Debugging Services in Kubernetes With Linkerd 2.0

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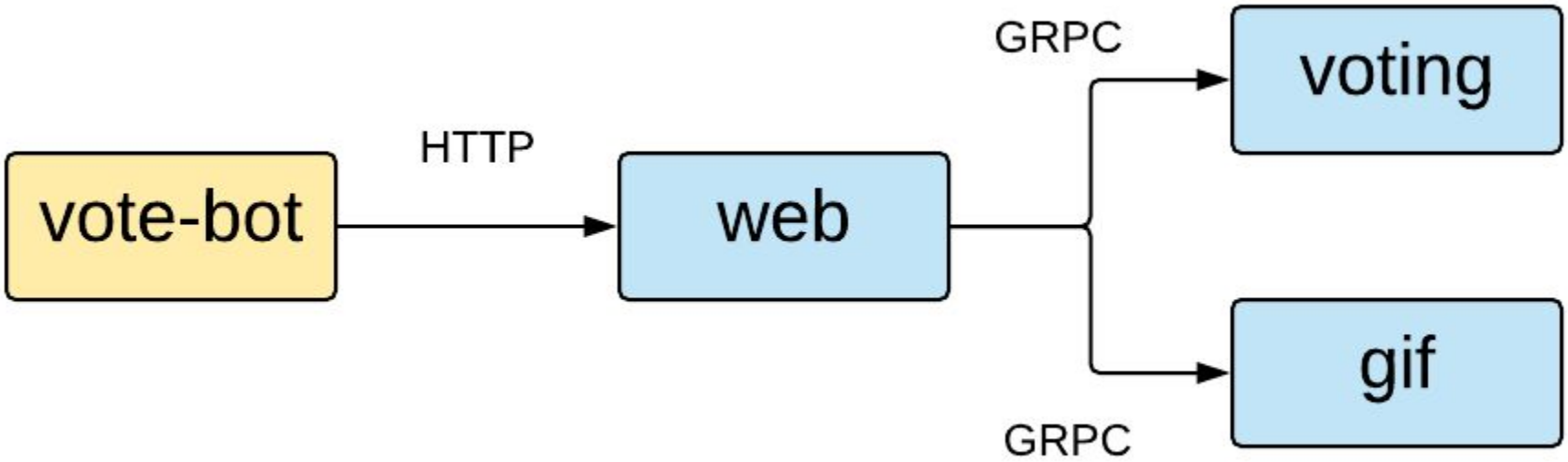
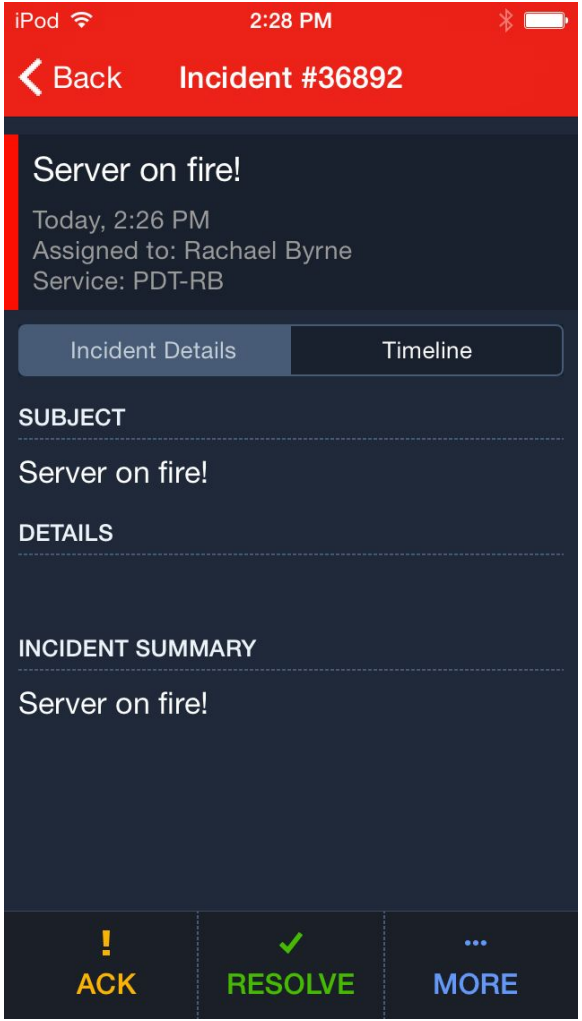
@marzipan

http://bit.ly/linkerd-tutorial

My application: nodevoto




iPod
2:28 PM
Back
Incident #36892
Server on fire!
Today, 2:26 PM
Assigned to: Rachael Byrne
Service: PDT-RB
Incident Details
Timeline
SUBJECT
Server on fire!
DETAILS
INCIDENT SUMMARY
Server on fire!
!
ACK
RESOLVE
MORE

Honest Status Page
@honest_update

Follow

We replaced our monolith with micro services so that every outage could be more like a murder mystery.

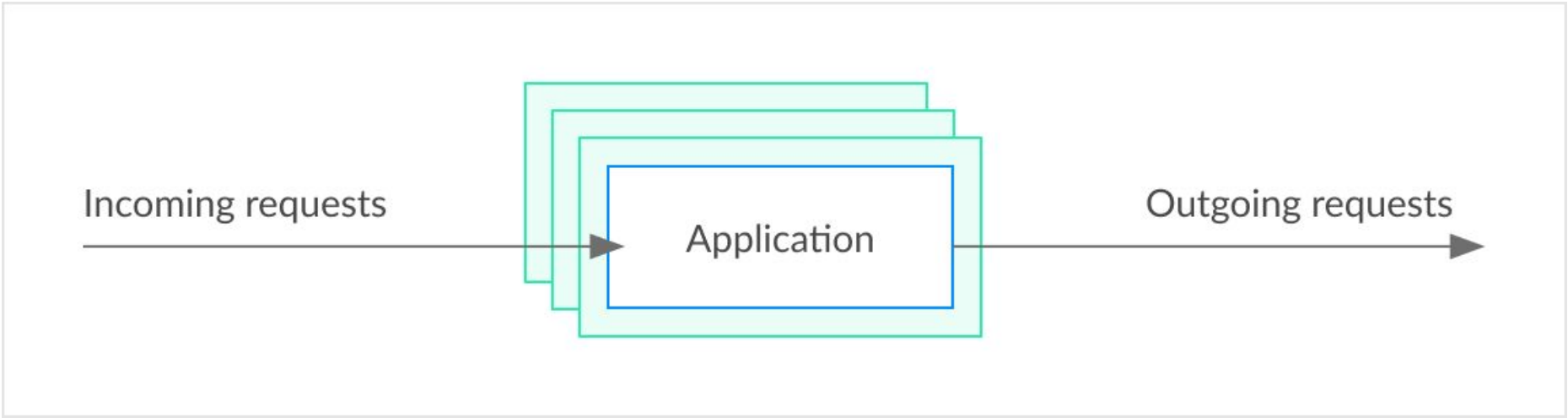
4:10 PM - 7 Oct 2015

How do we solve this mystery?

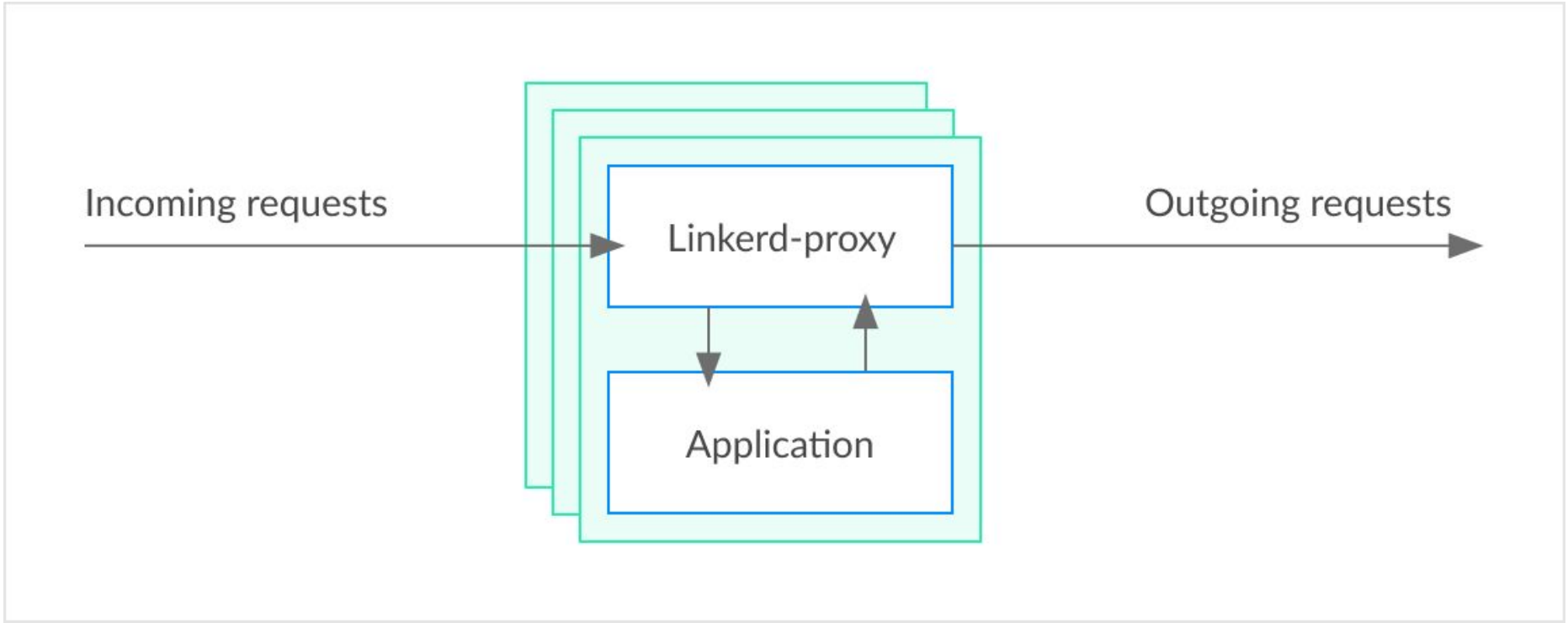
- Improve our logging
  - What if it’s a service we don’t control?
- We need visibility into our app!
  - Add instrumentation libraries to the code
  - Add monitoring (e.g. Prometheus)
  - Set up dashboard (e.g. Grafana)
- Is there an easier way?

Linkerd

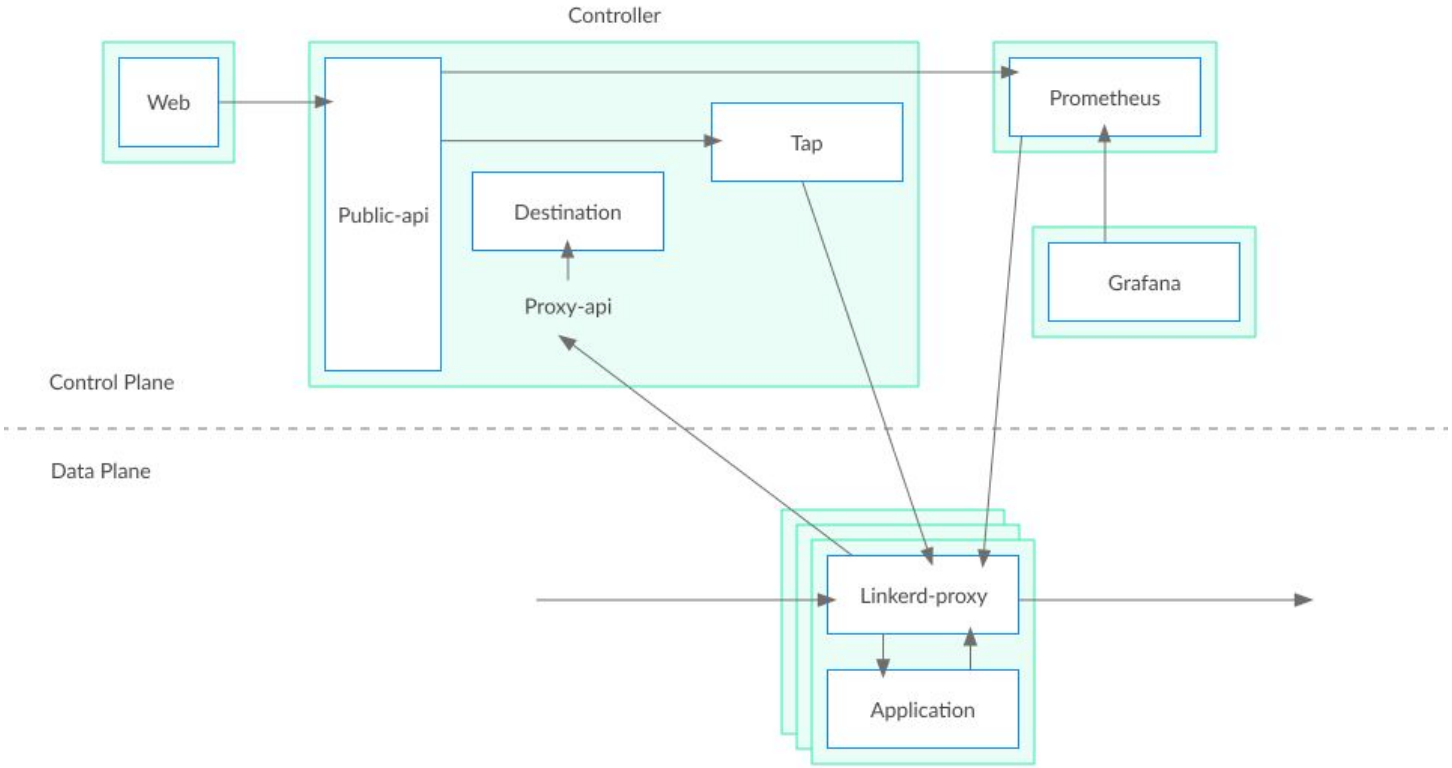
Linkerd 2.0: a service sidecar



Linkerd 2.0: a service sidecar



Linkerd 2.0 architecture



Mystery solved!

What did we do? ✅

- Installed linkerd control plane
- Added web to the linkerd data plane
- Got the observability we needed! 🎉
  - Used dashboard to find problematic endpoint
  - Inspected Grafana dashboards
  - Viewed live requests through the system

What did we NOT do? 🚫

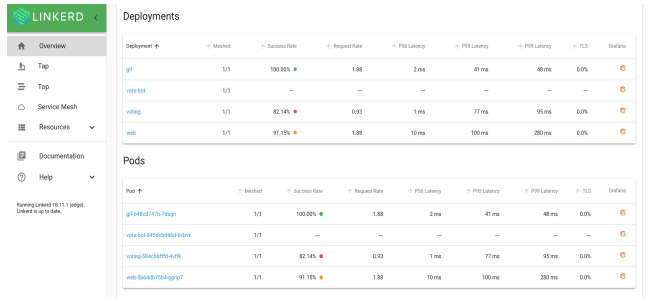
- No code changes!
- No config changes!
- No bothering of other service owners!
- No bothering of ops / platform owners!

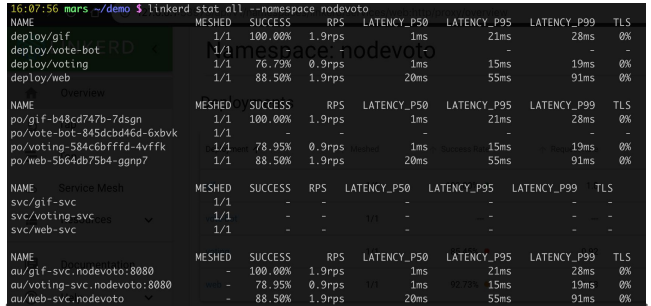
Linkerd is a tool for service owners

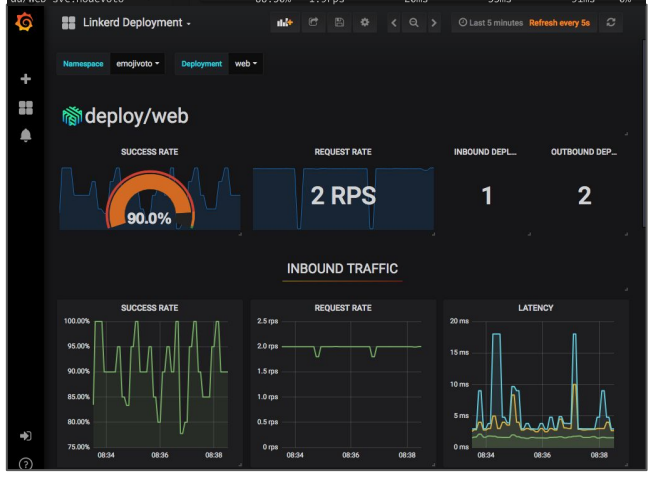
Not just a mesh, a “service sidecar”:

- ✓ Works on just one service
- ✓ No cluster-wide permissions
- ✓ Zero config, 60 seconds to install
- ✓ Focus on visibility and debugging
- ✓ Unix-Like CLI tools (tap, stat)

Solve problems. No permission required.







Try it yourself!

https://bit.ly/linkerd-get-started

24+ months in production

2k+ Slack channel members

7,000+ GitHub stars

20m+ DockerHub pulls

80+ contributors

400b+ production requests/mo

http://github.com/linkerd

Contribute!

http://github.com/linkerd

Golang, Javascript, Rust, Scala

Learn more!

Slides: http://bit.ly/debug-with-linkerd

Try it yourself!

- https://bit.ly/linkerd-get-started
- https://bit.ly/linkerd-tutorial

Ask questions!

- https://bit.ly/LinkerdMailingList
- https://slack.linkerd.io/

Linkerd User Studies

(if selected, $50 Amazon gift card)

https://bit.ly/LinkerdUserStudy

Upcoming Events!

- 12/10: Linkerd in Production 101: https://sched.co/GyOx
- 12/11-13: KubeCon: http://bit.ly/linkerd-kubecon

Risha: mars@buoyant.io / @marzipan

We're hiring!

https://buoyant.io/careers/

Questions!?