

Apigee On-premise Options



Apigee Microgateway

Objective



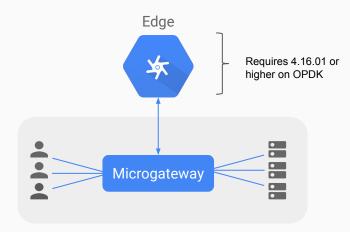
Deploy a lean API runtime infrastructure in your private enterprise environment while getting all the benefits of Edge API management in the cloud

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Use cases



- Reduce latency of traffic for close proximity services
- Keep API traffic within the enterprise-approved boundaries because of security or compliance purposes
- Continue processing messages if internet connection is lost



Enterprise Private Cloud

Description



- Microgateway is a Node.js application and can be run by anyone with permission to run such applications on a given machine
- It's a lightweight process that can run close to the target API—even on the same machine
- It requires Node.js 6.X LTS or later and runs on Windows, Linux, and macOS

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Features



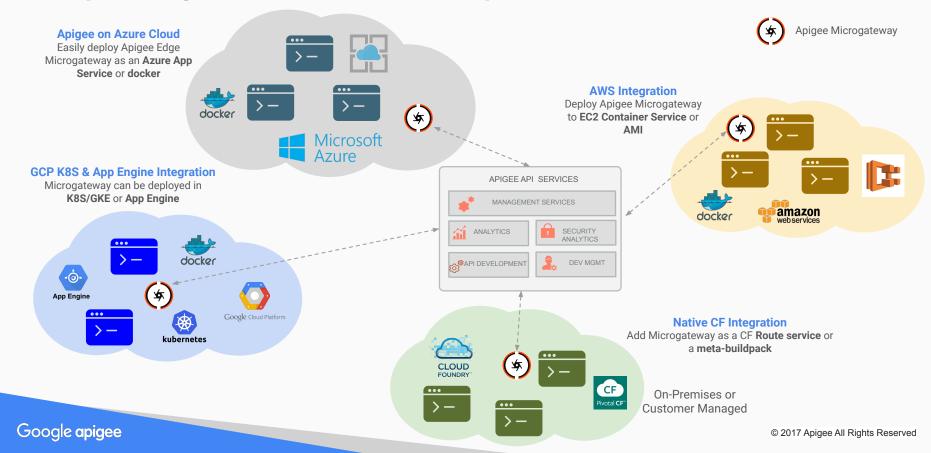
Edge Enterprise Gateway vs. Microgateway

Feature	Enterprise Gateway	Microgateway
OAuth: JWT tokens • Supports password and client credentials grant	⊘	⊘
OAuth: opaque tokens • Supports all four grant types	⊘	*
Spike Arrest & Quota	⊘	⊘
Caching	⊘	*
Threat protection (XML, JSON, RegEx)	⊘	⊗ *
Callout (Python, Java, XSLT)	⊗	8
JavaScript callouts, JSON-XML transformation	∀	⊘
Bot Detection & Monetization		
Containerization or Cloud Foundry Deployments	× ×	
Logging & Monitoring	⊗	file system only; basic menitoring
Analytics		
* Possible via customization		customer dimensions are not possib

When to use Microgateway?

Requirement	Which gateway?
 Building new APIs or new microservices Deploying in PaaS (Cloud Foundry or containers/Kubernetes) 	Microgateway
Distributed API management (a gateway for each API or a few APIs)	Microgateway
 A single (or a few) gateways for the enterprise Gateway pattern 	Enterprise Gateway
Complex mediation rules (API orchestration, aggregation, etc.)	Enterprise Gateway
Legacy services (such as SOAP) modernization	Enterprise Gateway
Internal APIs or APIs for application-to-application integration (simple APIM policies)	Microgateway
 External API traffic Monetization 	Enterprise Gateway
Scale: 100s of APIs per second	Microgateway
Scale: 1000s of APIs per second	Enterprise Gateway

Deep integrations with multiple clouds



Pros and Cons

Pros

- Easy to install and configure
- Based on Node.js
- Plugin based architecture
- Ability to write custom plugins
- Configured via YAML
- Small footprint (single VM or containers running in your DC)

Cons

- Cannot use Apigee Edge UI to configure plugins
- Must update Node.js and Microgateway when updates are available
- Setup and maintain network infrastructure (load balancer, and multiple instances of Microgateway)

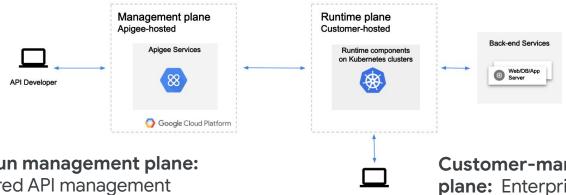




Apigee hybrid BETA

What is Apigee hybrid?

A hybrid deployment model with



Client App

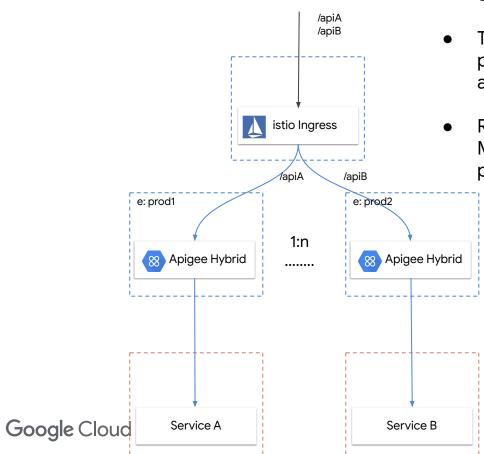
Apigee-run management plane:

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



Routing and Load Balancing

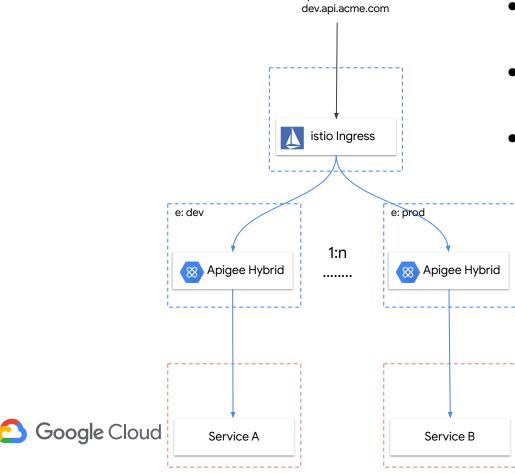


api.acme.com

- Single Virtual Host api.acme.com
- Two sets of Message Processors prod1 and prod2. Some APIs are available on prod1 and others on prod2
- Requests are routed to appropriate
 Message Processor instance bsed on the path in the URI

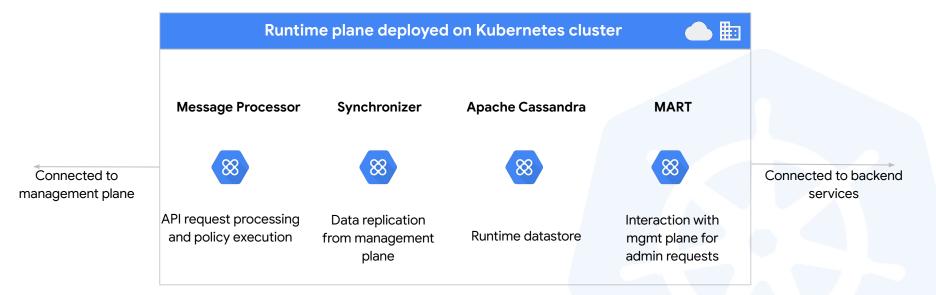
Routing and Load Balancing

api.acme.com



- Multiple VHs api.acme.com and dev.api.acme.com
- Two sets of Message Processors dev and prod.
- Requests are routed to appropriate message processor instance based on the Host header

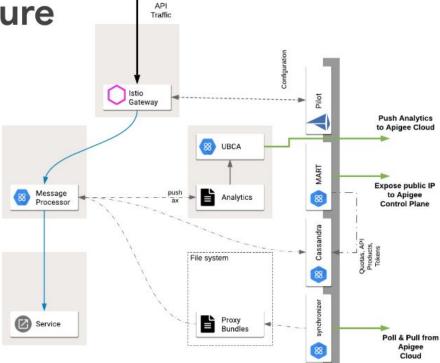
Key runtime components





Runtime Architecture

- Istio Gateway* (routing and LB)
- Istio Pilot* (configuration)
- Message Processor (API Gateway)
- Apache Cassandra (persistence layer)
- Synchronizer (replicates data)
- MART (management server)
- UBCA (analytics back to cloud)





Pros and Cons

Pros

- Full version of Apigee gateway running within your data center
- Gateways can be configured via Apigee Edge UI
- Requires Kubernetes

Cons

- Larger on-premise <u>footprint</u>
- Must have Kubernetes installed
- In beta and no planned release date yet
- Will incur additional costs



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Appendix

Apigee hybrid BETA

Enterprise-grade hybrid deployment option for the Apigee API Management Platform

- Customer-managed runtime plane with all API traffic on their choice of infrastructure
- Apigee-run management plane with security, scalability, and analytics
- Provides unified management of APIs on a single platform
- Enables use of hybrid and multi-cloud environments for APIs

