Developing APIs with Google Cloud's Apigee API Platform

Code:	GCP-DEV-API
Length:	3 days
URL:	[View Online](#)

Learn the fundamentals of API Design and the out-of-the-box capabilities offered by Google Cloud's Apigee API Platform. This course features a combination of lectures, hands-on labs, and supplemental materials to show you how to design, build, secure, deploy, and manage API solutions.

Skills Gained

- Identify the purpose and value of Google Cloud's Apigee API Platform.

- Develop a good understanding of Google Cloud's Apigee API Platform terminology and organizational model.

    Interact with Google Cloud's Apigee API Platform.

- Solve scenarios by leveraging APIs, recommended practices, and an API-first strategy.

- Understand and put in practice the API lifecycle.

- Identify capabilities available to secure, scale, and manage APIs and API products.

Who Can Benefit

Developers, architects, or engineers responsible for the solutioning, design, implementation, or management of APIs, API products, or digital products that leverage APIs

Prerequisites

Familiarity with HTTP, XML, Javascript.

Course Details

Course Outline
Module 1: Apigee Overview

- Understand the placement and role of API management in modern application development.

- Define Apigee API Platform logical components and organizational structure.

- Differentiate between Apigee flexible deployment models.

- Explain API lifecycle.

Module 2: API First and OpenAPI Specifications

- Describe REST API design.
- Understand the value of API-First development and how to apply it.
- Discuss OpenAPI specification and its use in the context of API-First development.

API Proxies

- Define the building blocks of APIs and API proxies.
- Describe how APIs proxies work and how capabilities such as flows, policies, route rules, virtual hosts and target servers play a role.
- Understand how APIs are exposed.
- Understand how API proxies connect to backend systems.

Module 4: API Products

- Define API products and the value behind API product strategy.
- Understand the role of developers, applications, and API keys in API management.
- Describe the API publication process.
- Understand API responses and status codes for REST APIs.

Module 5: Authentication, Authorization, and OAuth

- Discuss the importance of API Security.
- Understand the value of application identity.
- Understand the role of user authentication and authorization.
- Gain deep understanding of OAuth (Access token, Refresh token, Common pattern for all grant types) and its application in the context of API design and management.
- Discuss federated identity and the use of JSON Web Tokens in your API proxies.

Module 6: Content, Transport, and Internal Security

- Explore platform capabilities for protecting against content-based attacks and transport security.
- Understand how to protect sensitive data using encrypted KVMs, data masking, private variables.

Module 7: Mediation

- Understand the out-of-the-box platform capabilities for implementing mediation and fault handling.
- Describe implementation patterns and policies for JSON, XML, and SOAP.
- Understand extensibility options using Service Callouts, JavaScript, Python, and hosted targets.
- Explore development practices and capabilities used to reuse, share, and enforce execution of flows and policies.
- Illustrate out-of-the-box options to invoke Google Cloud services and third-party components using extensions.

Module 8: Traffic Management

- Describe when and how to use traffic management.

- Evaluate options and applicable use cases for rate limiting with spike arrests and quotas.

- Understand caching strategy and how to apply it.

Module 9: API Publishing

- Describe API publishing strategy and process.

- Expand understanding of REST API design by discussing API versioning.

- Describe the role of developer portals in the API lifecycle and as a critical part of API strateg

Module 10: Logging and Analytics

- Discuss available options for message logging.

- Understand the value and use of API analytics.

- Differentiate between message logging and API analytics.

- Understand the extensibility options available for API analytics using custom metrics and dimensions.

Module 11: Advanced Topics

- Discuss recommended practices and tooling for Apigee offline development.

- Describe the capabilities offered by management API.

- Evaluate options to leverage CI/CD as part of API lifecycle.

- Explore Apigee Deployment Options.

Download Whitepaper: Accelerate Your Modernization Efforts with a Cloud-Native Strategy
Get Your Free Copy Now