Multi-Cloud Service Mesh

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Multi-Access Edge Cloud
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- Users & Devices
- Edge Cloud
- Telco Cloud
- Public Clouds
Requirements

**Multi-Cloud** → End-to-End functionality will span multiple clouds
- On-premise / Central Offices / Internet Exchanges / Public Clouds
- Distributed Service Mesh

**Mobile Cloud** → Edge functionality will move with subscribers
- From one edge location to another
- Mobile Service Chains
Service Control and Data Planes: Istio

Control Plane API

Istio

- Pilot
- Mixer
- Citadel

Service Control Plane

Service Data Plane

Proxy

Service A

pod

Proxy

Service B

pod

L4/7
Service Control and Data Planes: XOS

Control Plane API(s)

Monitored State

Authoritative State

Sync A

Sync B

Service A

Service B

L2/3

pod

pod

Service Control Plane

Service Data Plane
Service Control and Data Planes: XOS

Control Plane API(s)

Monitored State → Authoritative State

Sync ONOS → Sync K8S

XOS

Service Control Plane

ONOS

K8S

Service Data Plane

Service A <-> Service B

L2/3
Combined Service Mesh

Control Plane API(s)

Monitored State

Authoritative State

XOS

Sync ONOS

Sync Istio

ONOS

VTN

Istio

Service A

Service B

Proxy

Service X

Proxy

Service Y

pod

pod

pod

pod

L2

L7
Questions for the Panel

What are the requirements for Multi-Cloud Service Meshes?

What did we learn from the Multi-Cloud Proof-of-Concept?
Multi-Cloud Service Mesh – PoC