

ISTIO SERVICE MESH

Piotr Kłoskowski
DevOps Wrocław Meetup
09.04.2019

softserve

#WHOAMI

- **PIOTR KŁOSKOWSKI**
- **INTERESTED IN CLOUD AND OPEN SOURCE**
- **DEVOPS PRACTITIONER**



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ISTIO SERVICE MESH

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David Samuelsson

@dasamuelsson

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Wednesday **#funny:**

2014 - We must adopt **#microservices** to solve all problems with monoliths.

2016 - We must adopt **#docker** to solve all problems with microservices.

2018 - We must adopt **#kubernetes** to solve all problems with docker

12:41 AM - 19 Sep 2018

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4

27



52



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HYUNDAI
F384
FORTUNE

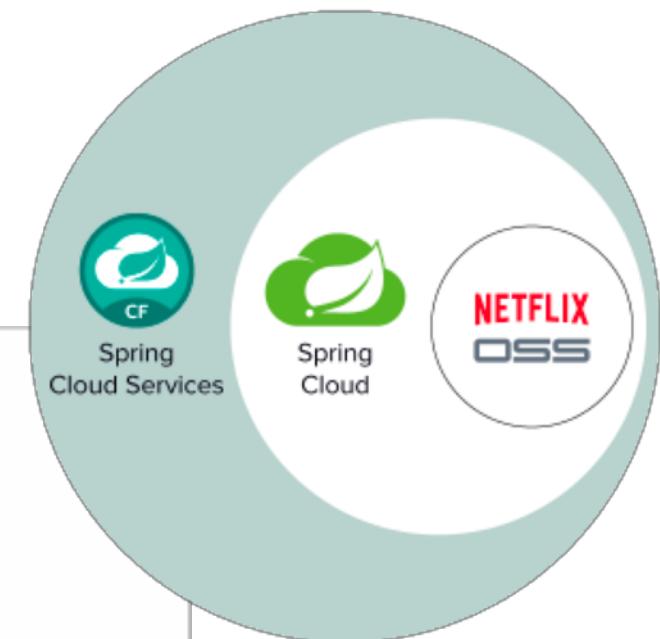
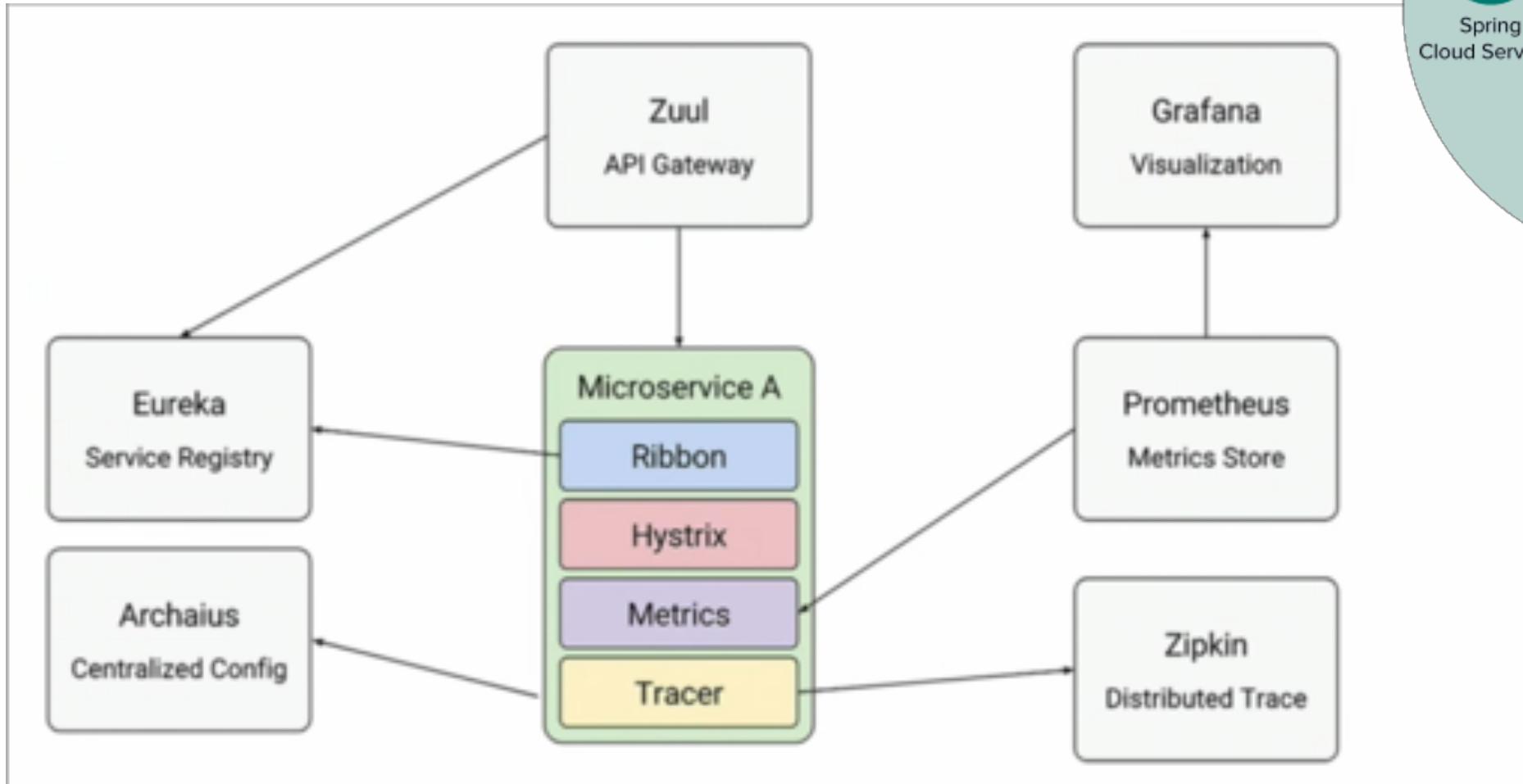
HYUNDAI

FALLACIES OF DISTRIBUTED COMPUTING

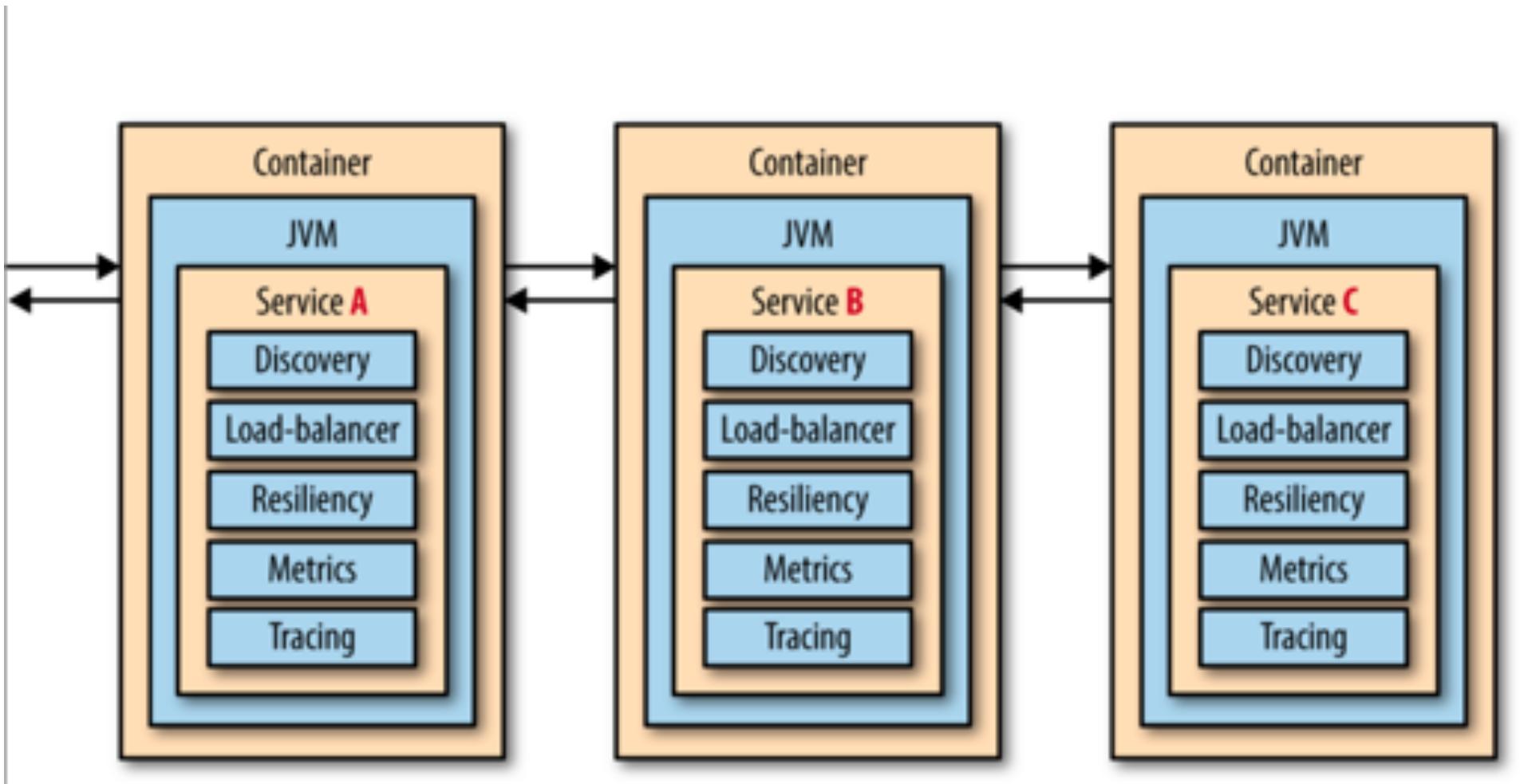
- 1. The network is reliable.**
- 2. Latency is zero.**
- 3. Bandwidth is infinite.**
- 4. The network is secure.**
- 5. Topology doesn't change.**
- 6. There is one administrator.**
- 7. Transport cost is zero.**
- 8. The network is homogeneous.**

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NETFLIX OSS

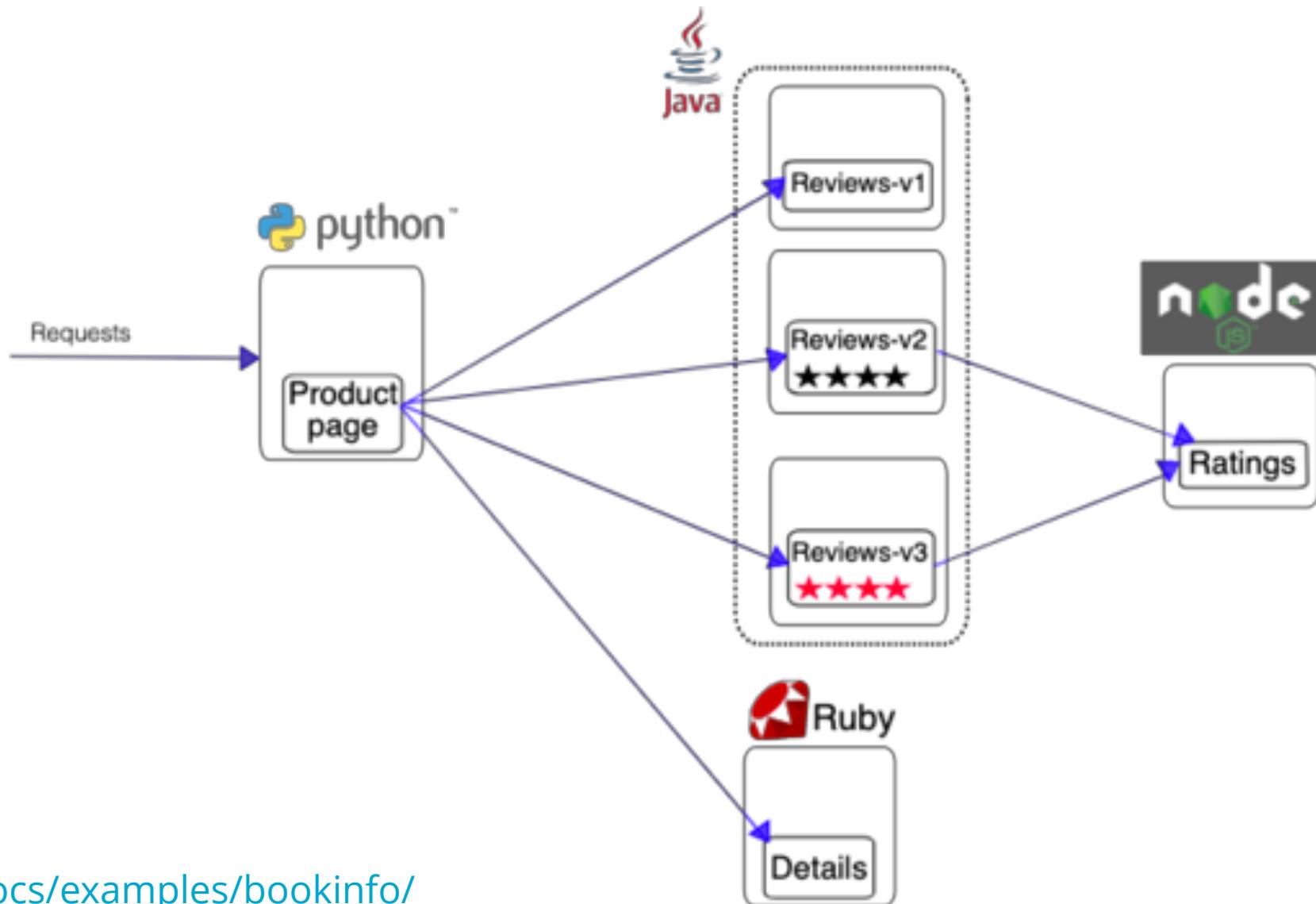


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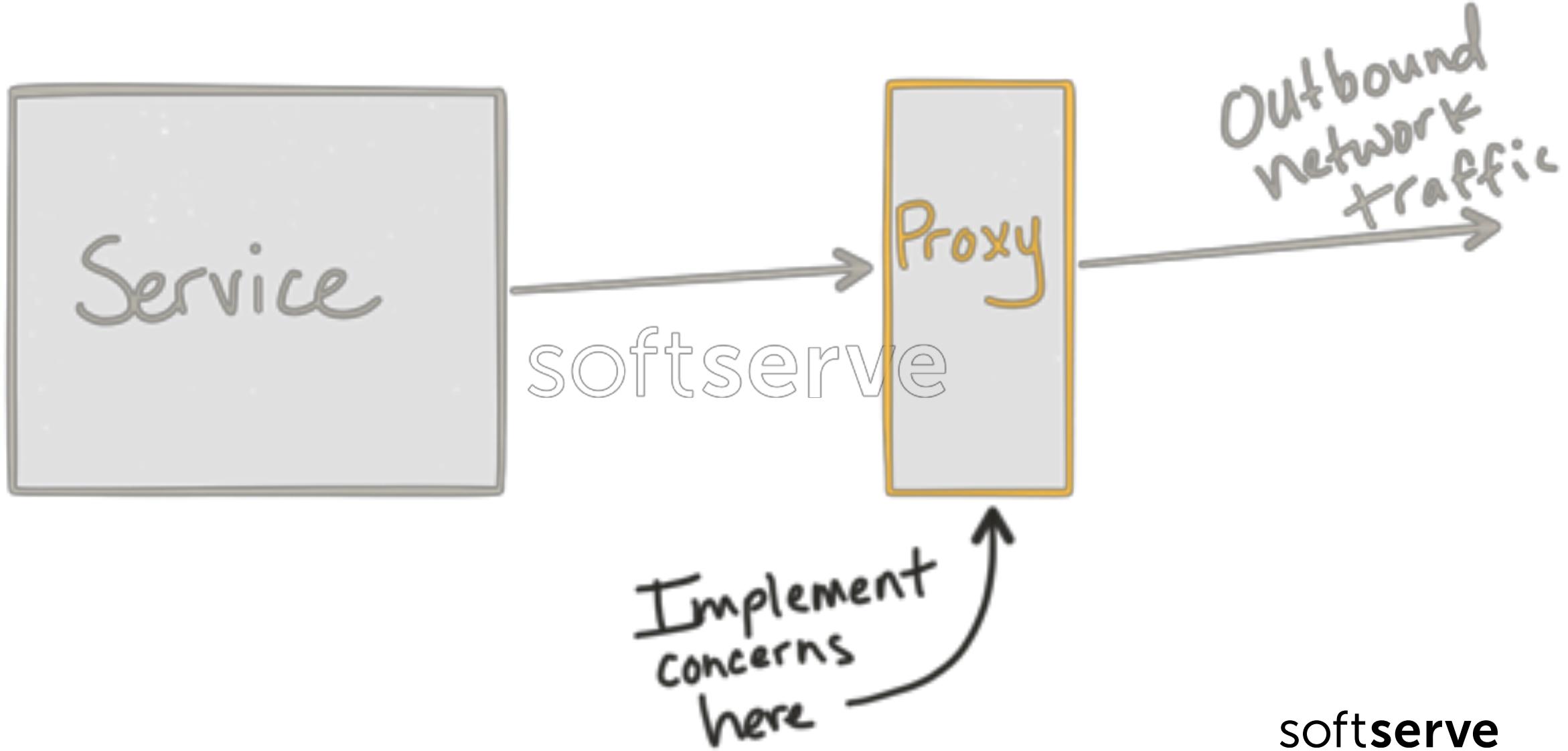


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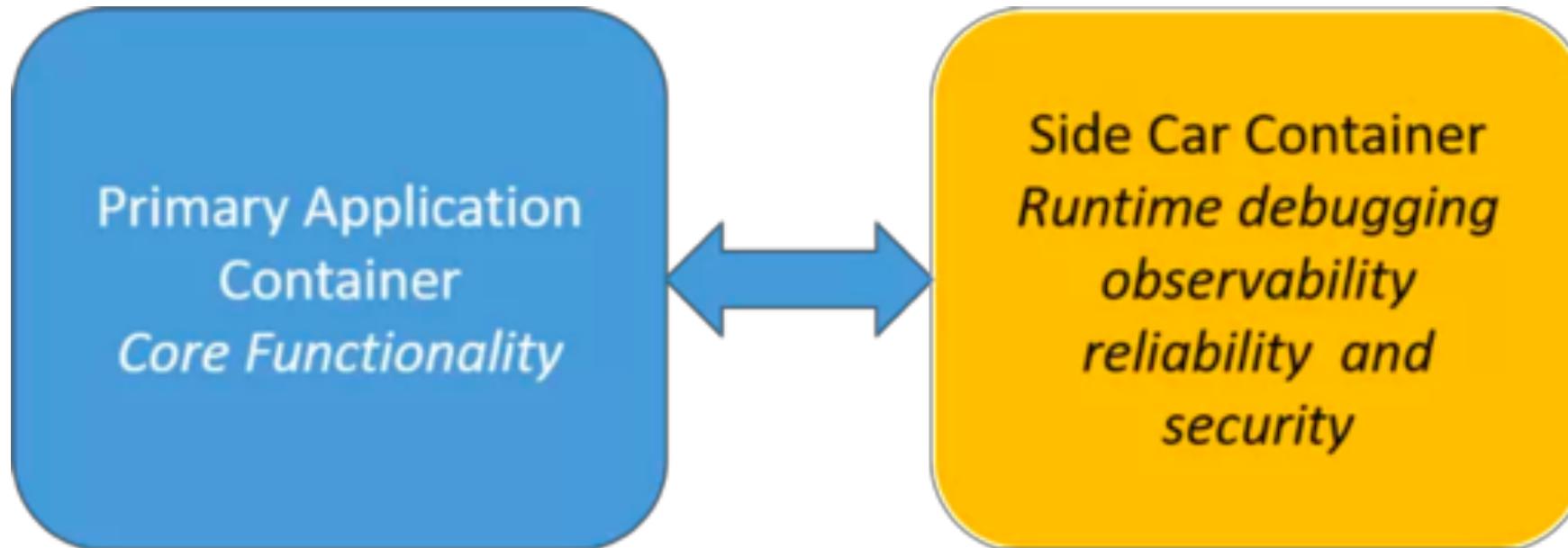
POLYGLOT MICROSERVICES WORLD



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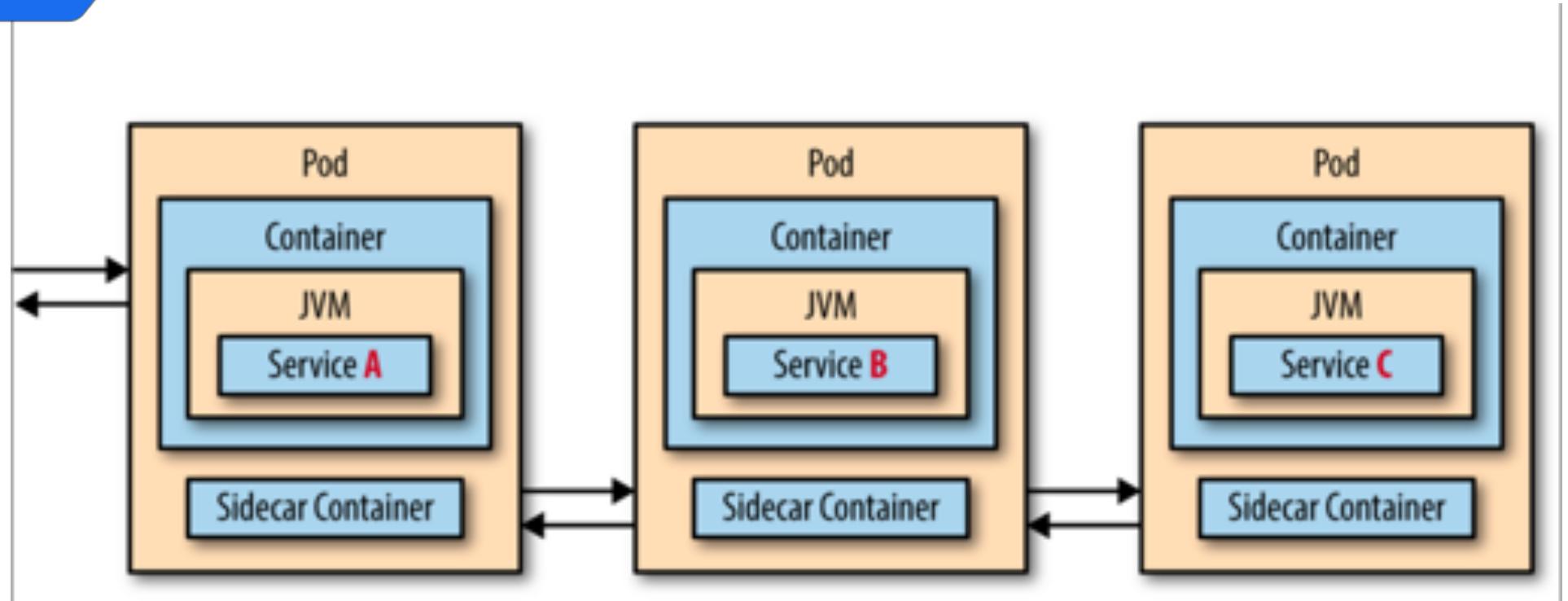
SERVICE DISCOVERY

RETRIES

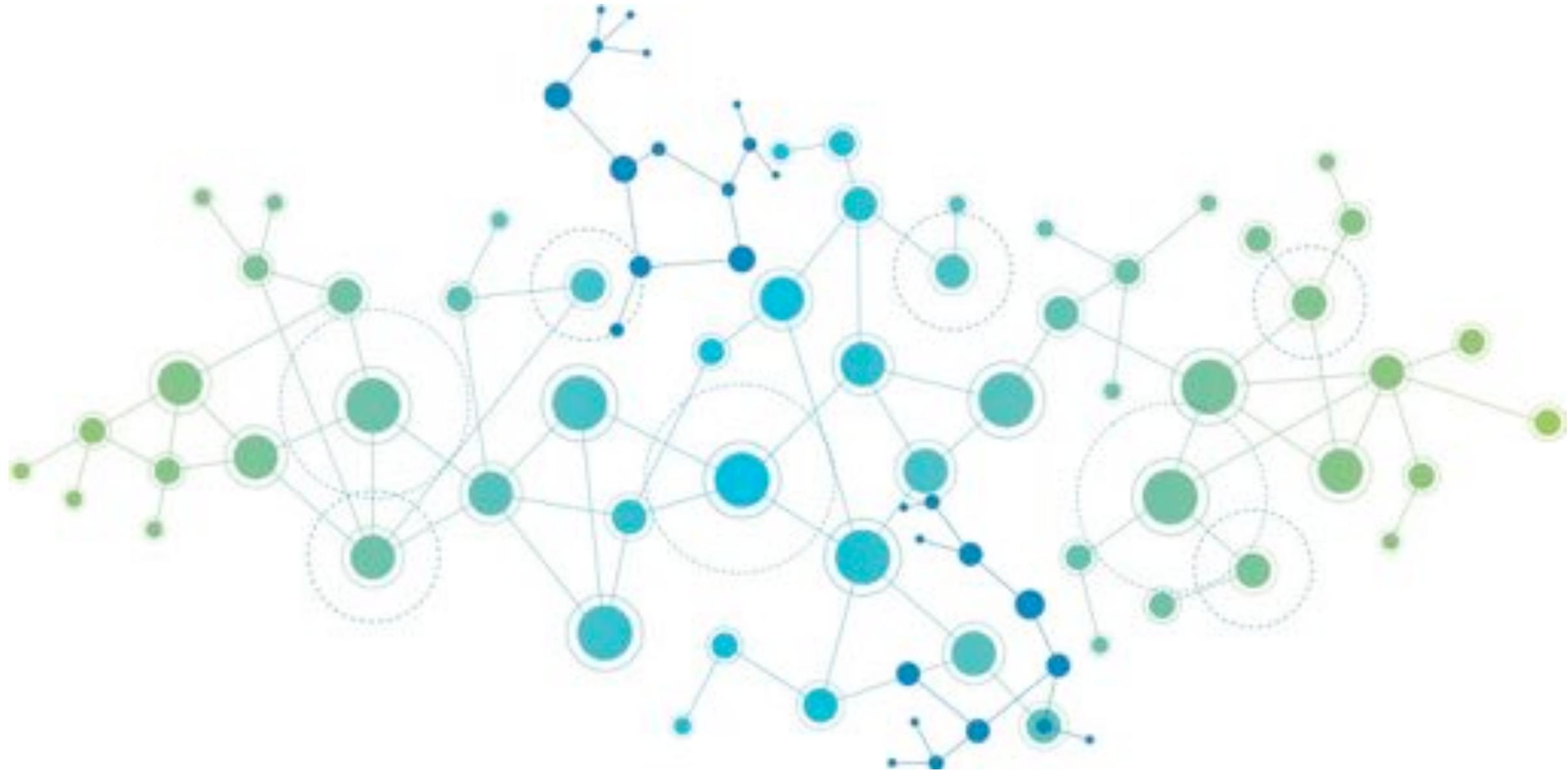
TIMEOUTS

CLIENT LOAD BALANCING

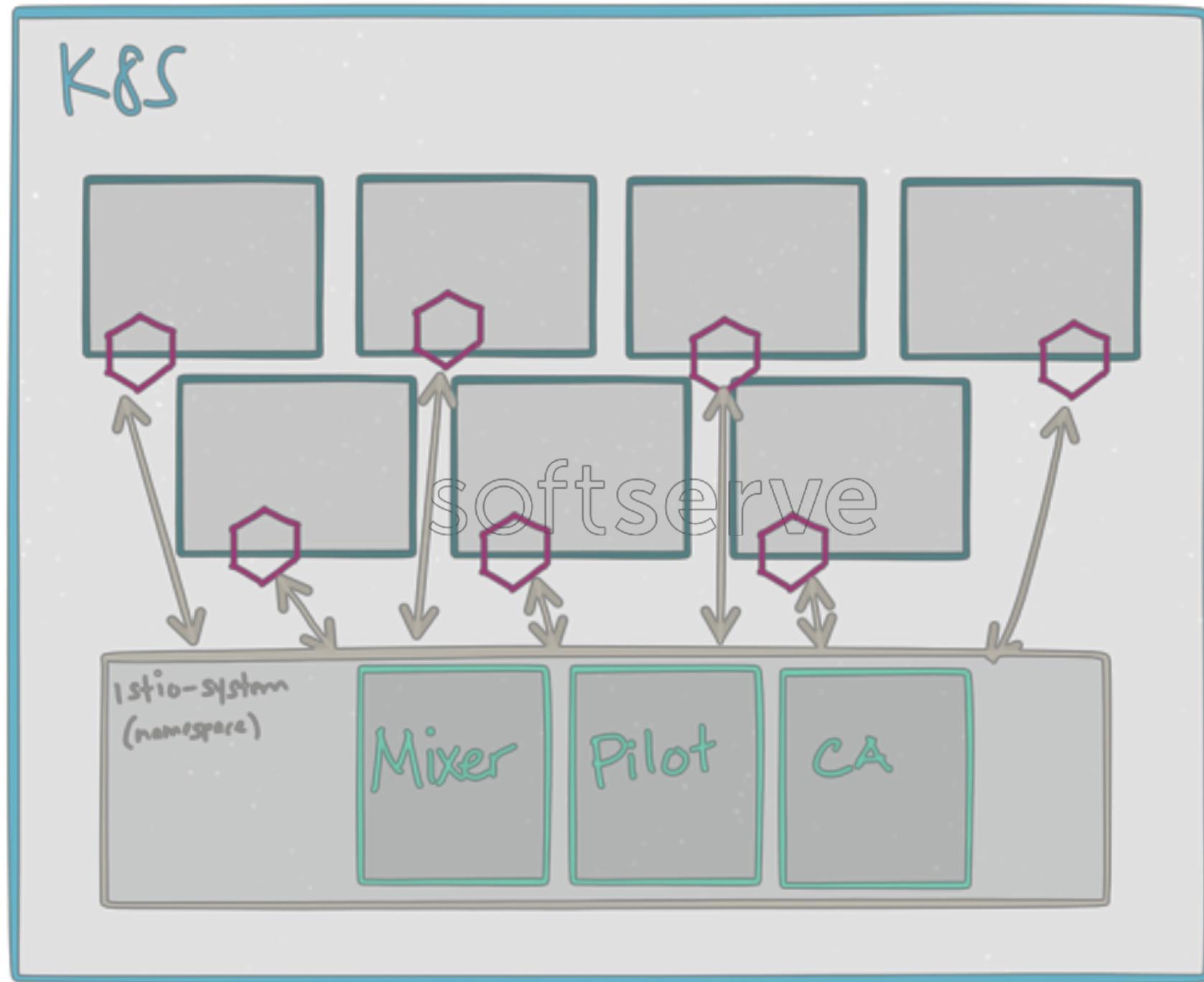
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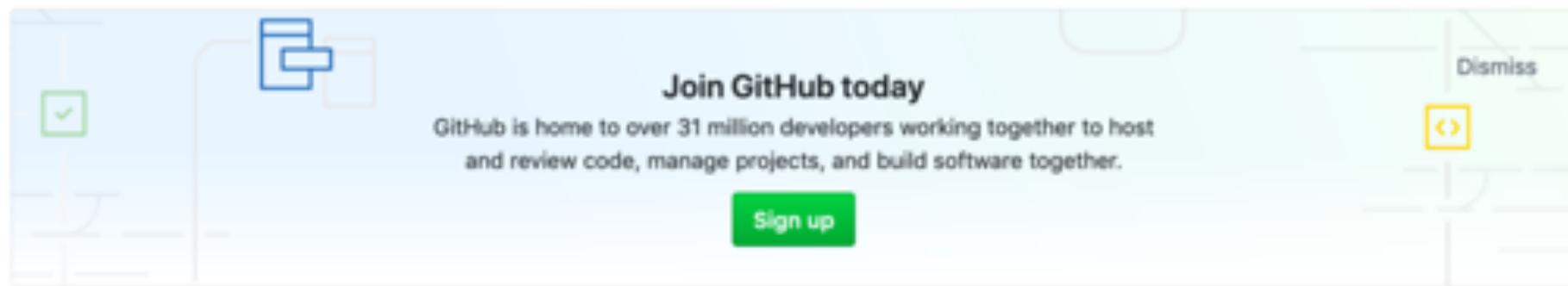
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[Code](#)[Issues 883](#)[Pull requests 192](#)[Wiki](#)[Insights](#)

Connect, secure, control, and observe services. <https://istio.io>

[microservices](#) [service-mesh](#) [lyft-envoy](#) [kubernetes](#) [api-management](#) [circuit-breaker](#) [polyglot-microservices](#) [enforce-policies](#) [proxies](#)

[microservice](#) [envoy](#) [consul](#) [nomad](#) [request-routing](#) [resiliency](#) [fault-injection](#)

7,418 commits

23 branches

53 releases

347 contributors

Apache-2.0

Branch: **master**

New pull request

Find File

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utka and istio-testing light modification path ([#13148](#))

Latest commit 576850c 16 minutes ago

.circleci Add labels to the test framework. ([#12819](#)) 10 days ago

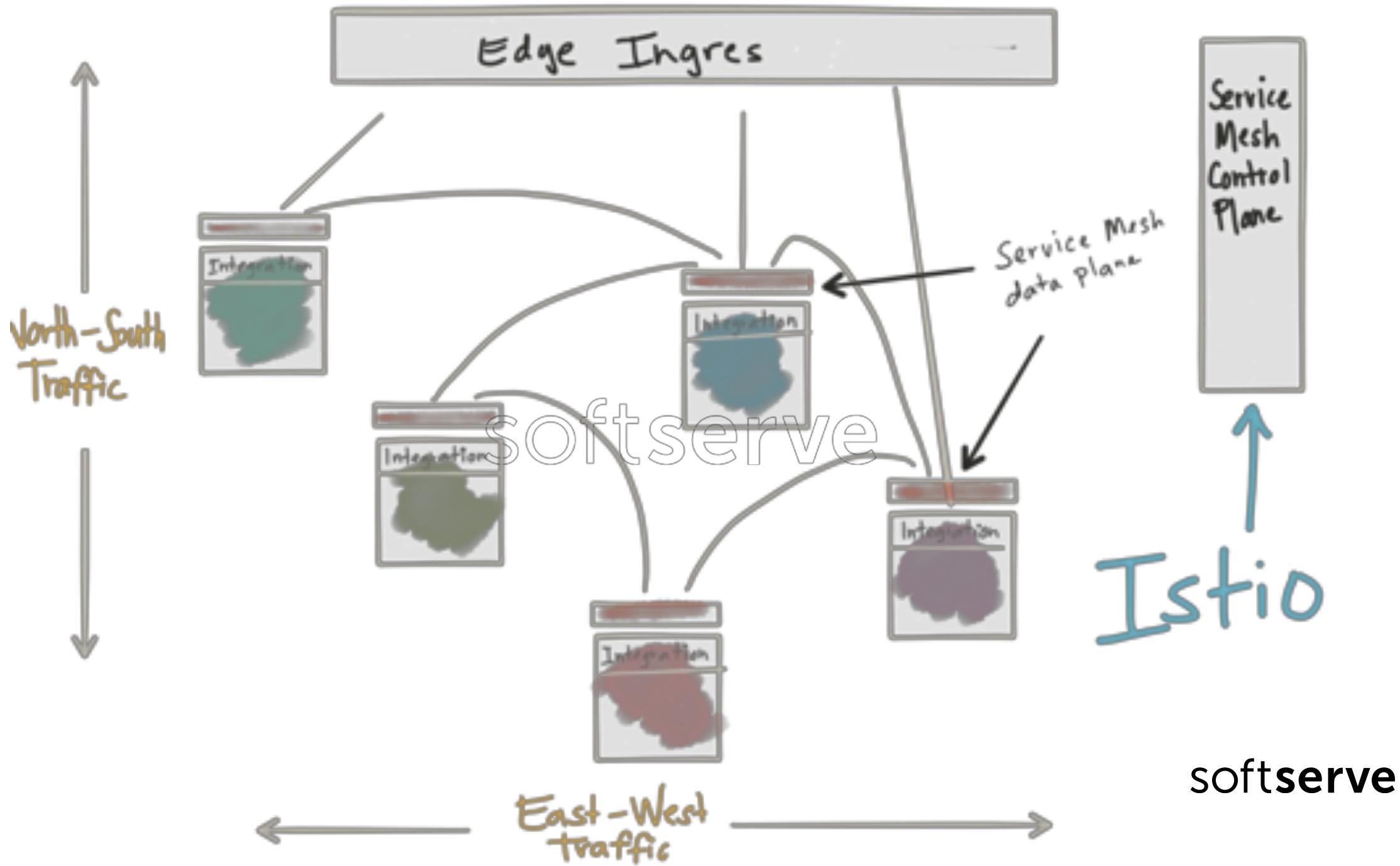
.github Hoist exemptLabels to top-level, so that they can apply to prs as wel... 7 days ago

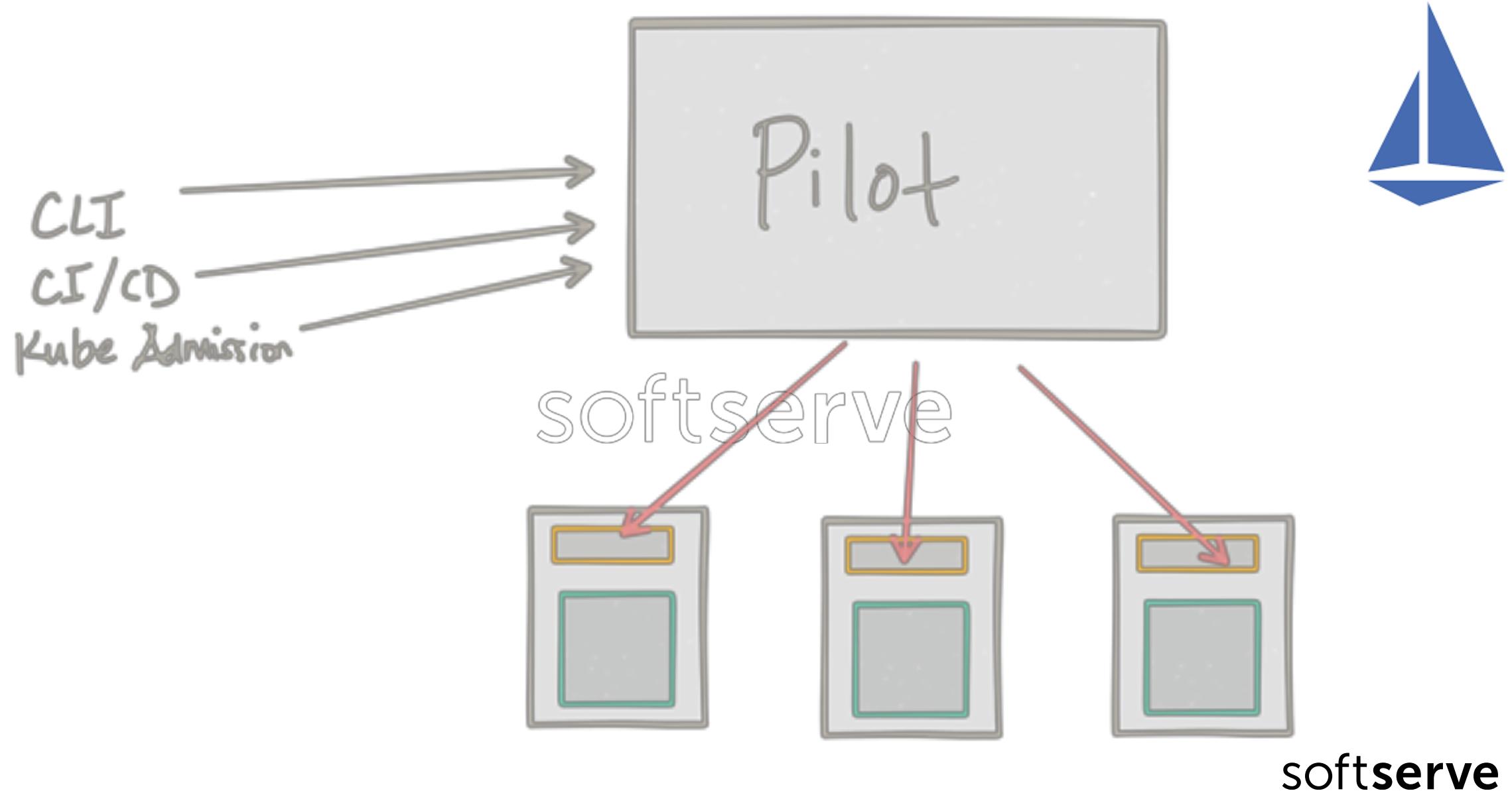
addons update linters ([#10809](#)) 3 months ago

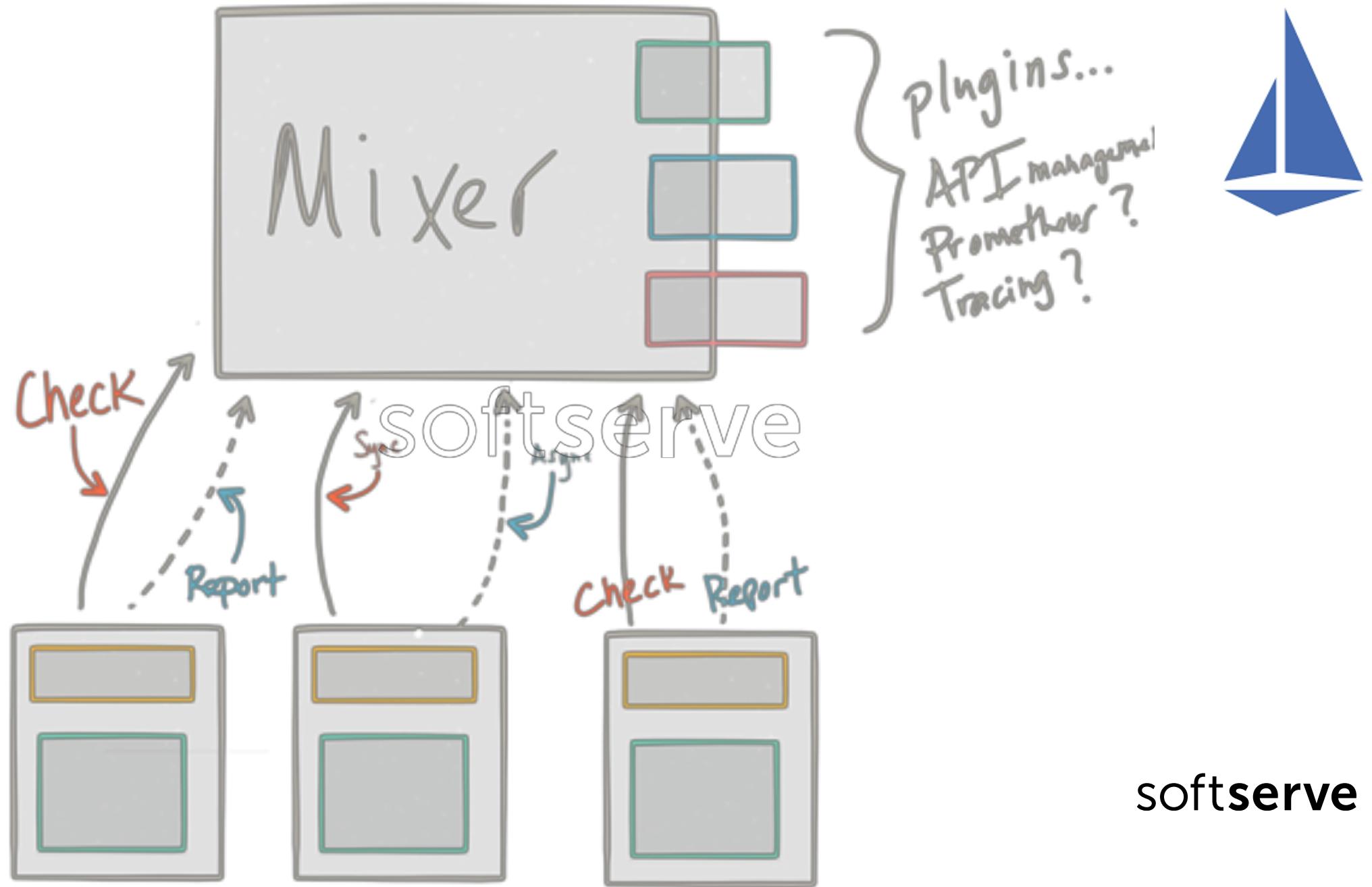
bin Enable more linters and fix warnings/errors ([#13061](#)) a day ago

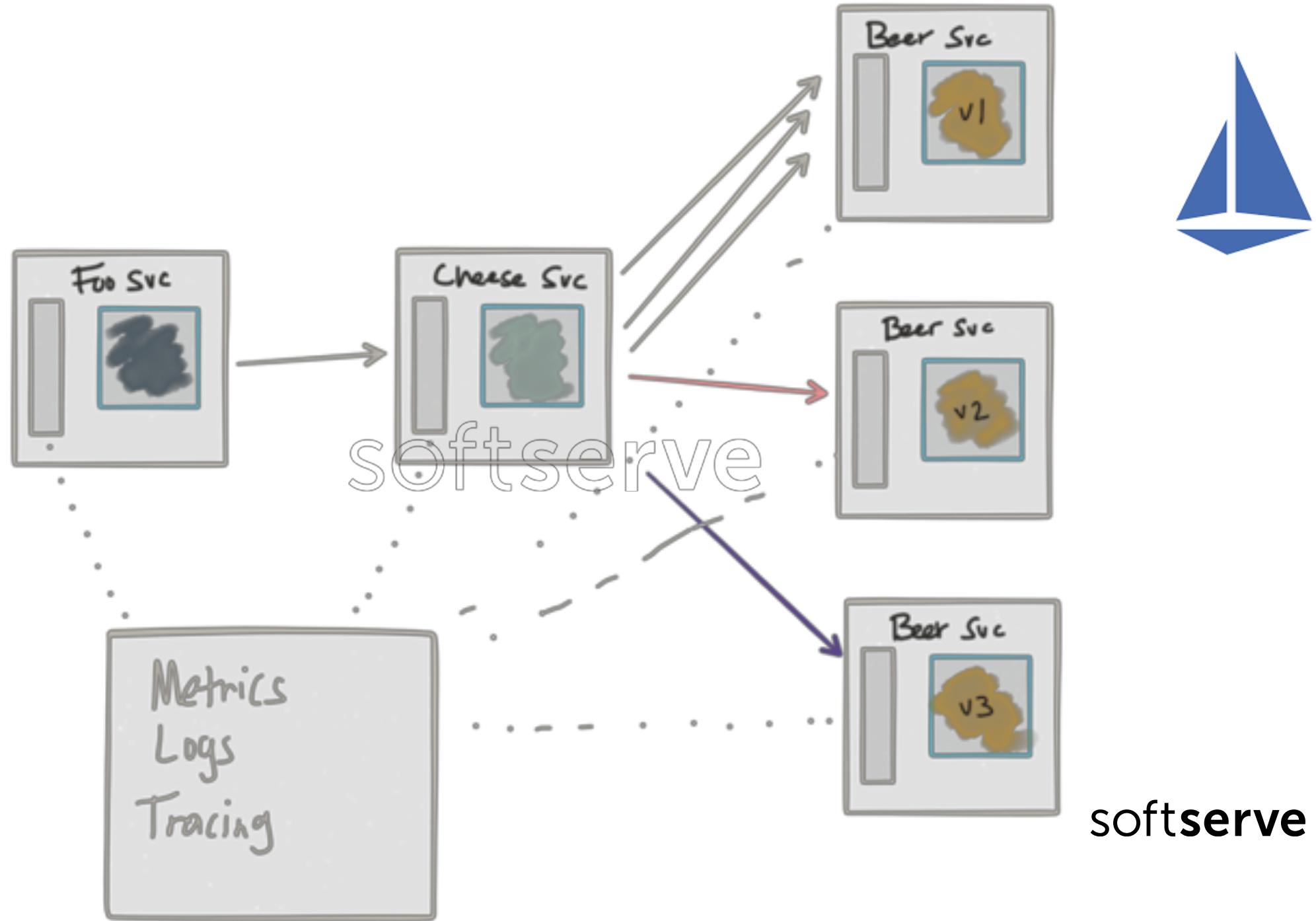
docker Merge release-1.1 into master ([#11096](#)) 3 months ago

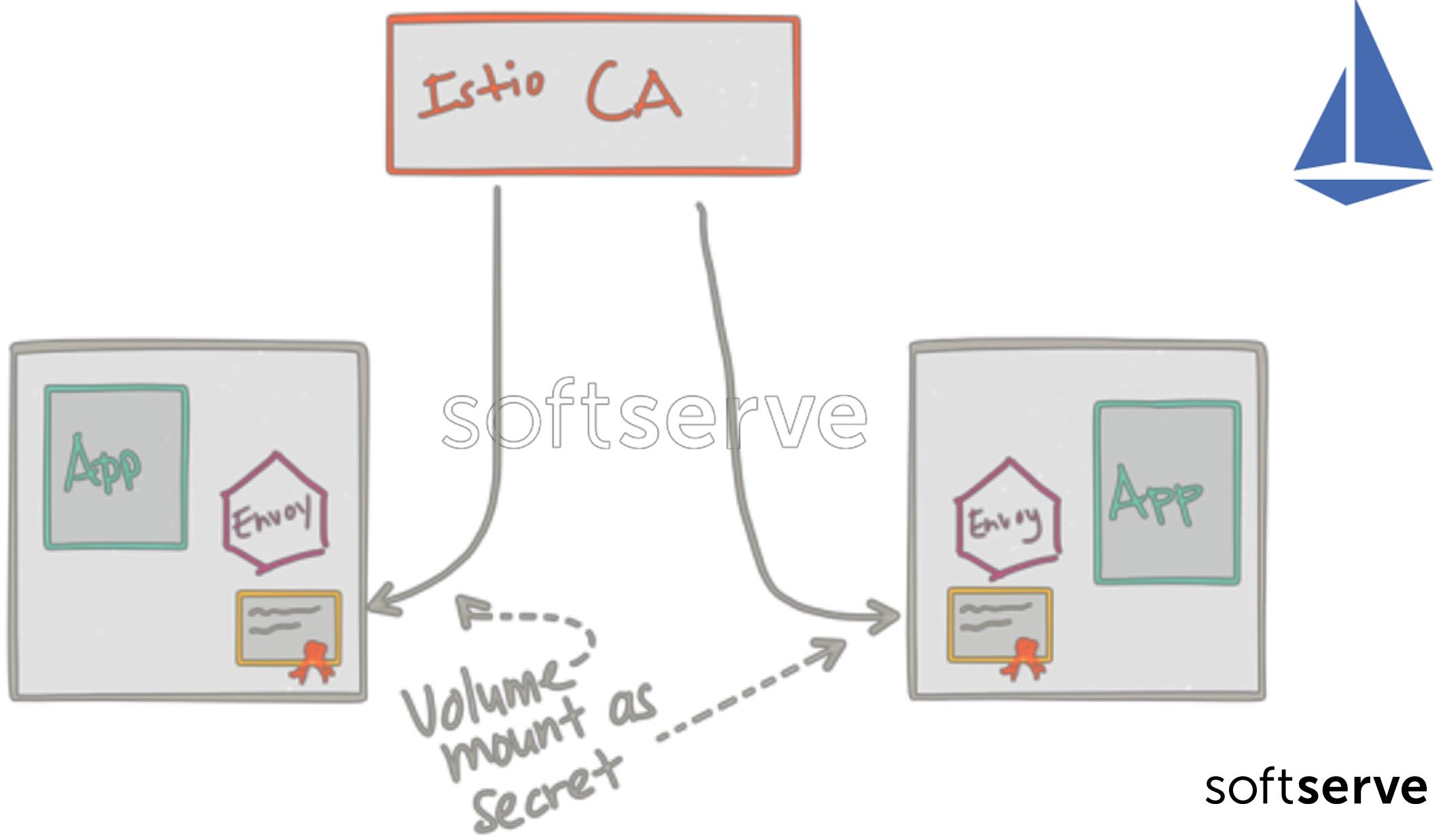
galley Enable more linters and fix warnings/errors ([#13061](#)) a day ago











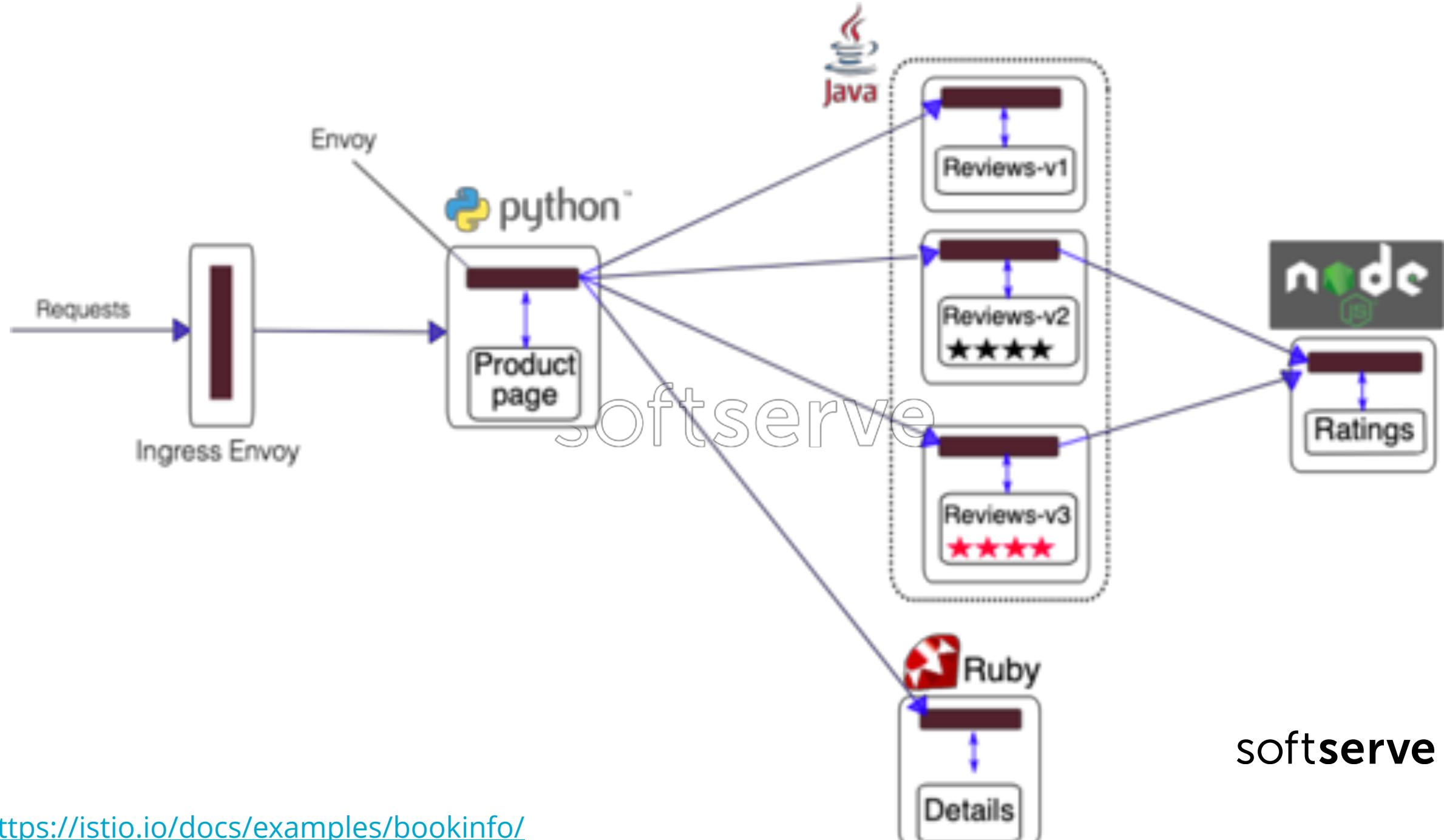


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DEMO

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Okay.....

What's the catch?

PERFORMANCE FOR ISTIO 1.1.1

ENVOY PROXY

0.6 vCPU

50 MB memory

per 1000 requests per second
going through the proxy

ISTIO TELEMETRY

0.6 vCPU

per 1000 **mesh-wide** requests
per second

PILOT

1 vCPU

1.5 GB memory

LATENCY

The Envoy proxy adds
8ms to the 90th
percentile latency.

70,000 MESH-WIDE REQUESTS PER SECOND

2000 SIDEKARS

1000 SERVICES

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WHEN YOUR BOSS TELLS YOU



WE'RE CONVERTING TO
MICROSERVICES

QUESTIONS?

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