

Apache EventMesh(incubating): 事件驱动分布式应用运行时

陈广胜

Apache EventMesh(incubating) Founder&PPMC
微众银行技术专家

TGO 鲲鹏会

汇聚全球科技领导者的高端社群

 全球 12 大城市

 1200+ 高端科技领导者

愿景
Vision

构建全球化的有技术背景的优秀人才同侪学习成长平台

使命
Mission

助力学员成为卓越的科技领导者

价值观
Values

渴望学习、乐于分享
互相成就、守护信任



扫描二维码，了解更多内容

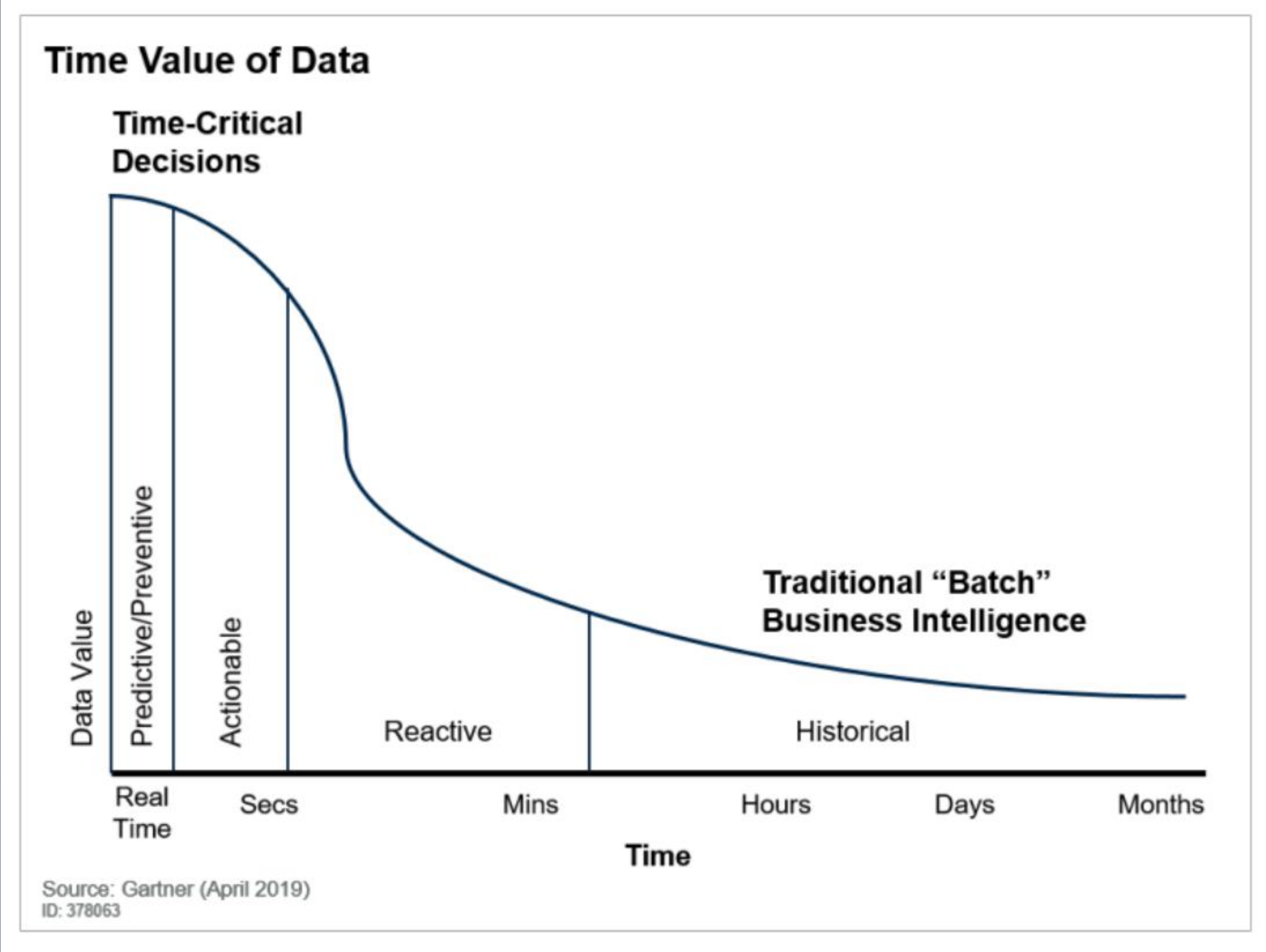
大纲

- Why Event-Driven?
- What is EventMesh?
- Why EventMesh?
- EventMesh core features
- EventMesh in webank
- EventMesh in other scenarios
- EventMesh ecosystem
- EventMesh future

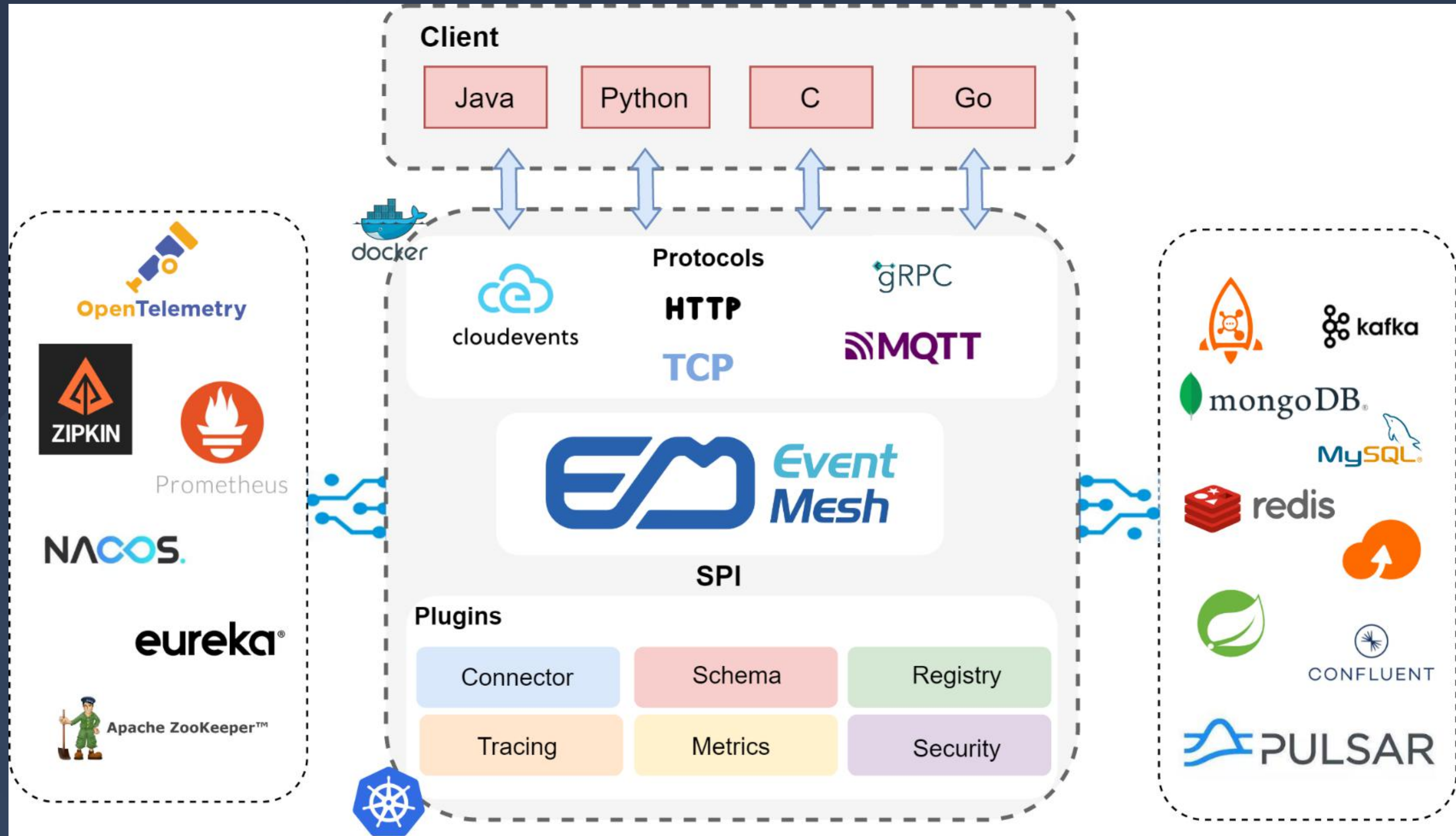
Message Vs Event

- Messages – Updates that are directly sent from one service to another.
- Events – Updates that occur at a specific time and are not tied to any specific recipient or client.

Real-time intelligence and 'lossless' business activity analysis



EventMesh Architecture



REST-Driven Vs Event-Driven

REST-Driven Systems

Pros

- Remote interface based on standard protocols
- Global uniform interface based on standards
- Simplicity makes it easy to learn

Cons

- @sgr m pcosqr+pcnjwank k sl ga_rgnl _qqsk nrgnl q, Synchronous g l _rspc,
- Nm r+rmnm r ank k sl ga_rgnl rf pmsf rf c _bmrgnl md_ajgl r+qcd cp _paf gcarspc _l b pcjgl ac m FRRN jc_bg e rmref r ansjg e g k gpmcpc gacq _paf gcarspcq pcqsjrg e g _ distributed monolith.
- REST lock-in, Gk gpmcpc gacq ank k sl ga_rc sqg e PCQR* rf _r ujj `c rf c k _g dmpk mdank k sl ga_rgnl npct cl rg e g rcpmcp_ ggwu gf l m +PCQR _nnjga_rgnl q,

Event-Driven Systems

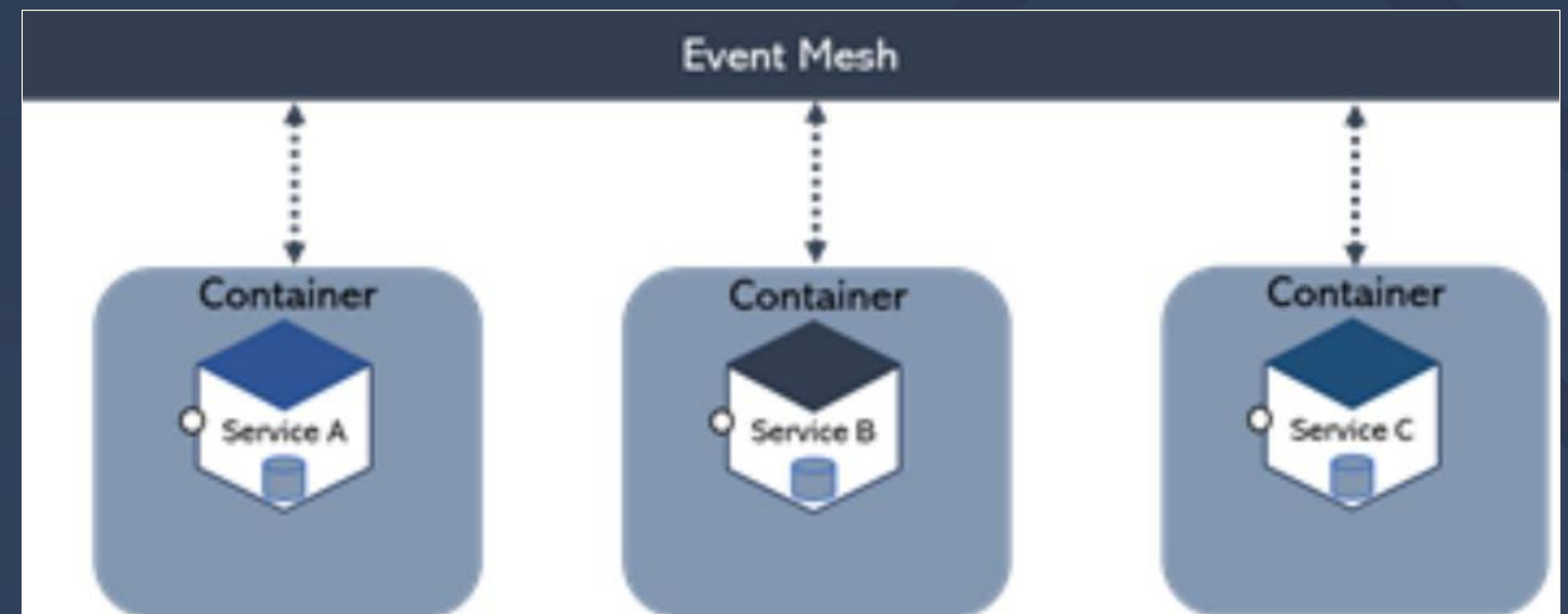
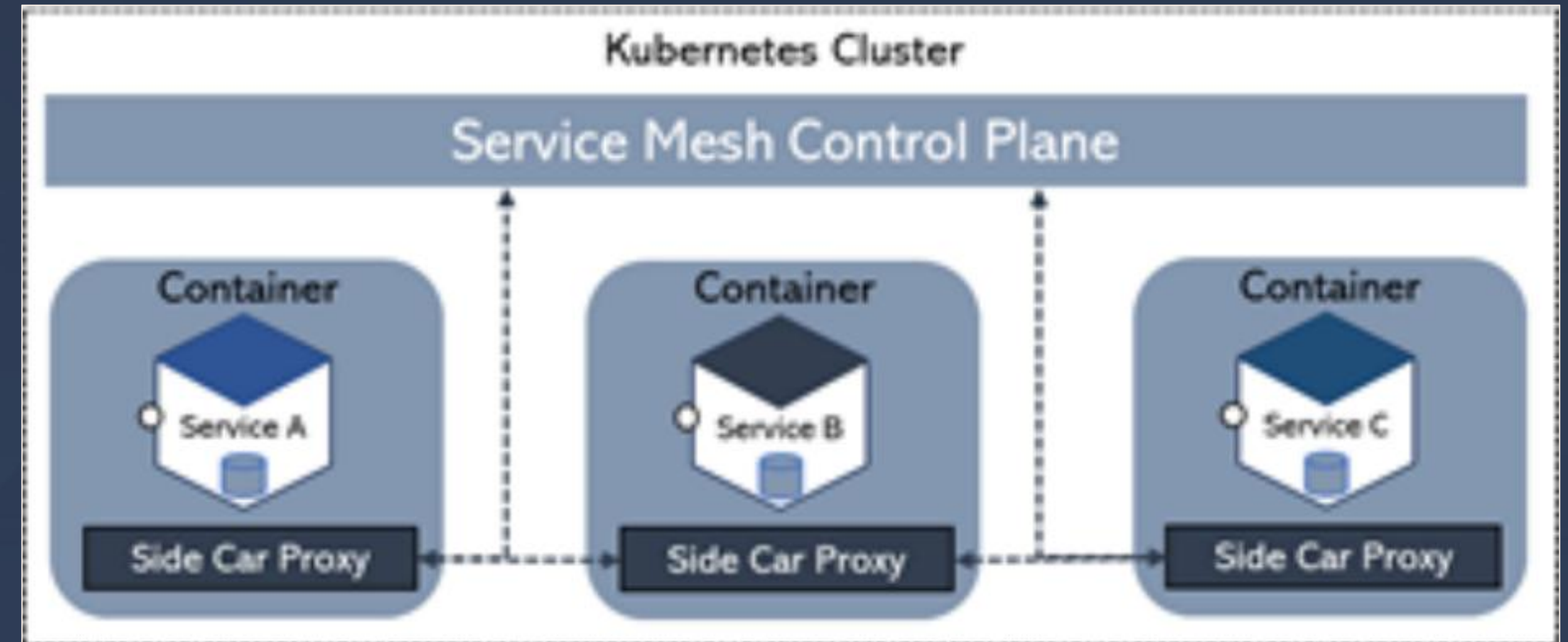
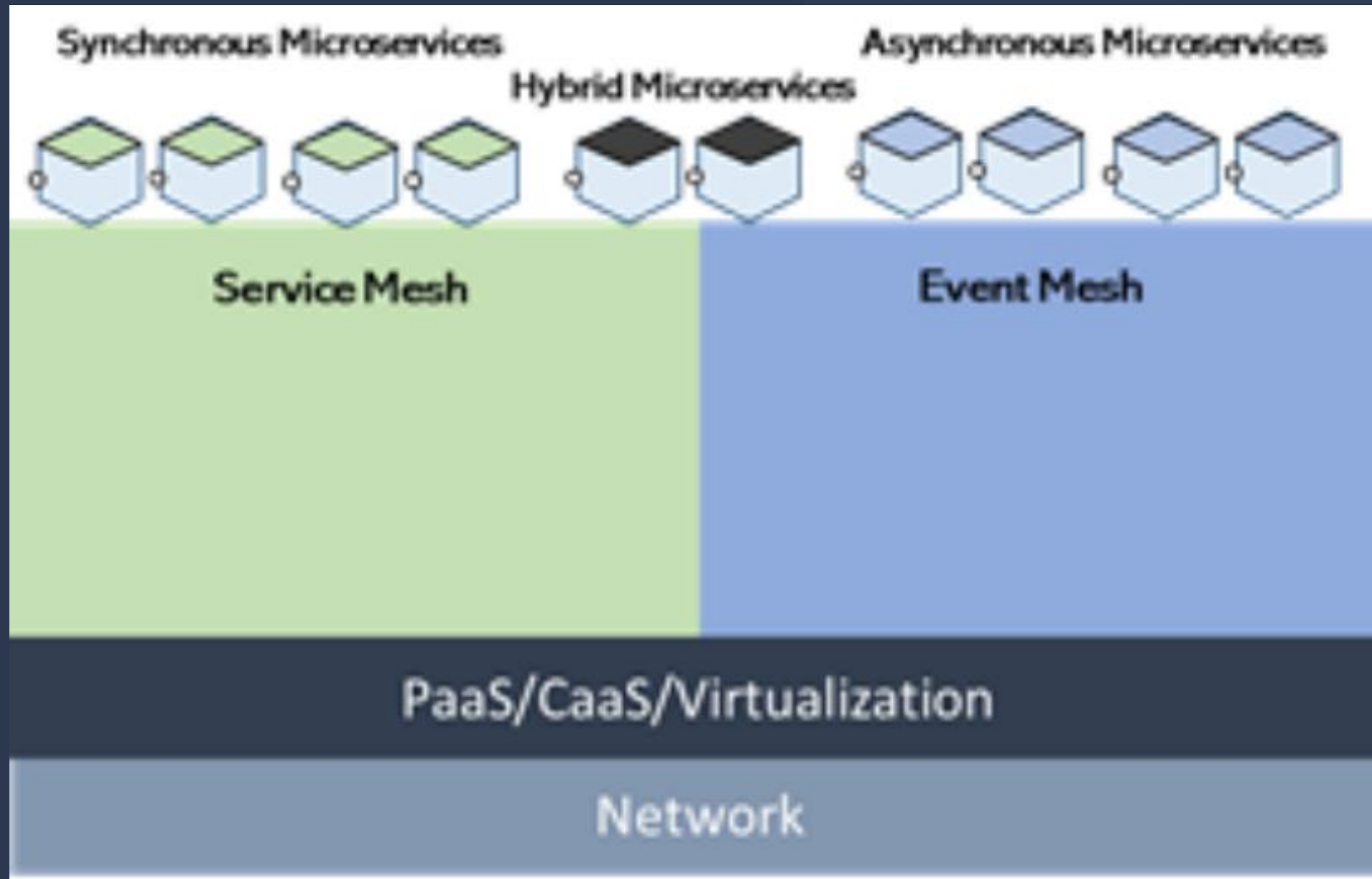
Pros

- Eventual consistency, Rf c pc_qml u f wGqcc rf gq _q _npmgq `ca_sqc _l ct cl r+bpcl qwrck nprk mcq _es_p_l rccb f gf _t _g_ ggwmrd c b_r_ u f cpc ct cl rs_jjw_jj k gpmcpc gacq g rf c qwrck u gj pcacg c rf c j_qr snb_rcb t _jsc mdrf c b_r_,
- Reduced coupling between microservices9_k cqq_ec qcl bcpbmcl m l ccb m l mu _`msr _l wam qsk cp Rf c m jwamsnjg e g CB? gq _rmga f gcp_paf wqpsarspc,
- Loose coupling of applications g qrc_b mdnm r+rmnm r pcj_rgnl qf gq* pcqsjrg e g easier scaling mdrf c qwrck ,
- Jm_b jct cjg e _l b qf mai _`qmp g e rf msf oscsg e k caf _l gk q,

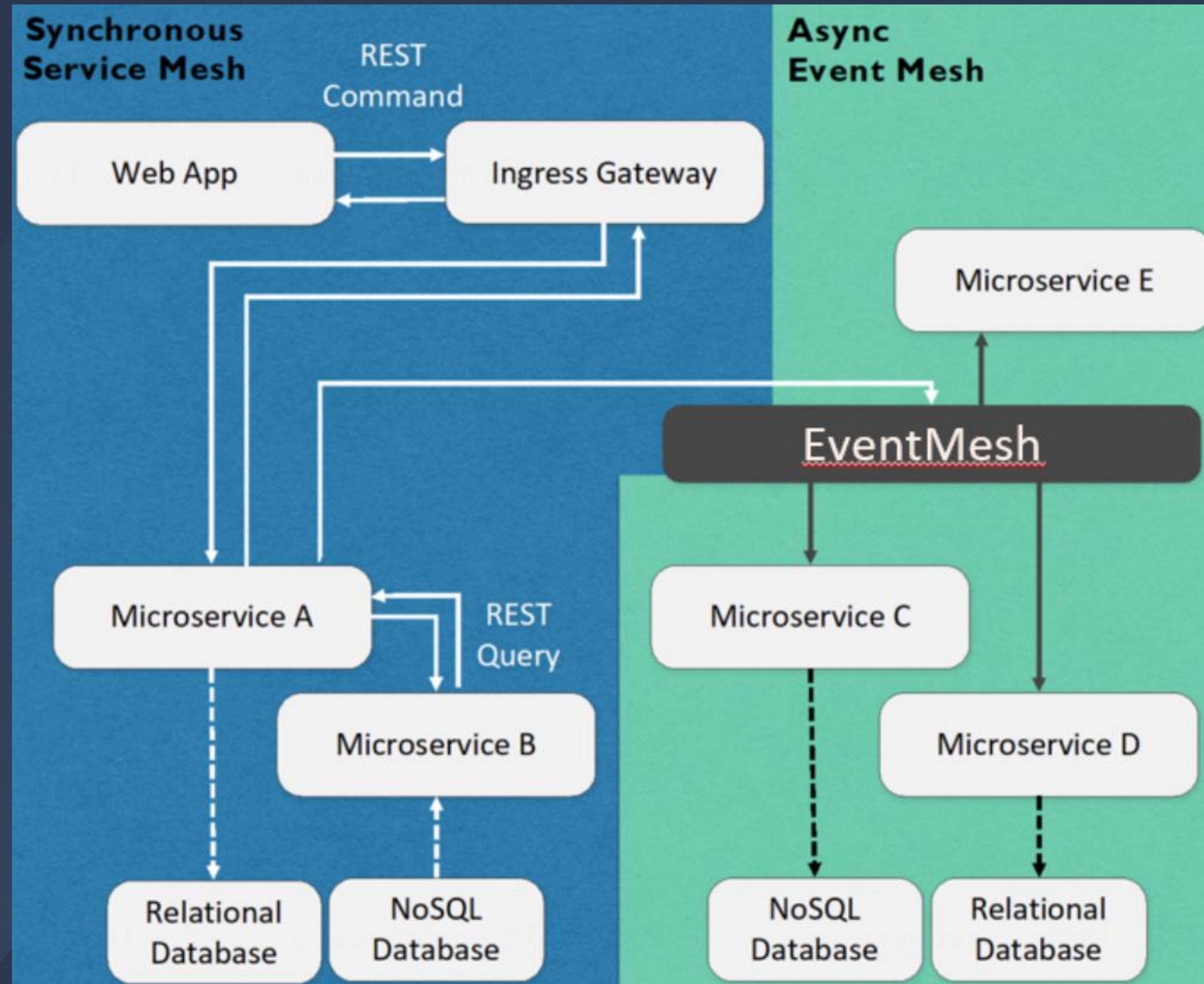
Cons

- Complexity mdf _l bjg e _ql af pm msq k cqq_ecq u f cl sqg e npk gg c ct cl r`pm cpq, Rf g ank njcvga_l `c k g g gcb `wsqg e _l _bt _l acb ct cl r`pm cp
- Ansng e u gf rf c k cqq_eg e g q_qpsarspc,

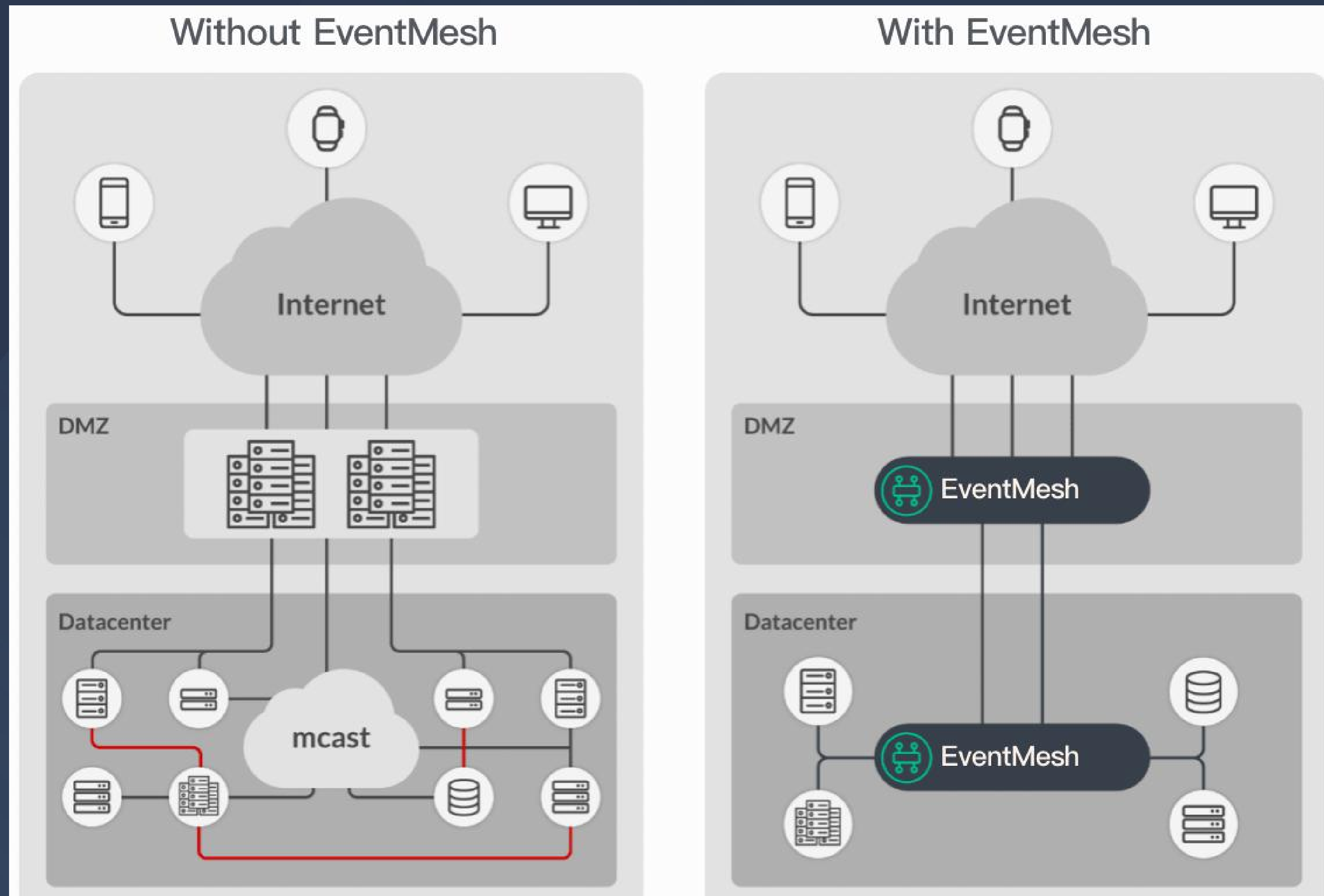
ServiceMesh Vs EventMesh



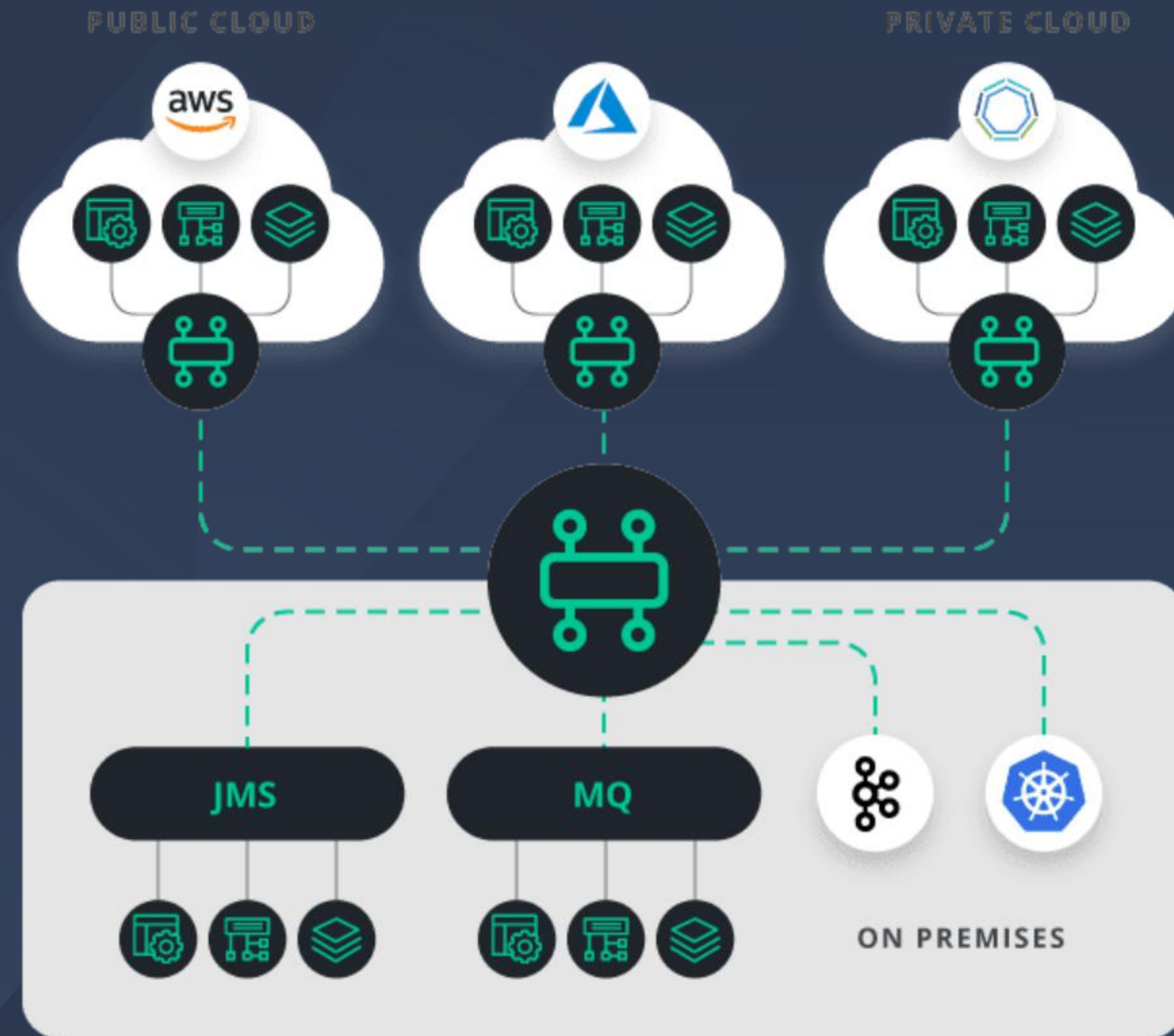
Using Both Service Mesh and Event Mesh for Microservices



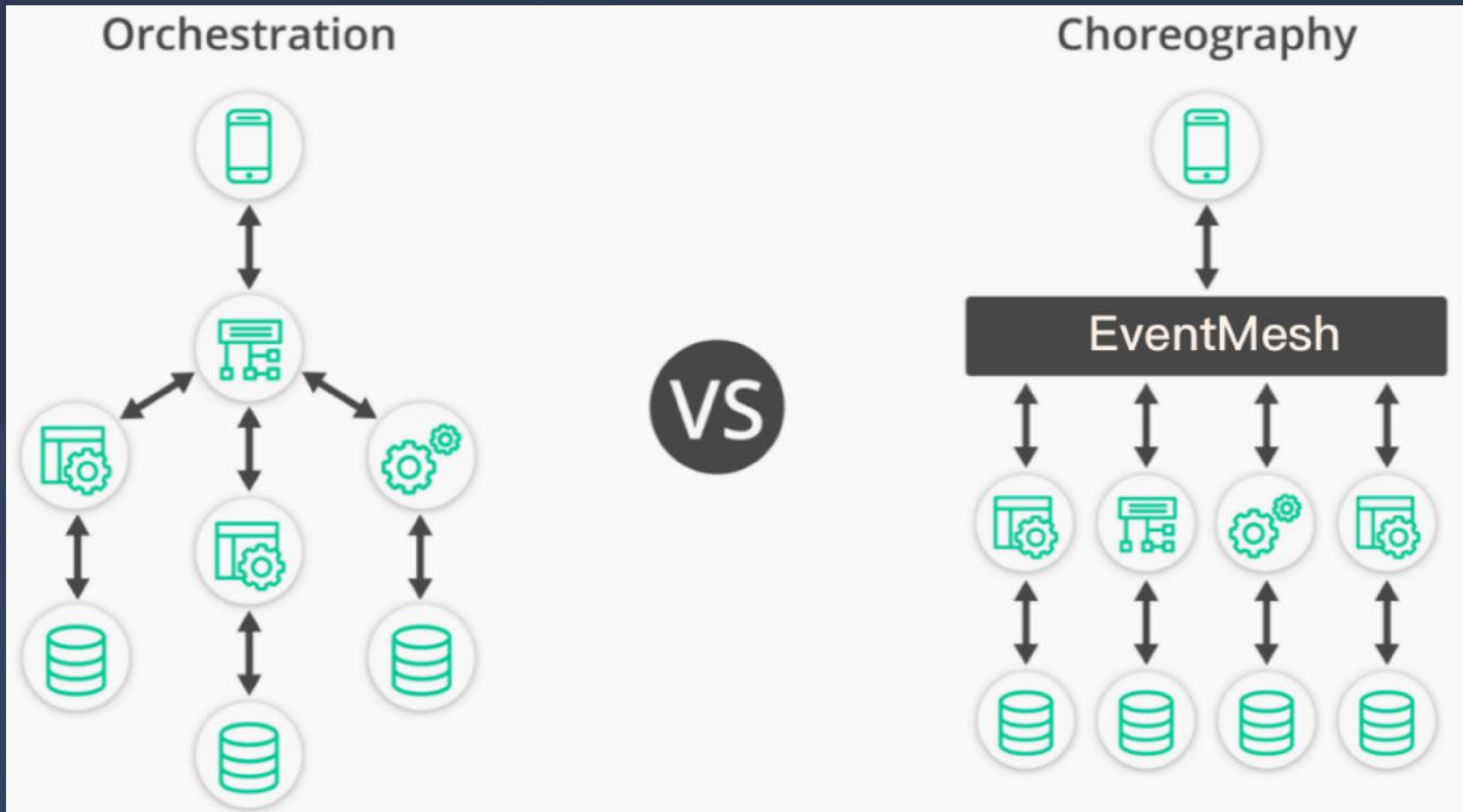
EventMesh makes simple



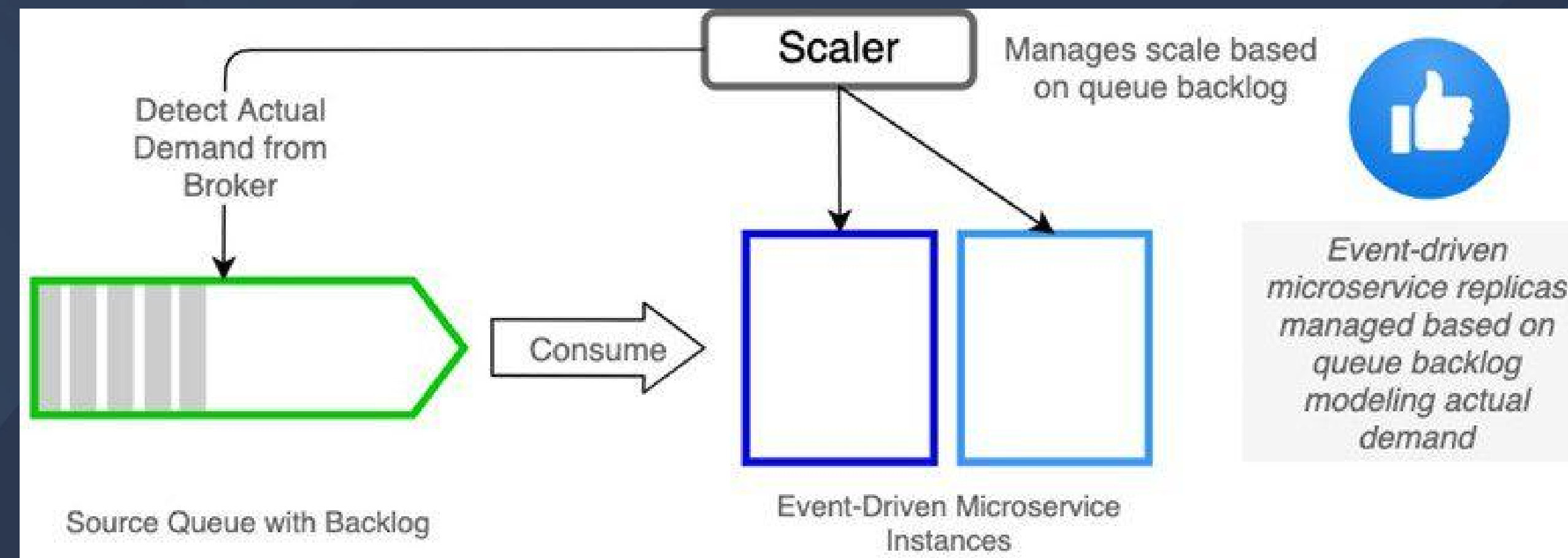
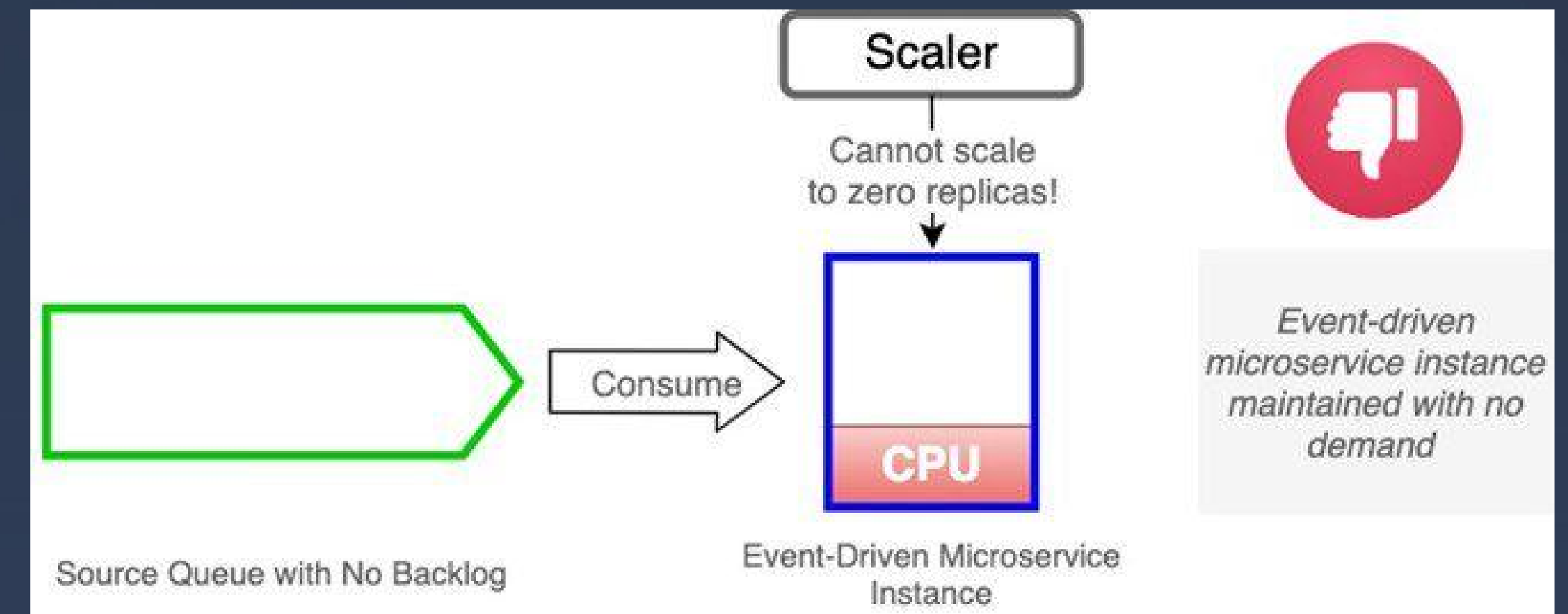
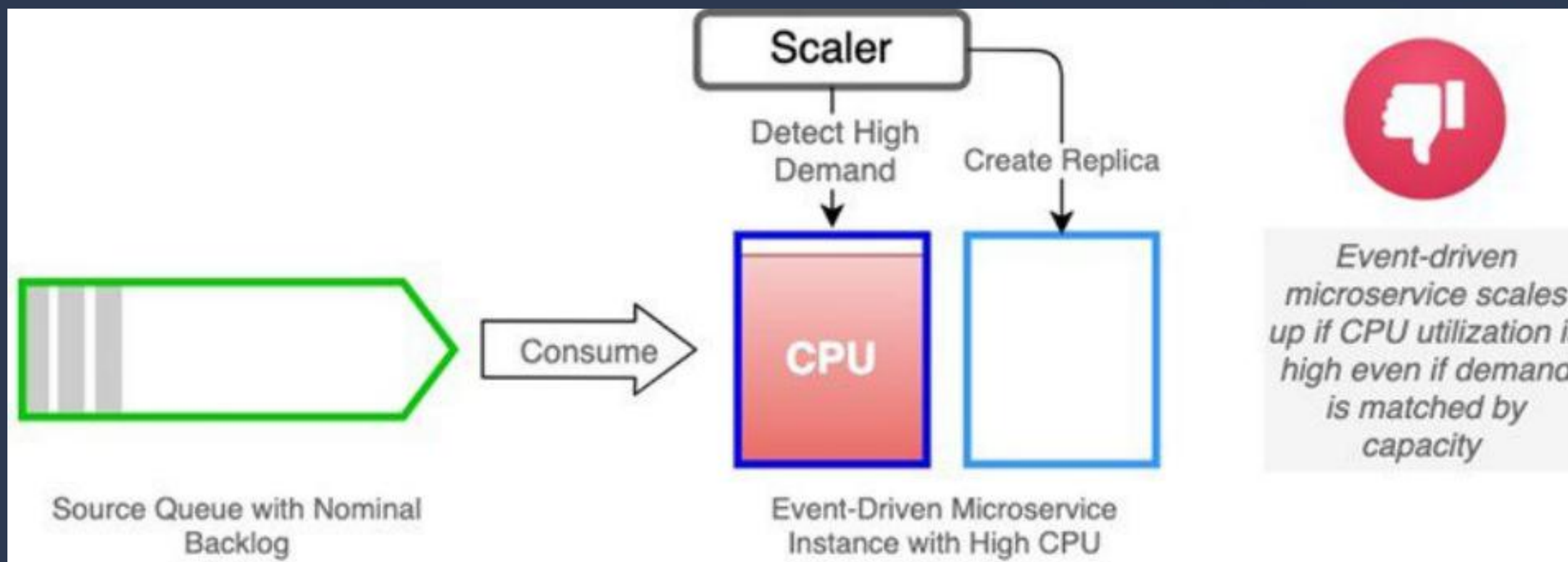
Feature: Pub/Sub+



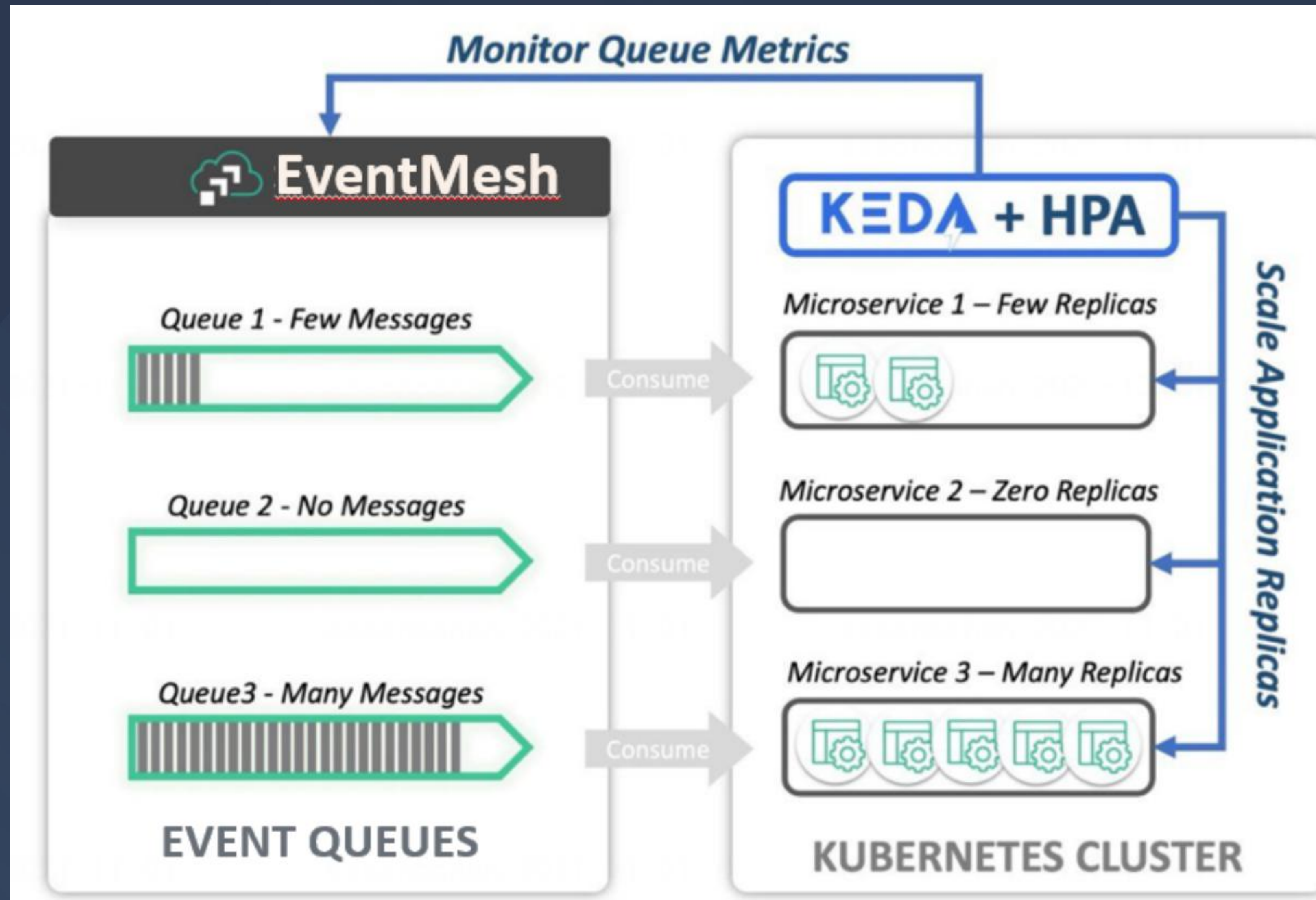
Feature: Choreography



CPU is Not a Good Metric for Scaling Event-Driven Microservices



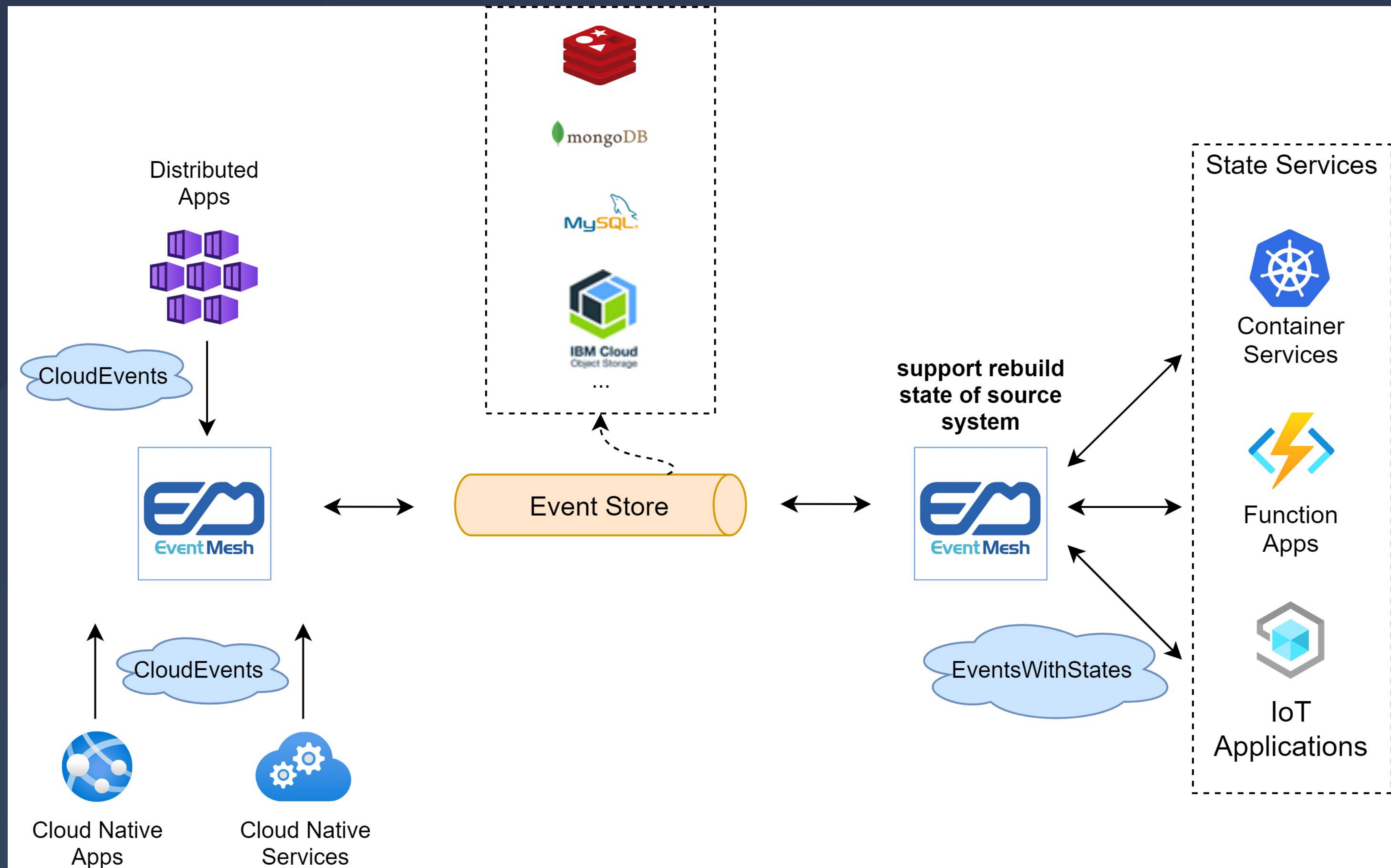
Feature: Better Metric for Scaling



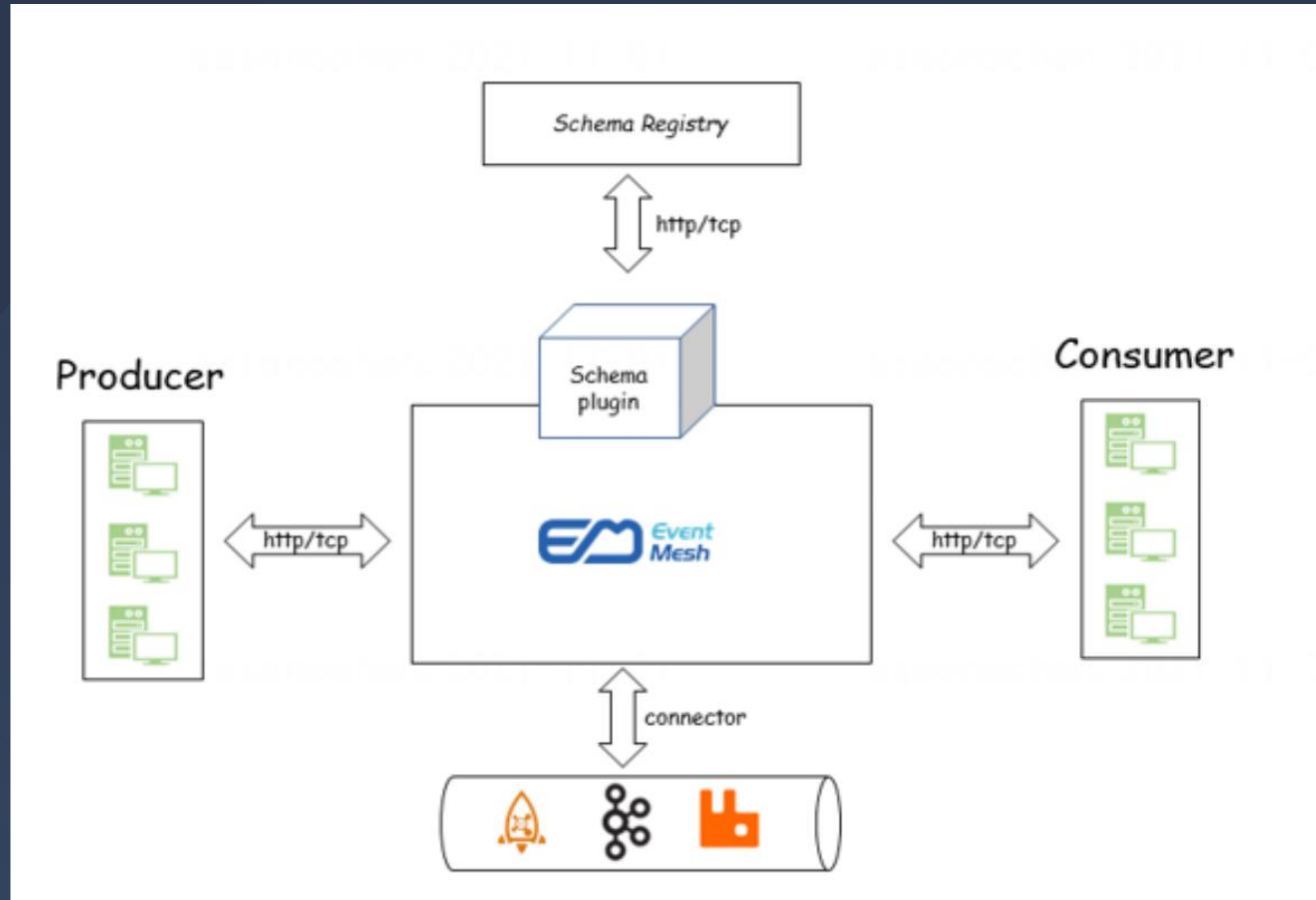
Feature: Event Streaming



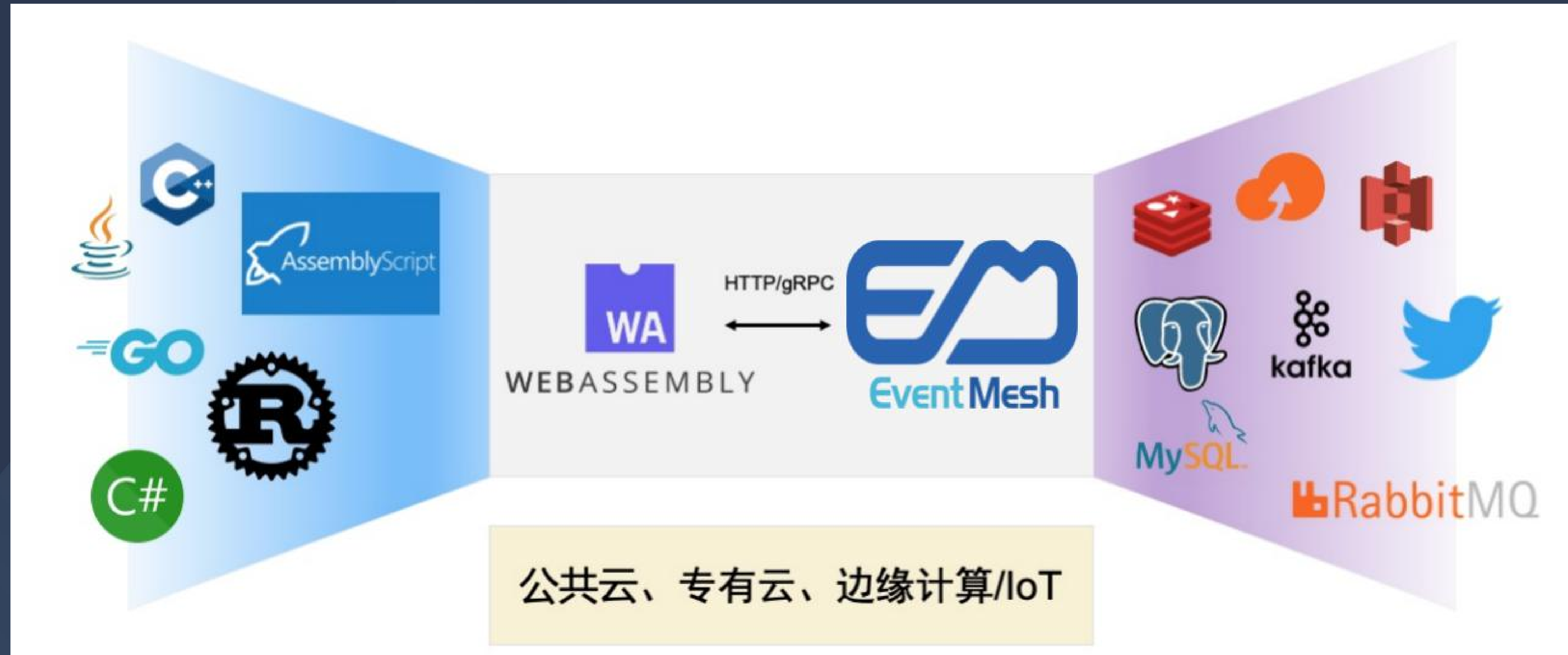
Feature: State Abstraction



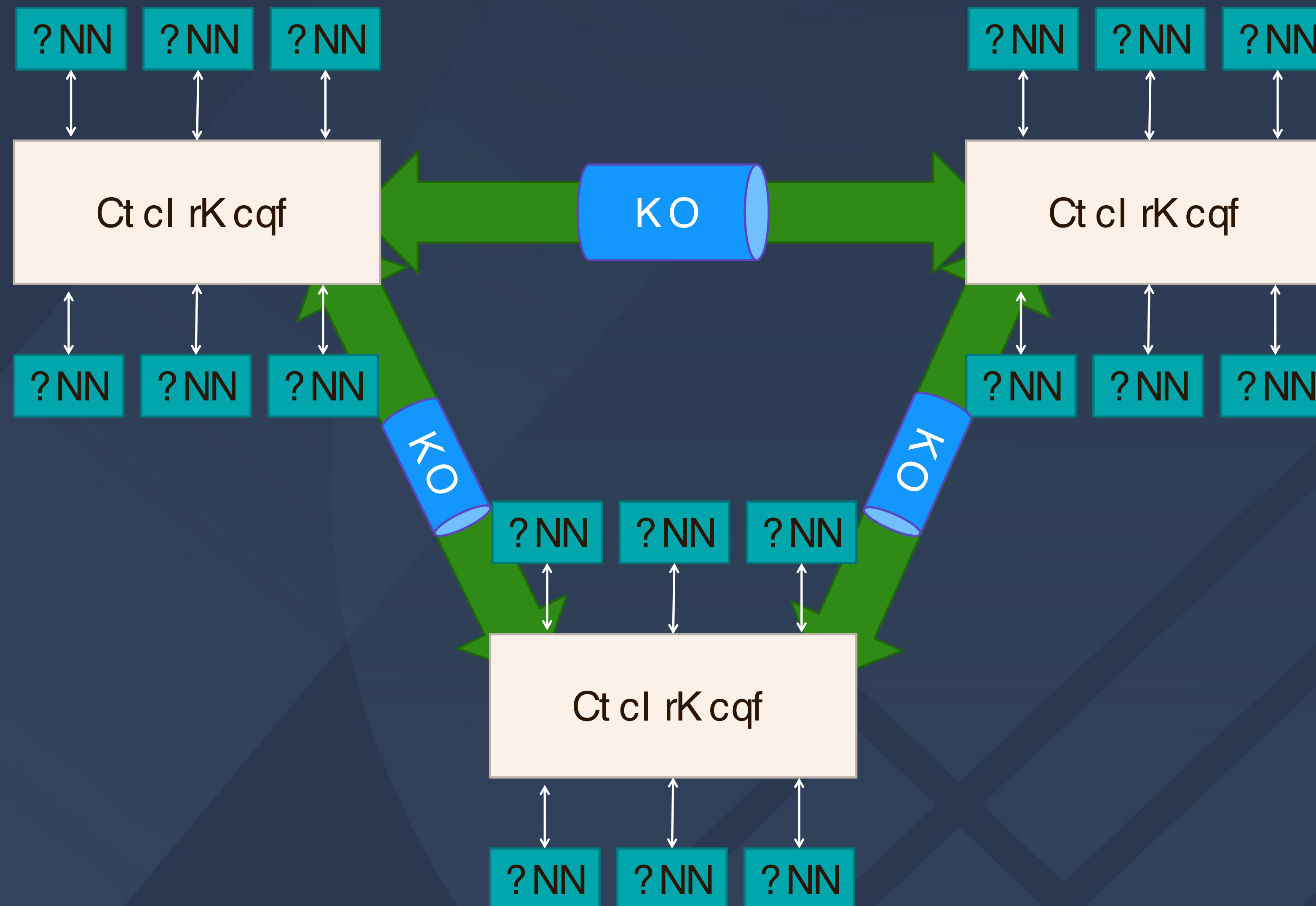
Feature: Schema



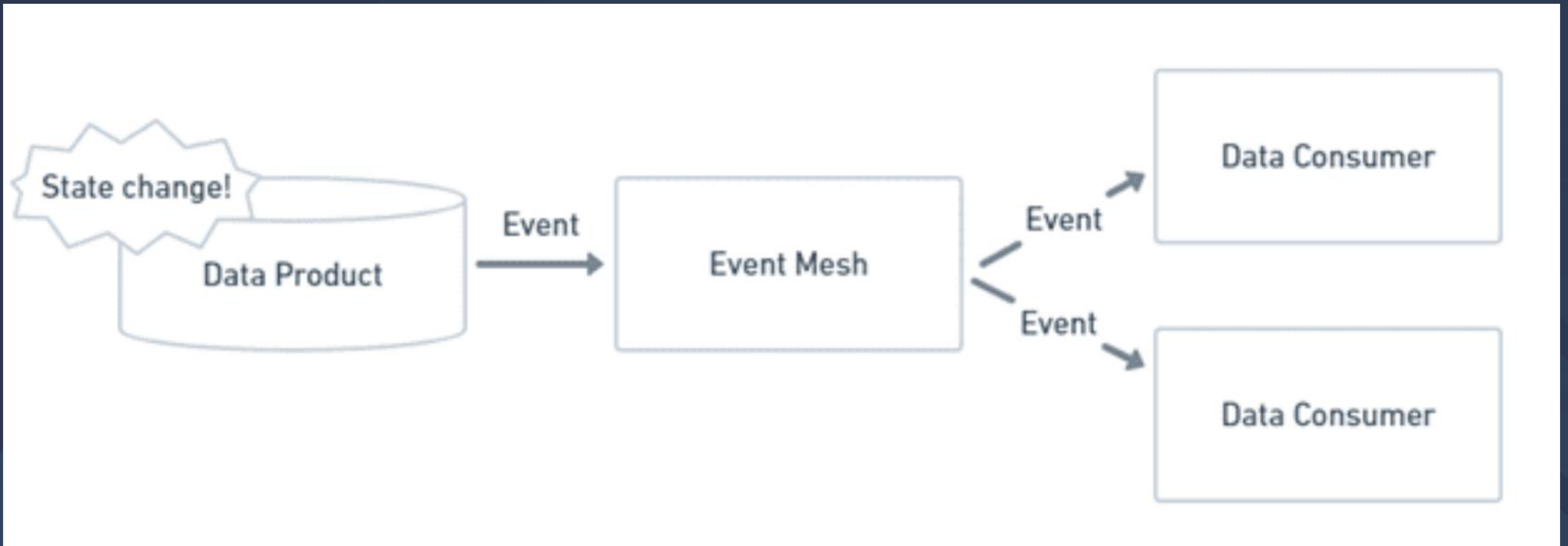
Feature: Wasm runtime



EventMesh in WeBank Message Bus <https://github.com/webankfintech/defibus>

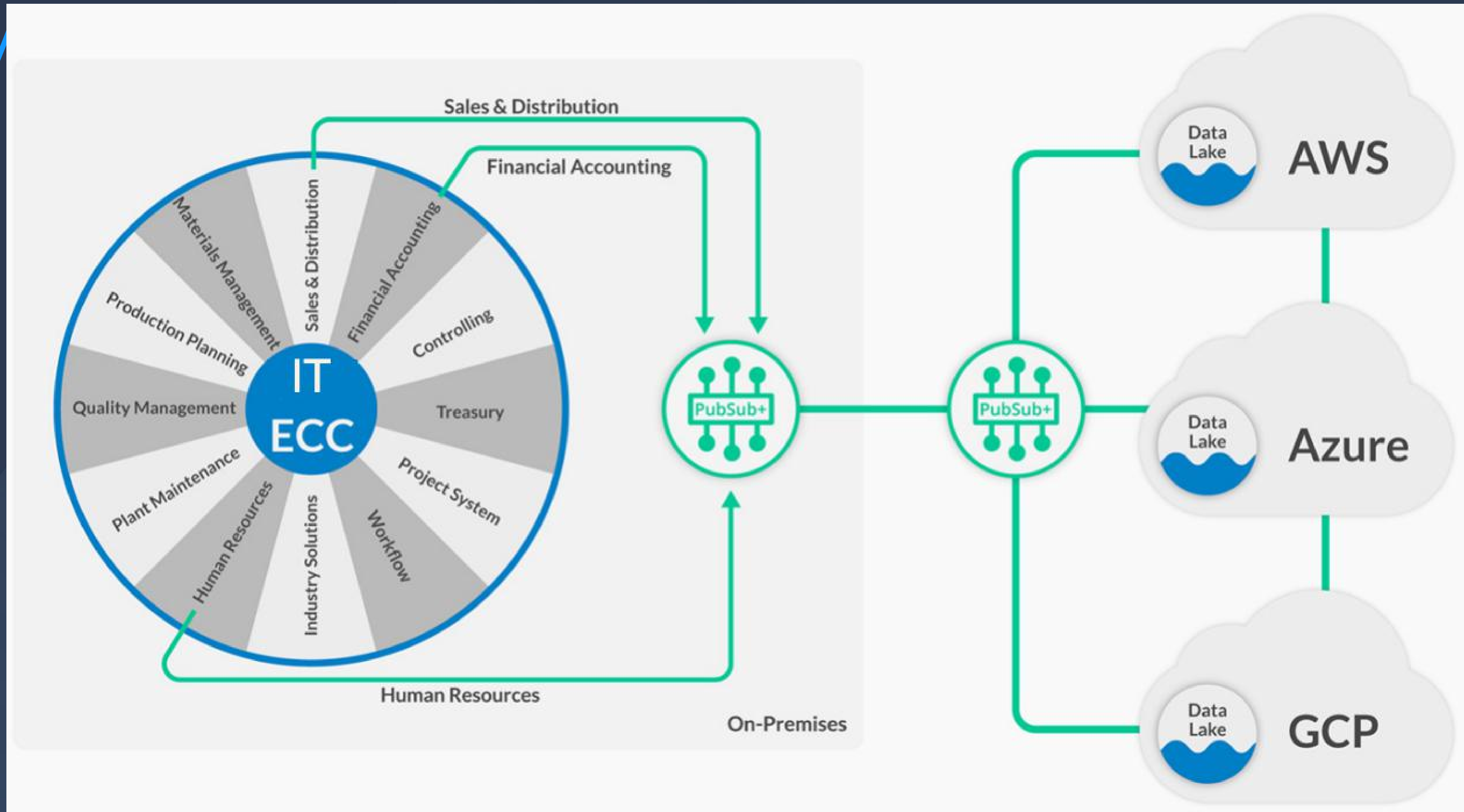


Other Scenario 1: Event-Driven Data Mesh



Other Scenario 2: EventMesh for Data Lake

Hy



Other Scenario 3: Decentralized Data Economy

Current IT Data Sharing infrastructures are centralized

Data Owner has NO control over
Data Users access to data

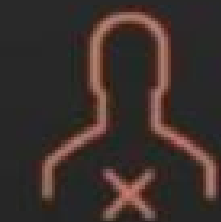


The Data Broker controls Data Users'
access to data

Data Users request data access
to the Data Broker owner



Granted



Not Granted

Other Scenario 3: Decentralized Data Economy

Decentralizes control over data access

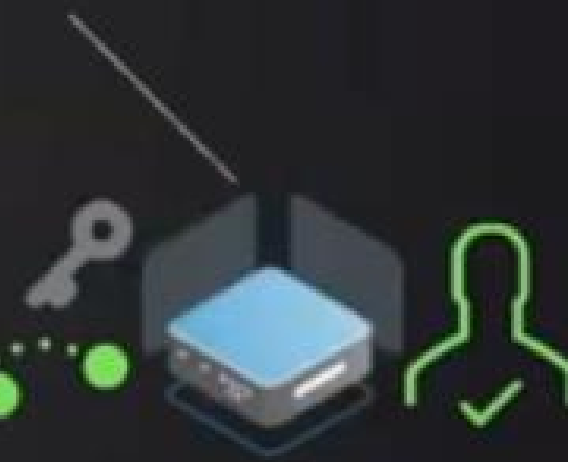
Data Owner has FULL control over
Data Users access to data



Blockchain-based
Data Ownership Platform



Data Users request data access
to the Data Owner



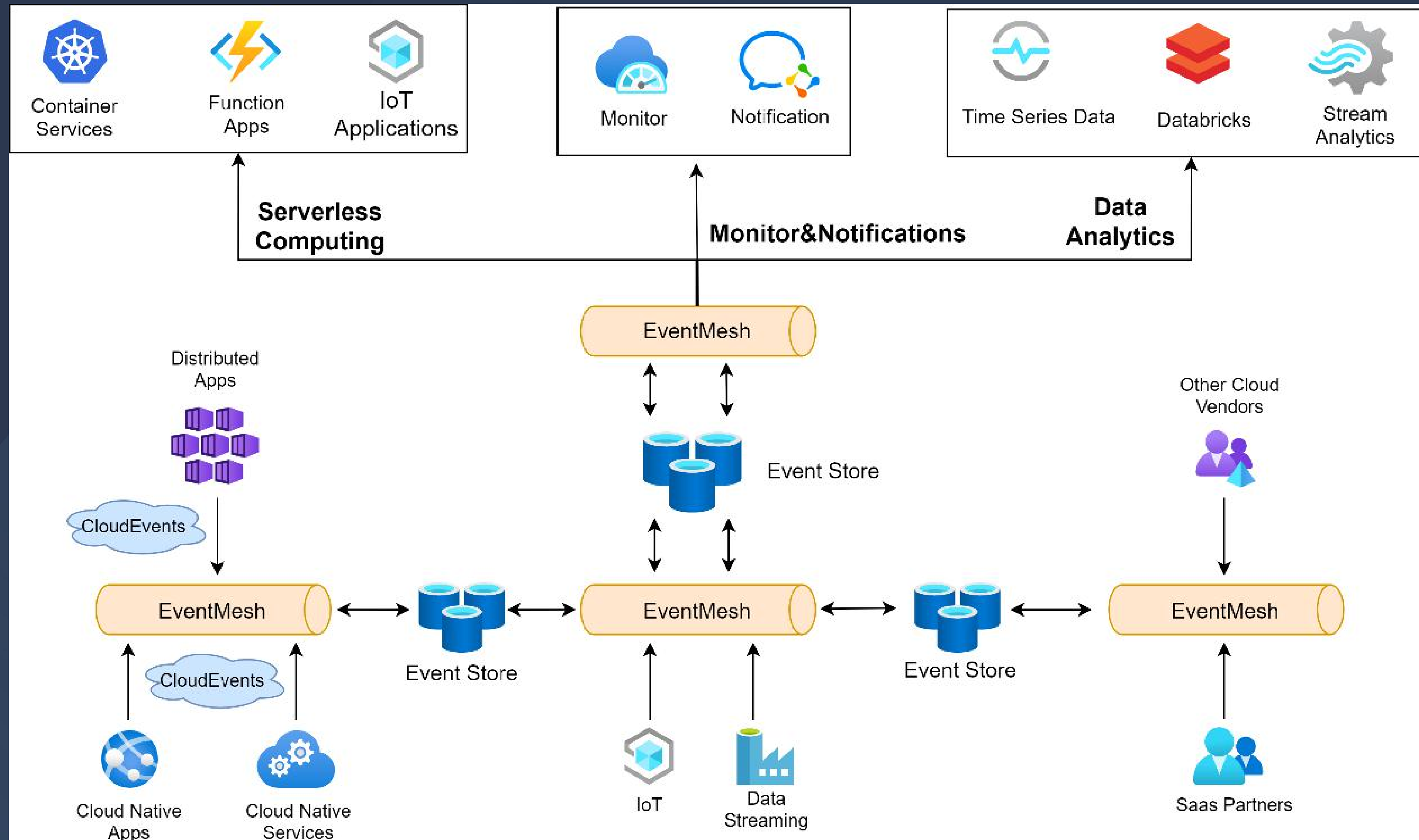
Granted



*Not
Granted*

Data Broker cannot control third-
party access to data

EventMesh Ecosystem



EventMesh Future

- gRPC/CloudEvents

- standard transfer and codec protocol



- Event Streaming

- Support real time event processing



- OpenTelemetry

- Tracing,Logging,Metrics



- OpenSchema

- Avro\JSON\ProtoBuf.....



- Choreography

- Dynamic Routing, federated, serverless workflow



- Multiple language SDK

- c\go\python



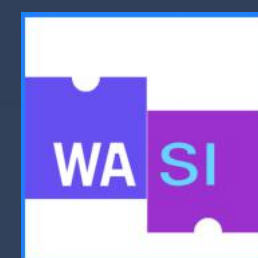
- More Protocols

- MQTT\AMQP\WebSocket



- Support more event store

- Kafka/Redis/Pulsar, blockChain, cold storage



- WASM runtime



企业级一站式数字技术学习平台



原创精品
课程



知识技能
图谱



岗位能力
模型



测学考评
体系



分层分级
培训



数字管理
系统

数字化专业人才培养方案定制



13167596032

<https://b.geekbang.org/>



扫码免费咨询

想一想，我该如何把这些 技术应用在工作实践中？



EventMesh助手



EventMesh公众号

THANKS

InfoQ vue

- <https://github.com/apache/incubator-eventmesh>
- <https://gitee.com/WeBank/EventMesh>
- <https://github.com/webankfintech/defibus>
- <https://gitee.com/WeBank/DeFiBus>