storage and SQL databases
- Development of Logic Apps in a VS code

Module 7:- Service Bus queue and topic

- What is Service Bus and why to use it
- Implementing Azure Service Bus: Queue Service
- Azure Service Bus connection strings
- Topics , queues, subscriptions and messages.
- Differnece between Queues in Service bus and in storage accounts
- use cases of Service bus Queues and best practices

Module 8 :- Event Grid Subscription/Domain

- Introduction
- Logging and Monitoring in Azure Functions

- Register Event Grid with Subscription
- Use cases of Event Grid and various case studues

Module 9:- API Management Services

- Need for an API and Benefits of API's.
- OpenID connect + OAuth2
- Publish, Manage secure and analyze API's ☐ Create managed APIs.
- Add 1-2 policies
- Configure API management policies.
- Logging and Monitoring

Module 10:- Developer Portal

- Working of Azure's Developer Portal.
- Discovering of API's in Developers portal.

Module 11:- API Gateways

- API Gateway Concepts.
- Authentication, SSL termination, Routing
- Load Balancing, Monitoring and Billing

Module 12:- Event Grid Topics

- Introduction to Event Grid
- Logging and Monitoring in Azure Functions ☐ Register Event Grid with Subscription ☐ Built-in events and custom events.

Module 13:- Azure Data Factory

- What is Data Factory and Data Factory in Azure.
- Provisioning of Azure DF, Pipeline, Activities, Linked Service, Datasets.
- Data Factory - Triggers, Data Flow
- User Properties & Monitoring

Module 14:- Key Vault

- Describe Azure Key Vault
- Granting permisisons / RBAC on keyvault
- Retrieve the secrets in keyvault using APIs

Module 15:- Monitor

- What is Azure Monitor & its working
- Creating Alerts
- Enabling deeper insights and analytics with monitoring system for troubleshooting purposes.

Module 16: - Log Analytics workspace

- Concept of Log Analytics.

- Scope for a monitored Azure resource/group of resources
- Log Analytics workspace

Module 17:- Function Apps

- Exploring the Azure Function App
- Triggers and Bindings
- Function Pipleline
- Supported Languages in Azure Functions
- Building a Function Pipeline

Module 18 :- Azure DevOps(Repos, Pipelines,Test Plans)

- Azure DevOps Architecture
- What is Azure Boards, Azure Repos, azure artifacts, Azure pipelines, Azure certification
- YAML Basics for Azure Pipelines
- Managing a DevOps project using Azure DevOps
- Compare Git and TFVC

Module 19:- Azure AD for features such as Managed Identity

- Azure Active Directory
- Managing Identities
- Securing Applications in AAD
- SSO , Open ID and OAUTH - Differences
- Data Authentication Flow
- Role Based Access Controls

Module 20:- App registrations

- Configuration of an app registration in Azure AD
- Configuration of authentication and authorization workflows
- Integrating App services with Azure AD for SSO

Module 21:- Resource Group

- Describe Resources
- Describe Resource Groups
- Describe Resource Manager
- Applying policy
- best practices in creating resource groups and cost management

Module 22:- Storage accounts

- What is Azure Storage
- Purposes of Blobgs, tables , files and queues
- Block , page and append blob differences and use cases
- Data lifecycle management
- Difference between GP V1 and GPV2
- Explore the Azure Data Lake enterprise-class security features.
- Organize your data with Azure Blob Storage
- Create storage resources to hold blobs
- Store and retrieve data from Azure Blob Storage