Apache APISIX from Gateway to Full Traffic Proxy with Istio

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About Me

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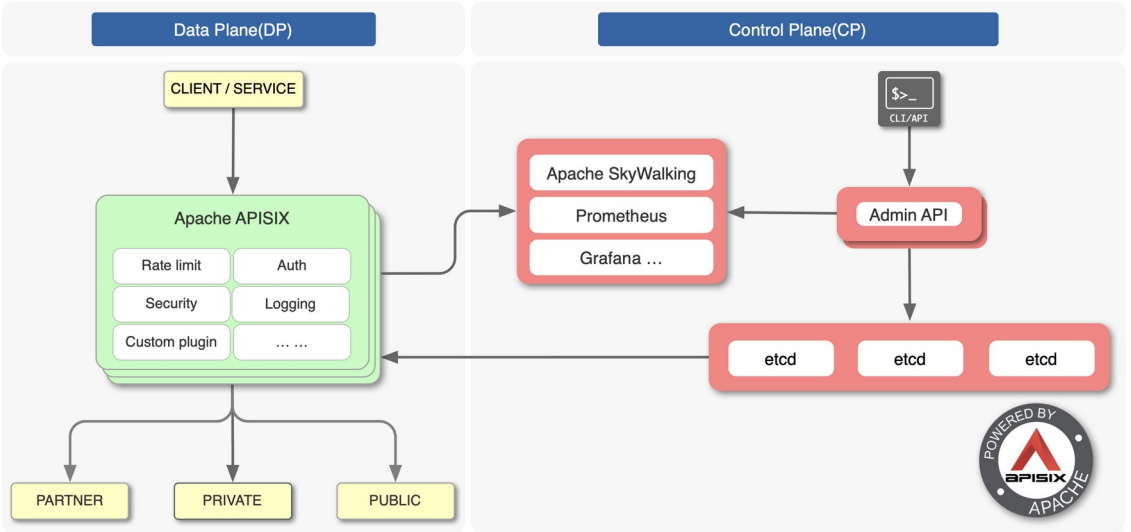
Agenda

- What is Apache APISIX
- Why use Apache APISIX as the data plane for Istio
- How to implement it
- The future

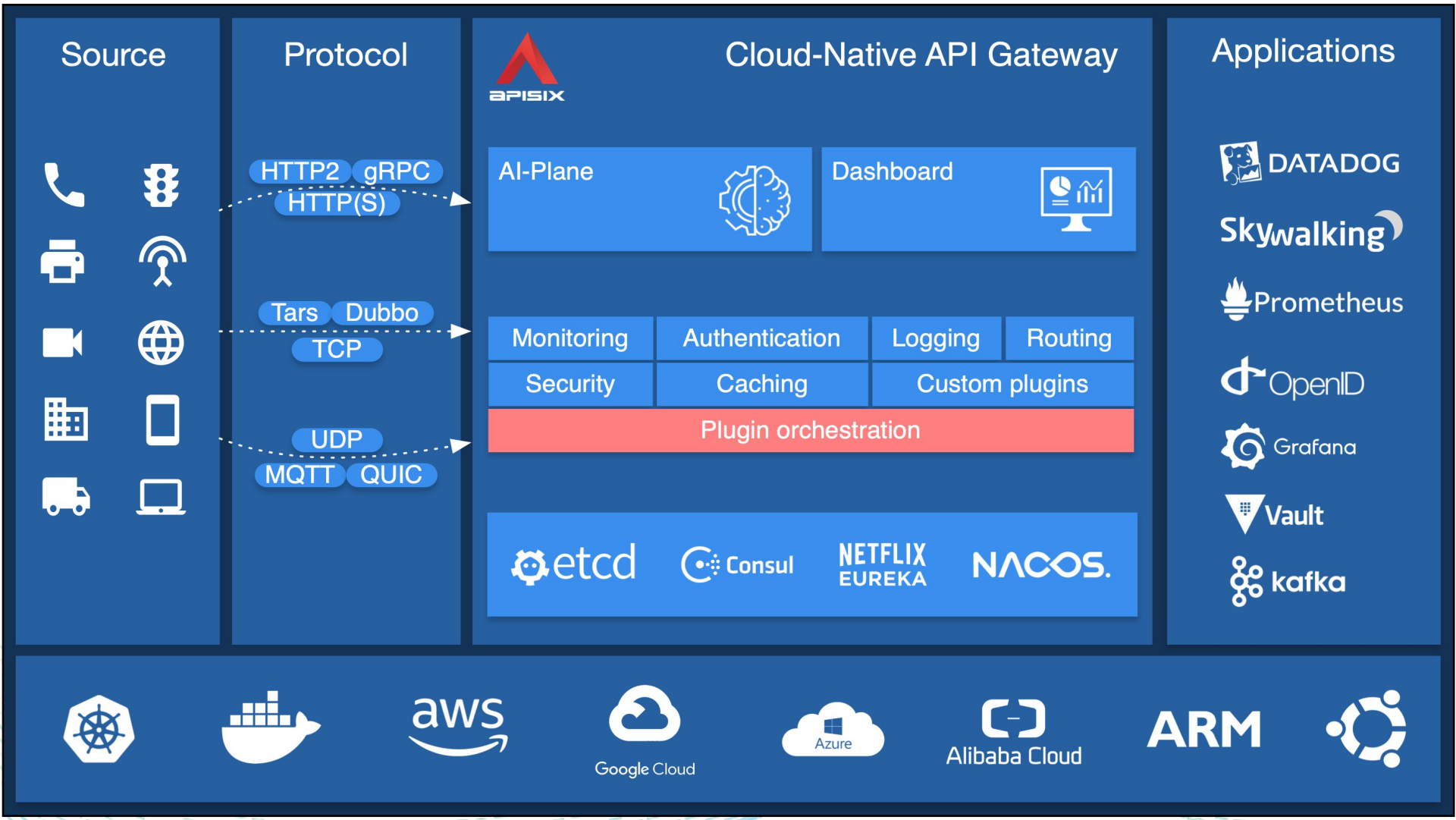
What is Apache APISIX

Apache APISIX

- ASF top level project
- Full Dynamic
- High Performance
- Cloud Native
- Out-of-the-box plugins
- Easy to extend



https://github.com/apache/apisix


Source
Protocol
APISIX
Cloud-Native API Gateway
Applications
HTTP2
gRPC
HTTP(S)
Tars
Dubbo
TCP
UDP
MQTT
QUIC
AI-Plane
Dashboard
Monitoring
Authentication
Logging
Routing
Security
Caching
Custom plugins
Plugin orchestration
etcd
Consul
NETFLIX EUREKA
NACOS.
DATADOG
Skywalking
Prometheus
OpenID
Grafana
Vault
kafka
aws
Google Cloud
Azure
Alibaba Cloud
ARM

Usage Scenarios for Apache APISIX

- L4/L7 Gateway （weibo、 WPS）
- Microservices API Gateway （iQIYI）
- Kubernetes Ingress controller （UPYUN）
  - https://github.com/apache/apisix-ingress-controller/

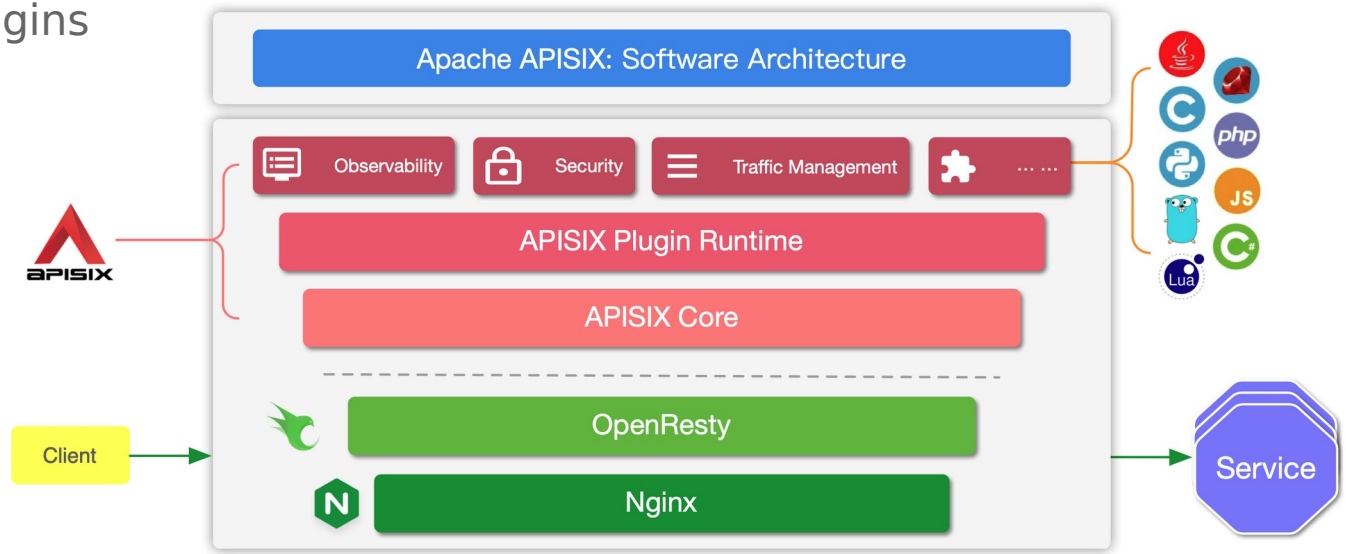
Why use Apache APISIX as the data plane for Istio

Easy to use

The concepts in APISIX are few and simple.
You can quickly get started with APISIX in 3 minutes.
But in the same amount of time, you may still be learning how to write filters rules for Envoy.

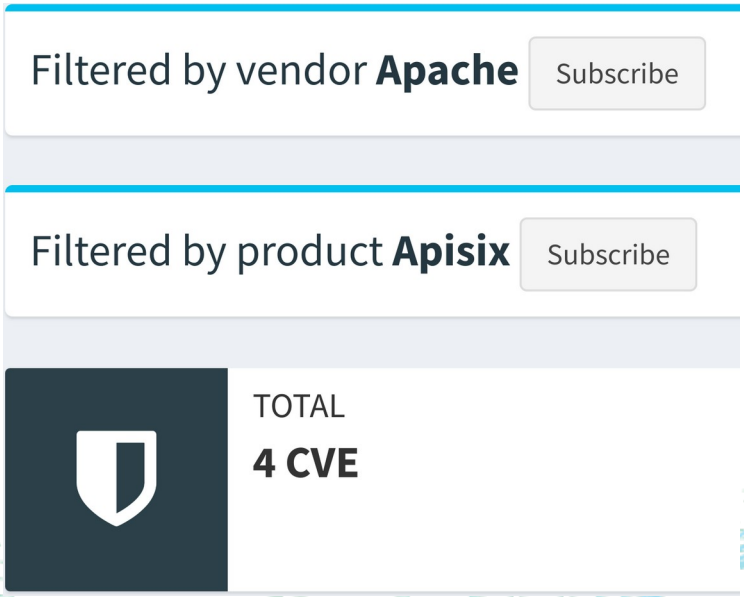
Easy to extend

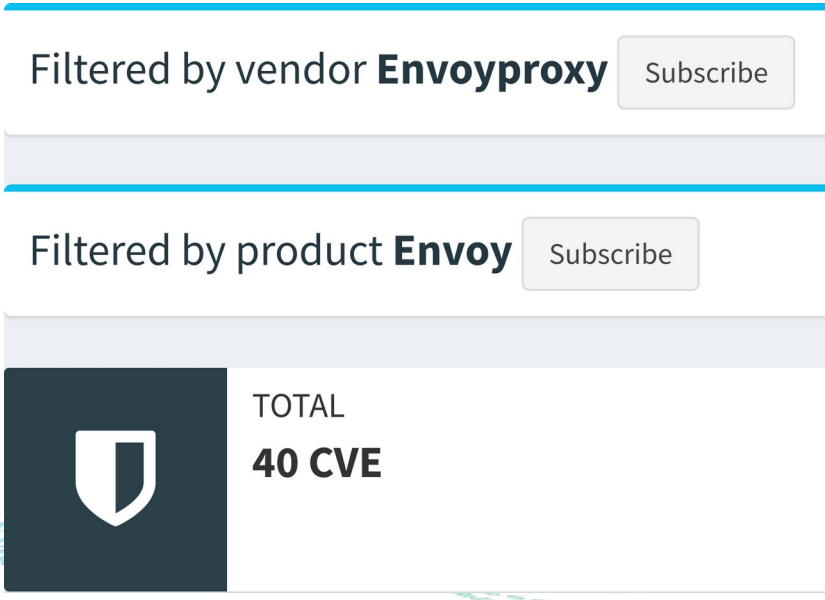
- NGINX + Lua
- multi-language plugins



Security

APISIX has fewer known vulnerabilities

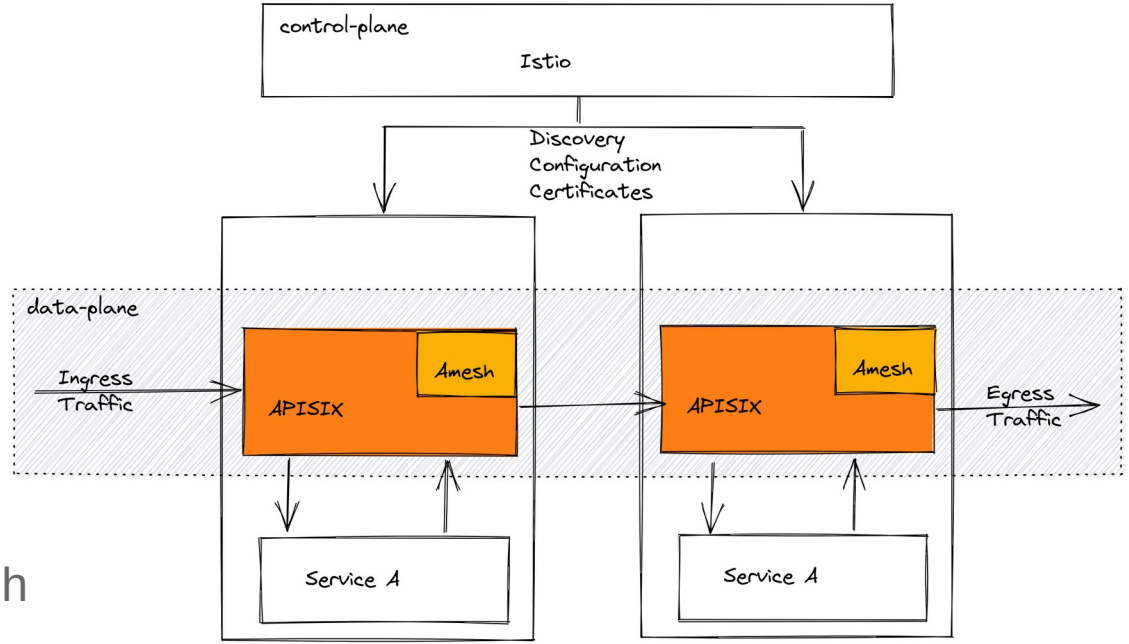




How to implement it

Apache APISIX Native Support

- No etcd required
- Support for xDS protocol



It’s public now!!!
https://github.com/api7/amesh

How to use it

Change the injection-template:

- proxy_init
- proxy

Ref: https://github.com/api7/amesh/blob/main/docs/en/demo.md

The future

- Donate it to the ASF for development as a sub-project of APISIX.
- Apache APISIX covers all traffic from east to west and north to south.

Thank you!

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