

Red Hat Service Mesh

Robert Baumgartner
Senior Solution Architect Middleware
Olaf Meyer
Senior Consultant

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Who are we



Robert Baumgartner

E-Mail: robert.baumgartner@redhat.com

Article:
<https://blog.openshift.com/enabling-monitoring-and-scaling-of-your-own-services/application>



Olaf Meyer

E-Mail: olaf.meyer@consol.de

Twitter: @ola_mey

Article: <https://labs.consol.de> + Tag OpenShift

What does Ops and Security want from your apps?

Visibility & Reporting

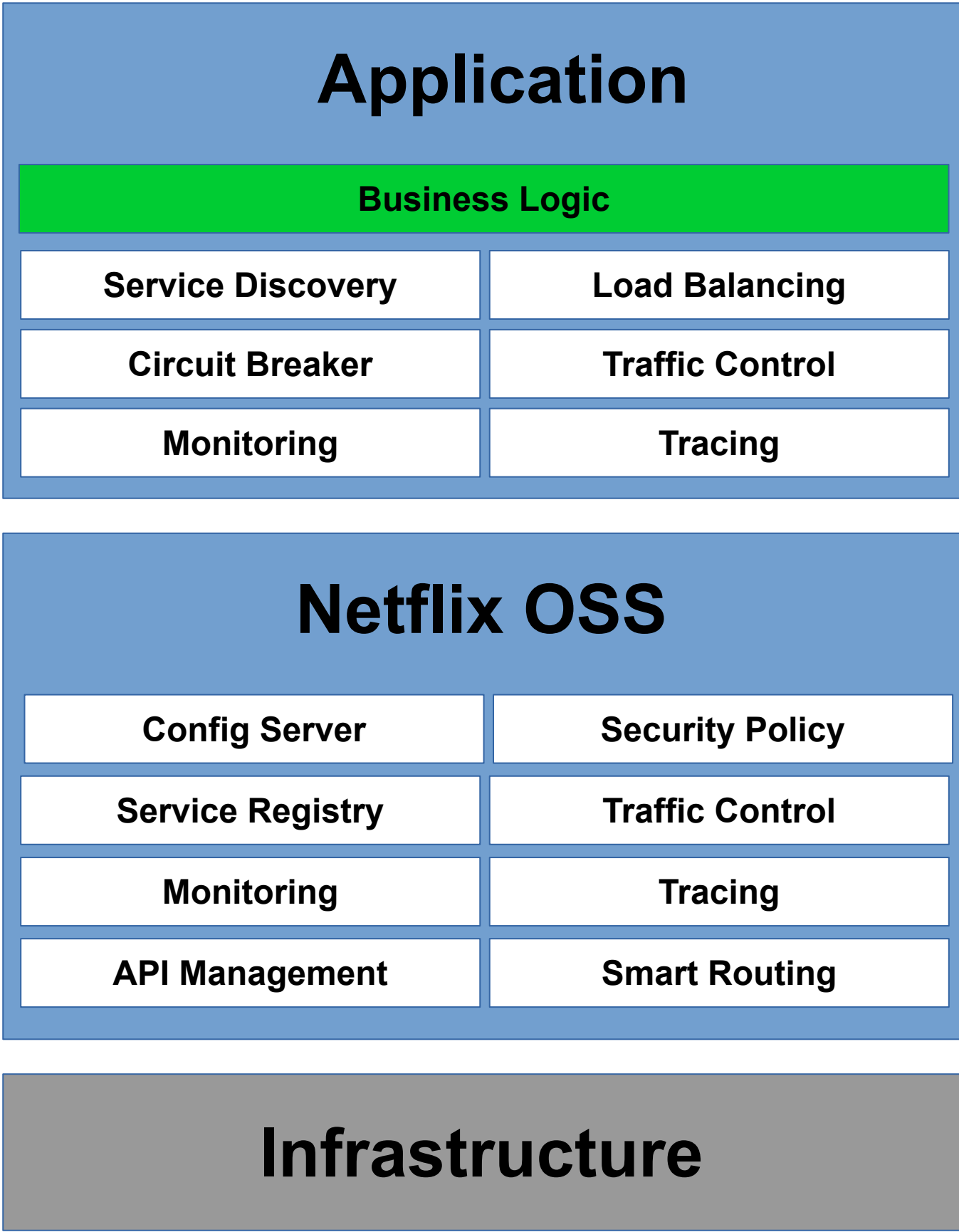
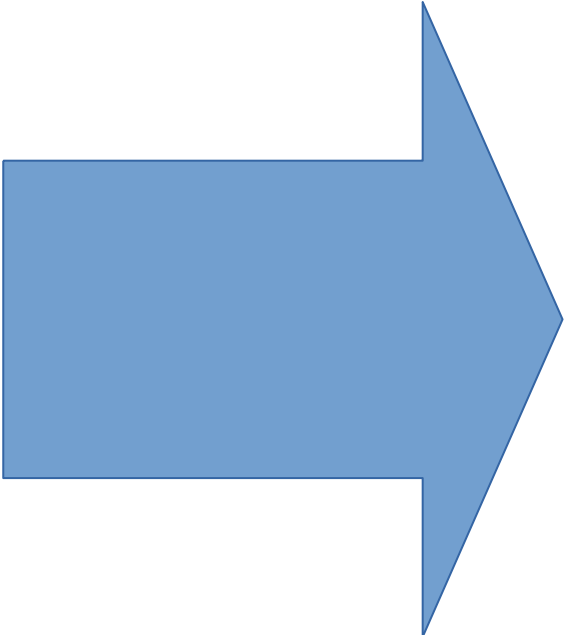
Resilience & Fault Tolerance

Routing & Traffic Control

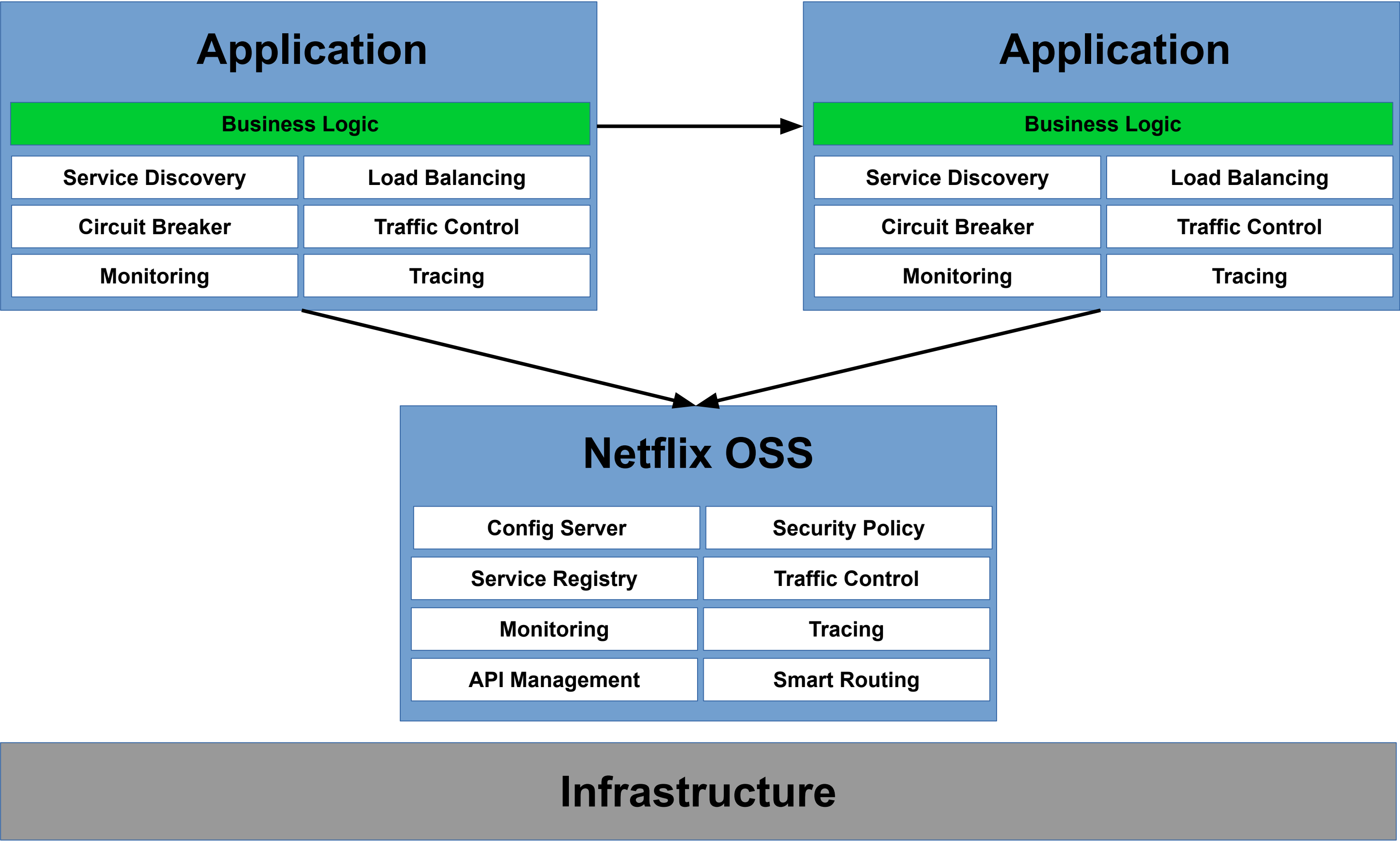
Identity & Security

Policy Enforcement

How does this affect your application?



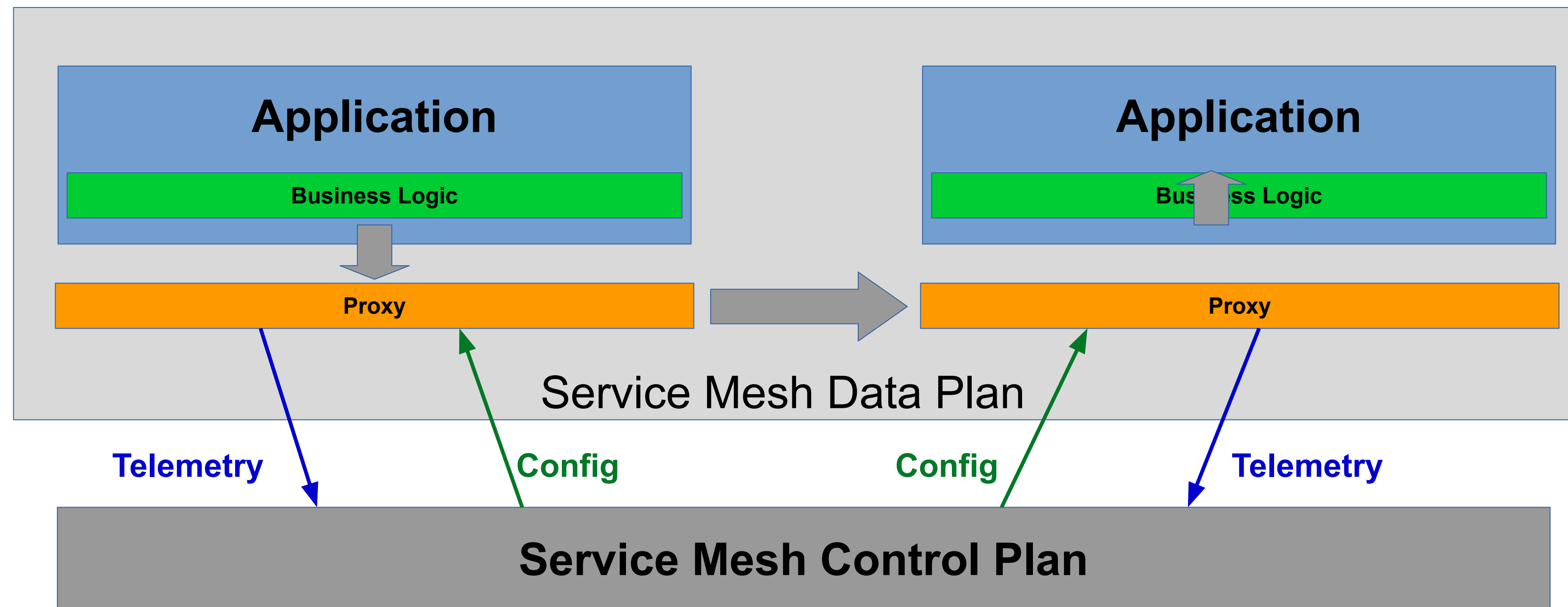
Overview for two applications



Used frameworks are only available for a defined set of frameworks and or programming languages

How does this work for off-the-shelf-apps?
Good luck if you need to integrate your ERP

How does a service mesh work?

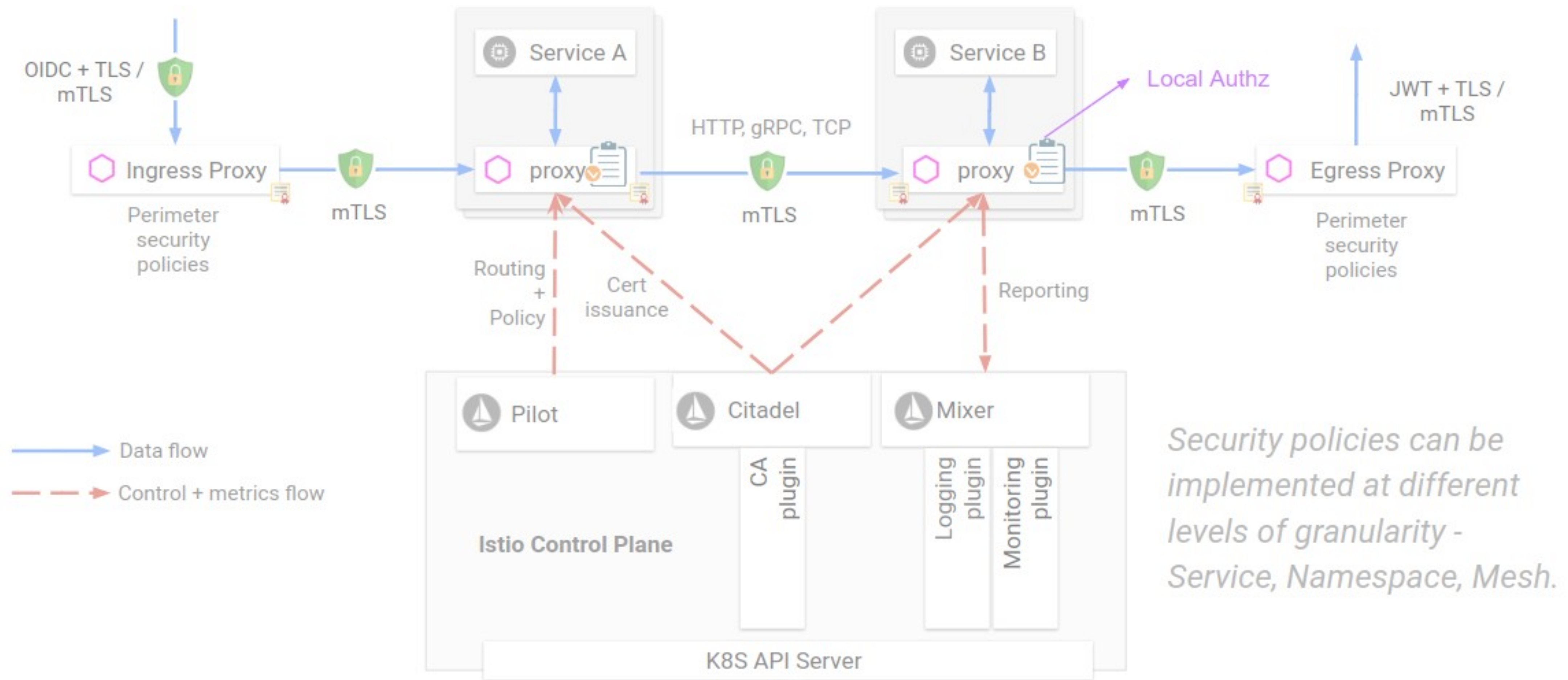


**No code changes
in application required!!!**

Popular service meshes are:

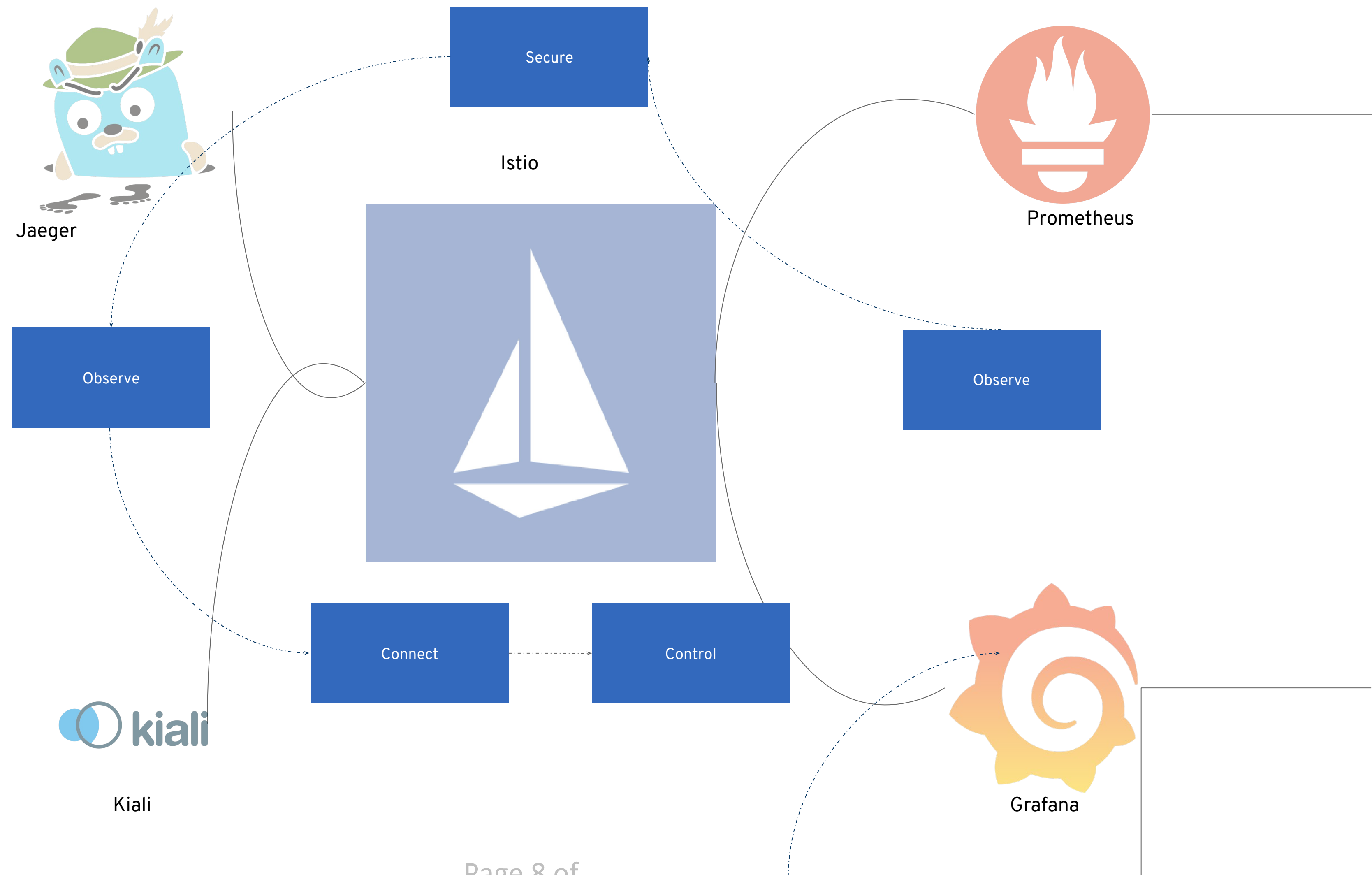
- Istio → Red Hat Service Mesh
- Linkerd
- Consul Connect
- ...

High-level architecture of Istio



Source: <https://istio.io/docs/concepts/security/>

Applications in Istio/Red Hat Service Mesh ecosystem



Kiali

kiali

Overview

Graph

Applications

Workloads

Services

Istio Config

Distributed Tracing

Namespace: olaf-customer

Graph

Versioned app graph

No edge labels

Display 8

Find...

Hide...

```
graph LR; ingress[istio-ingressgateway olaf-smcp] --> customer[customer v1]; customer --> preference[preference v1]; preference --> recommendation[recommendation]; recommendation --> v1[v1]; recommendation --> v2[v2]; recommendation --> v3[v3]; v1 --> egress[worldclockapi-egress-rule]; v2 --> egress; v3 --> egress;
```

May 22, 13:50:28 ... May 22, 13:51:28

Last 1m Every 15s

NS olaf-customer

Current Graph:
4 apps (6 versions)
4 services
9 edges

Incoming

Outgoing

Total

HTTP (requests per second):

Total	%Success	%Error
0.84	100.00	0.00

0

25

50

75

100

OK

3xx

4xx

5xx

Legend

Jaeger

Jaeger UI

Lookup by Trace ID...

Search

Compare

System Architecture

About

Log Out

Search

JSON File

Service (5)

customer.olaf-customer

Operation (2)

all

Tags ?

http.status_code=200 error=true

Lookback

Last Hour

Min Duration

e.g. 1.2s, 100ms, 500us

Max Duration

e.g. 1.2s, 100ms, 500us

Limit Results

20

Find Traces

20 Traces

Sort: Most Recent Deep Dependency Graph

Compare traces by selecting result items

☐

istio-ingressgateway: customer.olaf-customer.svc.cluster.local:8080/customer*

8b448b9

23.5ms

4 Spans

customer.olaf-customer (1)

istio-ingressgateway (1)

preference.olaf-customer (2)

Today 1:56:25 pm
a minute ago

☐

istio-ingressgateway: customer.olaf-customer.svc.cluster.local:8080/customer*

ad5389d

30.71ms

6 Spans

customer.olaf-customer (2)

istio-ingressgateway (1)

preference.olaf-customer (2)

recommendation.olaf-customer (1)

Today 1:56:24 pm
a minute ago

☐

istio-ingressgateway: customer.olaf-customer.svc.cluster.local:8080/customer*

e91b3cd

169.92ms

6 Spans

customer.olaf-customer (2)

istio-ingressgateway (1)

preference.olaf-customer (2)

recommendation.olaf-customer (1)

Today 1:56:24 pm
a minute ago

☐

istio-ingressgateway: customer.olaf-customer.svc.cluster.local:8080/customer*

58d7284

3.2s

6 Spans

customer.olaf-customer (2)

istio-ingressgateway (1)

preference.olaf-customer (2)

recommendation.olaf-customer (1)

Today 1:56:20 pm
a minute ago

☐

istio-ingressgateway: customer.olaf-customer.svc.cluster.local:8080/customer*

4ab709e

17.3ms

6 Spans

customer.olaf-customer (2)

istio-ingressgateway (1)

preference.olaf-customer (2)

recommendation.olaf-customer (1)

Today 1:56:18 pm
a minute ago



Thank you!



Olaf Meyer

E-Mail: olaf.meyer@consol.de

Twitter: [@ola_mey](https://twitter.com/ola_mey)

ConSol

Consulting & Solutions Software GmbH

St.-Cajetan-Str. 43

D-81669 München

Tel.: +49-89-45841-100

info@consol.de

www.consol.de

Twitter: [@consol_de](https://twitter.com/consol_de)