

Apache APISIX from Gateway to Full Traffic Proxy with Istio

Jintao Zhang
API7.ai



#IstioCon

About Me

- Apache APISIX PMC
- Kubernetes Ingress NGINX maintainer
- Microsoft MVP
- zhangjintao@apache.org
- <https://github.com/tao12345666333>



Agenda

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



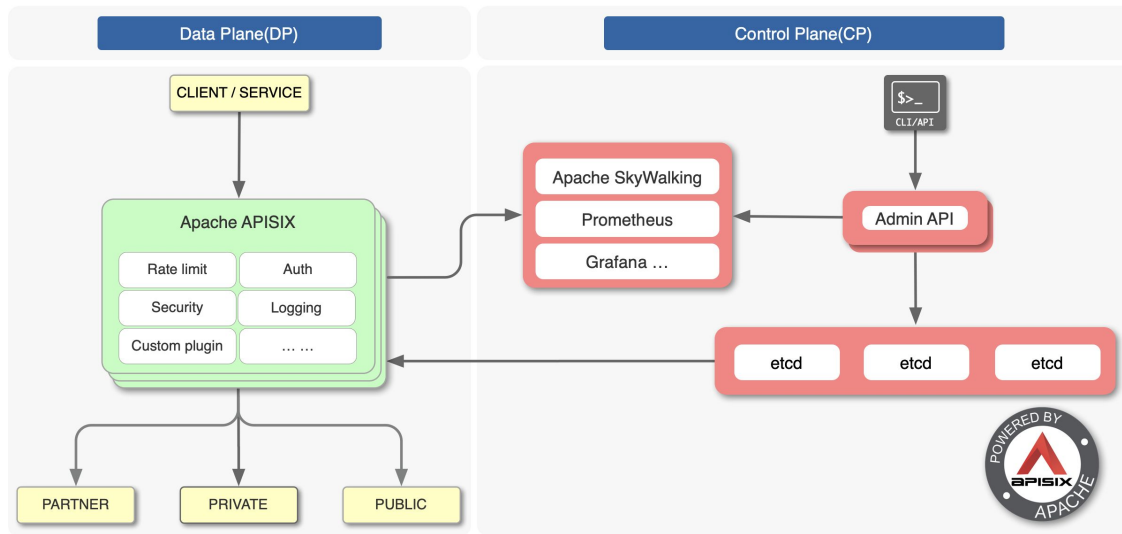
What is Apache APISIX

#IstioCon



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

HTTP2 gRPC
HTTP(S)

Tars Dubbo
TCP

UDP
MQTT QUIC



Cloud-Native API Gateway

AI-Plane



Dashboard



Monitoring

Authentication

Logging

Routing

Security

Caching

Custom plugins

Plugin orchestration



Applications



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

#IstioCon



Easy to use

The concepts in APISIX are few and simple.

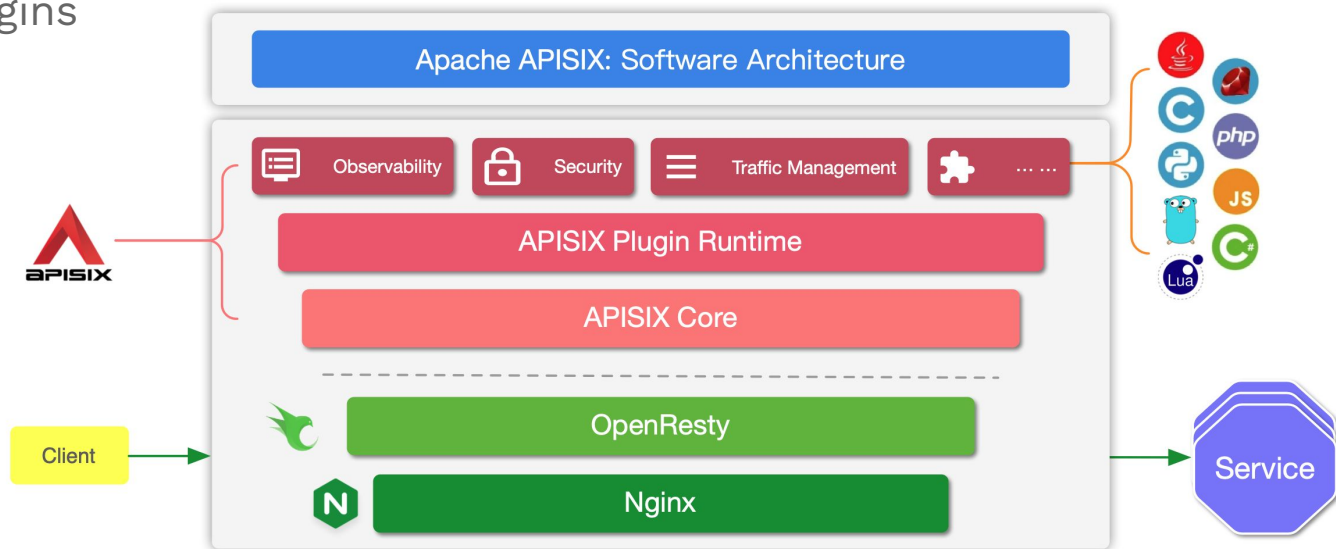
You can quickly get started with APISIX in 3 minutes.

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



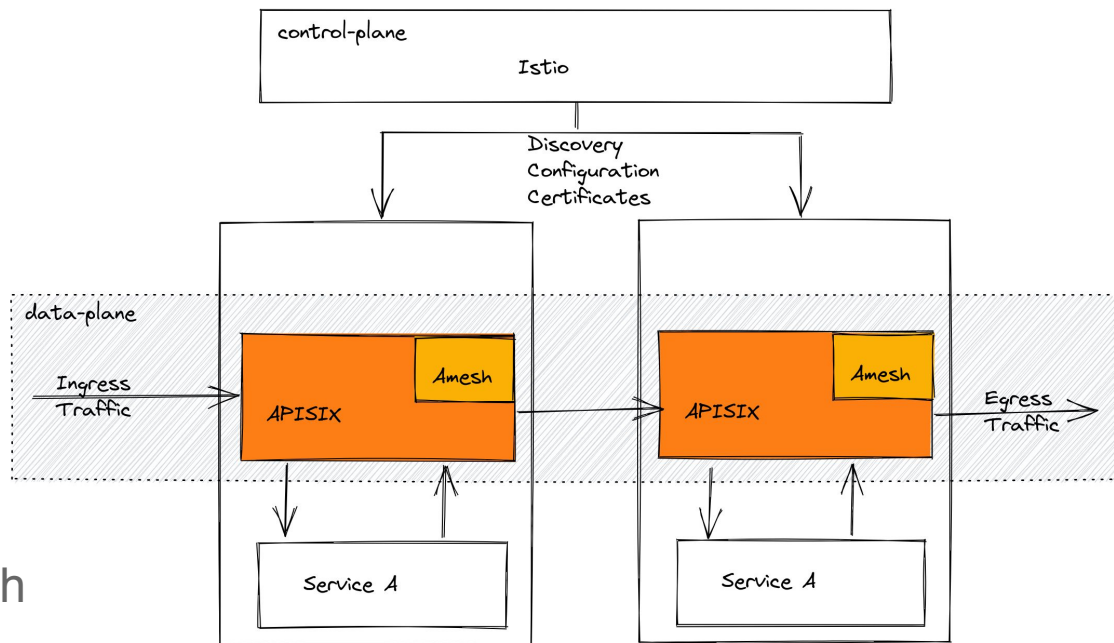
How to implement it

#IstioCon



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!

@zhangjintao9020
<https://moelove.info>

#IstioCon

