When the command line is not enough:
Why your OSS project needs a GUI

Risha
Mars

Software Engineer @ Buoyant

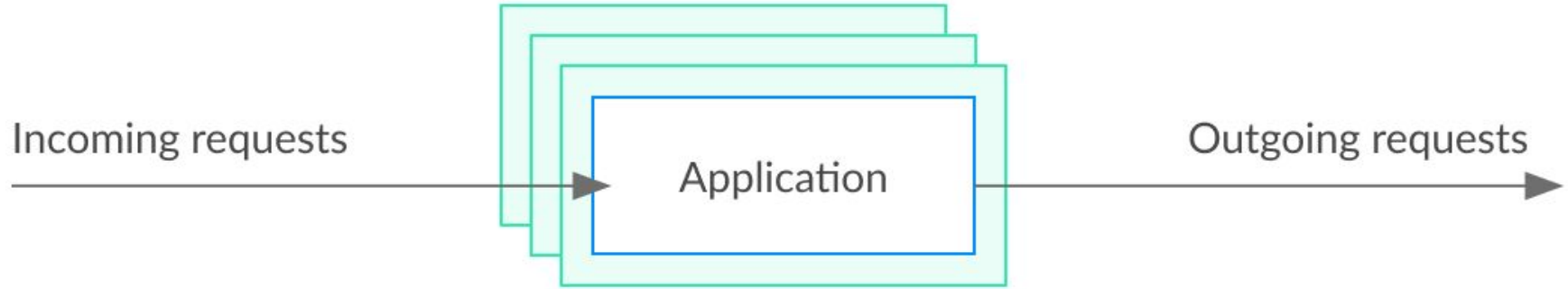🐦 @marzipan
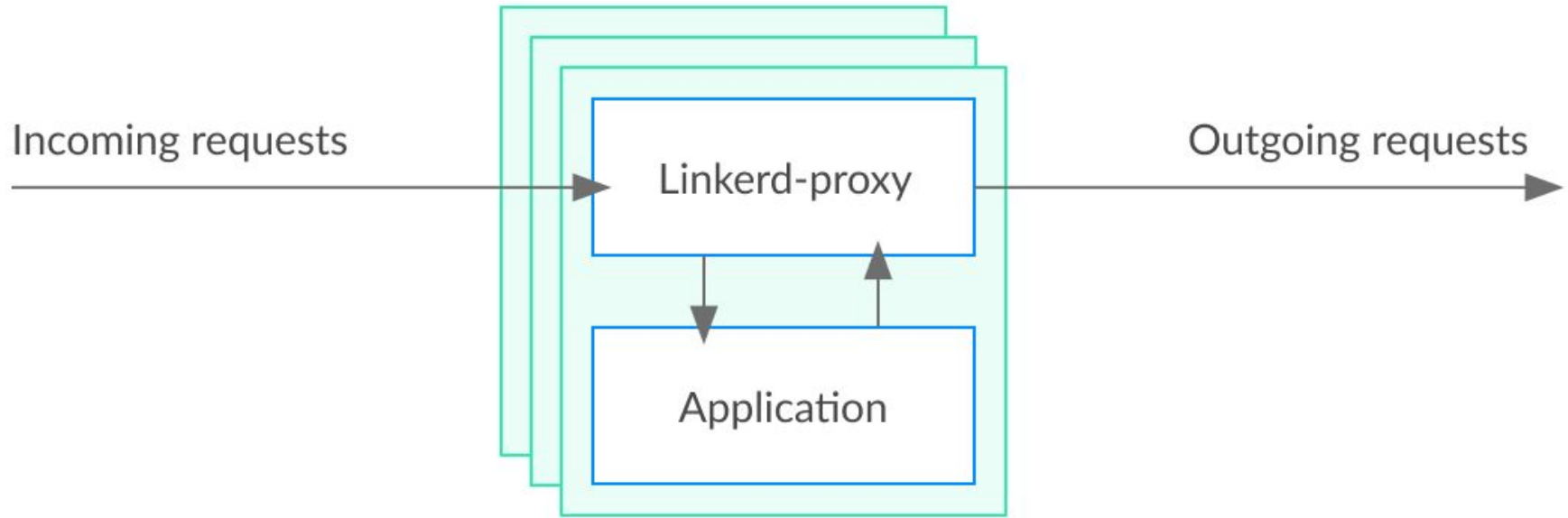
🐙 @rmars

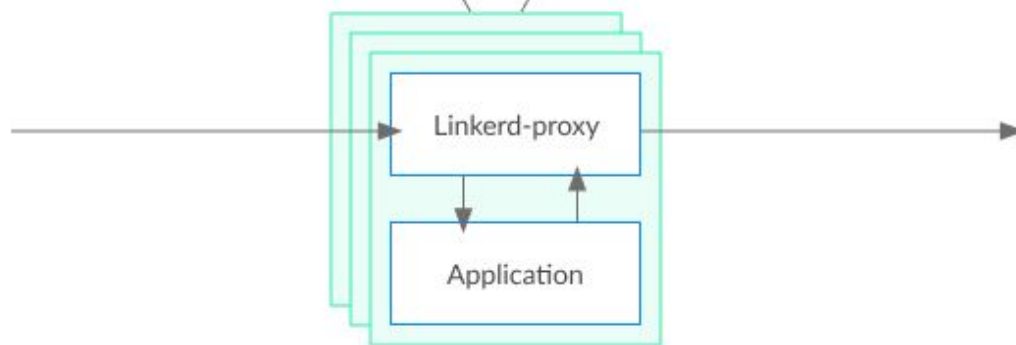⧉ @marzipan

Requests through a service

Incoming requests → Application → Outgoing requests

Service with Linkerd data plane

Dashboard → Controller → Prometheus ← Grafana

Control Plane

Data Plane

Linkerd-proxy

Application

Overview
Tap
Top
Top Routes
Service Mesh
Resources ^
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  ⌄ Deployments
    ● All
    ● linkerd/linkerd-controller
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    ● linkerd/linkerd-identity
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    ● linkerd/linkerd-proxy-inje...
    ● linkerd/linkerd-sp-validator
    ● linkerd/linkerd-web
  › Daemon Sets
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HTTP metrics

Namespace	Deployment	Meshed	Success Rate	RPS	P50 Latency	P95 Latency	P99 Latency	Grafana
linkerd	linkerd-web	1/1	100.00% ●	0.3	2 ms	3 ms	3 ms	☼
linkerd	linkerd-sp-validator	1/1	100.00% ●	0.2	1 ms	19 ms	20 ms	☼
linkerd	linkerd-proxy-injector	1/1	100.00% ●	0.2	3 ms	5 ms	5 ms	☼
linkerd	linkerd-prometheus	1/1	100.00% ●	48.78	169 ms	758 ms	952 ms	☼
linkerd	linkerd-identity	1/1	100.00% ●	0.3	2 ms	9 ms	10 ms	☼
linkerd	linkerd-grafana	1/1	100.00% ●	0.3	5 ms	9 ms	10 ms	☼
linkerd	linkerd-controller	1/1	100.00% ●	3.72	225 ms	758 ms	952 ms	☼
kube-system	kube-dns	0/1	---	---	---	---	---	
docker	compose-api	0/1	---	---	---	---	---	
docker		0/1						

TCP m...

Namespace						Grafana
linkerd						
linkerd						
linkerd						
linkerd	linkerd-identity	1/1	9	260.9B/s	257.08B/s	☼
linkerd	linkerd-grafana	1/1	2	347.55B/s	343.73B/s	☼

```
18:21:07 mars ~/w/go/src/github.com/buoyantio $ linkerd stat deploy -n linkerd
NAME                    MESHED   SUCCESS    RPS     LATENCY_P50   LATENCY_P95   LATENCY_P99   TCP_CONN
linkerd-controller      1/1      100.00%    2.0rps  100ms         400ms         480ms         18
linkerd-grafana         1/1      100.00%    0.3rps  1ms           2ms           2ms           2
linkerd-identity        1/1      100.00%    0.3rps  1ms           2ms           2ms           9
linkerd-prometheus      1/1      100.00%    21.6rps 136ms         296ms         372ms         38
linkerd-proxy-injector  1/1      100.00%    0.2rps  1ms           2ms           2ms           1
linkerd-sp-validator    1/1      100.00%    0.2rps  1ms           1ms           1ms           1
linkerd-web             1/1      100.00%    0.3rps  3ms           19ms          20ms          2
```
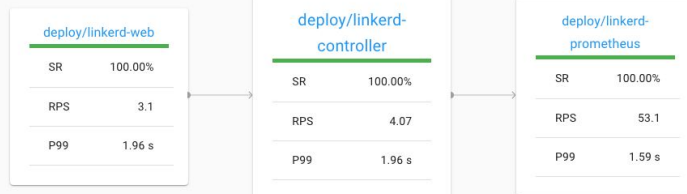
- Overview
- Tap
- Top
- Top Routes
- Service Mesh
- Resources
  - Authorities
  - Deployments
    - All
    - linkerd/linkerd-controller
    - linkerd/linkerd-grafana
    - linkerd/linkerd-identity
    - linkerd/linkerd-promethe...
    - linkerd/linkerd-proxy-inje...
    - linkerd/linkerd-sp-validator
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- Join us on Slack
- File an Issue

Running Linkerd 19.5.1 (edge).

deployment/linkerd-controller

`meshed`

deploy/linkerd-web

SR	100.00%
RPS	3.1
P99	1.96 s

deploy/linkerd-controller

SR	100.00%
RPS	4.07
P99	1.96 s

deploy/linkerd-prometheus

SR	100.00%
RPS	53.1
P99	1.59 s

LIVE CALLS | ROUTE METRICS

	Name	Method ↑	Path ↑	↓ Count	↑ Best	↓ Worst	↑ Last	↑ Success Rate	Tap
TO	deploy/linkerd-prometheus	GET	/api/v1/query	66	14 ms	867 ms	819 ms	100.00% ●	
FROM	deploy/linkerd-web	POST	/api/v1/StatSummary	1	893 ms	893 ms	893 ms	100.00% ●	
FROM	deploy/linkerd-prometheus	GET	/metrics	1	69 ms	69 ms	69 ms	100.00% ●	
FROM	deploy/linkerd-web	POST	/api/v1/ListPods	1	145 ms	145 ms	145 ms	100.00% ●	

Current Top query

```
linkerd top deployment/linkerd-controller --namespace linkerd
```

Inbound

Namespace ↑	Resource ↑	↑ Meshed	Success Rate	↑ RPS	P50 Latency	P95 Latency	P99 Latency	Grafana
linkerd	deploy/linkerd-web	1/1	100.00% ●	3.1	788 ms	1.79 s	1.96 s	

Outbound

Namespace ↑	Resource ↑	↑ Meshed	Success Rate	↑ RPS	P50 Latency	P95 Latency	P99 Latency	Grafana
linkerd	deploy/linkerd-prometheus	1/1	100.00% ●	53.1	334 ms	955 ms	1.59 s	

Linkerd tap: live requests


```
18:21:21 mars ~/w/go/src/github.com/buoyantio $ linkerd tap deploy -n linkerd
req id=2:0 proxy=out src=10.1.5.252:49498 dst=10.1.5.253:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.5.253:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
req id=2:1 proxy=out src=10.1.5.252:1588 dst=10.1.5.255:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.5.255:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
req id=2:2 proxy=out src=10.1.5.252:50176 dst=10.1.5.251:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.5.251:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
req id=2:3 proxy=out src=10.1.5.252:34956 dst=10.1.6.1:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.6.1:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
req id=2:4 proxy=out src=10.1.5.252:40222 dst=10.1.5.254:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.5.254:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
req id=2:5 proxy=out src=10.1.5.252:50864 dst=10.1.6.0:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.6.0:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
rsp id=2:0 proxy=out src=10.1.5.252:49498 dst=10.1.5.253:4190 tls=no_authority_in_http_request :status=200 latency=10885µs
rsp id=2:1 proxy=out src=10.1.5.252:1588 dst=10.1.5.255:4190 tls=no_authority_in_http_request :status=200 latency=6373µs
rsp id=2:3 proxy=out src=10.1.5.252:34956 dst=10.1.6.1:4190 tls=no_authority_in_http_request :status=200 latency=5915µs
rsp id=2:4 proxy=out src=10.1.5.252:40222 dst=10.1.5.254:4190 tls=no_authority_in_http_request :status=200 latency=5651µs
rsp id=2:5 proxy=out src=10.1.5.252:50864 dst=10.1.6.0:4190 tls=no_authority_in_http_request :status=200 latency=5382µs
rsp id=2:2 proxy=out src=10.1.5.252:50176 dst=10.1.5.251:4190 tls=no_authority_in_http_request :status=200 latency=6483µs
req id=2:6 proxy=out src=10.1.5.252:41976 dst=10.1.5.253:4190 tls=no_authority_in_http_request :method=POST :authority=10.1.5.253:4190 :path=/io.linkerd.proxy.tap.Tap/Observe
rsp id=2:6 proxy=out src=10.1.5.252:41976 dst=10.1.5.253:4190 tls=no_authority_in_http_request :status=200 latency=5202µs
req id=3:0 proxy=out src=10.1.5.253:51158 dst=10.1.5.252:8085 tls=true :method=POST :authority=linkerd-controller-api.linkerd.svc.cluster.local:8085 :path=/api/v1/StatSummary
req id=2:7 proxy=in  src=10.1.5.253:50538 dst=10.1.5.252:8085 tls=true :method=POST :authority=linkerd-controller-api.linkerd.svc.cluster.local:8085 :path=/api/v1/StatSummary
req id=2:8 proxy=out src=10.1.5.252:33802 dst=10.1.5.254:9090 tls=true :method=GET :authority=linkerd-prometheus.linkerd.svc.cluster.local:9090 :path=/api/v1/query
req id=0:0 proxy=in  src=10.1.5.252:51358 dst=10.1.5.254:9090 tls=true :method=GET :authority=linkerd-prometheus.linkerd.svc.cluster.local:9090 :path=/api/v1/query
req id=3:1 proxy=in  src=10.1.0.1:41798 dst=10.1.5.253:9994 tls=not_provided_by_remote :method=GET :authority=10.1.5.253:9994 :path=/ready
```

linkerd / linkerd2

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Pulse

Contributors

Community

Traffic

Commits

Code frequency

Dependency graph

Network

Forks

Dec 3, 2017 – May 6, 2019

Contributions: Commits ▾

Contributions to master, excluding merge commits

#1 rmars
217 commits 39,401 ++ 21,958 --

#2 siggy
208 commits 58,302 ++ 28,345 --

#3 klingerf
182 commits 30,844 ++ 30,734 --

#4 olix0r
151 commits 73,036 ++ 50,165 --

#5 briansmith
122 commits 9,931 ++ 5,614 --

#6 hawkw
113 commits 16,897 ++ 17,254 --

#7 adleong
55 commits 16,120 ++ 8,265 --

#8 dadjeibaah
39 commits 4,057 ++ 919 --

#9 alpeb
36 commits 11,704 ++ 6,733 --

#10 seanmonstar
31 commits 6,153 ++ 1,309 --

Benefits of a GUI

Ability to aggregate several types of data on one page

Tooltips vs man pages

⏱️ Easy entry point for external contributors

Widens pool of potential contributors

Can complement your app: links, sorting, dragging, autocomplete

LINKERD

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