

Developing APIs with Google Cloud's Apigee API platform (T-APIENG-B)

ID GO-T-APIENG-B Duración 3 días

Quién debería asistir

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

Prerrequisitos

Familiarity with HTTP, XML, JSON, and JavaScript.

Objetivos del curso

- Explore and put into practice API design, development and management concepts.
- Understand the value of API-first development and how to apply it.
- Describe the fundamentals of REST API design.
- Describe API products, API product strategies, and how to publish APIs to a developer portal.
- Understand the role of user authentication and authorization and the importance of API security.
- Understand the out-of-the-box platform capabilities for implementing mediation, traffic management, caching, and fault handling.
- Describe the value and use of API analytics.
- Understand the deployment options for the Apigee platform.

Esquema Detallado del Curso

Module 01: Apigee Overview

- Understand the placement and role of API management in modern application development.
- Define logical components and organizational structure of Apigee API platform.
- Differentiate between Apigee flexible deployment models.
- Explain the API lifecycle.

Module 02: API First and OpenAPI Specifications

- Describe the fundamentals of REST API design.
- Understand the value of API-first development and how to apply it.
- Discuss OpenAPI specifications and their use in the context of API-first development.

Module 03: 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 04: 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 05: 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 06: Content, Transport, and Internal Security

- Explore platform capabilities for protecting against content-based attacks.
- Discuss transport security and how to protect the connection between Apigee and backend services.
- Understand how to protect sensitive data using KVMs,

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data masking, and private variables.

Module 07: 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.

Module 08: 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 09: 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 strategy.

Module 10: Logging and Analytics

- Discuss available options for message logging.
- Understand the value and use of 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.

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