

# Building Solutions with Apigee X

Modernize your APIs for the cloud with Apigee X

3 jours / 21h

## What you'll learn

- Secure the backend of your legacy application using mutual TLS
- Design applications with an API first design using the OpenAPI specification
- Integrate your API proxy with the Cloud Data Loss Prevention (DLP) API
- Best practices for site reliability with Apigee using monitoring and logging
- Modernize application deployment using Cloud Run and Cloud Build
- Authentication using API Keys and Firebase Authentication with Apigee
- Harden APIs using Apigee Policies and Cloud Armor
- Mitigate external threats with reCAPTCHA Enterprise
- Leverage Apigee Analytics to show custom data capture and reporting
- Leverage Cloud Code in your development environment to locally emulate Apigee
- Use Apigee Integration to improve connectivity with other services in Google Cloud

## Target audience

Customers

## Prerequisites

Completion of the “Developing APIs with Google Cloud’s Apigee API Platform” course or equivalent experience with Google Cloud and Apigee.

# Course Outline

## Module 01: Why Apigee X

### Topics

- Why Apigee X
- Introduction to use case – Who are you?
- One/Two-Way TLS
- Getting Started

### Objectives

- Review Apigee X concepts
- Review difference between one-way and two-way TLS

### Activities

- Lab: The Journey (Parts 1 and 2)

## Module 02: The Target

### Topics

- Implement a mTLS gateway
- API Keys
- Control your API's Response

### Objectives

- Implement a mTLS gateway
- Control your API's Response

### Activities:

- Lab: The Journey (Parts 3 and 4)

## Module 03: API First Design with OpenAPI

- API First Design
- The Show Me Now Rest API
- What is OpenAPI
- Apigee Debugging

## Objectives

- Understand API first design
- Build an OpenAPI specification
- Debug your API proxies

## Activities

- Lab: API First Design with OpenAPI

## **Module 04: Integrating External Services**

### Topics

- Cloud Data Loss Prevention (DLP) API
- Apigee ServiceCallout Policy
- Message Logging/Cloud Logging
- Uptime Checks
- Alerting Policies

## Objectives

- Explore the use of the Data Loss Prevention API
- Interface Apigee with external services
- Implement uptime checks and alerting policies

## Activities

- Lab: Integrating External Services

## **Module 05 : Consuming Apigee Resources**

### Topics

- Introducing the Client Application
- Application Build Tools
- Firebase Authentication
- Apigee Security Policies

## Objectives

- Build and host a client application
- Implement Firebase authentication
- Work with Apigee security policies

## Activities

- Lab: Integrating a Client Application

## **Module 06 : Hardening your API**

### Topics

- API security vulnerabilities
- JSON threat protection policies
- Cloud Armor
- The Hacker Tools

### Objectives

- Resolve common API security vulnerabilities
- Mitigate JSON threats
- Protect your API with Cloud Armor
- Investigate API security

## Activities

- Lab: Hardening your API

## **Module 07 : External Threat Mitigation**

### Topics

- reCAPTCHA Enterprise
- Apigee Data Collection
- Apigee Custom Reports

### Objectives

- Implement reCAPTCHA Enterprise in Apigee
- Build Apigee custom reports for analytics

## Activities

- Lab: External Threat Mitigation with reCAPTCHA Enterprise

## **Module 08 : Expand your Apigee Toolset**

### Topics

- The Apigee management API

- API Proxy Deployment Options
- Local development using Cloud Code
- Apigee emulator
- Development workflow

## Objectives

- Implement the Apigee management API
- Deploy an API proxy using different options
- Develop API proxies locally
- Plan your Apigee development workflow

## Activities

- Lab: Developing for Apigee using Cloud Code

## **Module 09 : Application Integration**

### Topics

- Introduction to Application Integration
- Triggers
- Tasks
- Apigee Integration Policies

### Objectives

- Use Application Integration with Apigee
- Create triggers and tasks in Application Integration
- Call integrations within Apigee

### Activities

- Lab: Expanding your API with Apigee Integrations

## **Module 09 : Consuming Apigee Resources**

### Topics

### Objectives

### Activities

## **Module 10 : Summary**

### Topics

- Course Debrief
- Apigee X or Apigee Hybrid
- What's next?

## Objectives

- Discuss differences between Apigee X and Apigee Hybrid