Google Apigee API Management

Google Cloud

Choose the right deployment that fits your needs

Public Cloud / SaaS

Allow Apigee to manage the infrastructure for you. Simply configure, deploy and manage your APIs in the cloud.

Hybrid

Get the added benefits of a cloud-hosted API platform for managed design, analytics and documentation plus the autonomy to deploy a runtime wherever you'd like.

Private Cloud

When you need to fully managed the platform and infrastructure yourself. This could be in the private cloud of your choice or 100% on-premises.

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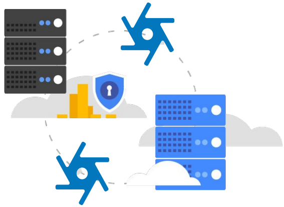
Runtime Options

Enterprise Gateway

Fully featured runtime capable of high scale and high throughput of API traffic and policy enforcement. This is provided in a centralized manner with multi-region and autoscaling built-in.

Microgateway

Lightweight node.js runtime purpose-built to co-exist or be co-located with microservices and containers. This provides limited policy support, but is fully customizable.



Apigee hybrid

Fully featured runtime identical to the enterprise gateway; however, this can be deployed in a distributed fashion to multi-cloud and on-premises Kubernetes environments.

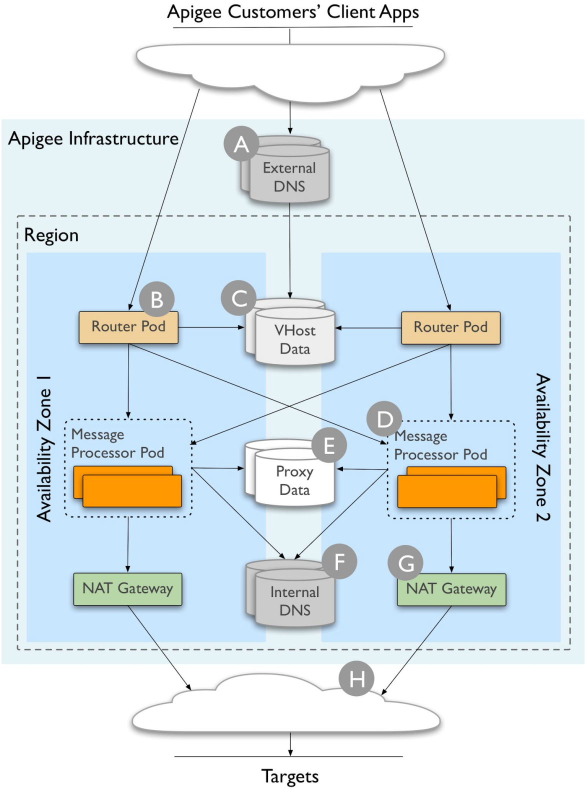
Apigee Public Cloud / SaaS

- **Fully Managed** Apigee provides a SaaS offering that is fully hosted and maintained by our team. No infrastructure operations overhead for the customer.

- **Consistent Replication** All platform assets and definitions are persisted and replicated across pods and regions in near real-time so customer need not worry about inconsistencies of the runtime behavior.

- **Resilient Runtime** Apigee provides a guaranteed SLA of 99.99% for multi-region customers

- **Dedicated NAT** Each customer is provided a dedicated NAT address that is used for routing and whitelisting by their targets



A — Router resolution
Client call to DNS is resolved to a specific Apigee router instance.

B — TLS initiation
Client starts establishing a TLS session with the Apigee router.

C — TLS completion
Apigee router uses VHost data specified by the customer to finish establishing TLS session.

D — Proxy initiation
Client sends API call parameters to the Apigee router, which it forwards to a healthy message processor.

E — Proxy processing
Message processor executes the customer's API proxy.

F — Target resolution
To make calls to a backend, the message processor resolves the backend DNS entry using the internal DNS service.

G — Proxy forwarding
To make calls to backends during its processing, the message processor establishes a TCP session through the NAT gateway in its availability zone. Using configured IP table rules, the NAT gateway establishes a TCP session with the backend.

H — Target processing
Message processor establishes a TLS session, then exchanges data with the backend.

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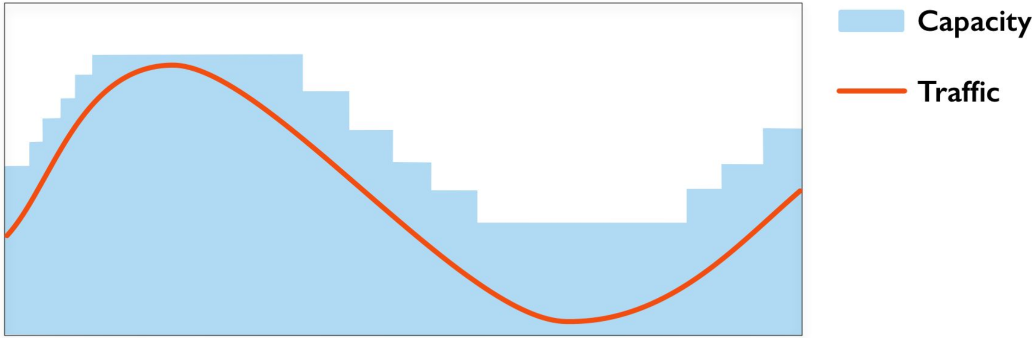
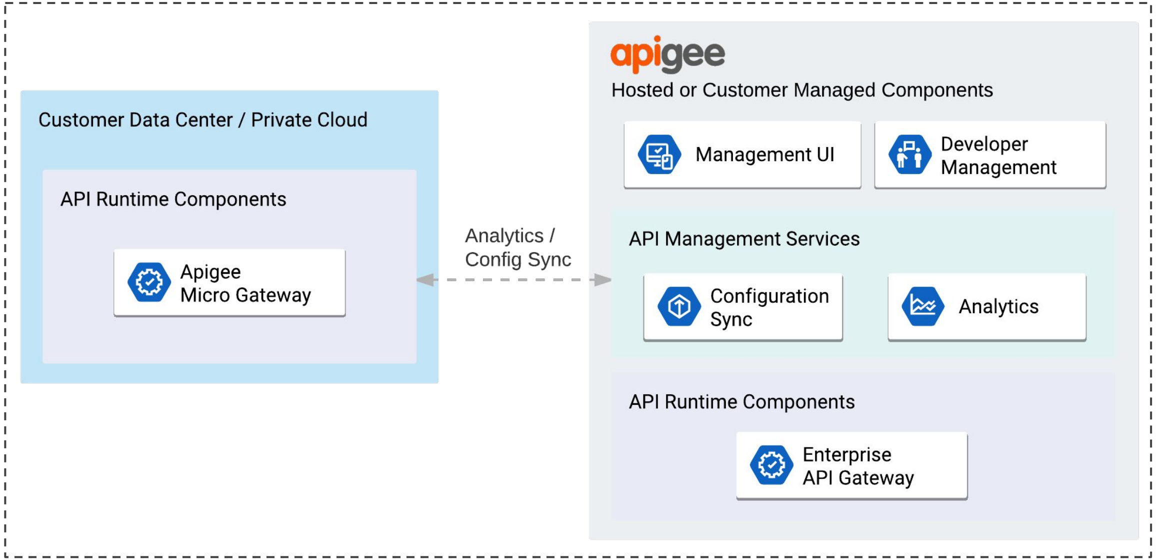
Runtime Autoscaling



- **Monitored** Apigee constantly monitors each and every customer environment for increases in resource utilization
- **Quick Response** As thresholds are triggered, the platform responds within seconds to spin up new instances to accommodate the new traffic pattern
- **Hands off** Customers need not take any action to gain benefits from autoscaling
- **Elastic** Autoscaling is completely elastic - they scale up when needed and scale back down after traffic decreases.
- **Utilization Based** Triggered by utilization of CPU, active threads adjusted against defined baseline percentiles. Node scale are set in a min/max fashion.

Microgateway



- **Lightweight** Microgateway requires limited resources and is deployed as node.js app
- **Flexible** Can be deployed anywhere and everywhere you would like - VMs, Kubernetes, PCF, GKE - and is often times co-located with microservices/containers
- **Asynchronous** Can run in “offline” mode which requires limited connectivity to control plane
- **Limited Features** Only supports key APIM features such as quota, spike arrest, Oauth, API key, analytics and logging
- **Poll/Push** Microgateway periodically polls the control plane for new config changes and pushes analytics and metrics after they are collected

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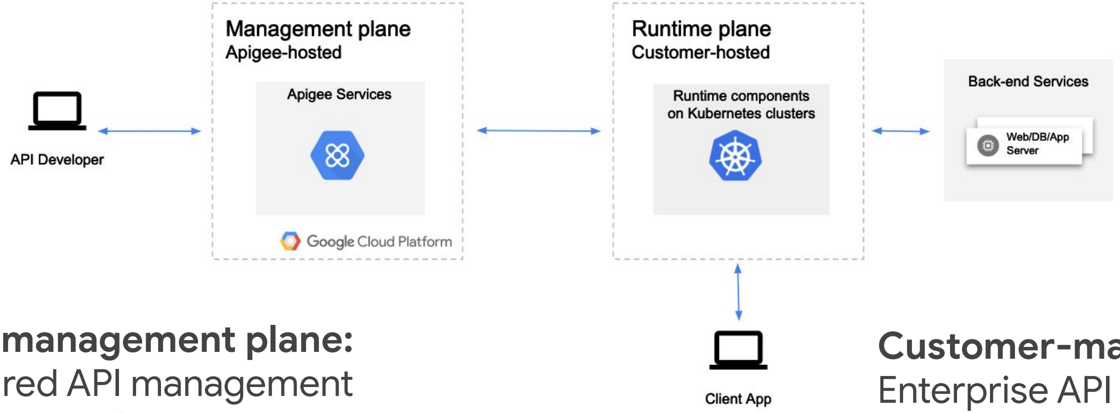
Apigee hybrid

A hybrid deployment model with



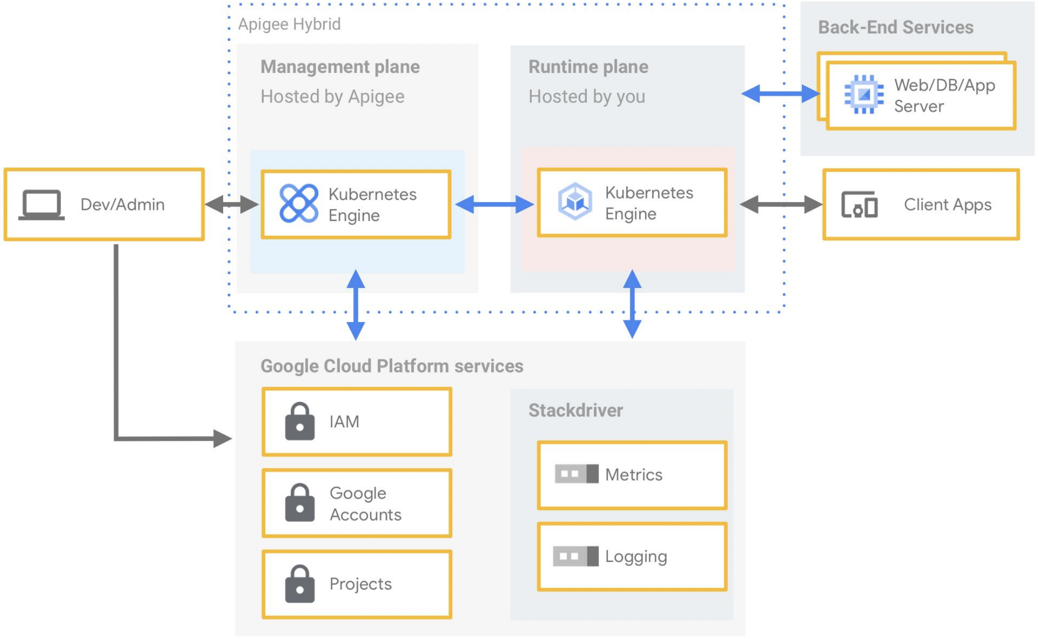
Apigee-run management plane: Full-featured API management capabilities Analytics, API usage, access, productization, and developer portal

Customer-managed runtime plane: Enterprise API gateways, hosted and managed by you in your environment of choice

More details on Apigee architecture here - https://docs.apigee.com/hybrid/what-is-hybrid

Apigee hybrid

Apigee hybrid high-level overview



Apigee Hybrid

Management plane

Hosted by Apigee

Kubernetes Engine

Runtime plane

Hosted by you

Kubernetes Engine

Back-End Services

Web/DB/App Server

Client Apps

Dev/Admin

Google Cloud Platform services

IAM

Google Accounts

Projects

Stackdriver

Metrics

Logging

Apigee management plane

API lifecycle management capabilities

Customer runtime plane

Enterprise API gateways

Containerized runtime

Kubernetes-driven

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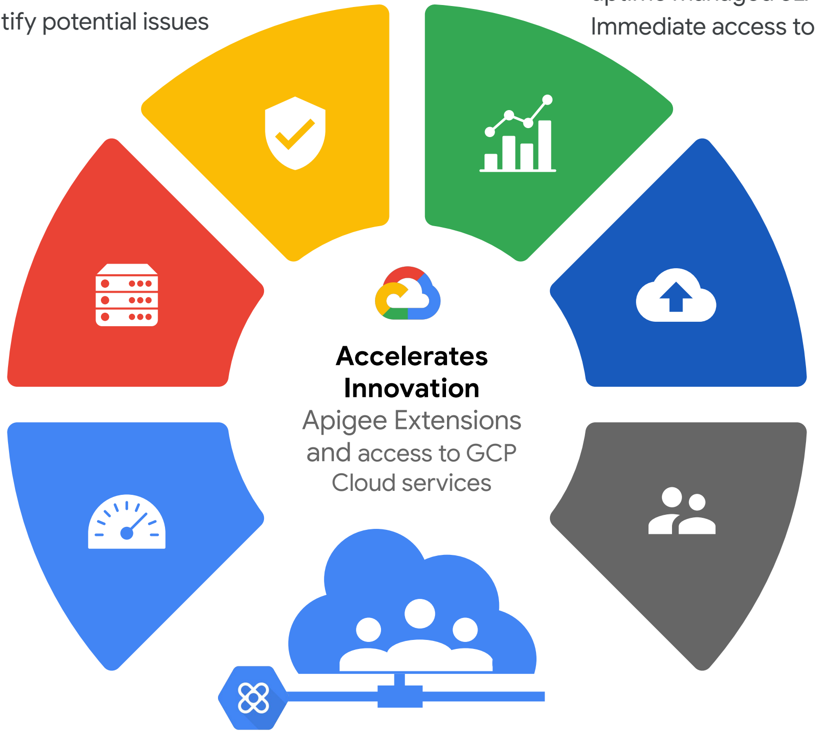
Impact IT Bottom Line



Security Vulnerabilities Proactively Removed

Using Apigee Sense, Security Dashboard and GCP DDos prevention to proactively identify potential issues

Scalability, Resilience and Agility for Future Growth

New Regions, Traffic Isolation, Auto-scale/heal and uptime managed SLA/SLOs by Apigee SaaS. Immediate access to new features releases

Reduction in Datacenter Costs

Apigee SaaS available in global regional availability zones with PCI/HIPAA compliance

Reduction in Compute and VM / Cloud Costs

Apigee Apigee SaaS / Hybrid remove need to pay for Private Cloud

Accelerates Innovation

Apigee Extensions and access to GCP Cloud services

Increase Speed of Resolution (MTTR)

Utilizing API Monitoring automation Apigee SaaS / Hybrid Support to proactively notify teams and

Repurpose & Upskill Ops Talent to new initiatives

Labor pool repurpose and cost avoidance due Apigee SaaS managed services, automatic upgrades and Apigee Operational tools