

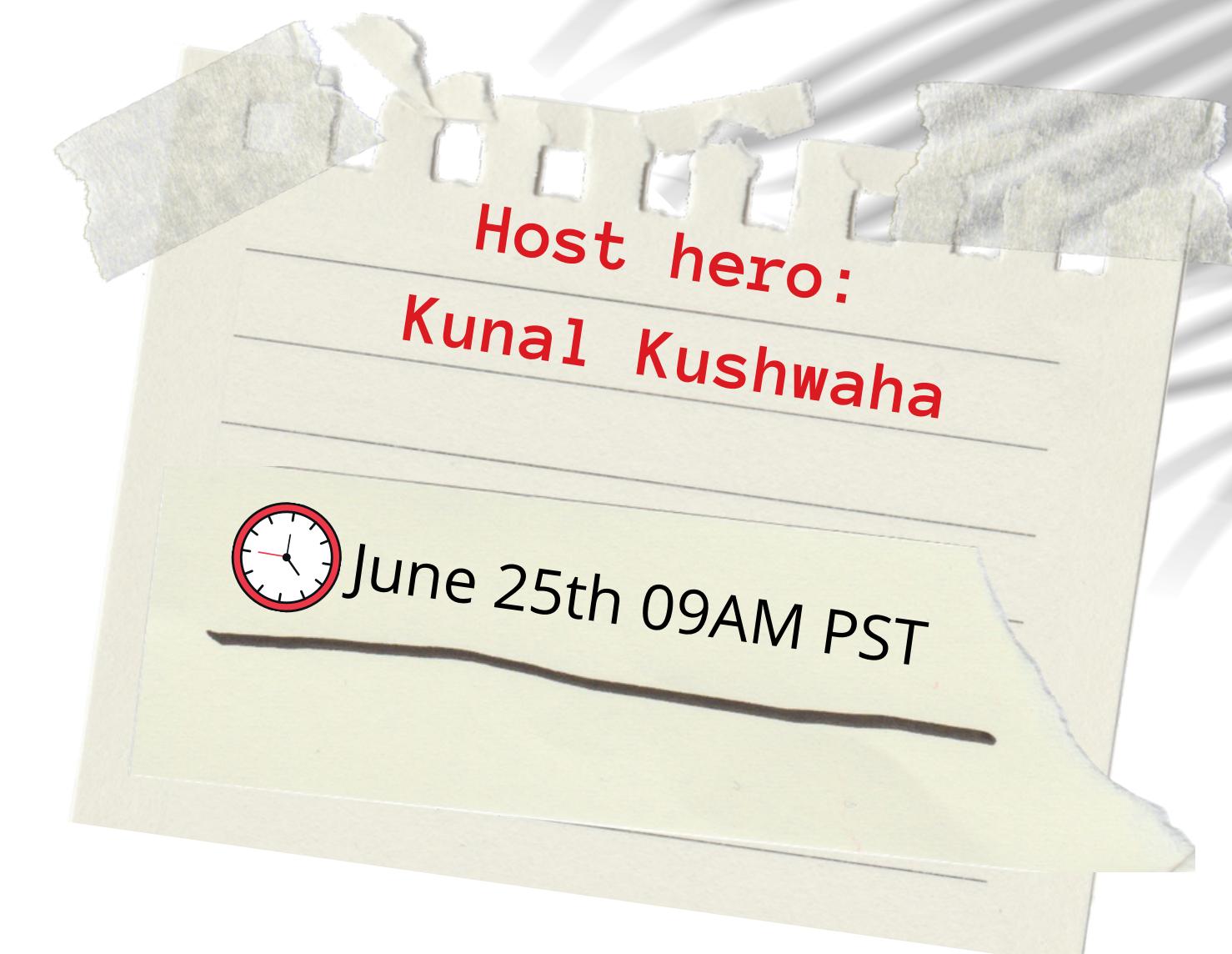


Intro to Service Mesh



Sako M

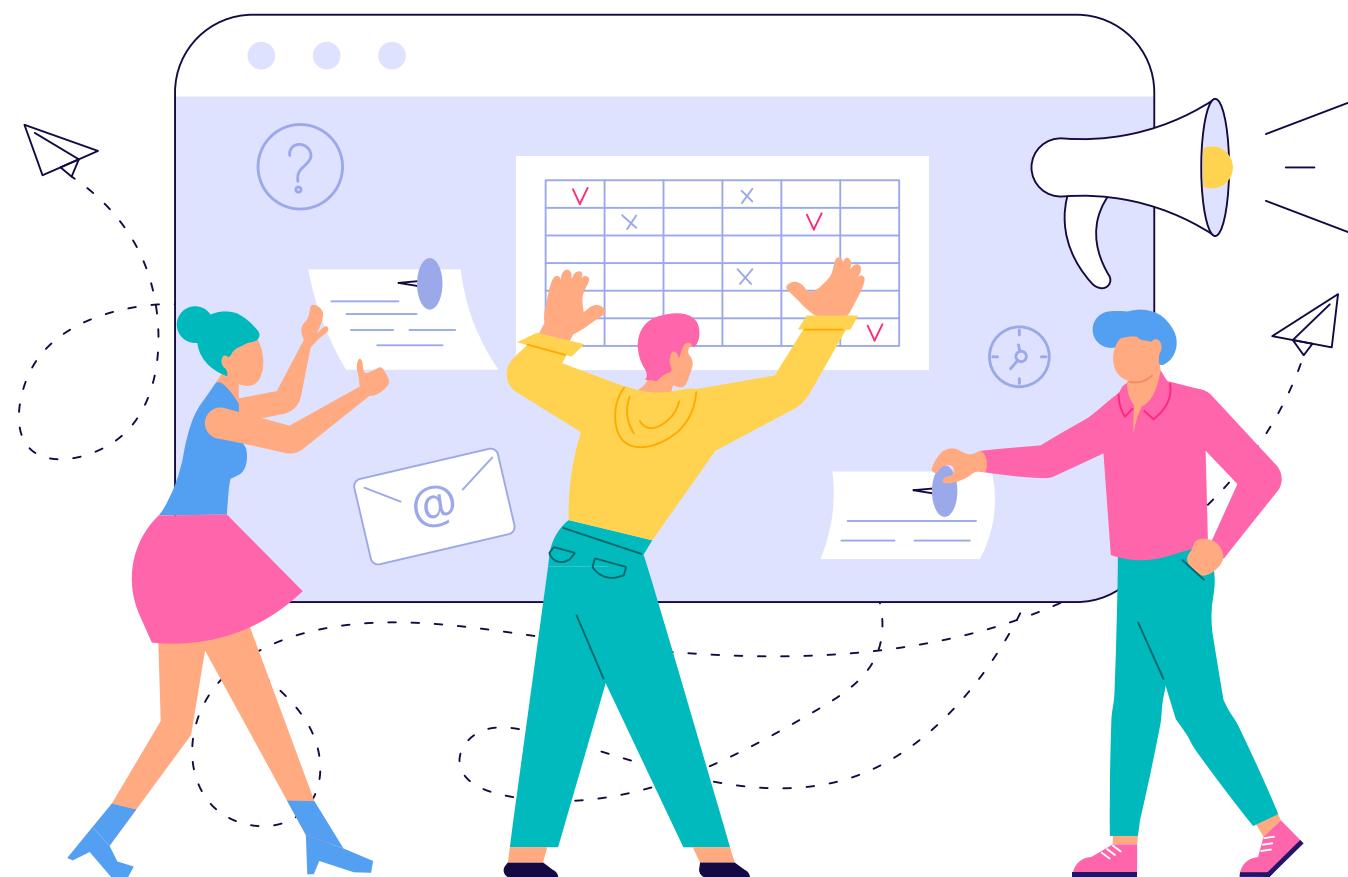
DevOps/Security @
OpenGov
DevOps Architect @
Metabob
Founder @ GOUP
Founder @ JobHax
Contributor @ Meshery



Hosted by



Agenda



- **09:00-09:10 | Kickoff**
 - Introduction
 - Chit Chat
- **09:10-09:40 | Presentation**
 - Speaker
- **09:40-09:45 | Break**
 - Pre Q&A
- **09:45-10:00 | Q&A**
 - Discussion
- **10:00-10:05 | Wrap Up**
 - Contact Speaker

QUOTE OF THE SESSION

By the time we finish, the content maybe obsolete.

Are you ready?

Let's Begin!

CHIT CHAT

Intro to Service Meshes

What you would like to learn in this session?

Chit Chat

what's a service mesh

How to get started with service mesh?

What is your favorite application of service meshes?

Why Service Mesh

How long does it take to get into service mesh

what's it used for

Which are the main structures

what does it do?

what are microservices?

when to use service mesh

How do you get involved? What prerequisite knowledge might you need?

Security/Cybersecurity?

How is this related to devops

How is this related to devOps

Drawbacks of service mesh?
When to use it and why?

What languages are used in Service Meshes?

How is created?

given a very small personal project, should one use service mesh?

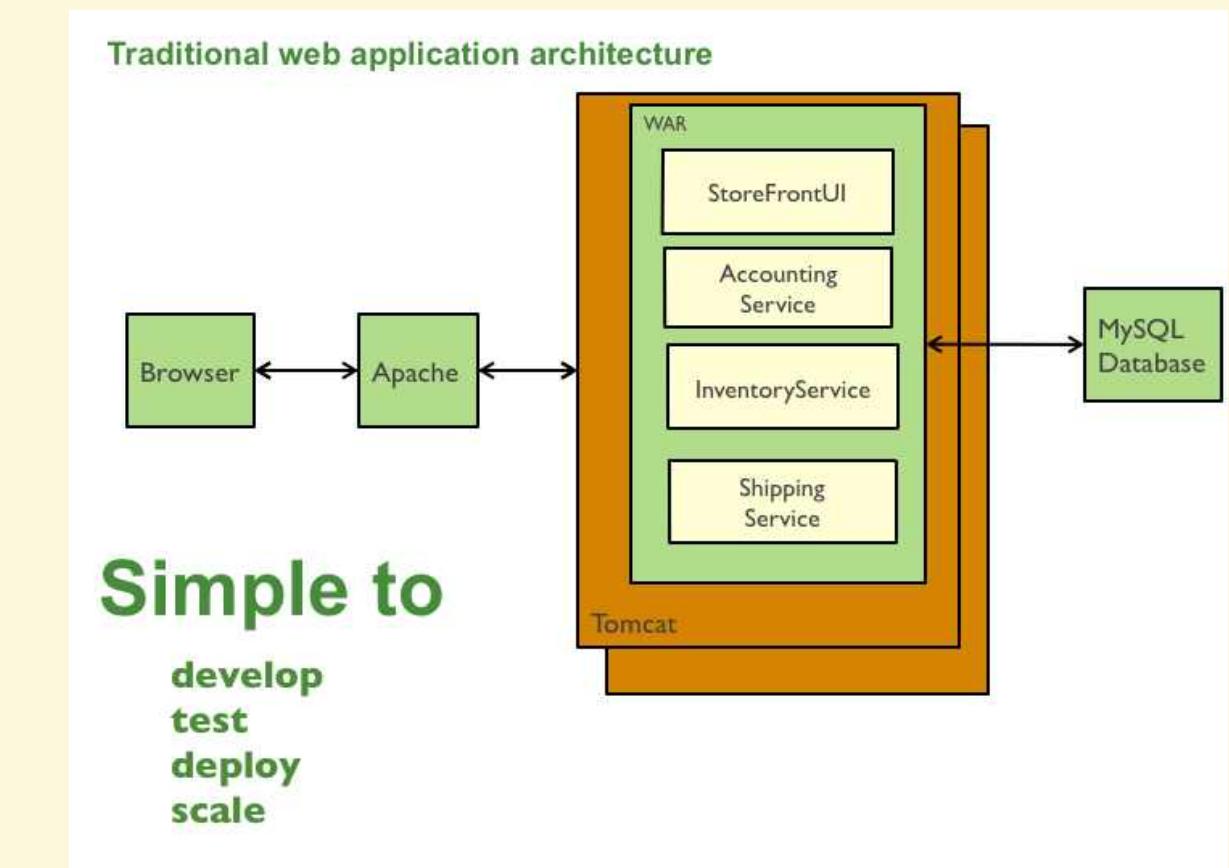
How important is this in a SRE's day to day work

Presentation

- **Codebase** - One codebase tracked in revision control, many deploys
- **Dependencies** - Explicitly declare and isolate dependencies
- **Config** - Store config in the environment
- **Backing services** - Treat backing services as attached resources
- **Build, release, run** - Strictly separate build and run stages
- **Processes** - Execute the app as one or more stateless processes
- **Port binding** - Export services via port binding
- **Concurrency** - Scale out via the process model
- **Disposable** - Maximize robustness with fast startup and graceful shutdown
- **Dev/prod parity** - Keep development, staging, and production as similar as possible
- **Logs** - Treat logs as event streams
- **Admin processes** - Run admin/management tasks as one-off processes

Monolithic Architecture – a single-tiered application in which the user interface and data access code are combined into a single platform that are simple to:

- Develop
- Test
- Deploy
- Scale

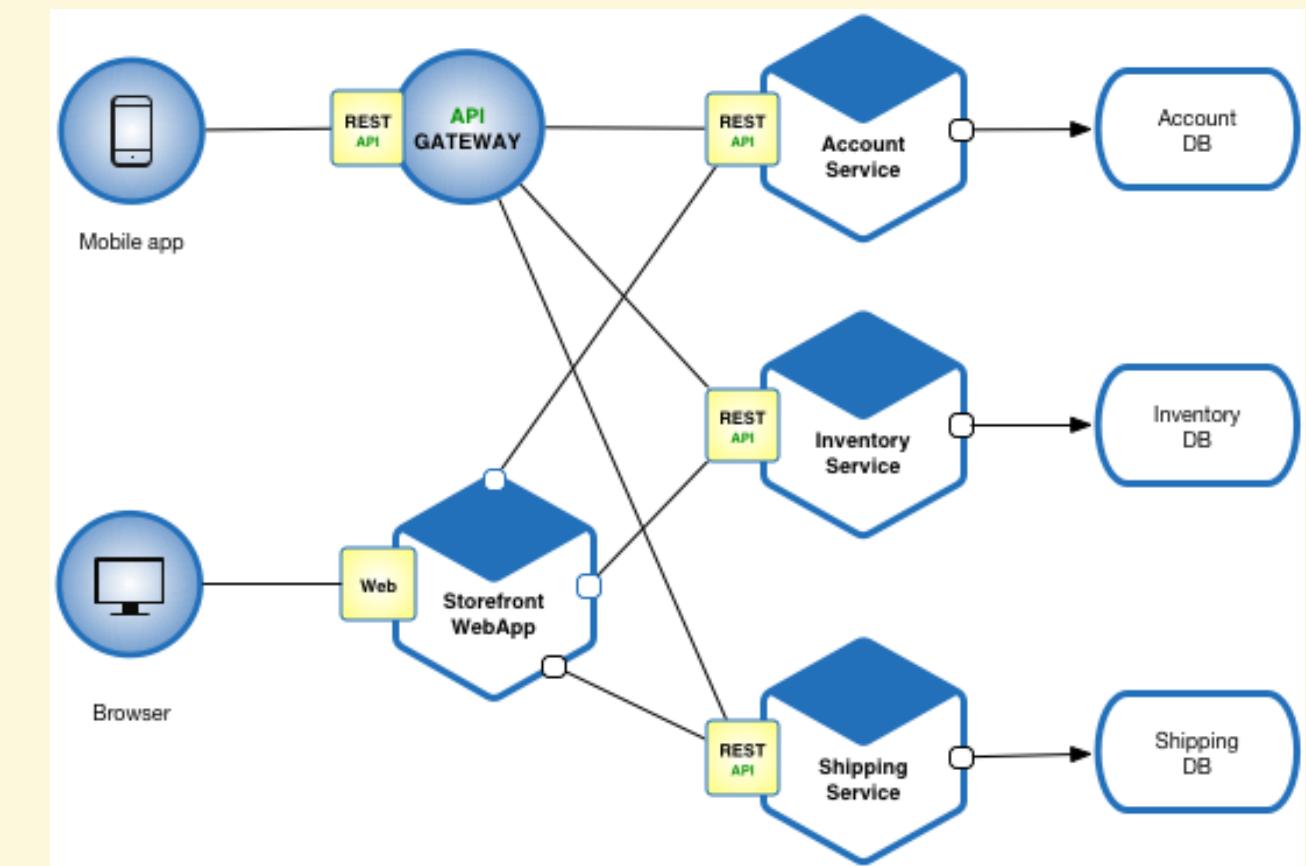


—What are monolithic apps?

LINK: [HTTPS://MICROSERVICES.IO](https://microservices.io)

Microservices architecture – is an architectural style that structures an application as a collection of services that are:

- Highly maintainable and testable
- Loosely coupled
- Independently deployable
- Organized around business capabilities
- Owned by a small team



—What are microservices?

LINK: [HTTPS://MICROSERVICES.IO](https://microservices.io)

Kubernetes - System for automating deployment, scaling, management of containerized apps.

- Automated rollouts and rollbacks
- Storage orchestration
- Automatic bin packing
- IPv4/IPv6 dual-stack
- Self-healing
- Service discovery and load balancing
- Secret and configuration management
- Batch execution
- Horizontal scaling
- Designed for extensibility

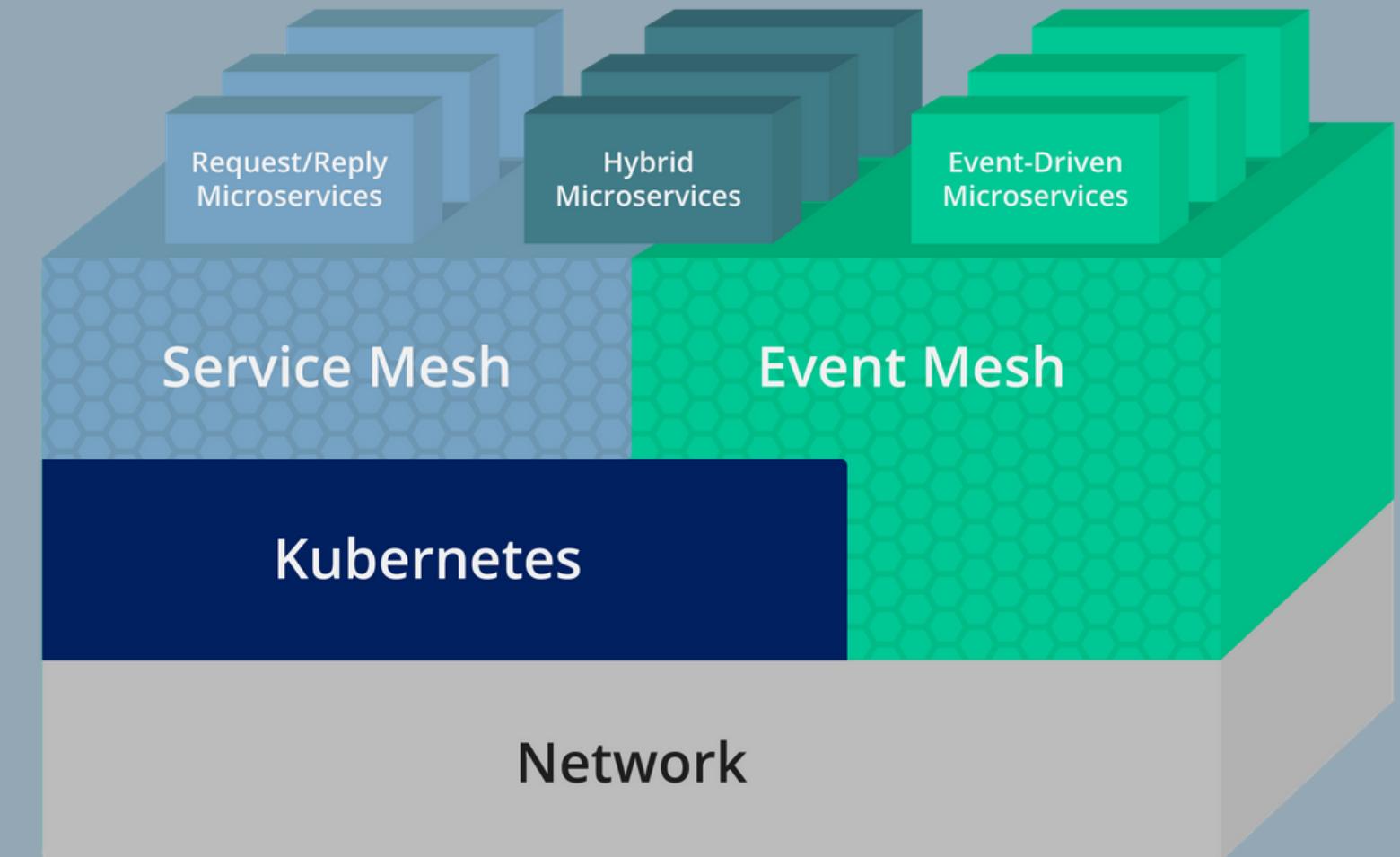


—What is k8s?

LINK: [HTTPS://KUBERNETES.IO](https://kubernetes.io)

Service mesh – infrastructure layer for microservices that makes communication between services controlled, secure and visible.

- Service discovery
- Load balancing
- Encryption
- Authentication and authorization
- Circuit breakers and rate limiting
- Timeouts and retries
- Tracing
- Traffic mirroring
- Inject failure and delays

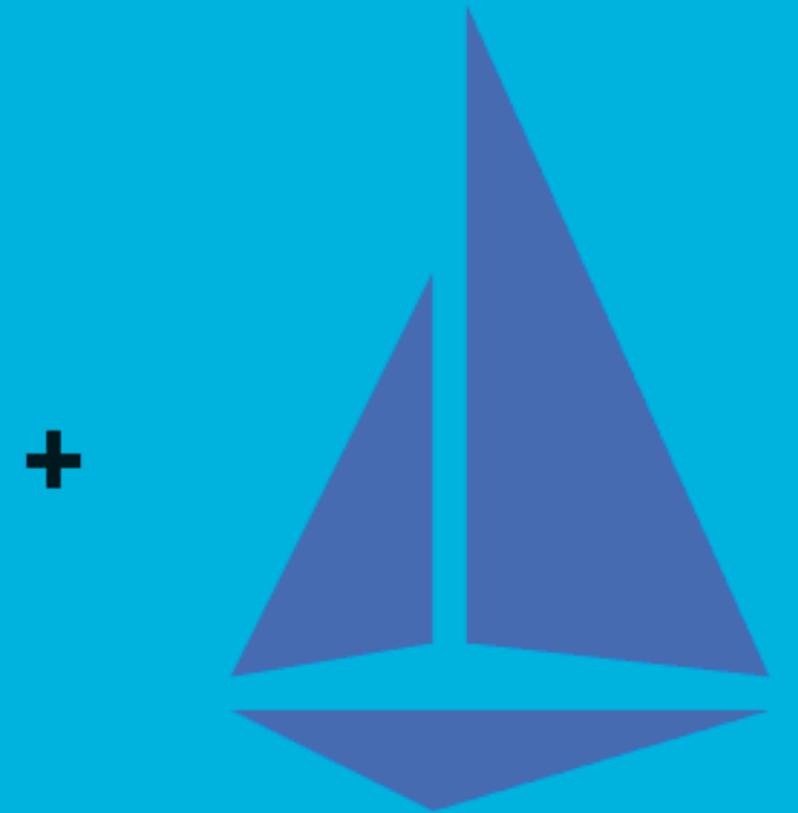


—What is service mesh?

LINK: [HTTPS://LAYER5.IO](https://layer5.io)

Istio – service mesh that extends Kubernetes to establish a programmable, application-aware network using the powerful Envoy service proxy.

- Traffic Management
- Security
- Observability
- Extensibility



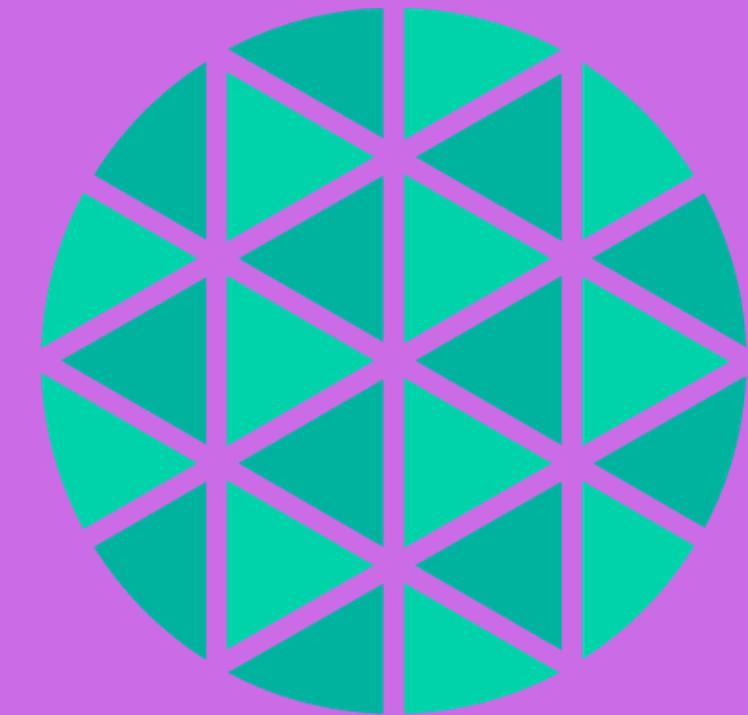
—What is Istio?

LINK: [HTTPS://ISTIO.IO](https://istio.io)

Layer5 – represents the largest collection of service mesh projects and their maintainers.

Meshery – multi-service mesh management plane offering lifecycle, configuration, and performance management of service meshes and their workloads.

- Service Mesh Lifecycle Management
- Service Mesh Configuration Management
- Adhering to Service Mesh Standards



MESHERY

LAYER5
THE SERVICE MESH COMPANY

—What is Meshery?

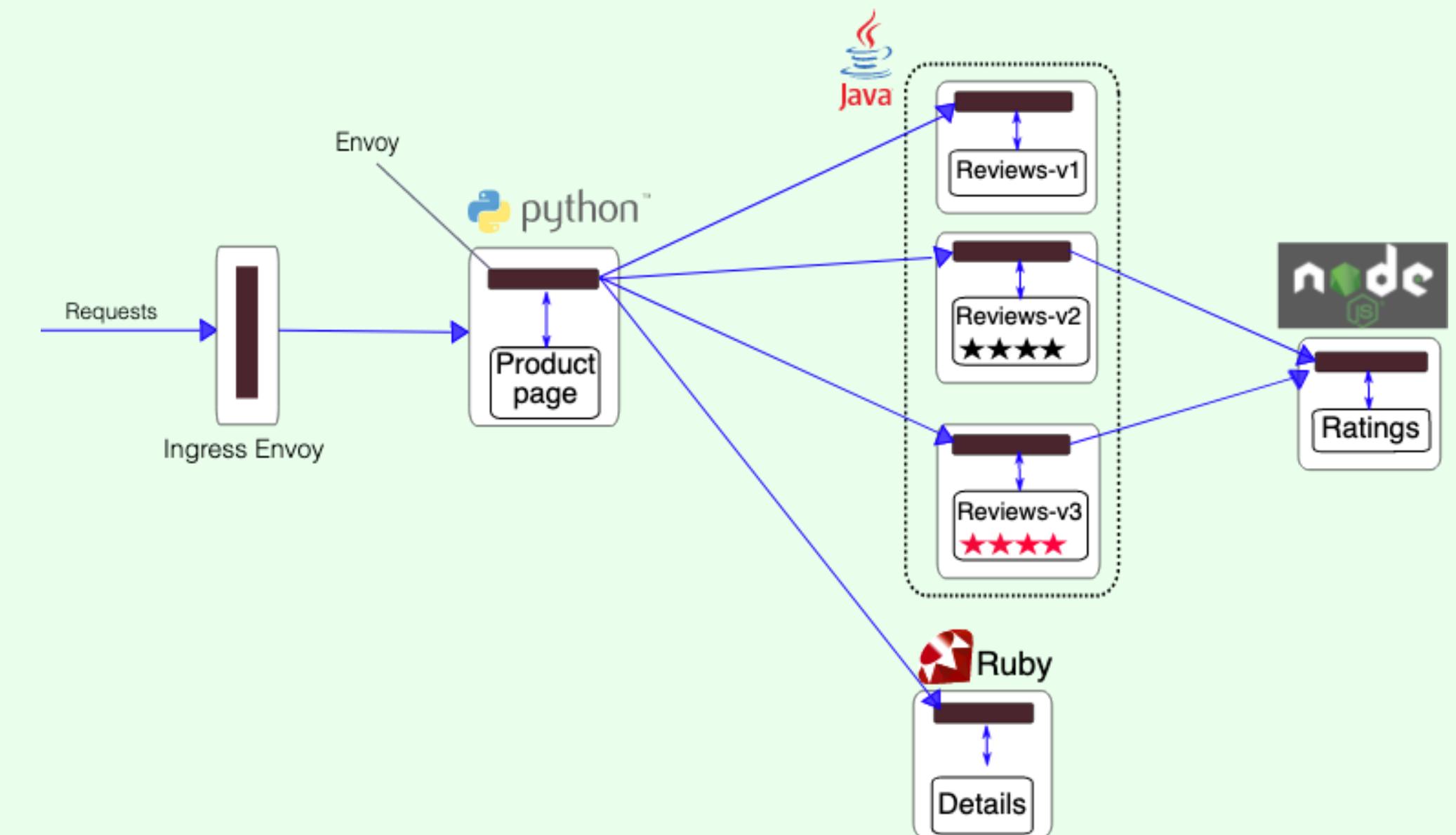
LINK: [HTTPS://LAYER5.IO](https://layer5.io)

Demo

Docker +
K8s +
Meshery+
Istio

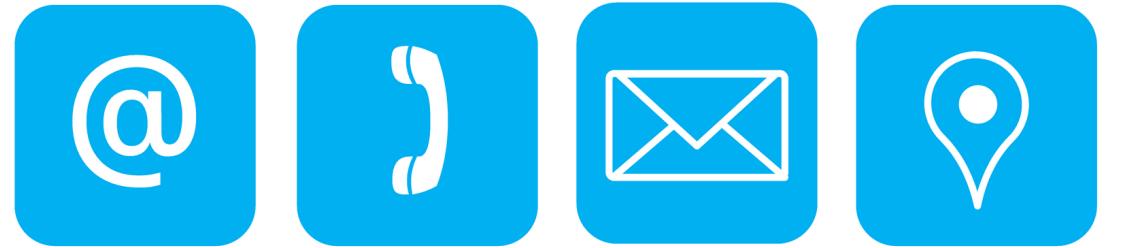
Deploying the application

- 1 Install Meshery
- 2 Install Istio
- 3 Install Application



Wrap Up

HOWTO



Remember!

- Re-Search
- Be short and clear
- Re-mind
- Q&A over Slack

Linkedin: [@sakom](#)

Twitter: [@sakows](#)

GOUPE Slack: [@sako](#)



Sako M

Thank You