

# Installing and Managing Google Cloud's Apigee API Platform for Private Cloud

**Course Duration: 24 Hours**

**Course code: IMGCAAPPC**

## 1. Course Overview

This course provides a comprehensive understanding of installing, configuring, and managing Google Cloud's Apigee API Platform in a private cloud environment. It focuses on on-premises deployment, architecture, API gateway management, security, monitoring, and troubleshooting. Learners will gain hands-on experience in setting up Apigee components and managing API proxies in enterprise environments.

## 2. What you'll learn?

**By the end of the course, you will be able to:**

- Understand Apigee architecture and private cloud components
- Install and configure Apigee in a private cloud environment
- Manage API proxies and developer portals
- Implement API security and traffic management policies
- Monitor, log, and troubleshoot Apigee deployments
- Optimize API performance and scalability
- Manage upgrades, backups, and maintenance
- Integrate Apigee with enterprise systems

## 3. Target Audience

- API Developers and Engineers
- Cloud and System Administrators
- DevOps Engineers
- Integration Specialists
- IT Infrastructure Professionals

## 4. Pre-Requisites

Before taking this course, you should have:

- Basic understanding of APIs and REST services
- Knowledge of Linux system administration
- Familiarity with networking concepts
- Experience with cloud or on-prem infrastructure (recommended)

## 5. Course content

Module 1: Course Introduction

- Course overview and objectives
- Introduction to Apigee API Platform
- Use cases and enterprise benefits

Module 2: Apigee Architecture Overview

- Components of Apigee Private Cloud
- Runtime plane and management plane
- Message processors, routers, and databases
- Deployment topologies

Module 3: Infrastructure Planning and Prerequisites

- Hardware and software requirements
- Network planning and configuration
- Sizing and capacity planning
- Security considerations

Module 4: Installing Apigee Private Cloud

- Installation process overview
- Installing Apigee components
- Configuration of nodes and services
- Post-installation validation

## Module 5: Configuring Apigee Platform

- Environment setup
- Organization and environment configuration
- User roles and permissions
- Initial platform setup

## Module 6: API Proxy Development and Management

- Creating API proxies
- Proxy endpoints and target endpoints
- Managing API lifecycle
- Versioning APIs

## Module 7: Traffic Management and Policies

- Understanding policies in Apigee
- Traffic control (quota, spike arrest)
- Flow variables and conditions
- Error handling

## Module 8: API Security

- Authentication and authorization
- OAuth 2.0 implementation
- API keys and access tokens
- Threat protection policies

## Module 9: Developer Portal and API Publishing

- Introduction to developer portal
- Publishing APIs
- Managing developers and apps
- API documentation

## Module 10: Monitoring and Analytics

- Apigee analytics overview
- Monitoring API performance
- Logs and debugging
- Custom reports and dashboards

## Module 11: Troubleshooting and Maintenance

- Identifying and resolving issues
- Debugging API proxies
- Log analysis
- Routine maintenance tasks

## Module 12: Scaling and Performance Optimization

- Scaling Apigee components
- Load balancing strategies
- Performance tuning
- High availability setup

## Module 13: Backup, Restore, and Upgrades

- Backup strategies
- Restoring Apigee environment
- Upgrading Apigee versions
- Patch management

## Module 14: Integration with Enterprise Systems

- Integrating with backend services
- Hybrid and multi-cloud considerations
- CI/CD integration
- Automation strategies

## Module 15: Real-World Use Cases and Capstone Project

- Enterprise API management scenarios
- End-to-end Apigee deployment project
- Best practices and architecture design
- Final evaluation

