

# Developing APIs with Google Cloud's Apigee API Platform

---

<b>Code:</b>	GCP-DEV-API
<b>Length:</b>	3 days
<b>URL:</b>	<a href="#">View Online</a>

---

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.

---

## Schedule (as of 3 )

Date	Location

[Download Whitepaper: Accelerate Your Modernization Efforts with a Cloud-Native Strategy](#)  
 Get Your Free Copy Now