

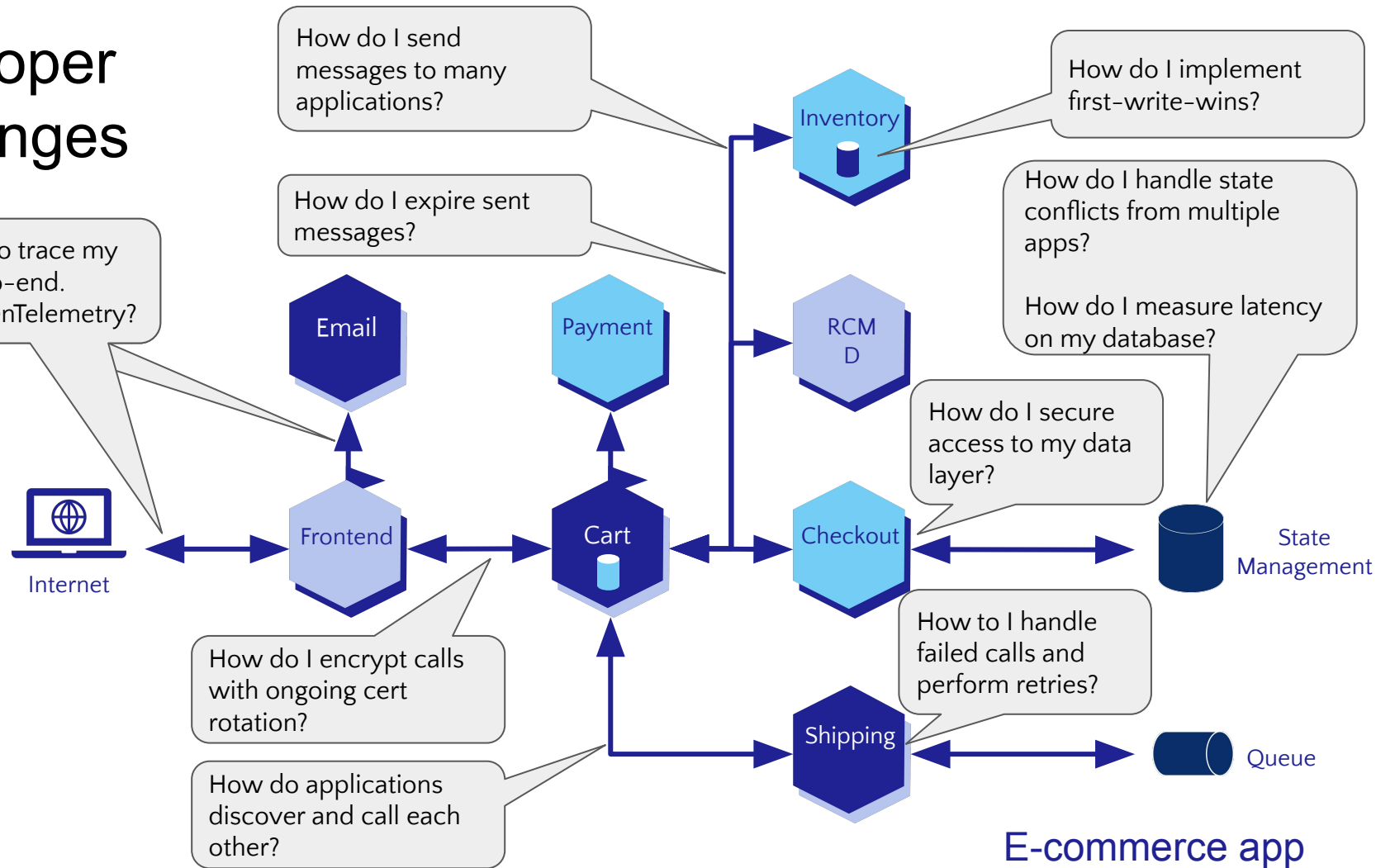
Better WASM microservices with Dapr

Yaron Schneider

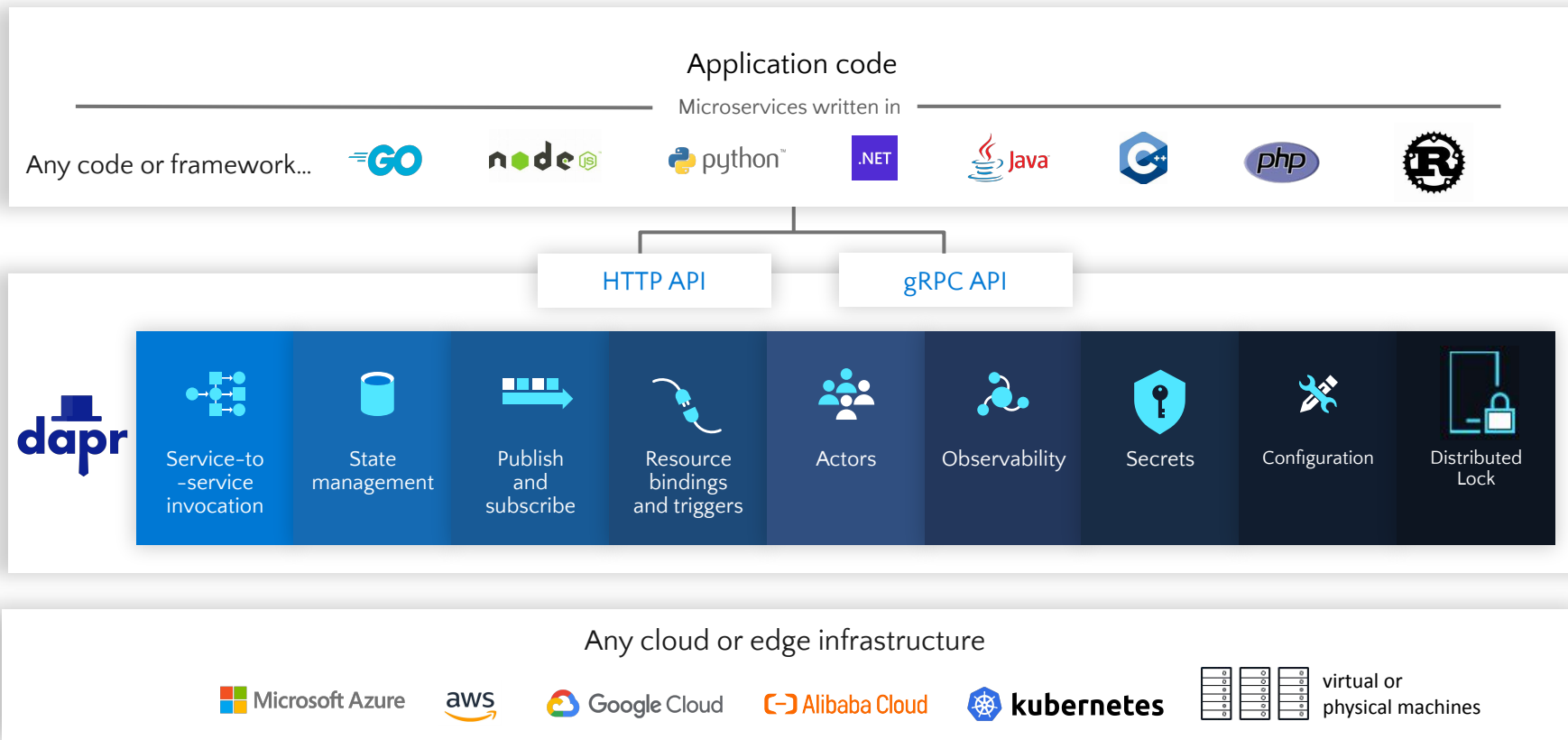
Co-Founder / CTO at Diagrid

Dapr maintainer & steering committee member

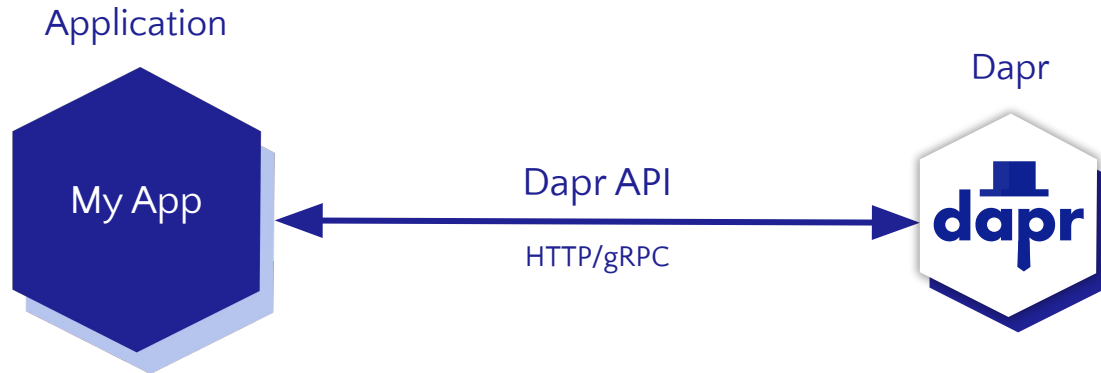
Developer challenges



Enter Dapr - Distributed Systems APIs



Dapr does the heavy lifting



POST `http://localhost:3500/v1.0/invoke/cart/method/neworder`

GET `http://localhost:3500/v1.0/state/inventory/item67`

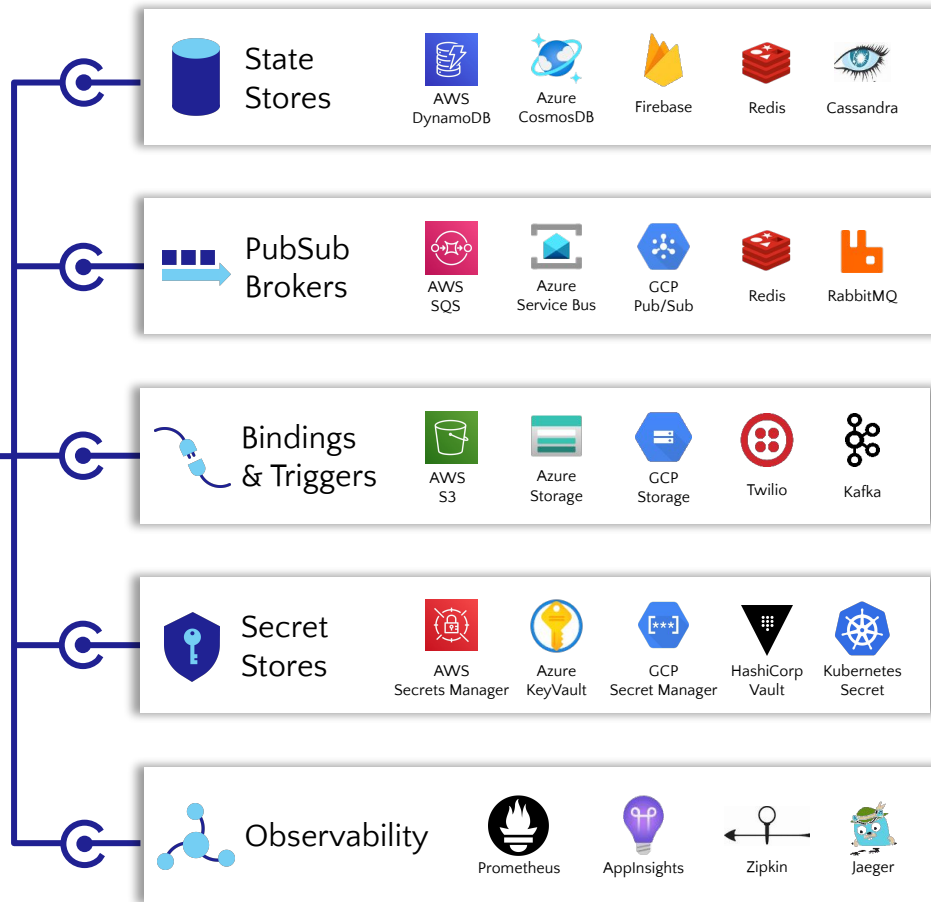
POST `http://localhost:3500/v1.0/publish/shipping/orders`

GET `http://localhost:3500/v1.0/secrets/appvault/password`

Dapr integrates with existing infrastructure



Over 105 community contributed components



Dapr Community Momentum

19.8k

GitHub stars

2.3k

Contributors

108

Community components

+1.0M

Docker Hub monthly pulls

4.9k

Discord members

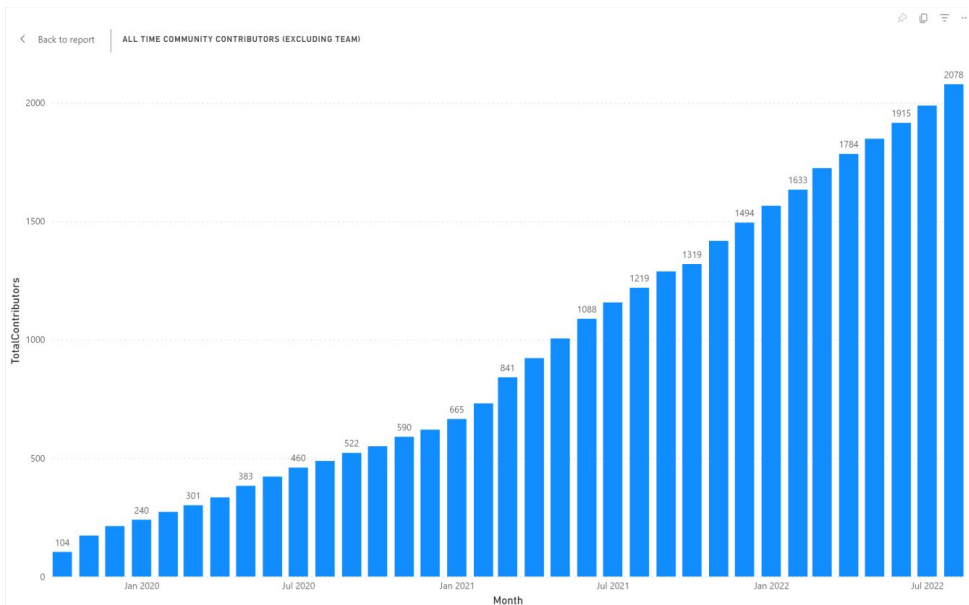
291k

Unique docs views/mo



CLOUD NATIVE
COMPUTING FOUNDATION

9th largest CNCF project
(of 124)



Contributing organizations include:



Microsoft

amazon

vmware



Alibaba Cloud



Diagrid

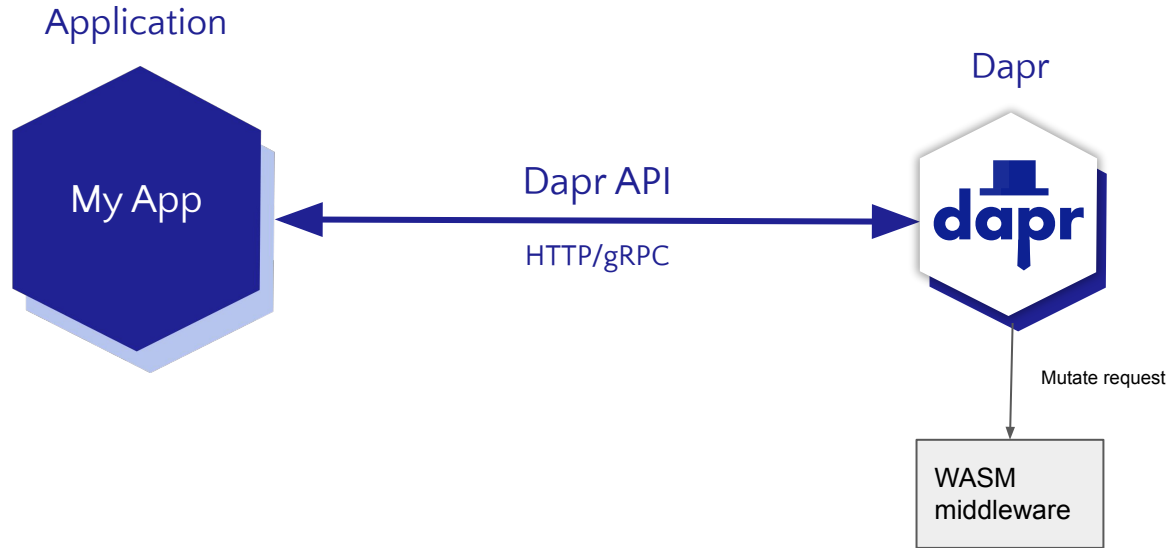


Tencent 腾讯



BOSCH

WASM support in Dapr - today



Dapr components

1. Compiled as part of the Dapr binary
2. Must be written in Go

HTTP API
Server

gRPC API
Server

 State
Stores


AWS
DynamoDB


Azure
CosmosDB


Firebase


Redis


Cassandra

 PubSub
Brokers



AWS
SQS


Azure
Service Bus


GCP
Pub/Sub


Redis


RabbitMQ

 Bindings
& Triggers


AWS
S3


Azure
Storage



GCP
Storage


Twilio


Kafka

 Secret
Stores


AWS
Secrets Manager


Azure
KeyVault


GCP
Secret Manager


HashiCorp
Vault


Kubernetes
Secret

 Observability

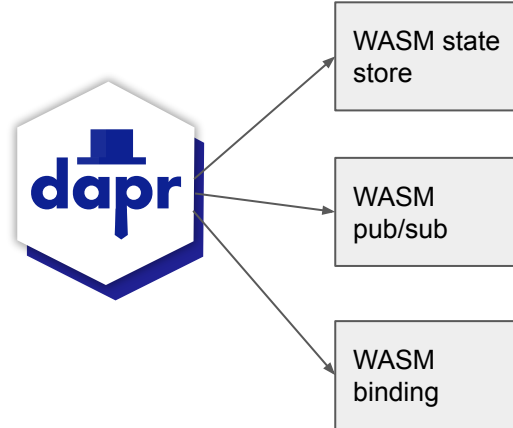

Prometheus


Applinsights


Zipkin


Jaeger

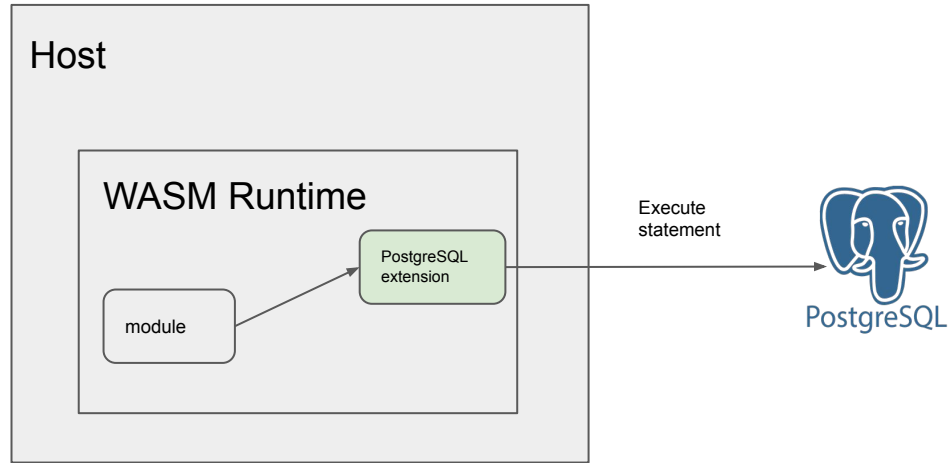
As WASM matures - pluggable, dynamic components

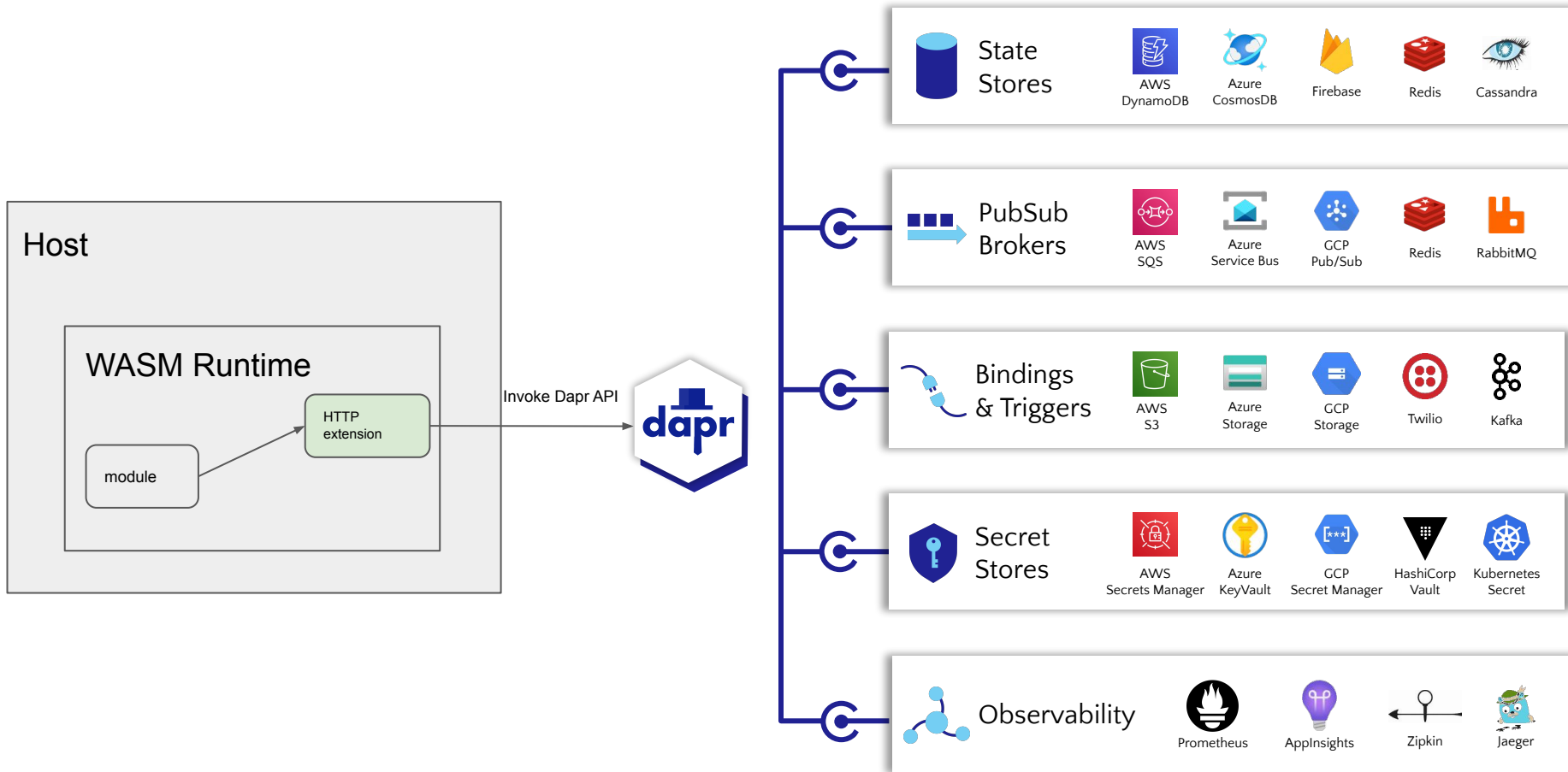


How can Dapr help WASM apps?

WASM limitations

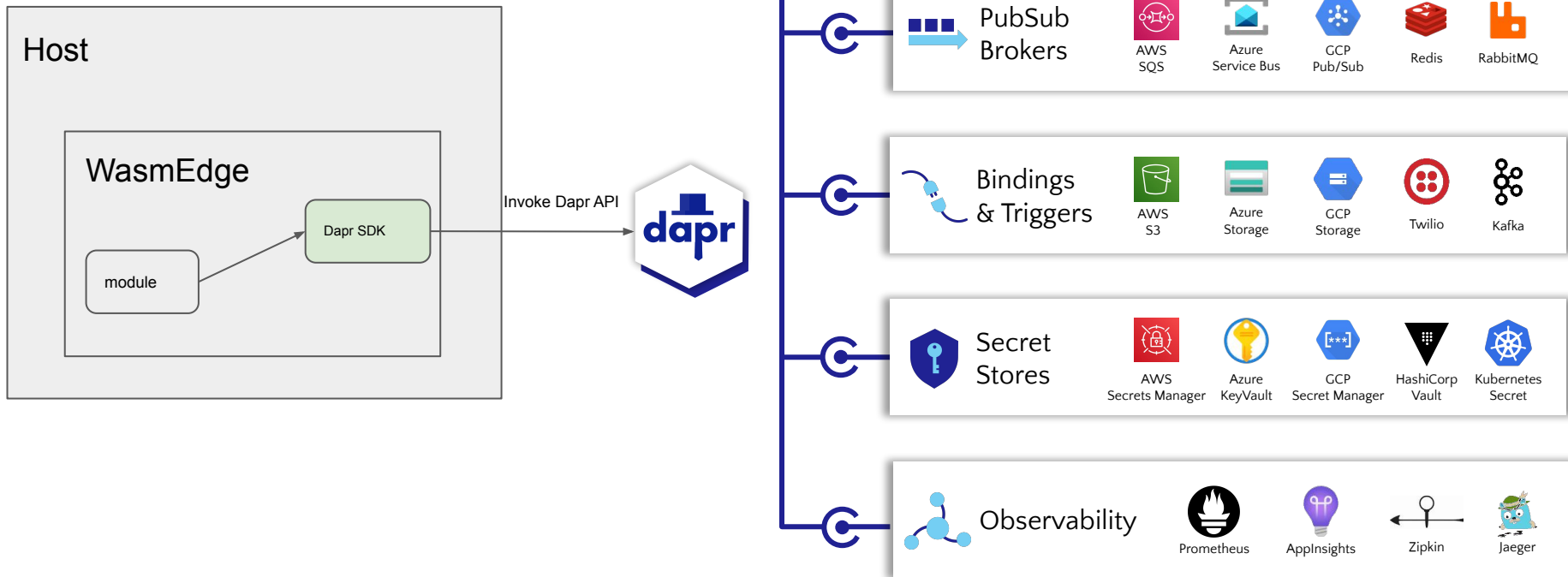
1. No TCP/UDP networking primitives - limited client ecosystem
2. Limited multi-threading outside of Web Workers



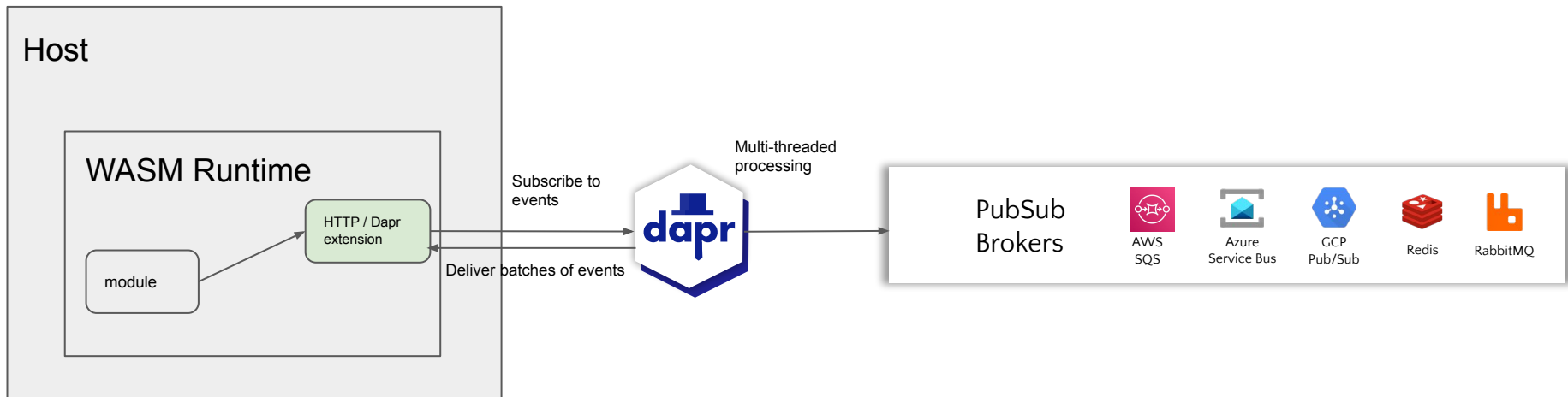


Dapr support in WasmEdge

<https://github.com/second-state/dapr-wasm>



Common real world scenario - High throughput message processing



Thank you!