Apigee

Accelerate digital transformation with APIs

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Enable government agencies to accelerate application modernization, and decouple from legacy backend systems to optimize IT. With Apigee, the Department of Defense can securely share its data and services inter and intra-agency creating a more efficient organization & partner ecosystem while creating better user experience.

Mission Challenge

In today's digital era, a key enabler to operating at internet speed and scale is APIs (application programming interfaces). APIs connect applications to one another and to the data and services that power them - enabling commands and programs to quickly and easily combine software for new products.

But securely delivering, managing, and analyzing APIs, data, and services is complex and critical - and it's getting more challenging as programs expand beyond on-premises data centers to include private and public clouds, SaaS, and other endpoints. To navigate this complexity, programs and commands need enterprise-grade API management to exert the power of APIs across the entire IT ecosystem.

Apigee Solution Overview

Apigee is Google Cloud's API Management Platform. It gives DoD agencies control over and visibility into the APIs that connect applications and data across the on-premises infrastructure and across clouds. Apigee empowers agencies to accelerate digital transformation by unlocking the value of data, driving internal efficiencies, and delivering modern applications.

Apigee is a full lifecycle API management platform that enables API providers to design, secure, deploy, monitor, and scale APIs. Apigee sits in-line with runtime API traffic and enforces a set of out-of-the-box API policies, including key validation, quota management, transformation, authorization, and access control. API providers use the customizable developer portal to enable developers to consume APIs easily and securely, and to measure API performance and usage.

Apigee is the platform for all of the command's API initiatives, whether powering external experiences, enabling agility and speed for internal or external developers, or connecting internal applications and systems. With Apigee, commands and programs can quickly deliver the connected experiences, modernize applications, and breakdown silos.

The Apigee runtime has the ability to run wherever needed whether the workload is on-premise or in the Cloud (Figure 1). Use the best of the cloud with no vendor lock-in. Run on all clouds and on-premises with visibility, control, and security across the total environment.
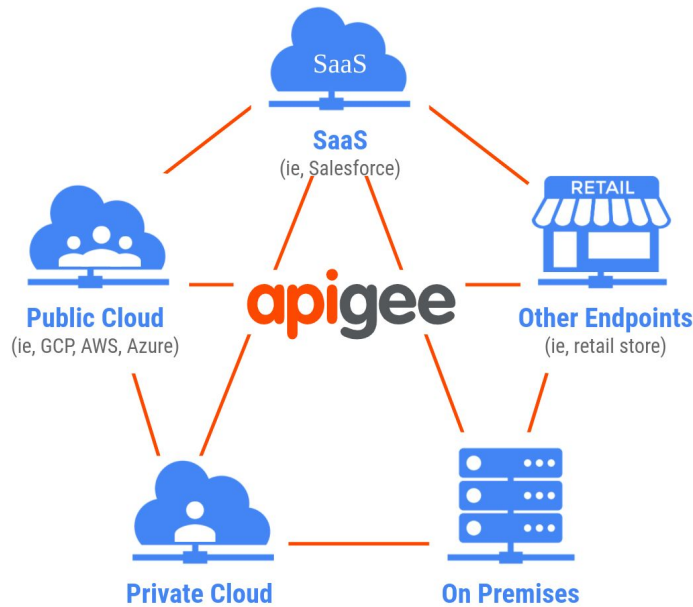
Figure 1

Apigee is the platform for all of the DoD enterprise API initiatives, whether powering external experiences, enabling agility and speed for internal or external developers, or connecting internal applications and systems. With Apigee, organizations can quickly deliver the connected experiences, modernize applications and activate new information channels.
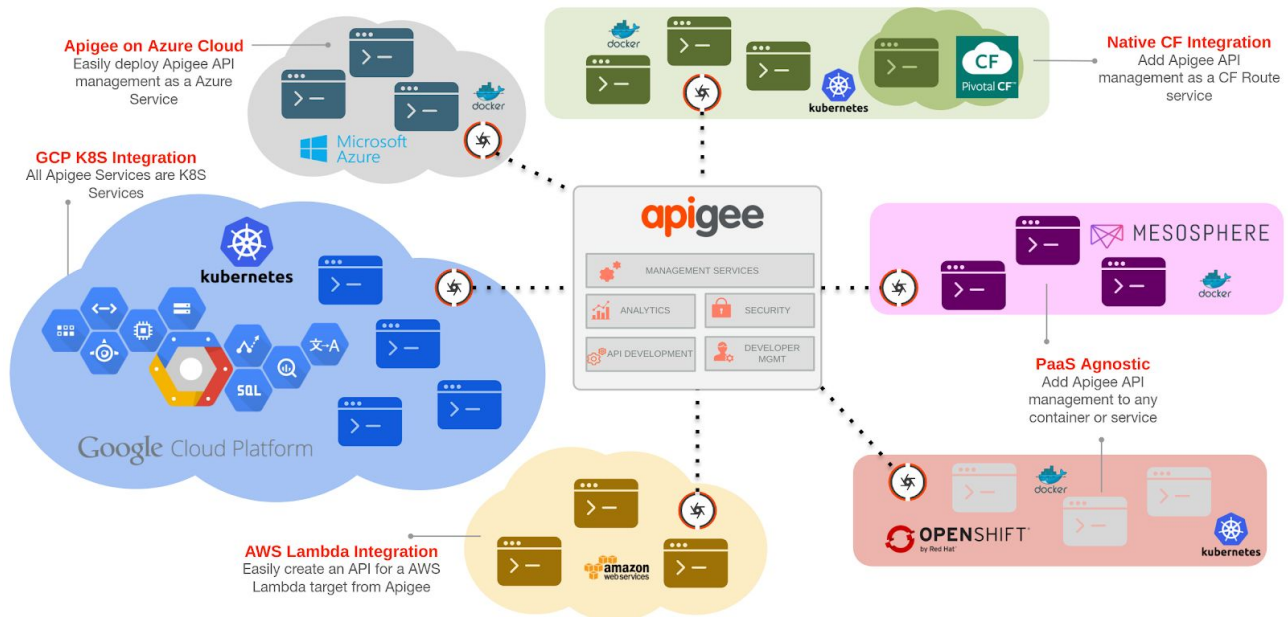
Apigee Hybrid and Multi Cloud Architecture

Apigee supports

- **Service continuity** - One of the primary concerns of application migration is tight coupling of the user experiences to the backend services or apps. Apigee acts as an abstraction layer between the exposure and consumption allowing for the service connectivity while parts of the application's backend or frontend are migrated to cloud

- **Security Enforcement** - Apigee can act both as a security enforcement layer as well as a security mediation layer. As apps are modernized while moving to the cloud, it is very common for the modern apps to have a different security mechanism (like JWT, OAUTH) vs the legacy, traditional backends (like SAML, Basic Auth etc). Apigee can bring in uniformity by allowing the moden apps to use one common mechanism while mediating the credentials when talking to the legacy backends and vice versa. Apigee can also make sure that security mechanisms like Regex checks, DLP enforcement are done while on-prem apps (that have strict compliance needs) are calling the workloads in the cloud

- **Visibility** - By acting as the facade across on-prem, cloud workloads, Apigee can provide visibility into how the application migrations are happening and the success or traction for the migrated apps. The API metrics that Apigee provides are slightly higher level as Apigee will have visibility into which application, developer, or user is calling the API, which API Product is being used to call the API etc. The API metrics can also be pulled in through Apigee's management API and analyzed along other operational metrics collected by app's logging frameworks etc.

- **API Facades** - Most often, not all the applications can be migrated at once. The replatformed or modernized apps will have to talk to a monolith, or a legacy or traditional backend. These backends most of the time will be in legacy protocols like SOAP/XML. It is not ideal for the modern applications to consume them that way, as it adds the additional burden of maintaining additional libraries making the app heavy or complex. Apigee can help create API Facades that are modern while keeping the monolith intact. The replatformed or modern cloud-native applications can talk to these facades instead of going directly to the backend

- **Service Management** - Lift & Modernize is one of the standard themes of App migration. Microservices, often on Kubernetes, is the vehicle for application modernization. As enterprises realize the success of the microservices based architecture, the number of microservices explode as the applications are migrated to the cloud. Without the right security and visibility it is extremely difficult to accelerate the adoption of microservices. Apigee's microgateway can add capabilities to manage their microservices like security, analytics.

Google Cloud Professional Services Offerings

Google Cloud's Professional Services Organization (PSO) is able to work directly with customers to help realize the value of Apigee for API management. The below outlines a services engagement to get started with Apigee.

Apigee Accelerate 2-day Workshop

Enables customers to plan and position themselves for an accelerated launch onto the Apigee API platform and allow for the short term realization of the capability through an onsite engagement led by an Apigee Customer Success Architect and Digital Engagement Lead.

<u>What's Included</u>

- Documented Solution Architecture approach for a Minimum Viable Mission Outcome (MVMO)
- Provide industry best practices to API design, implementation, and publishing
- Document and identify tools needed to support App Developer discovery, adoption, and use of published APIs
- Assessment of the current delivery model / team structure and provide recommendations to align it with a more API centric approach
- A Customer Journey Plan / Roadmap of work to deploy Apigee, develop internal capabilities, and deliver APIs to Production

Depending on Apigee licensing and the Google Cloud resources used, the Apigee solution costs $175K-$250K

Let's connect to discuss how Google Cloud Document AI can help your organization!