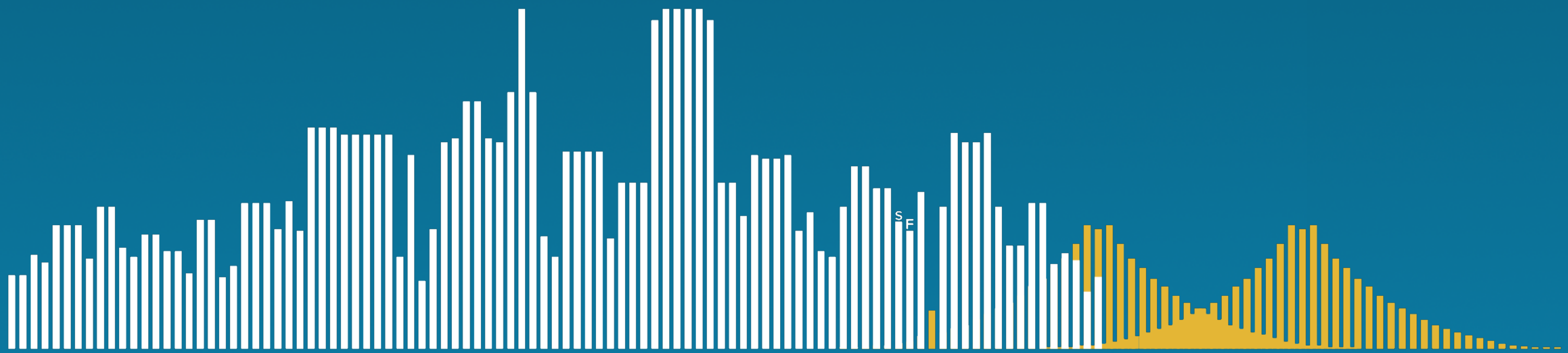




hi.



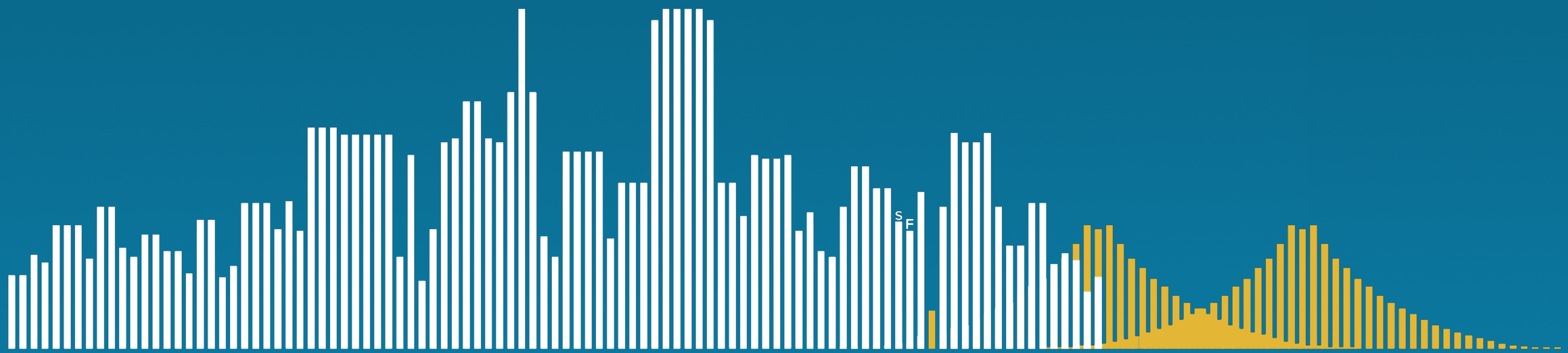


hi.

dave@librato.com

@davejosephsen

github: djosephsen



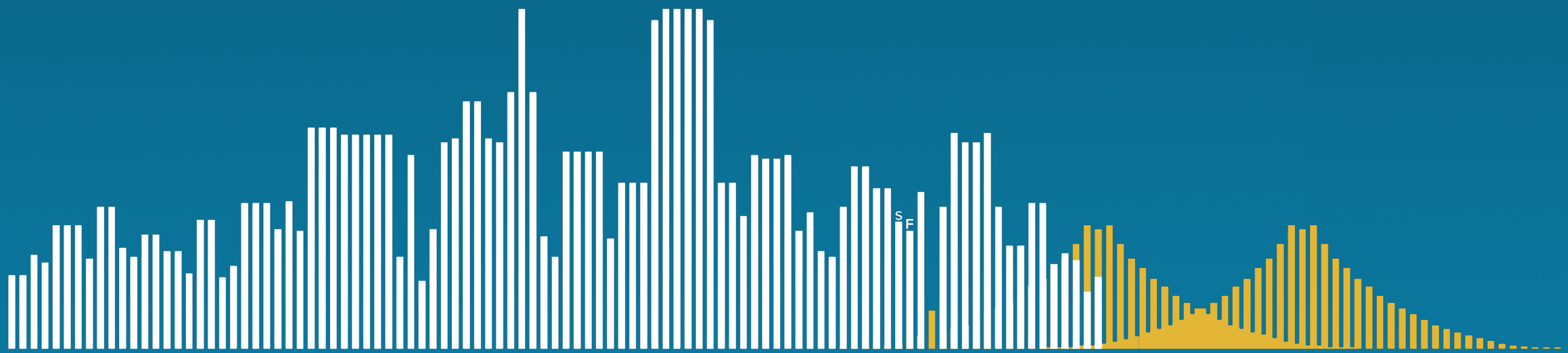


Alert on What you Draw

dave@librato.com

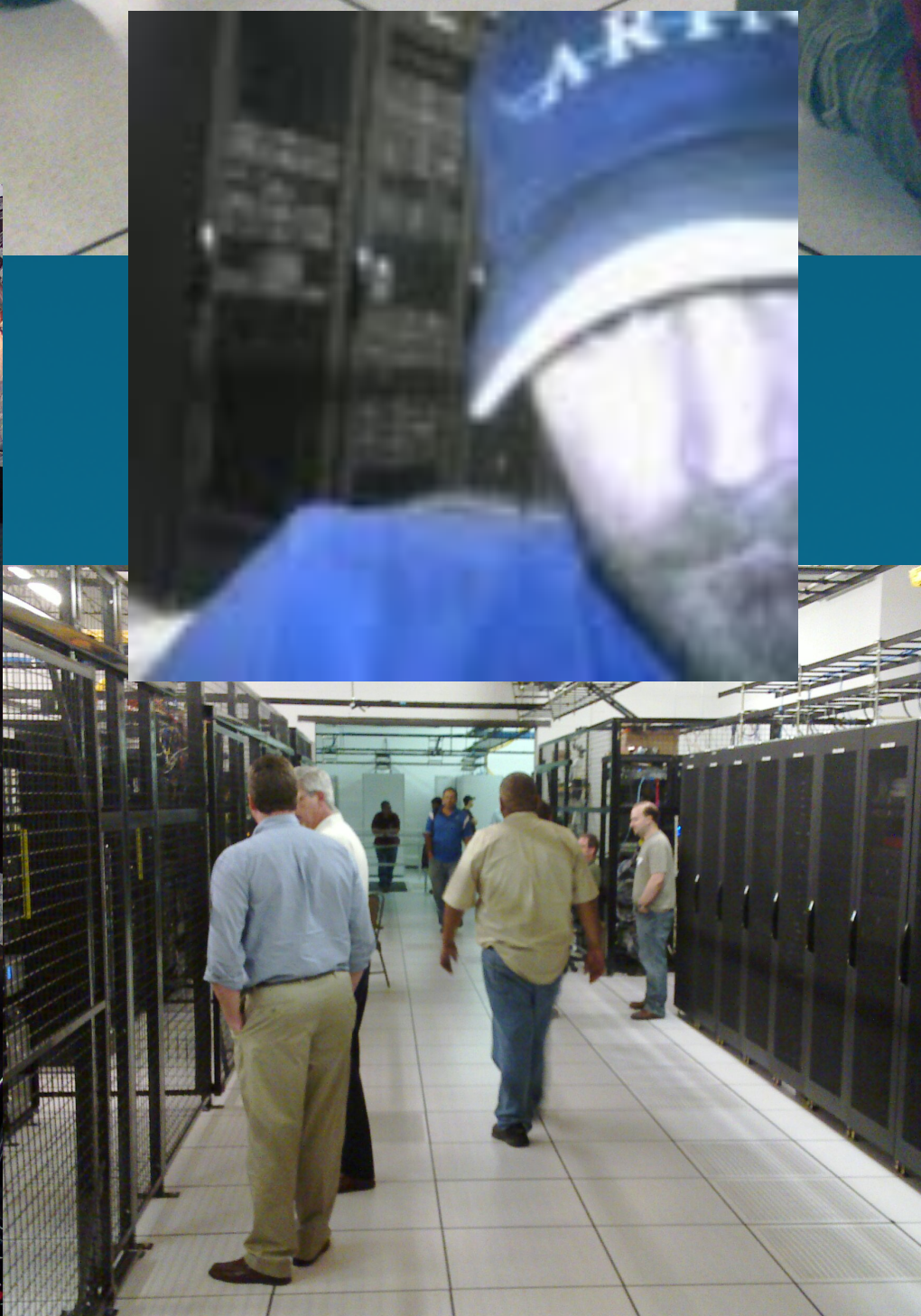
@davejosephsen

github: djosephsen



Alert on What you Draw







SEPTEMBER 15-17, 2014
 NEW YORK, NEW YORK
 VELOCITYCONF.COM
 @VELOCITYCONF

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18th Large Installation System Administration Conference — Abstract

Pp. 1–20 of the *Proceedings*

Awarded Best Paper!

Scalable Centralized Bayesian Spam Mitigation with Bogofilter

Jeremy Blosser and David Jos

iVoyeur
 Changing the Game, Part 4

DAVE JOSEPHSEN



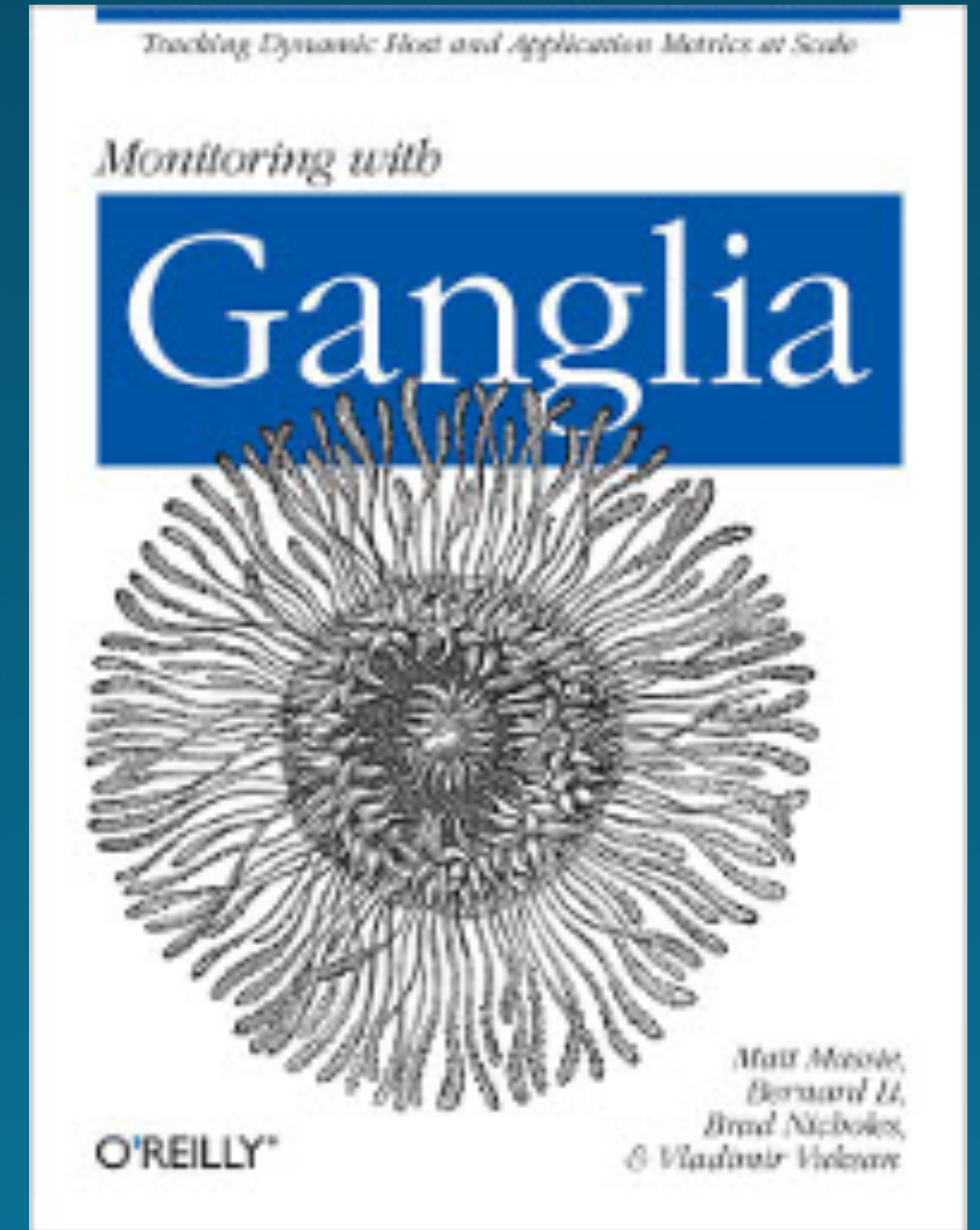
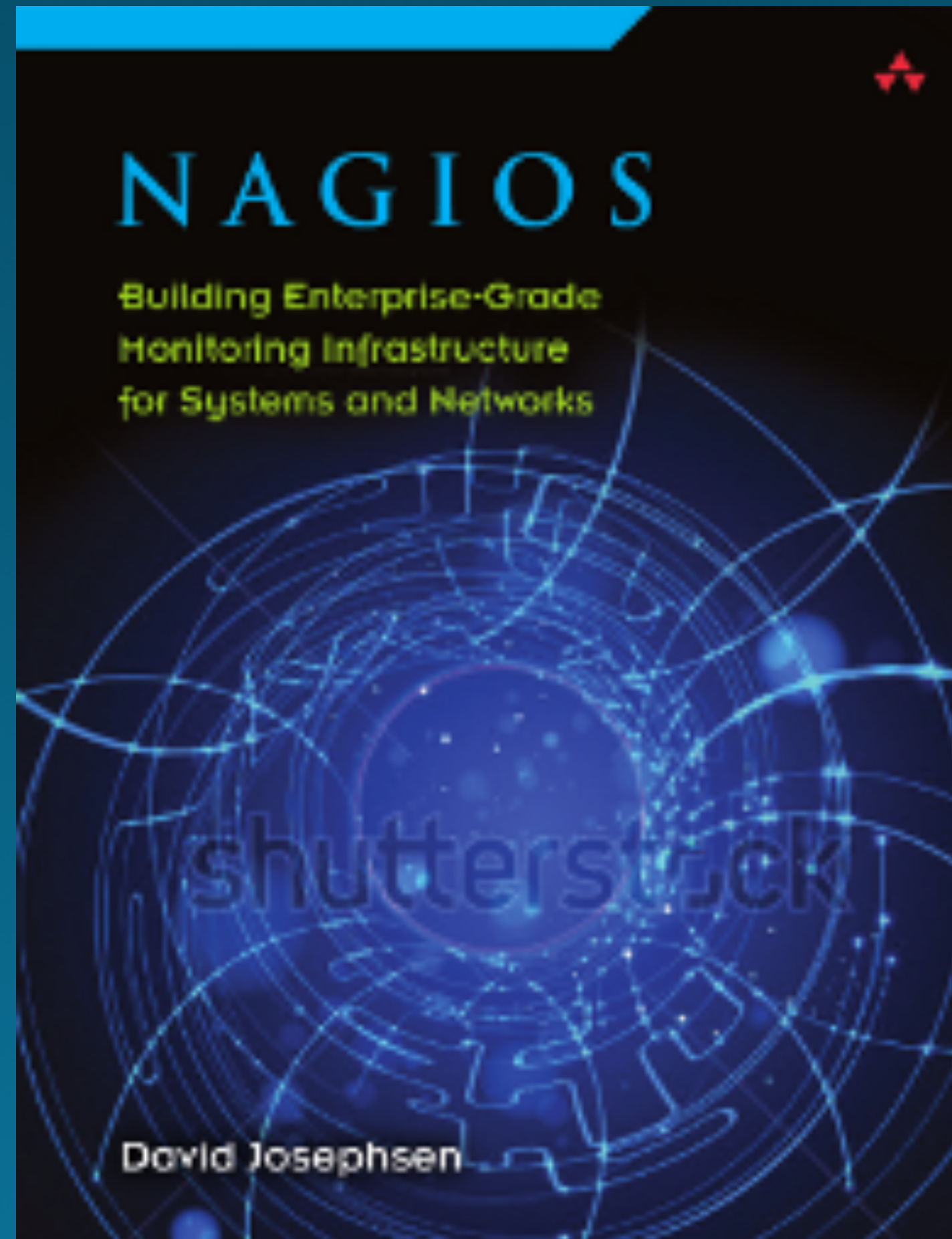
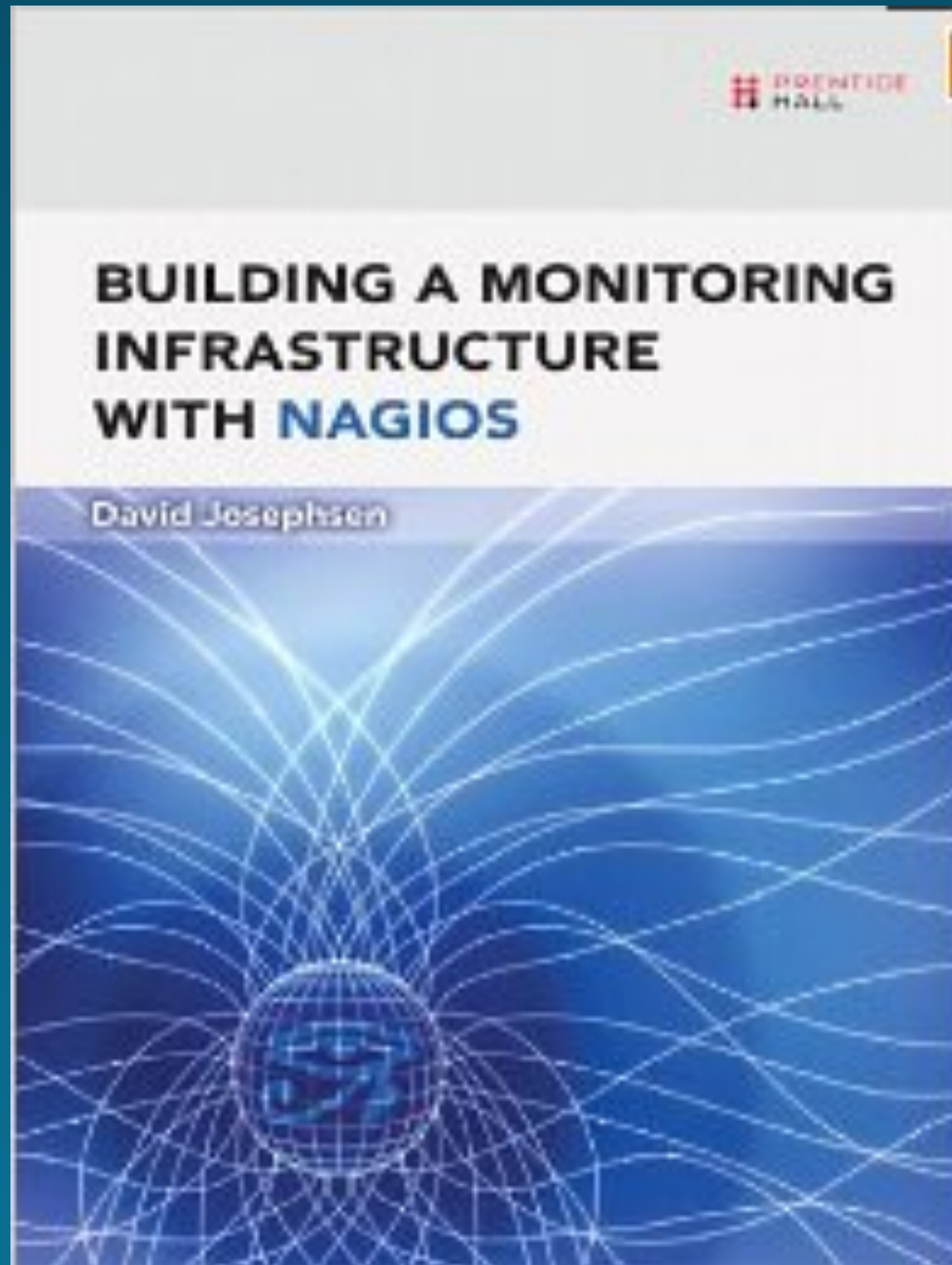
Dave Josephsen is the author of *Building a Monitoring Infrastructure with Nagios* (Prentice Hall PTR, 2007) and is senior systems engineer at DBG, Inc., where he maintains a gaggle of geographically dispersed server farms. He won LISA '04's Best Paper award for his co-authored work on spam mitigation, and he donates his spare time to the SourceMage GNU Linux Project.
dave-usenix@skeptech.org

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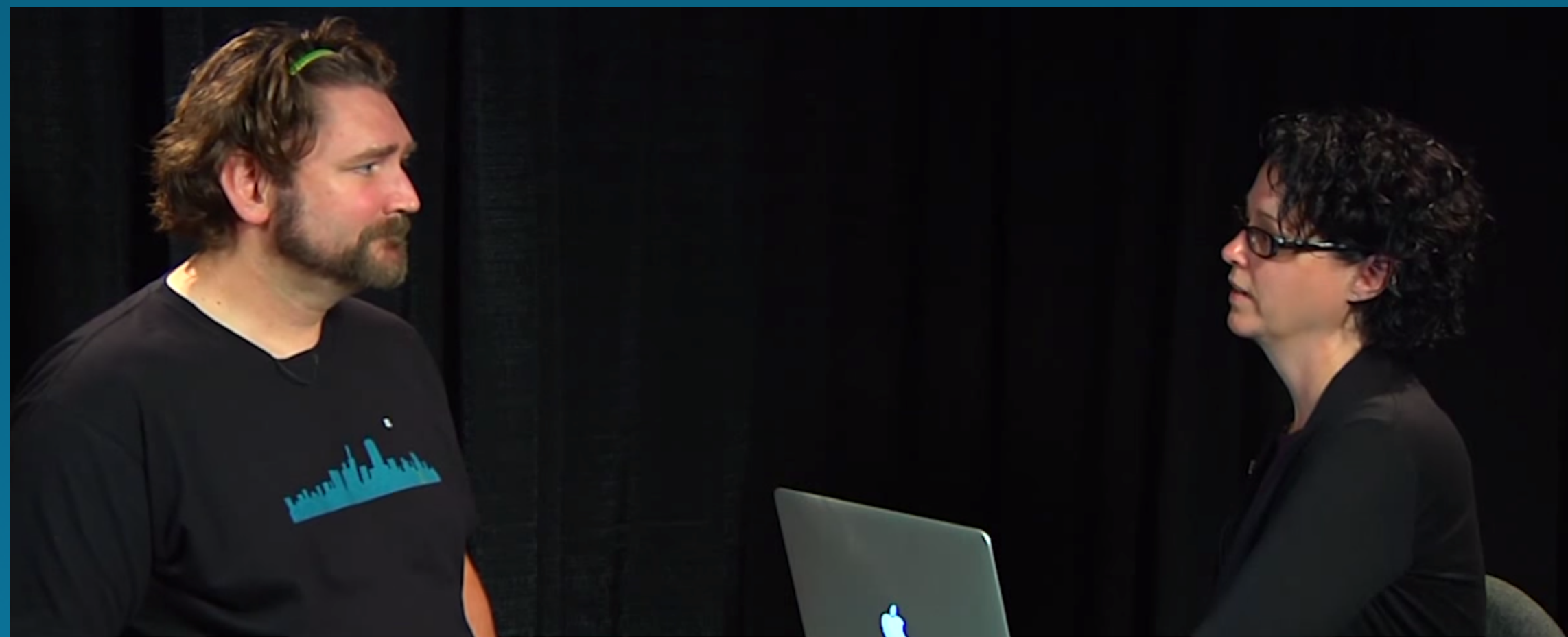




Collector Highlight Series: Collectd

DaveJosephsen September 16, 2014 Integrations, New Features, Collector Highlight

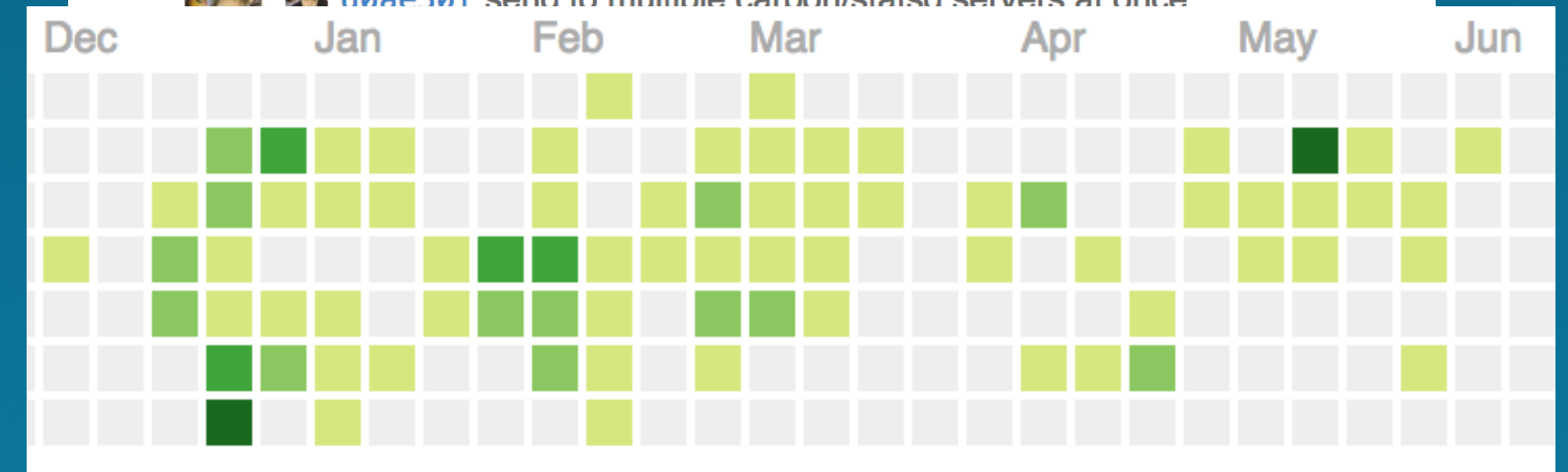
Share



JENN WEBB
MANAGING EDITOR, RADAR
O'REILLY MEDIA, INC.



- 6 days ago **djosephsen** opened pull request [shawn-sterling/graphios#34](#)
The changes we discussed
- 1 commit with 28 additions and 24 deletions
- 6 days ago **djosephsen** pushed to **backendmerge** at **djosephsen/graphios**
098b6a8 The changes we discussed
8f0749a adding special thanks section
3 more commits >
- 7 days ago **djosephsen** commented on pull request [shawn-sterling/graphios#33](#)
Hey Shawn. Like the commit shows. I added a setup script and manifest for
`python setup.py sdist` and then copy...
- 7 days ago **djosephsen** pushed to **backendmerge** at **djosephsen/graphios**
76b6a0f Adding a setup.py so we can pip install this beast
- 11 days ago **djosephsen** opened pull request [shawn-sterling/graphios#33](#)
send to multiple carbon/statsd servers at once
- 1 commit with 63 additions and 67 deletions
- 11 days ago **djosephsen** pushed to **backendmerge** at **djosephsen/graphios**
d0ae50f send to multiple carbon/statsd servers at once



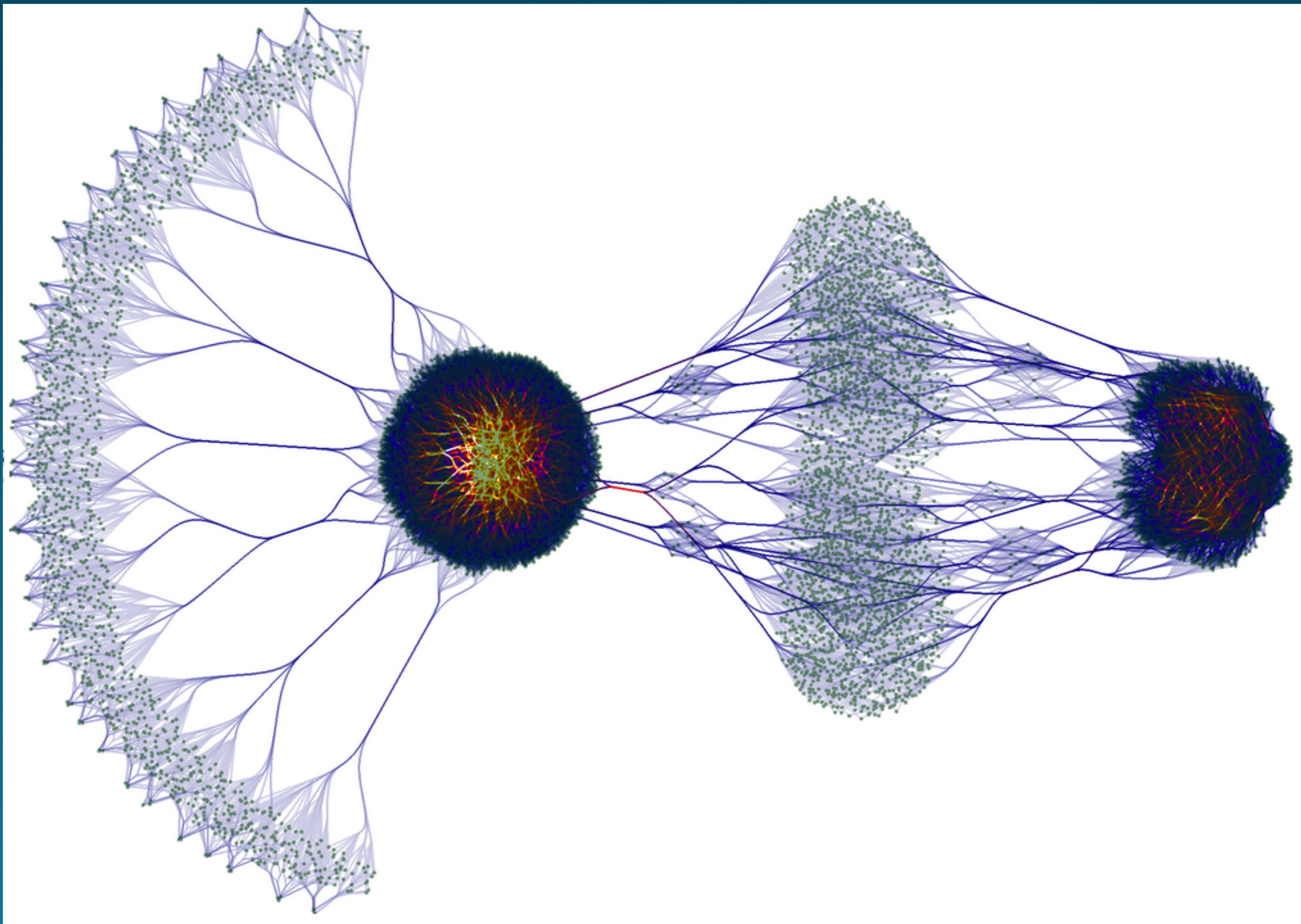
SAY DEVOPS

ONE MORE TIME

memegenerator.net

AND HERE'S OUR

"CLOUD"

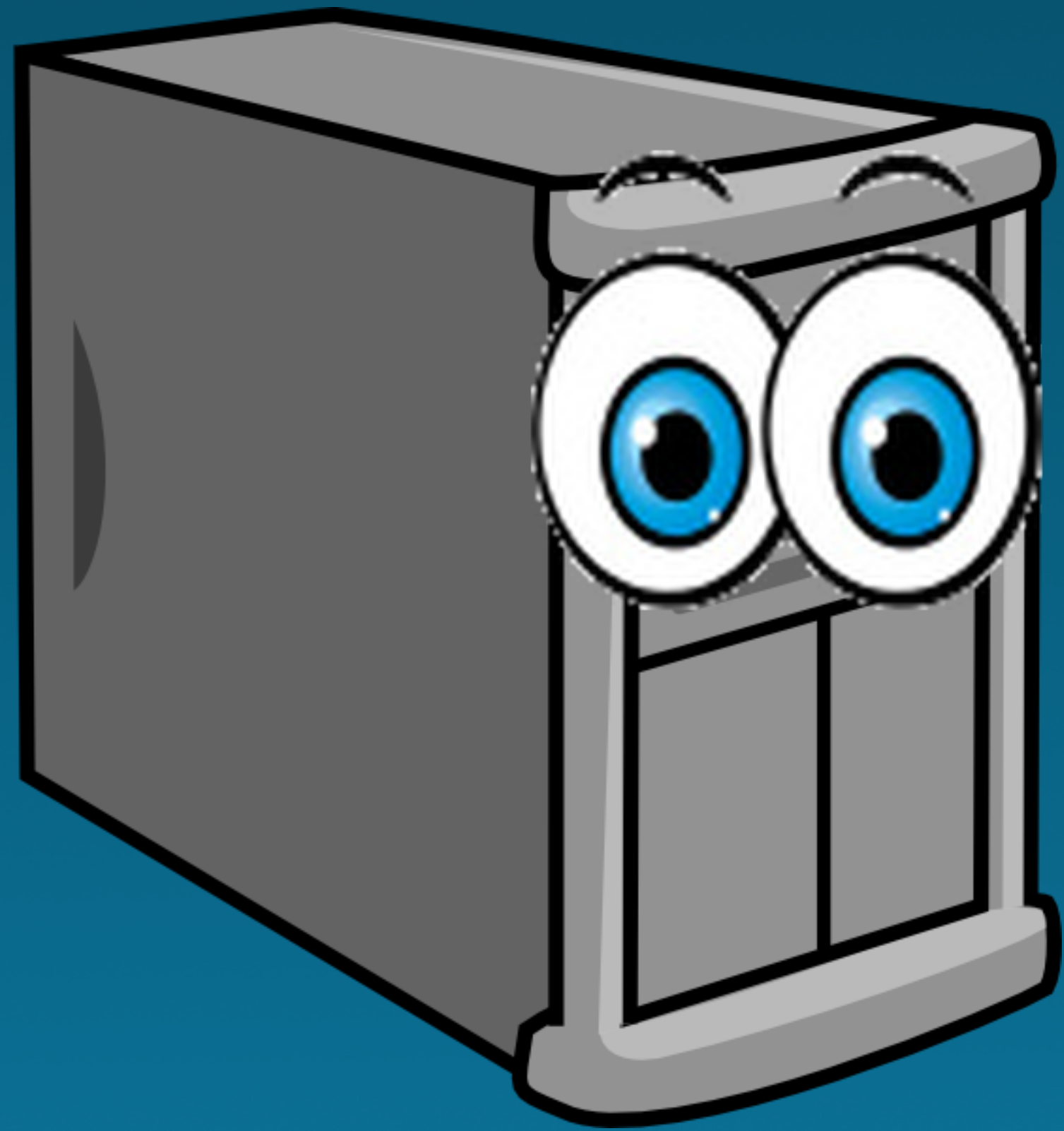



```
[dave@a][~]--> uptime
```

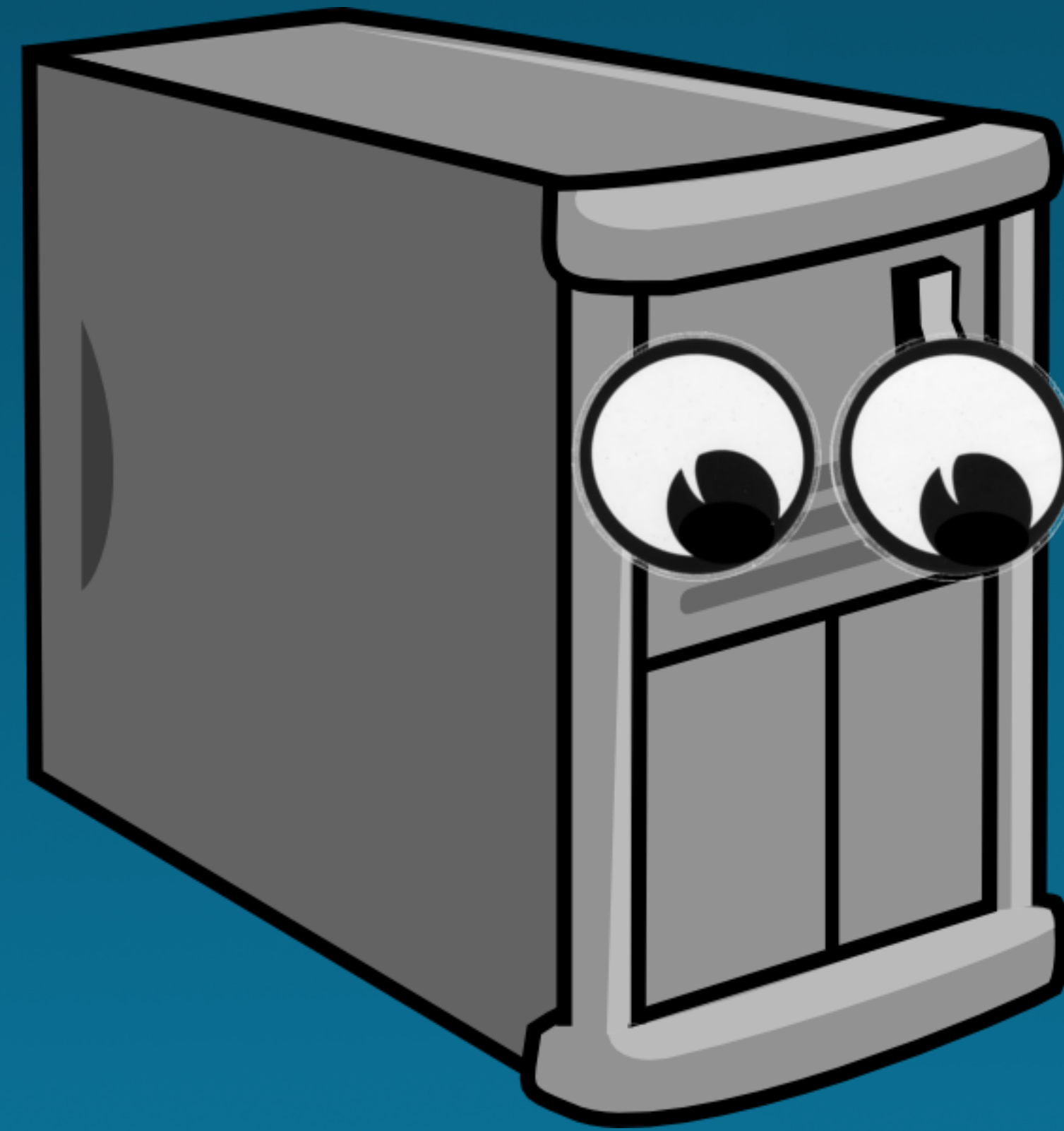
```
1:58PM up 1316 days, 22:23, 3 users, load averages: 0.35, 0.28, 0.21
```

```
[dave@a][~]--> █
```



tim.mycorp.com



bob.mycorp.com

Change control

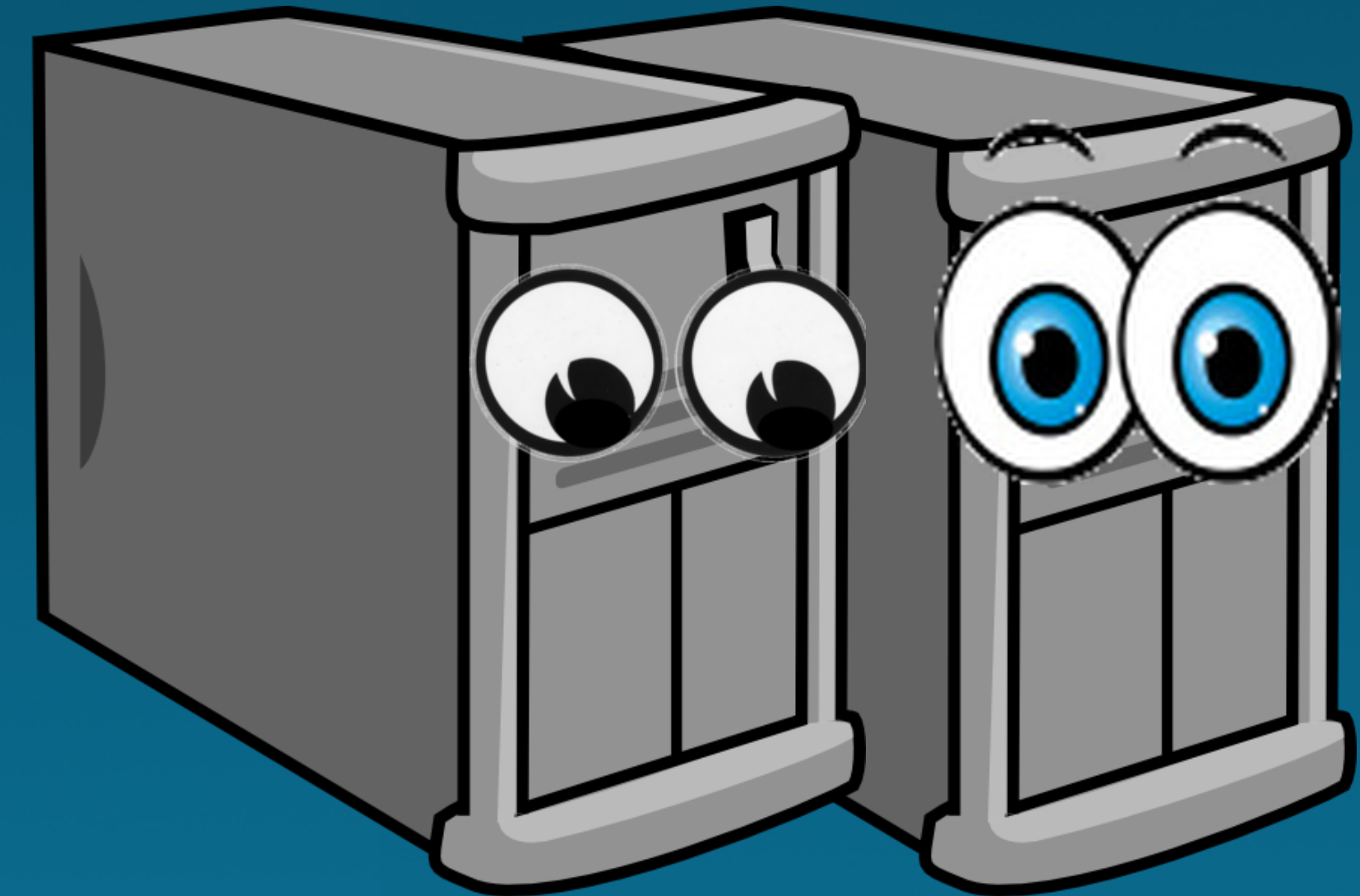
Developer cat



Wants to change things

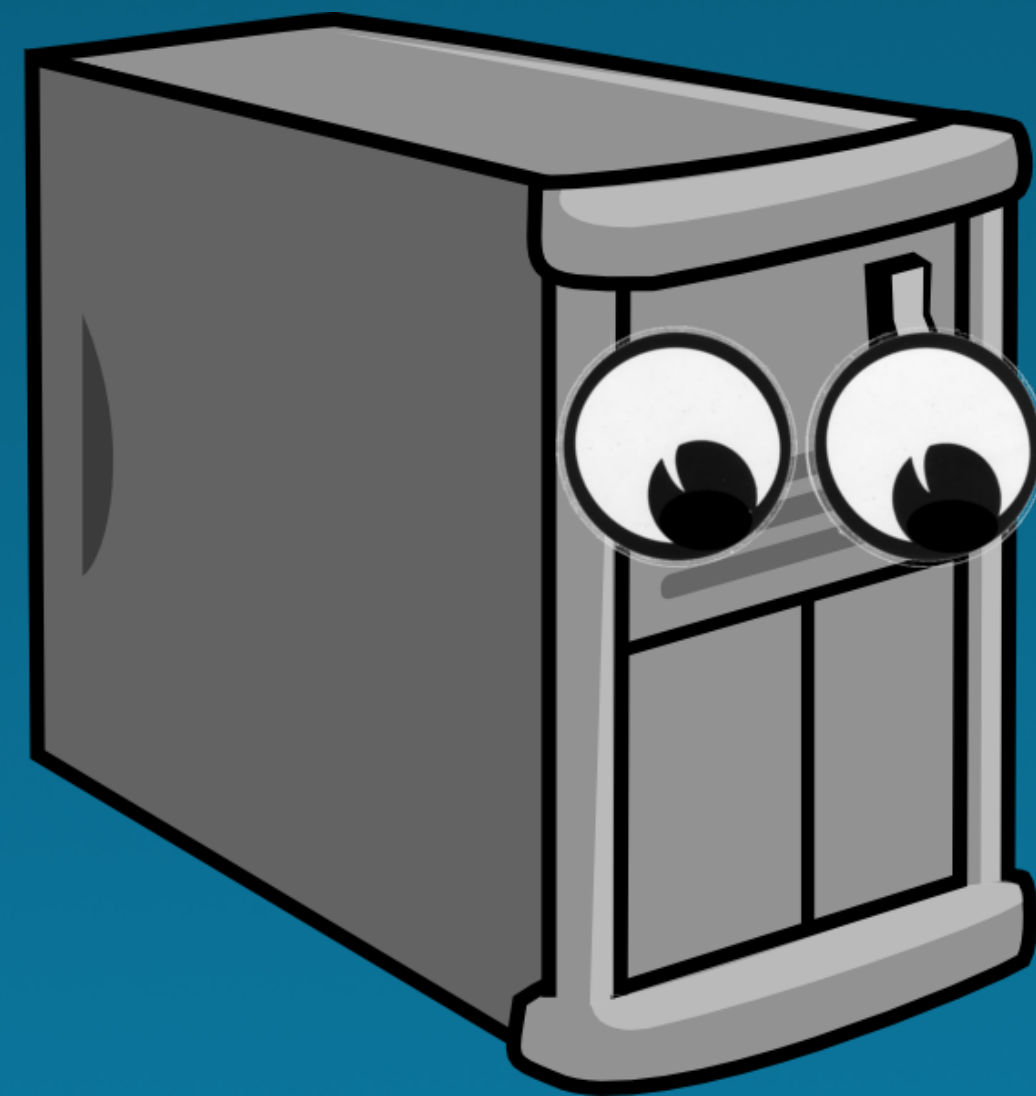


Says no.

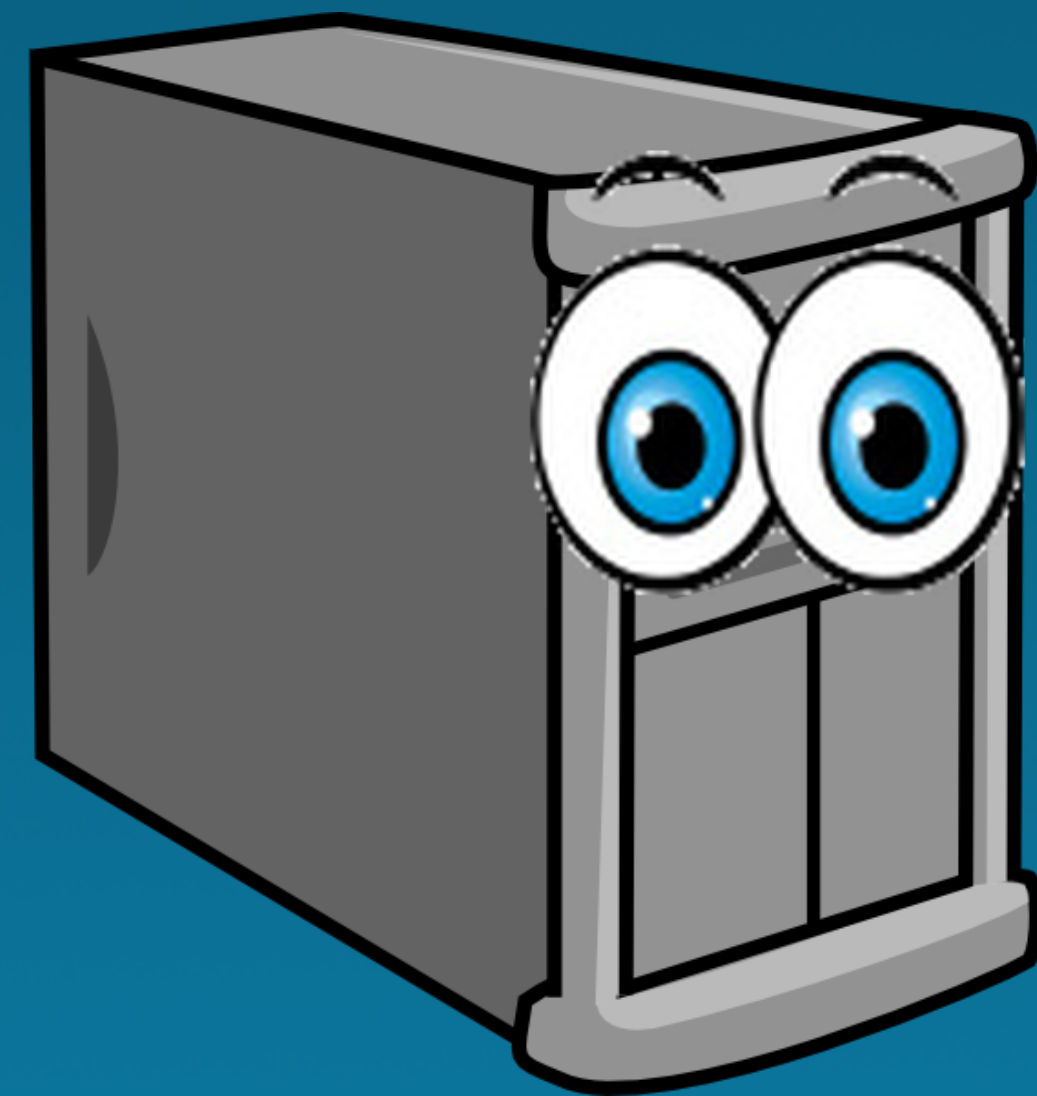




You guys ok?



YUP



YUP

Process Oriented Model

Given a **finite** number of **reliable** systems, and **full environmental control**, run **processes** for as long as possible

```
[dave@a][~]--> uptime  
1:58PM up 1316 days, 22:23, 3 users, load averages: 0.35, 0.28, 0.21  
[dave@a][~]--> █
```




The Cloud

Virtual



The Cloud

Virtual

Multi-Tenant



The Cloud

Virtual

Multi-Tenant

The Cloud

Massive Infrastructure

Virtual

Multi-Tenant



The Cloud

Massive Infrastructure

Compulsory Maintenance

The Cloud



Justin Lintz

@lintzston



+ Follow

The year 2014, I can launch 1000s servers with a single button, but I still have to scrape a damn webpage to get their pricing
[#aws](#)

The Cloud



Justin Searls

@searls



[+ Follow](#)

Thinking about going back to college to get a degree in the AWS admin page. Hope that I can finish in 4 years.

The Cloud



 beerops
@beerops



 Follow

No, AWS, why would we want to, you know,
BE ABLE TO BRING UP ANY ~~PHYSICAL~~
SERVERS AT ALL? Why would we want
CAPACITY in the cloud EVER?

 Reply  Retweet  Favorited  More

Cloudpocalypse: Amazon Cloud Drive Rains on NSA's Parade

Summary of the Amazon EC2 and Amazon RDS Service Disruption in the US East Region

April 29, 2011

CLOUD DOWN

Amazon Offers 10 Days Free to Everyone in Vicinity of Cloudpocalypse



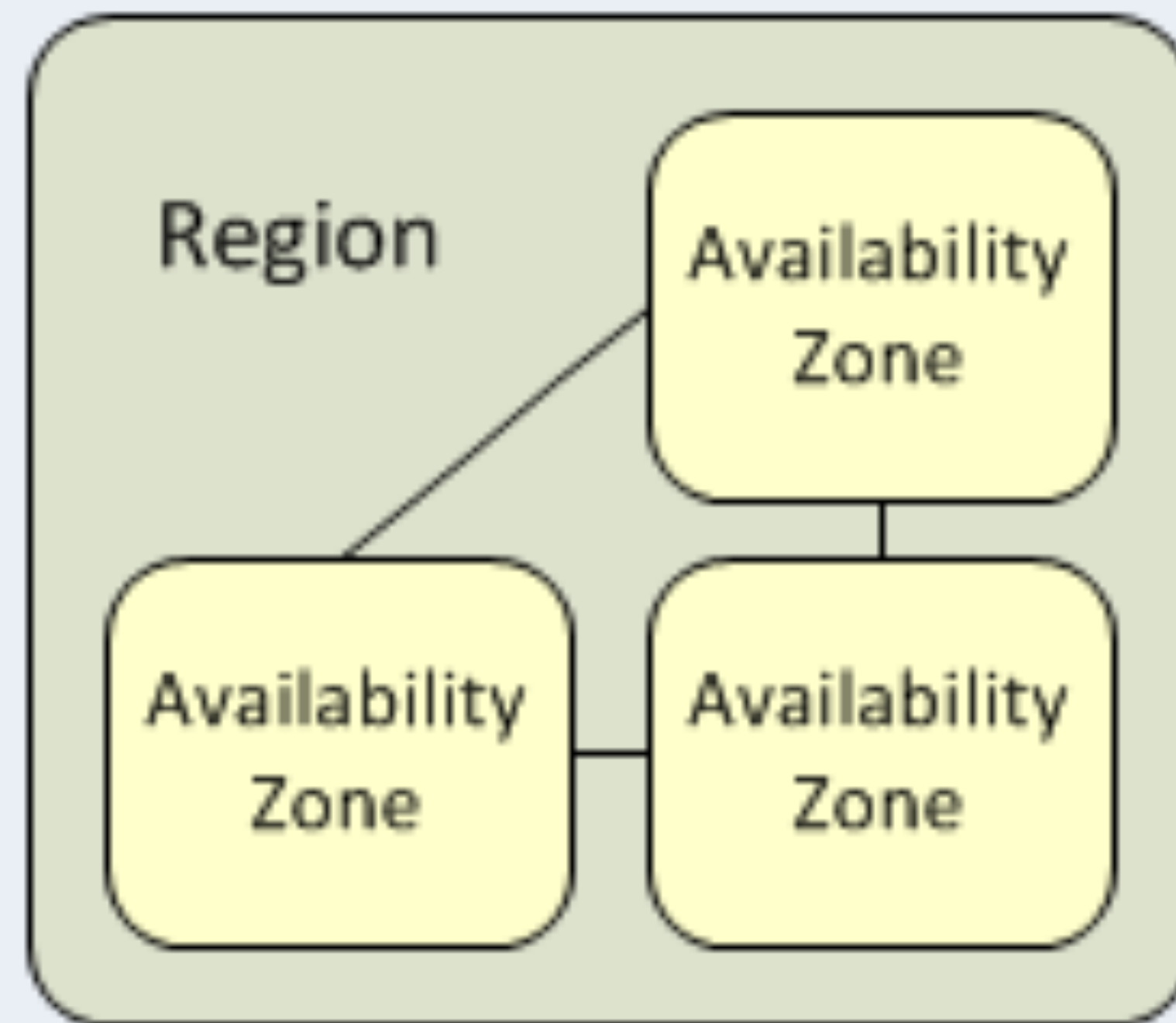
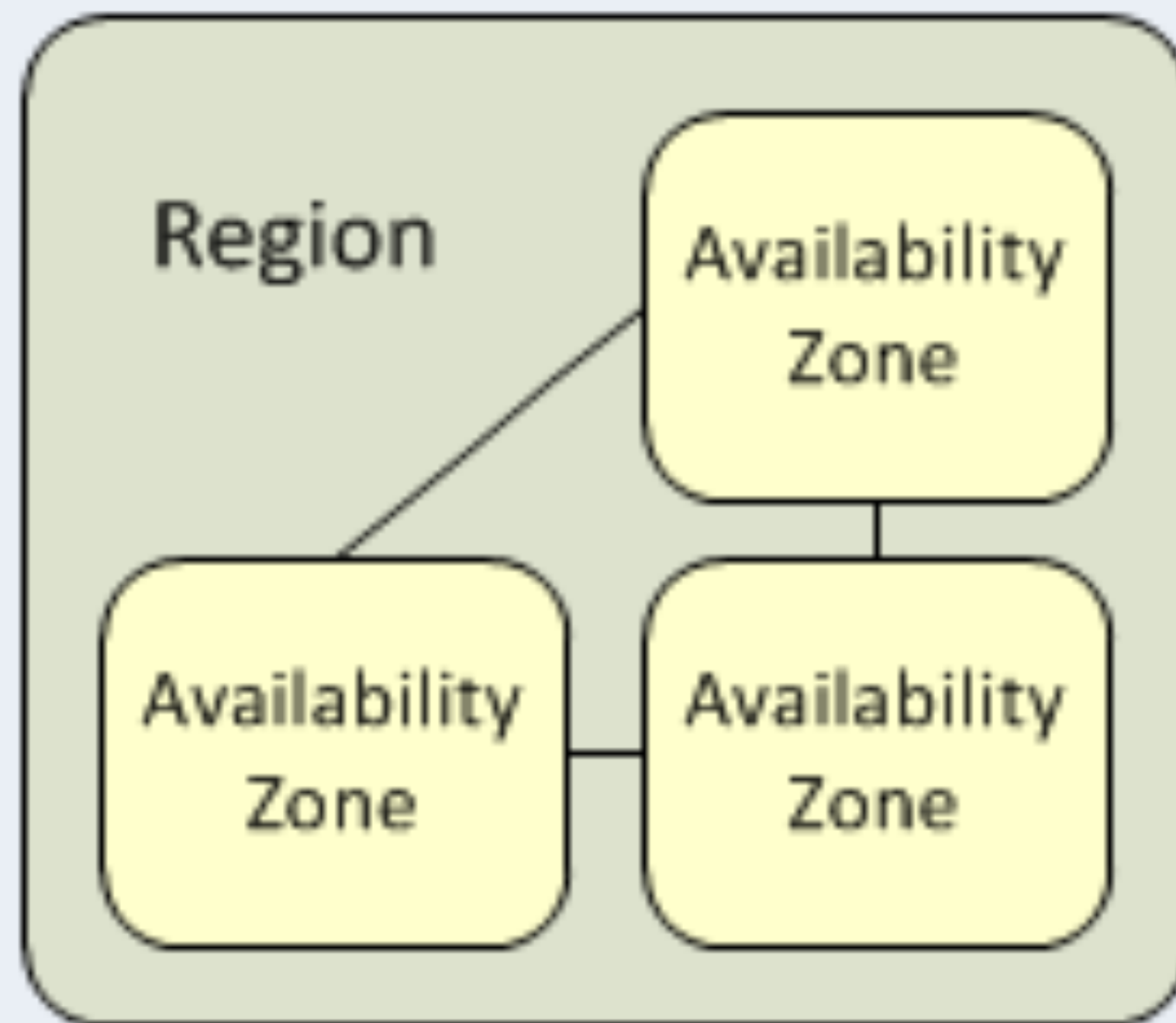
Fred Moyer
@phredmoyer

Godaddy.com is still down.
[#cloudpocalypse](#)

Reply Retweet Favorite Buffer More

6:21 PM - 13 Jun 2011

Amazon Web Services



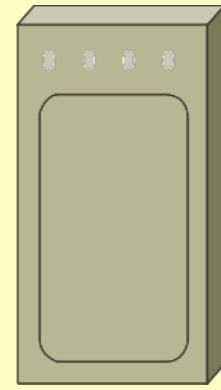
US-EAST

AZ-1

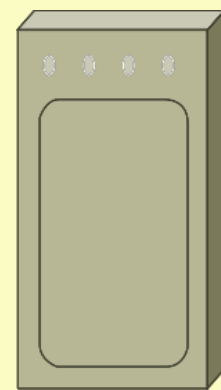
AZ-2

US-EAST

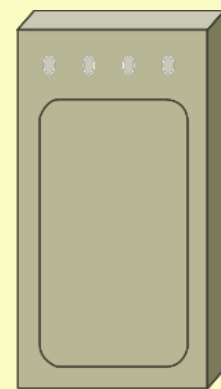
AZ-1



AZ-2

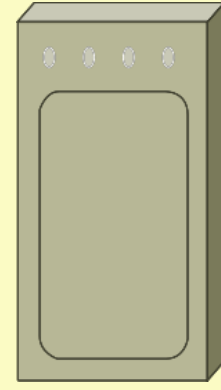


AZ-3

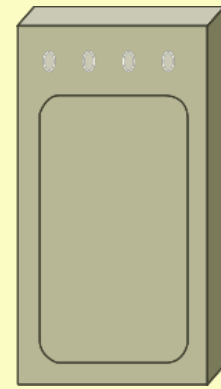


US-EAST

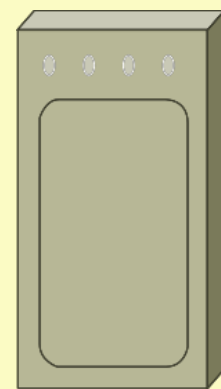
AZ-1



AZ-2

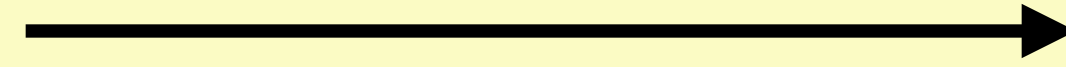
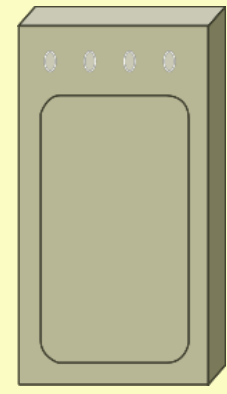


AZ-3

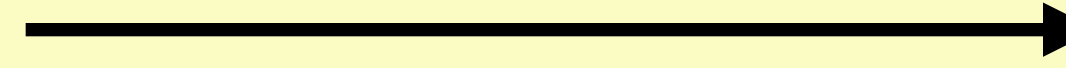
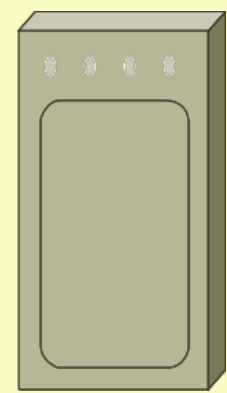


US-EAST

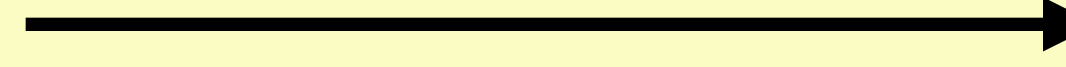
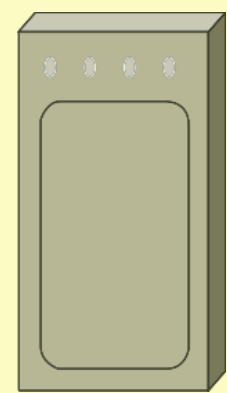
AZ-1



AZ-2

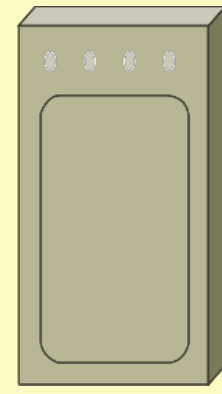


AZ-3

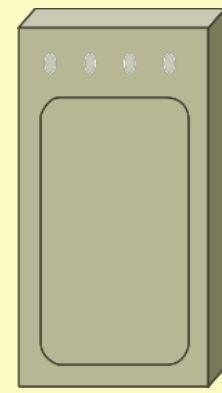


US-EAST

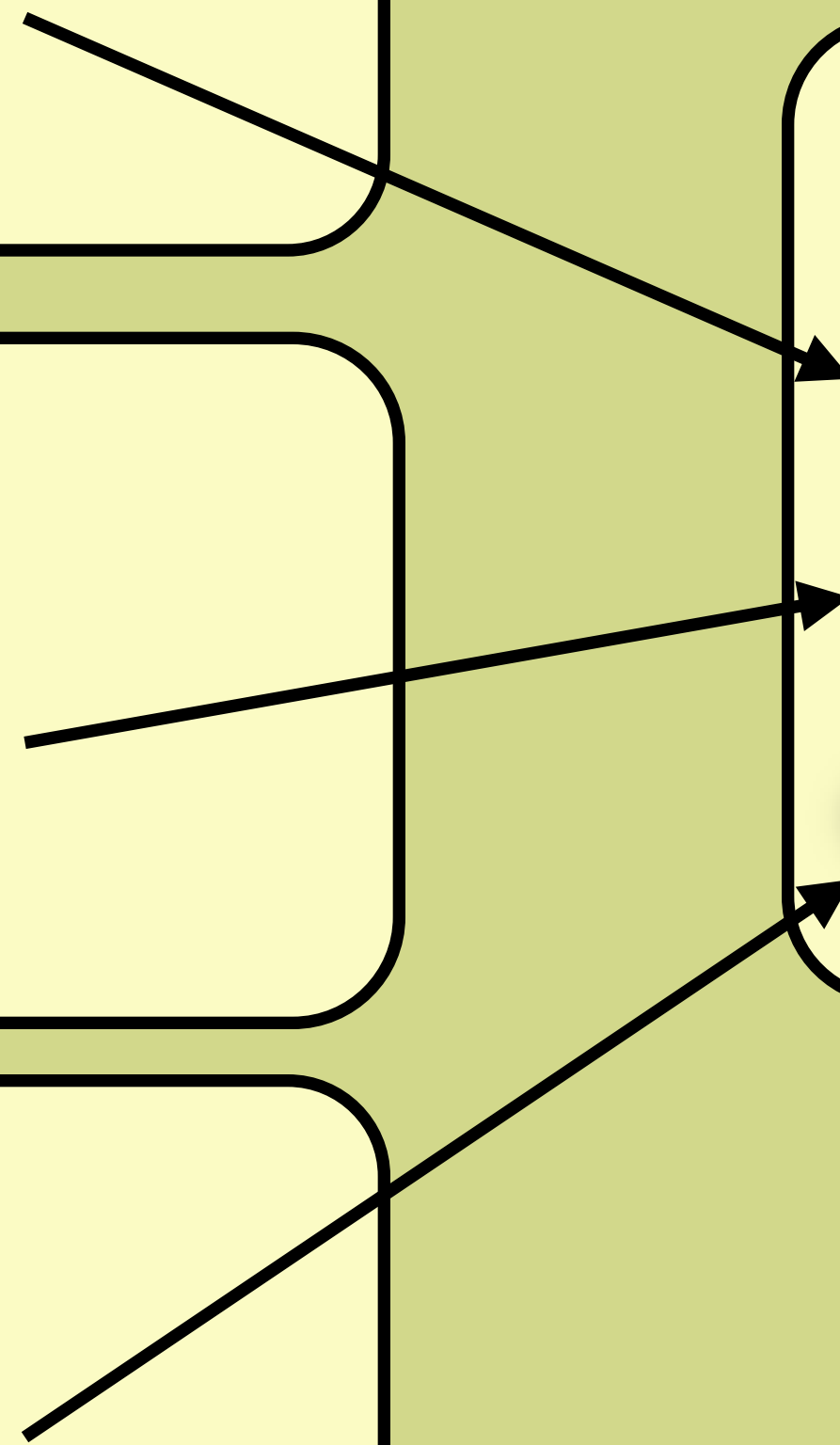
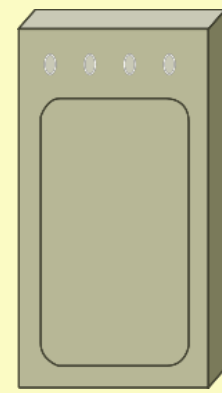
AZ-1



AZ-2

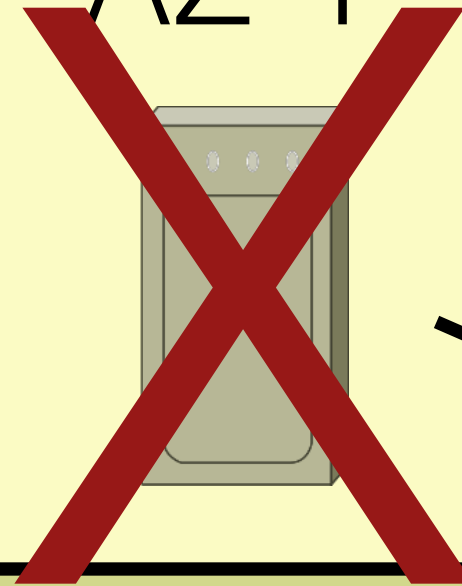


AZ-3

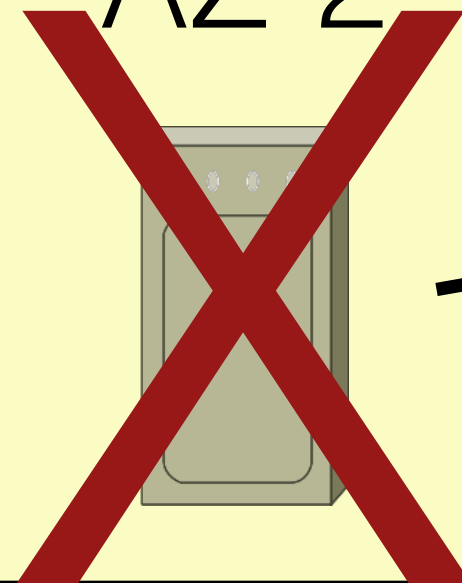


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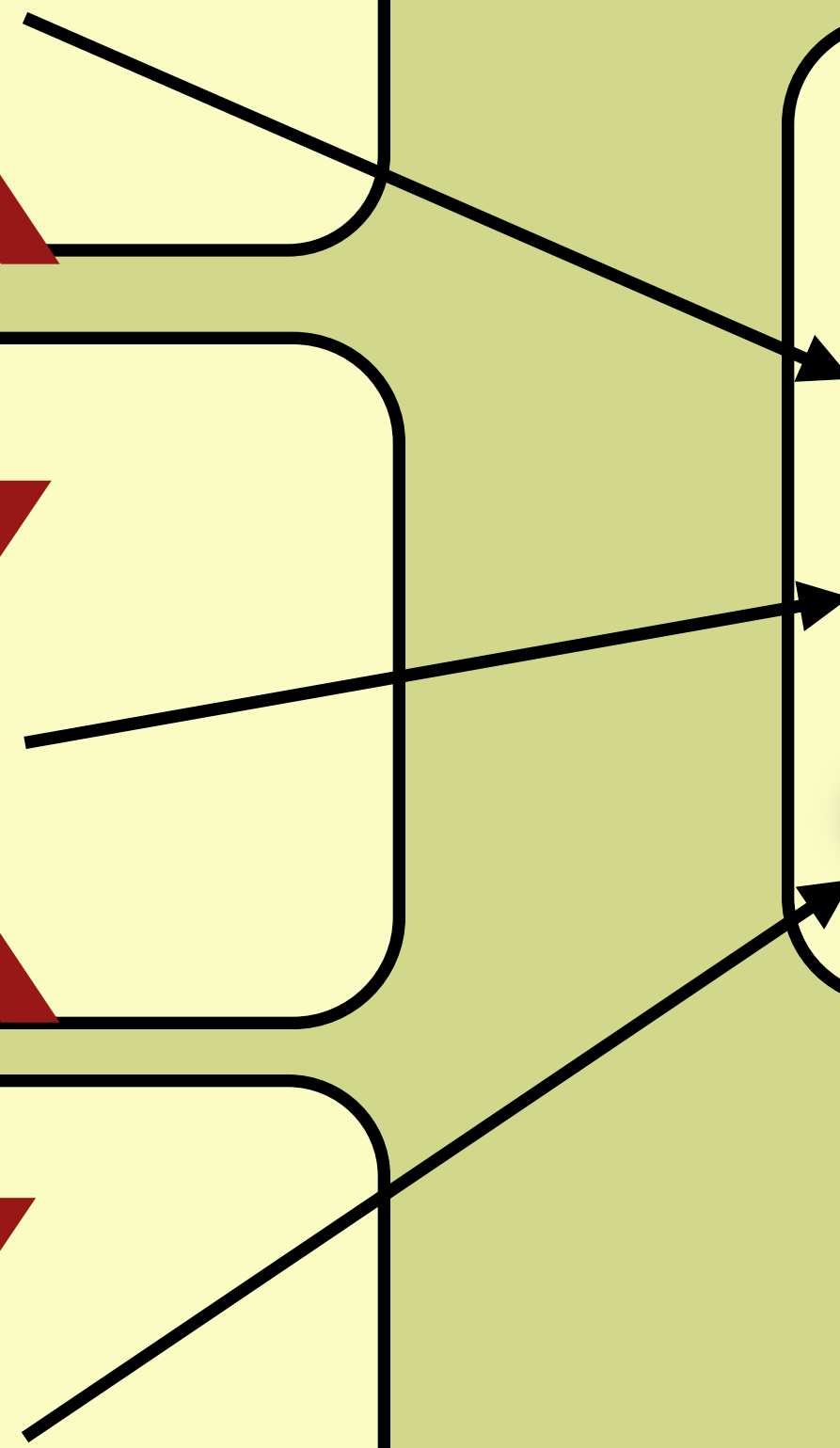
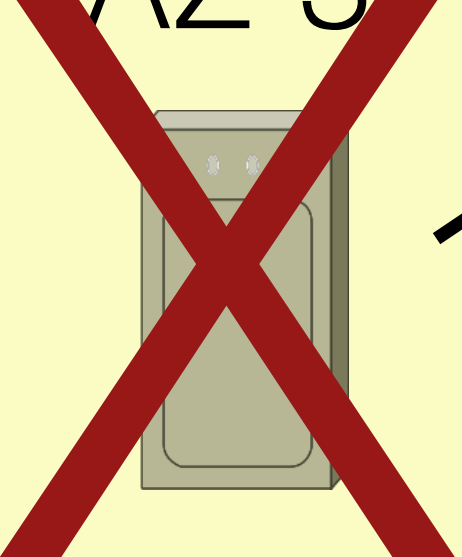
AZ-1



AZ-2



AZ-3



CLOUD // SOFTWARE AS A SERVICE

NEWS

9/26/2014
09:55 AM

Amazon Reboots Cloud Servers, Xen Bug Blamed



Amazon tells customers it has to patch and reboot 10% of its EC2 cloud servers before Oct. 1.

RACKSPACE FOLLOWS AWS, REBOOTS CLOUD SERVERS TO PATCH XEN

Still no information on what spooked some of the world's largest cloud providers



Services Oriented Model

Design reliable **services** atop an **infinite** number of **unreliable**, and **uncontrollable** systems.



Surviving Amazon's Cloudpocalypse

April 29, 2011 @ 5:50am

Two weeks ago, our Crowd Fusion team was right in the middle of the big cloud outage at Amazon. All of the big brands using our platform run on Amazon servers.

[George Reese](#) from O'Reilly had the [best early recap and perspective](#) of the dozens of stories I read:

If you think this week exposed weakness in the cloud, you don't get it: it was the cloud's shining moment, exposing the strength of cloud computing.

Netflix lost 218 database servers during AWS reboot and stayed online

by [Derrick Harris](#) OCT. 3, 2014 - 9:32 AM PDT

“ Out of our 2700+ production Cassandra nodes, 218 were rebooted. 22 Cassandra nodes were on hardware that did not reboot successfully. This led to those Cassandra nodes not coming back online. Our automation detected the failed nodes and replaced them all, with minimal human intervention. Netflix experienced 0 downtime that weekend.”

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by [Derrick Harris](#) OCT. 3, 2014 - 9:32 AM PDT

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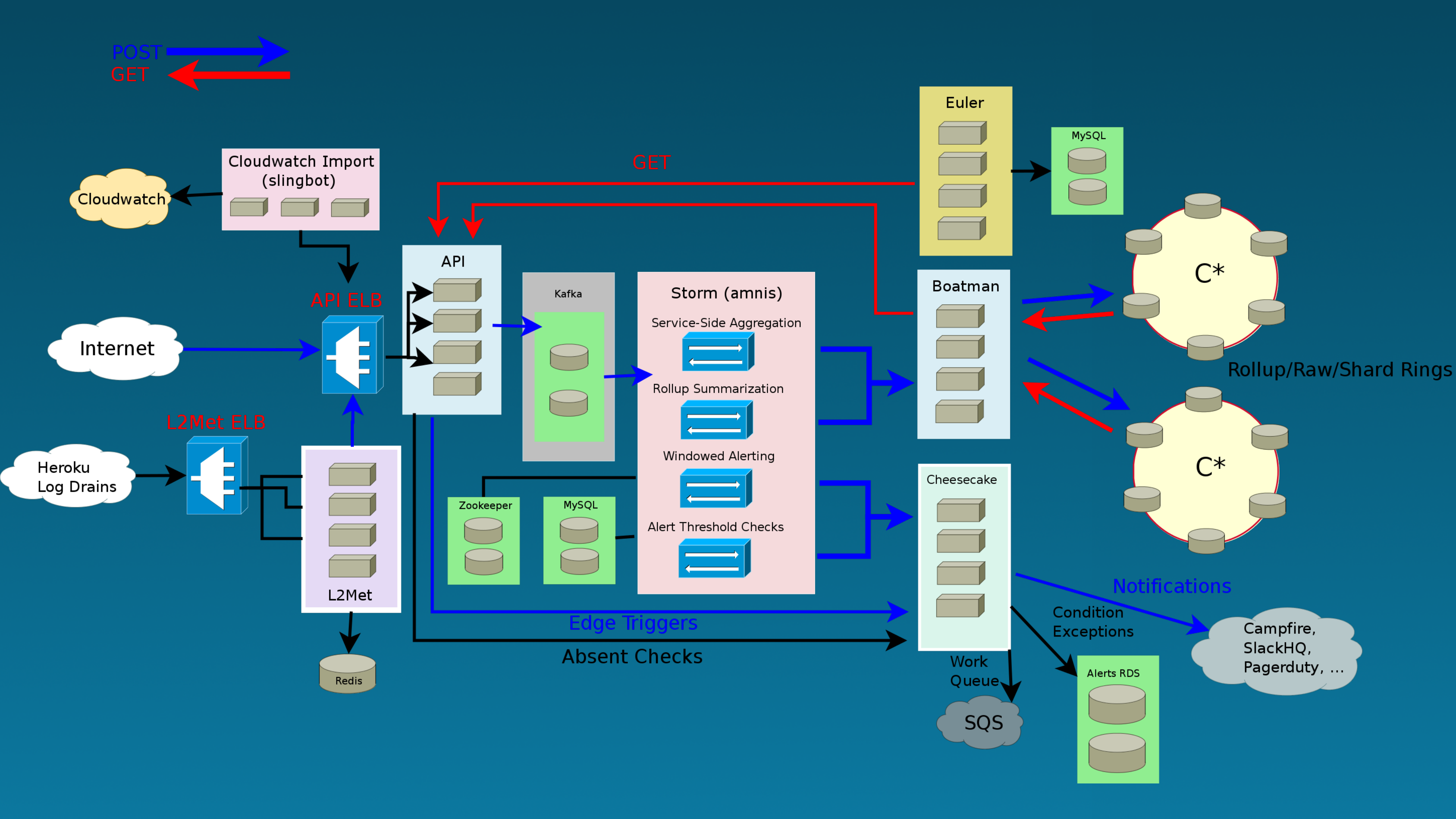
NETFLIX

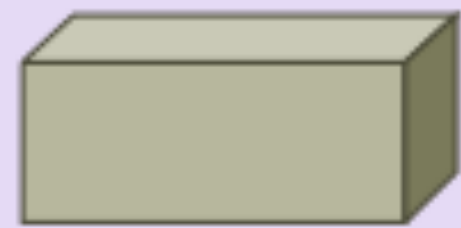
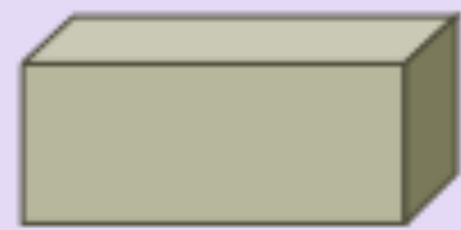
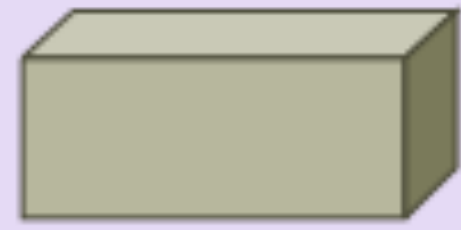
Monday, July 30, 2012

Chaos Monkey Released Into The Wild

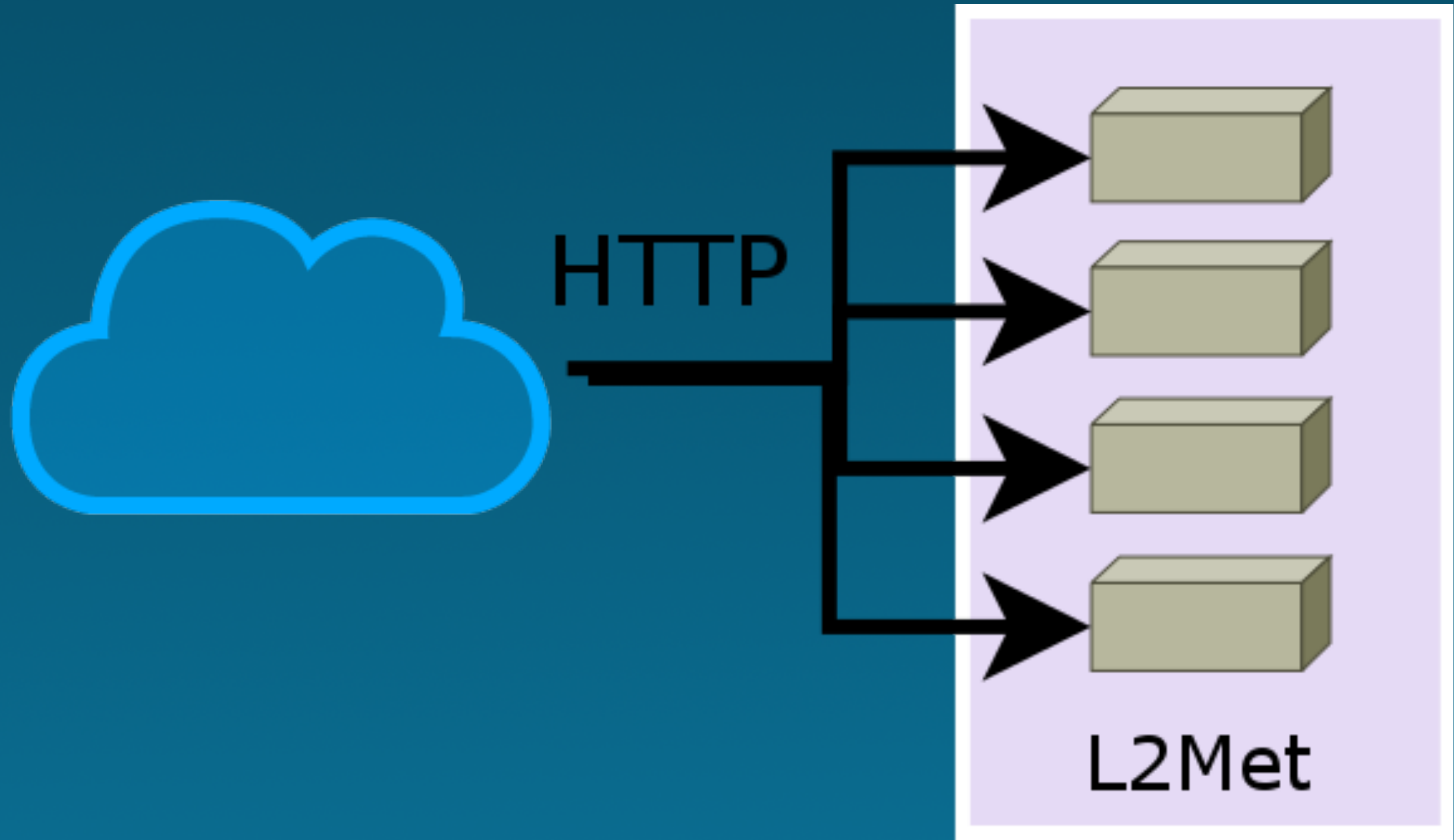
By Cory Bennett and Ariel Tseitlin



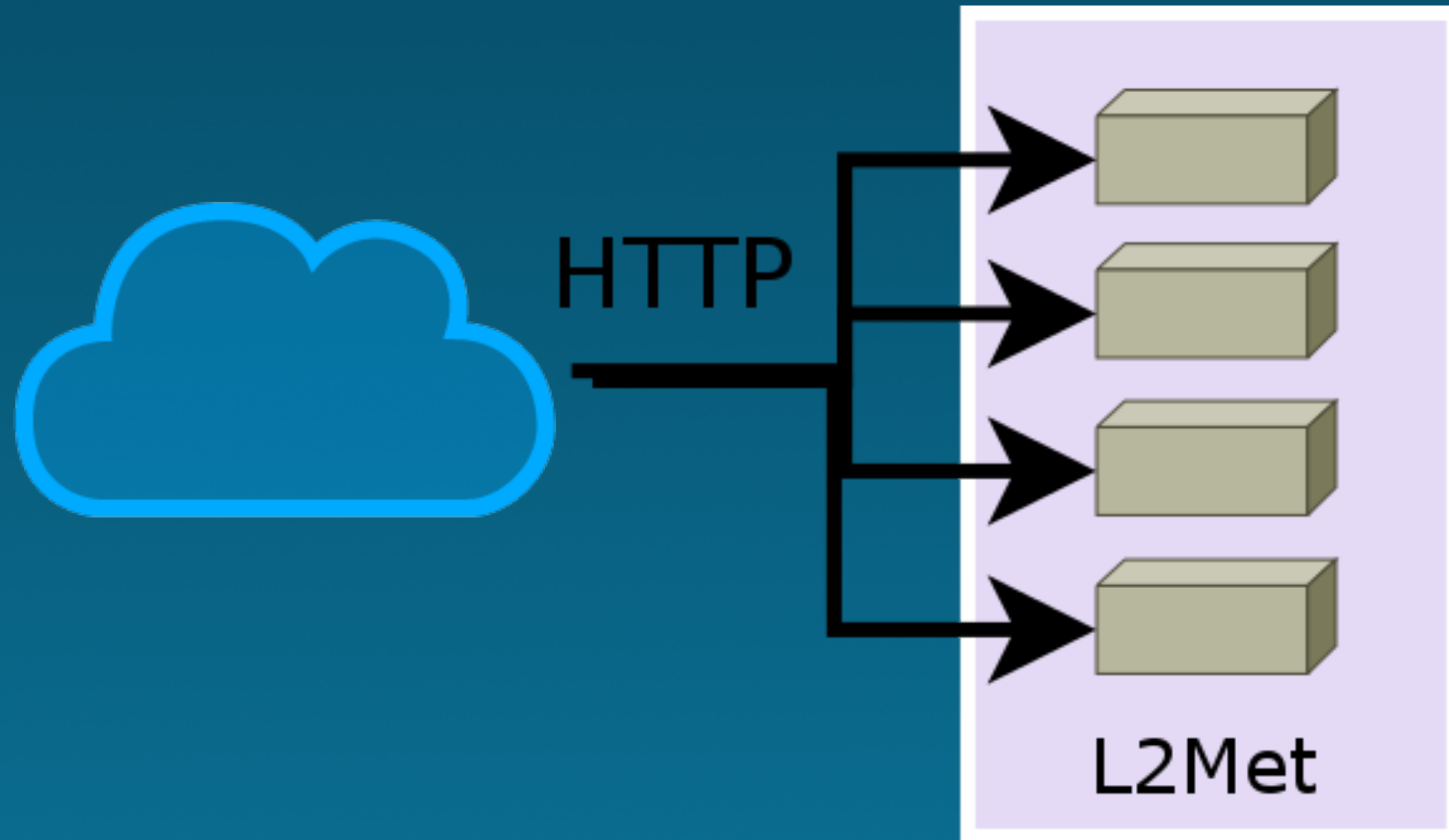




L2Met



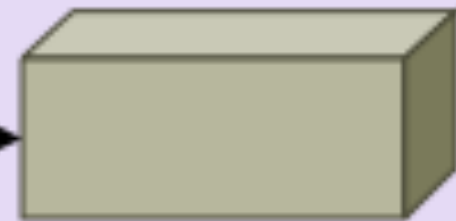
here's a log line wrapped in an http GET request



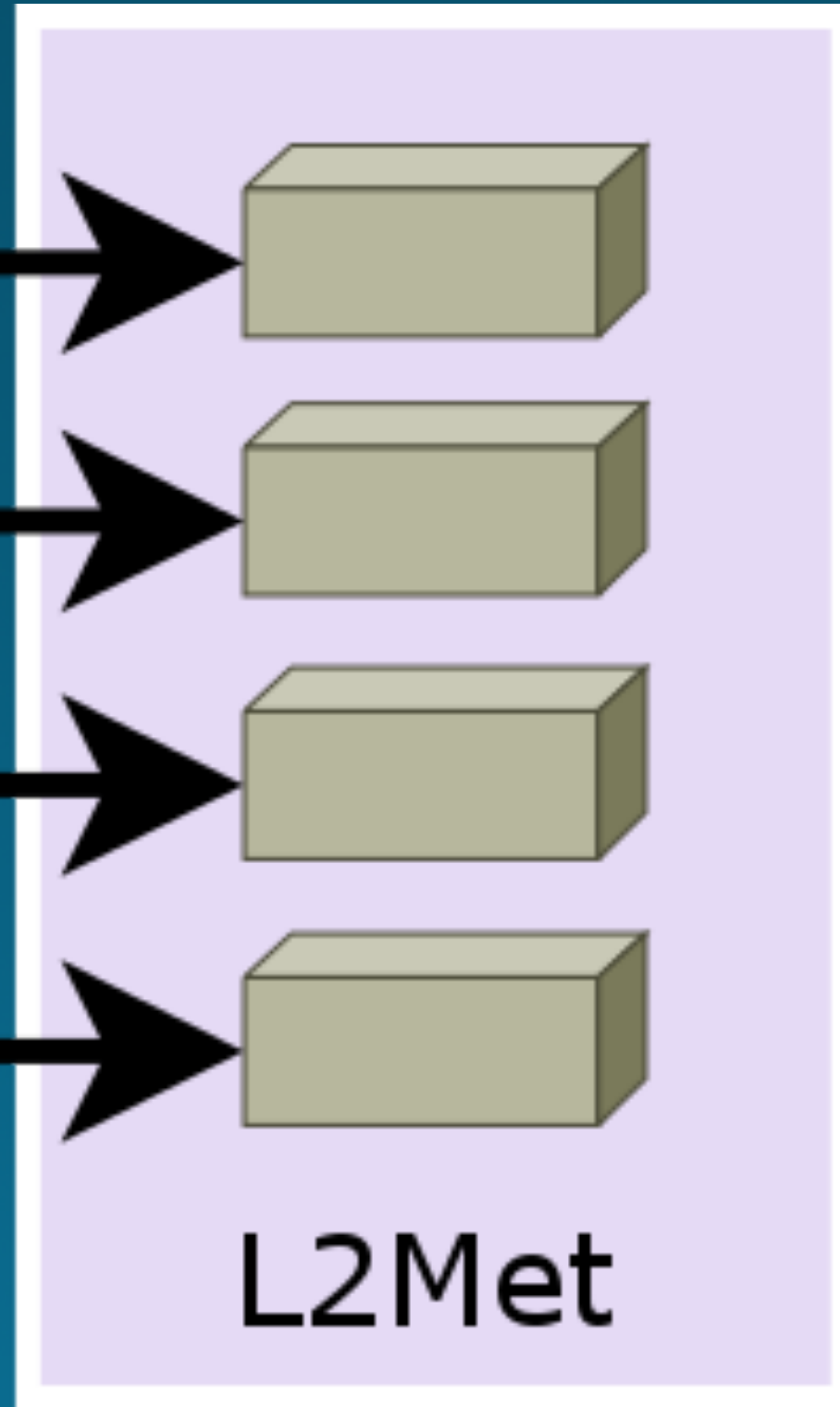
HTTP 200 OK!

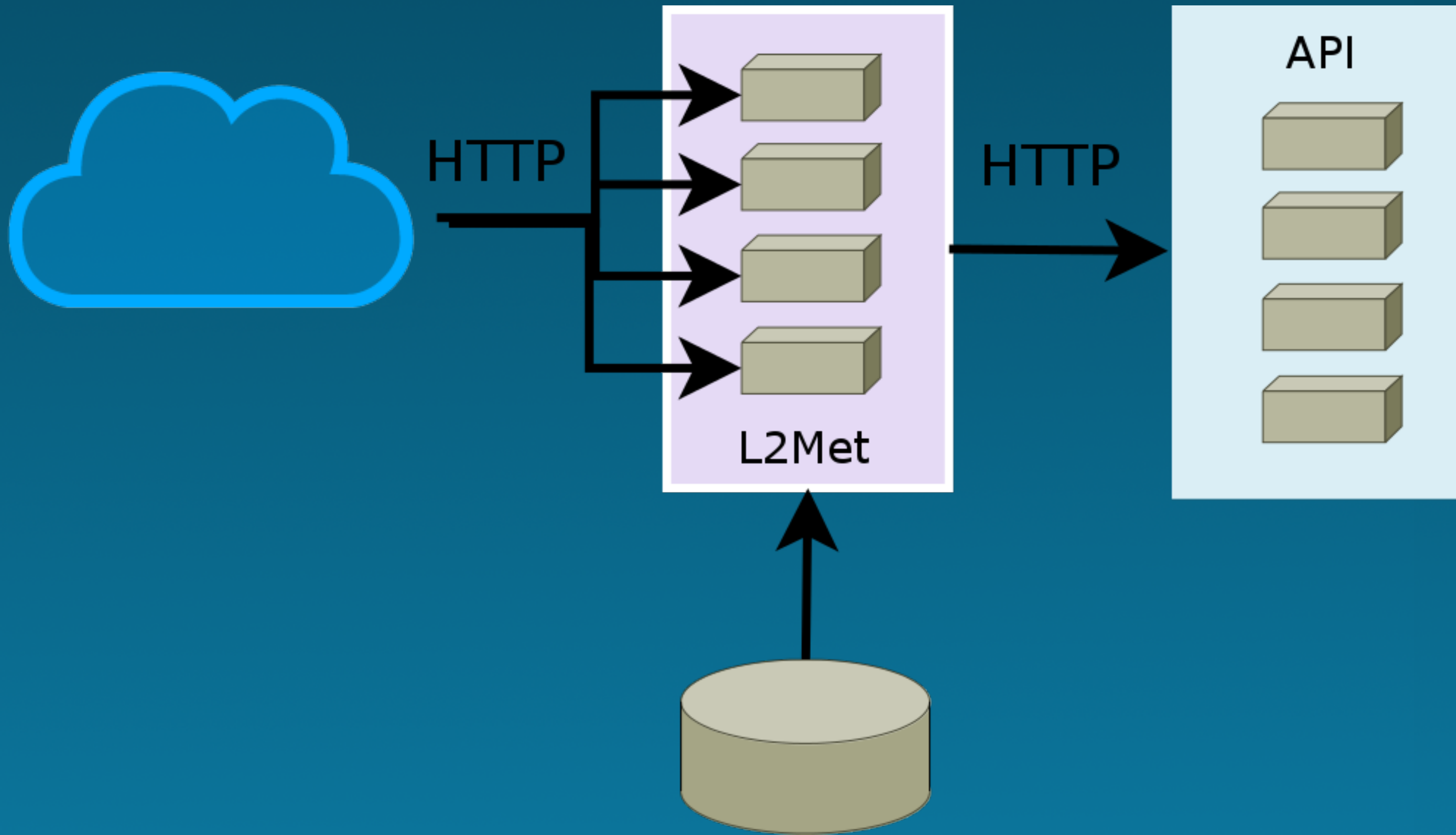


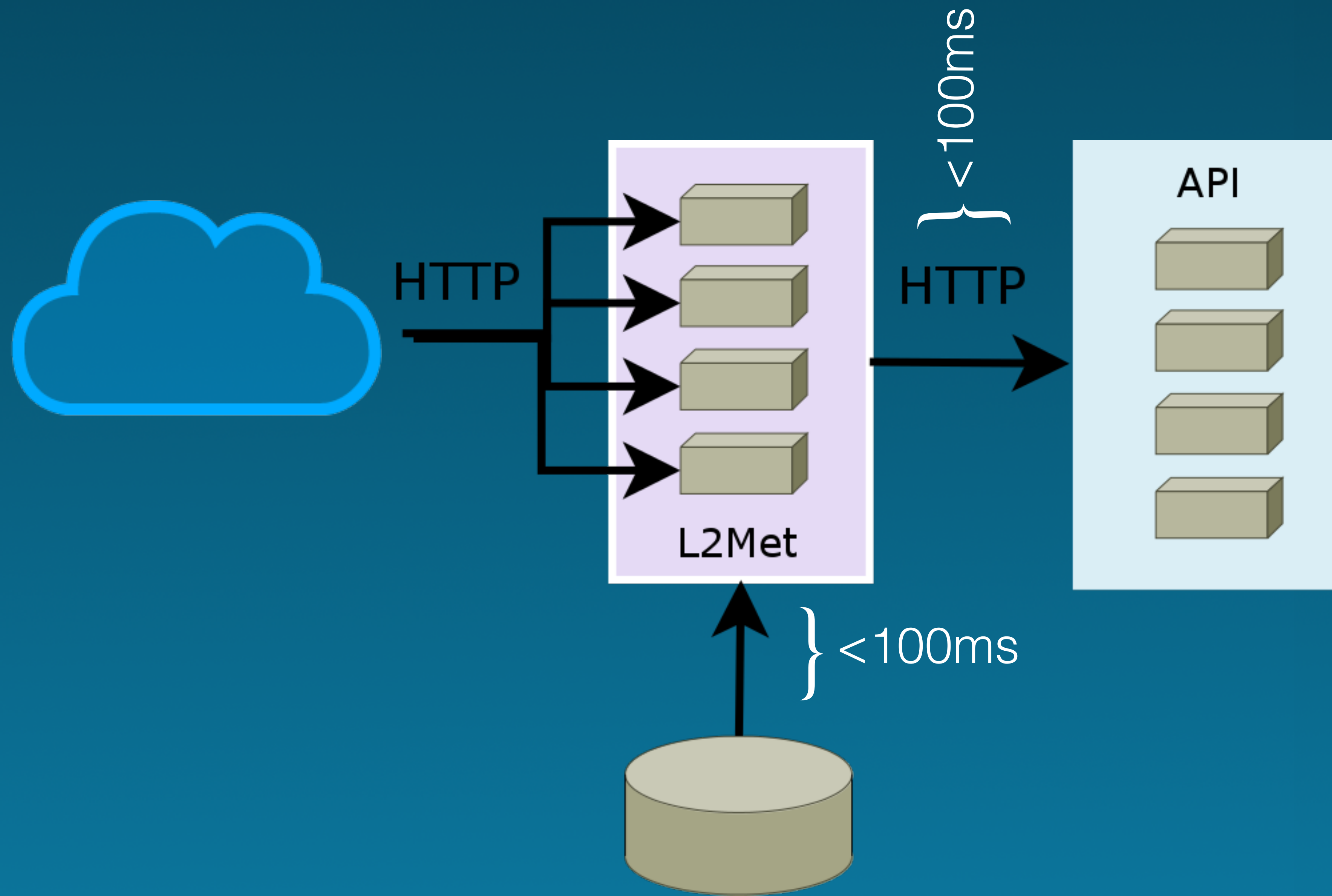
HTTP



L2Met





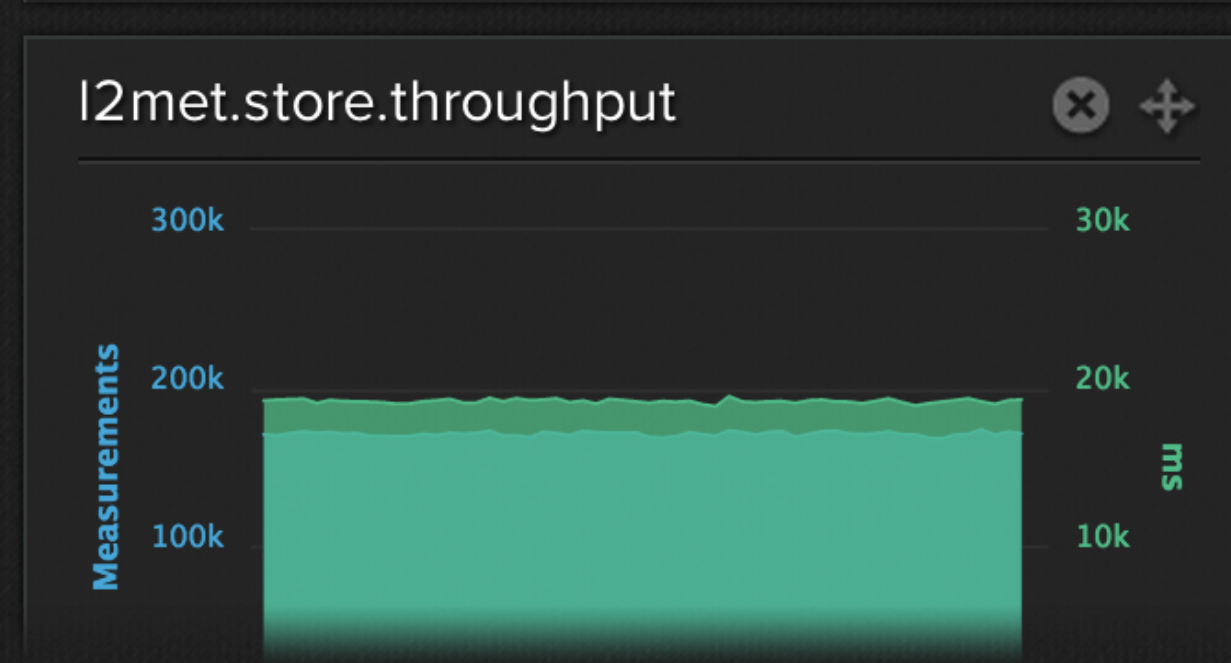
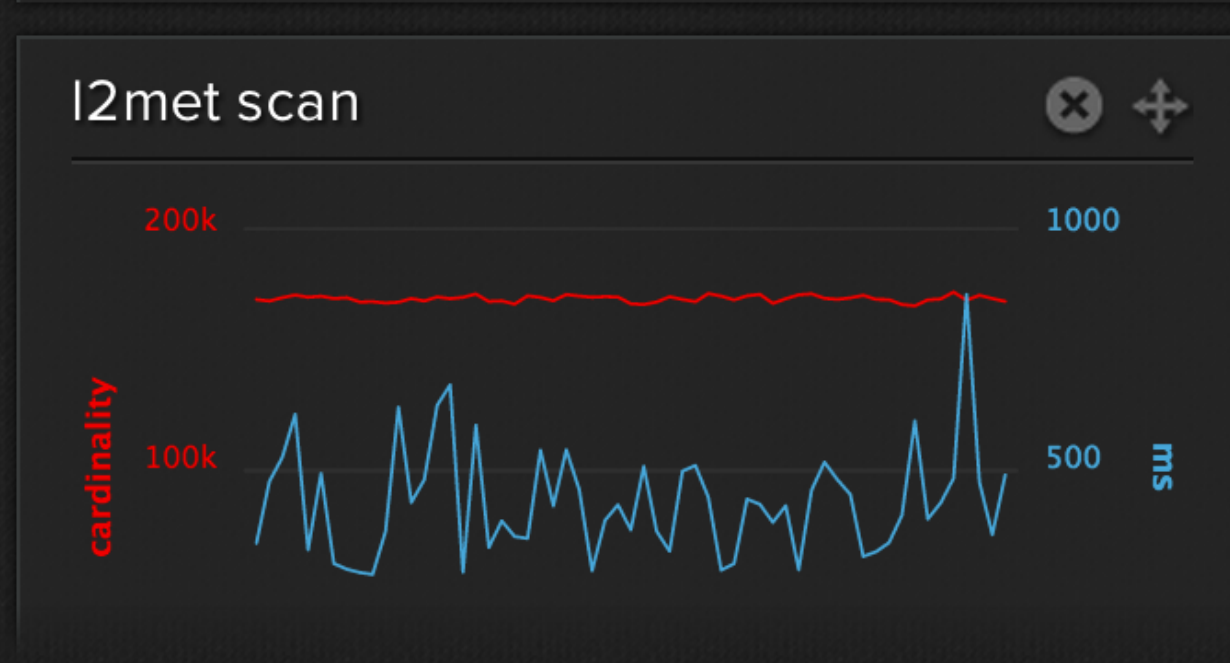
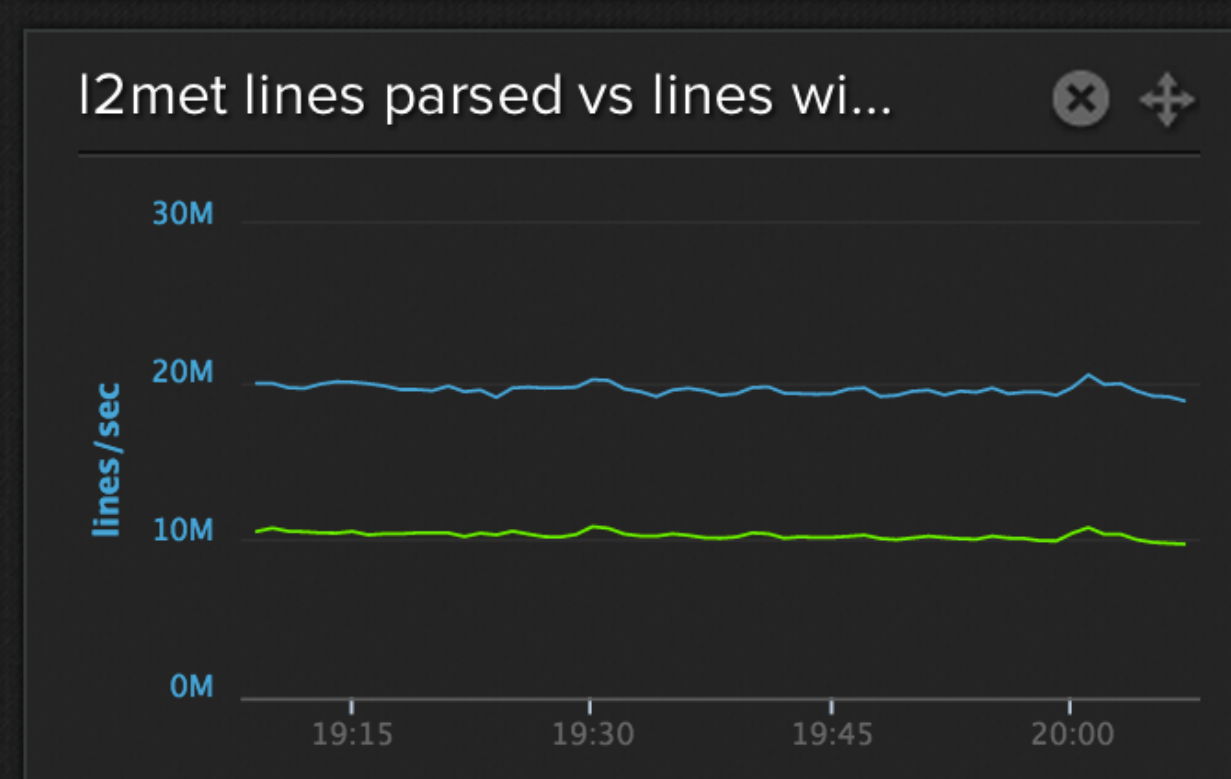
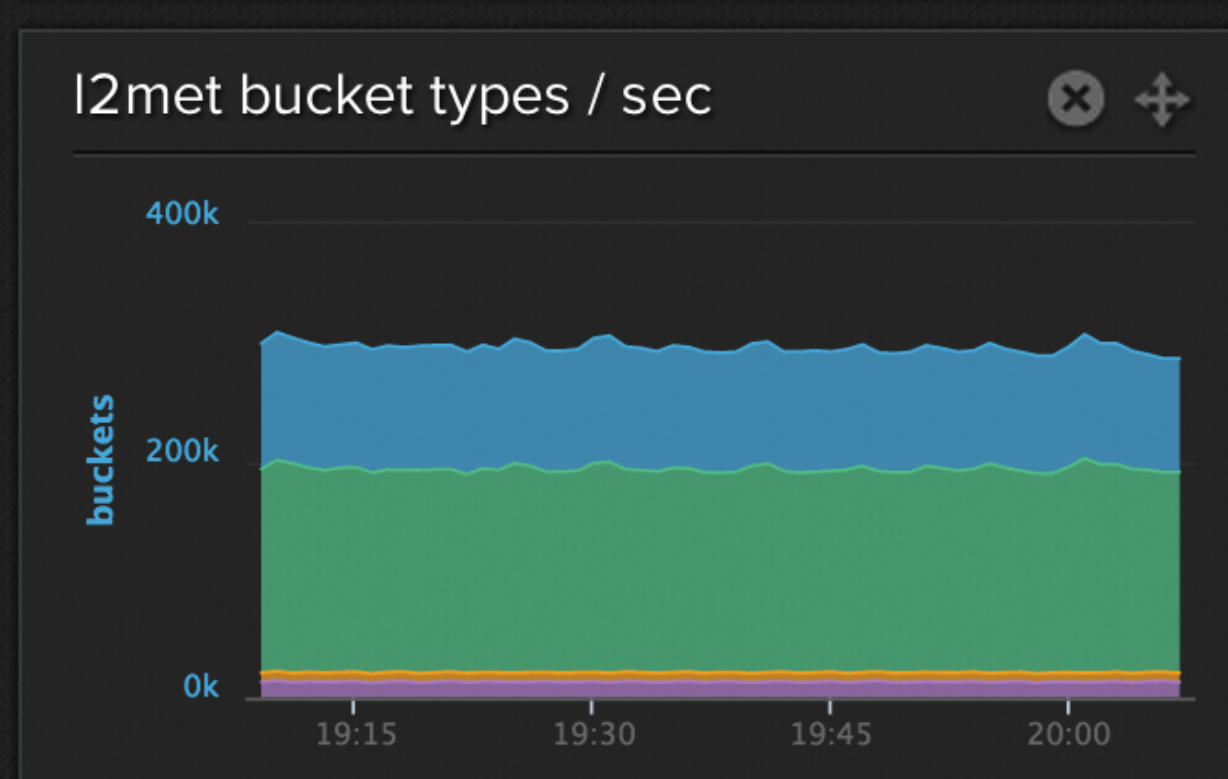
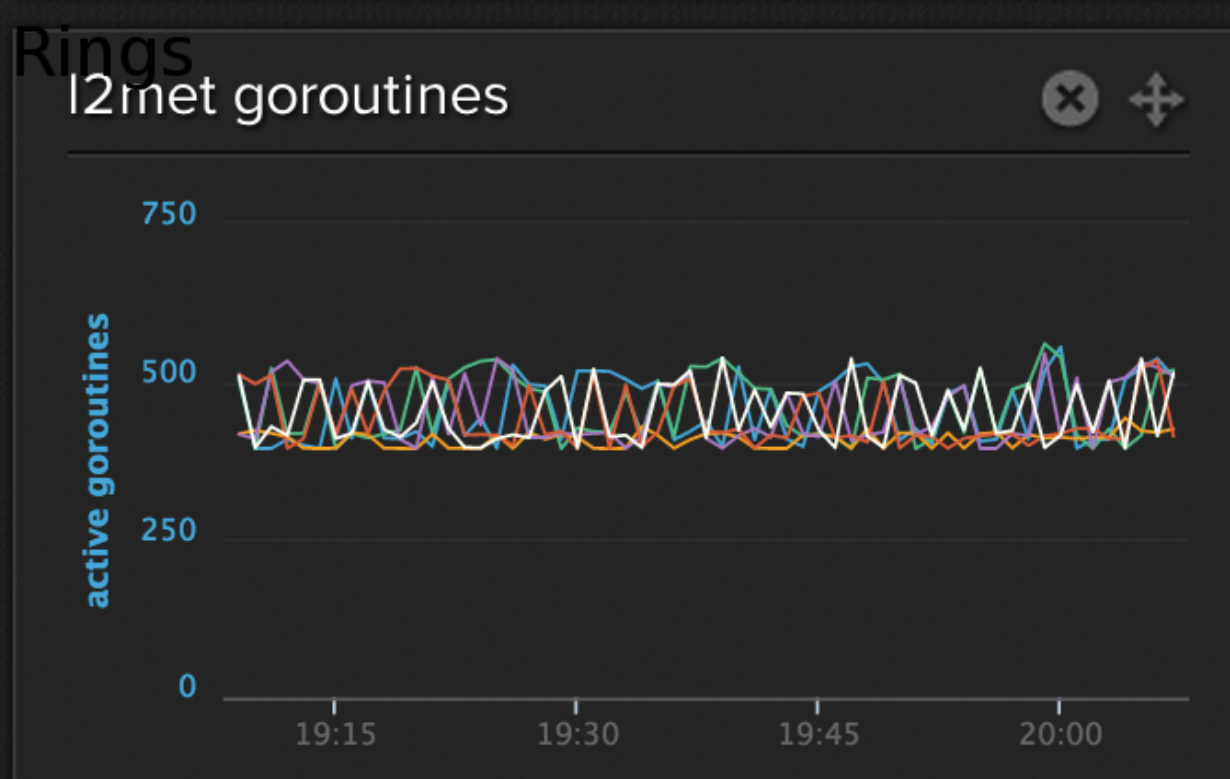
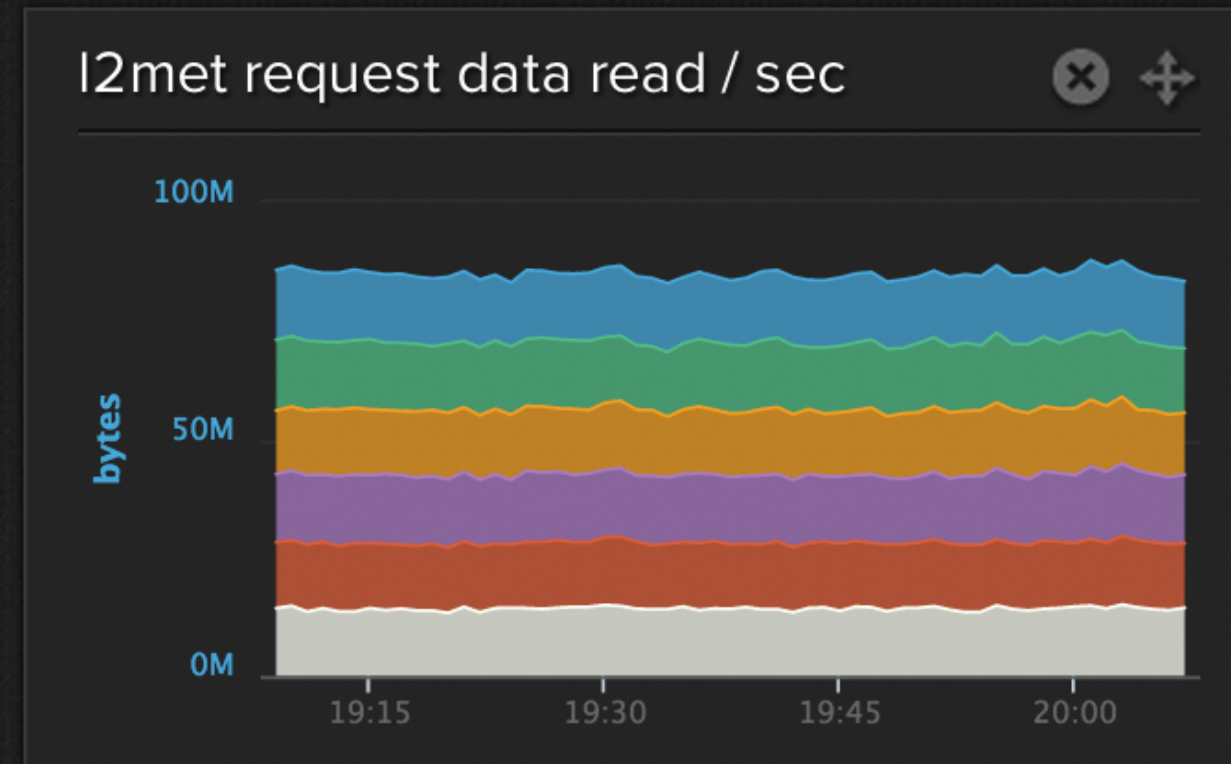
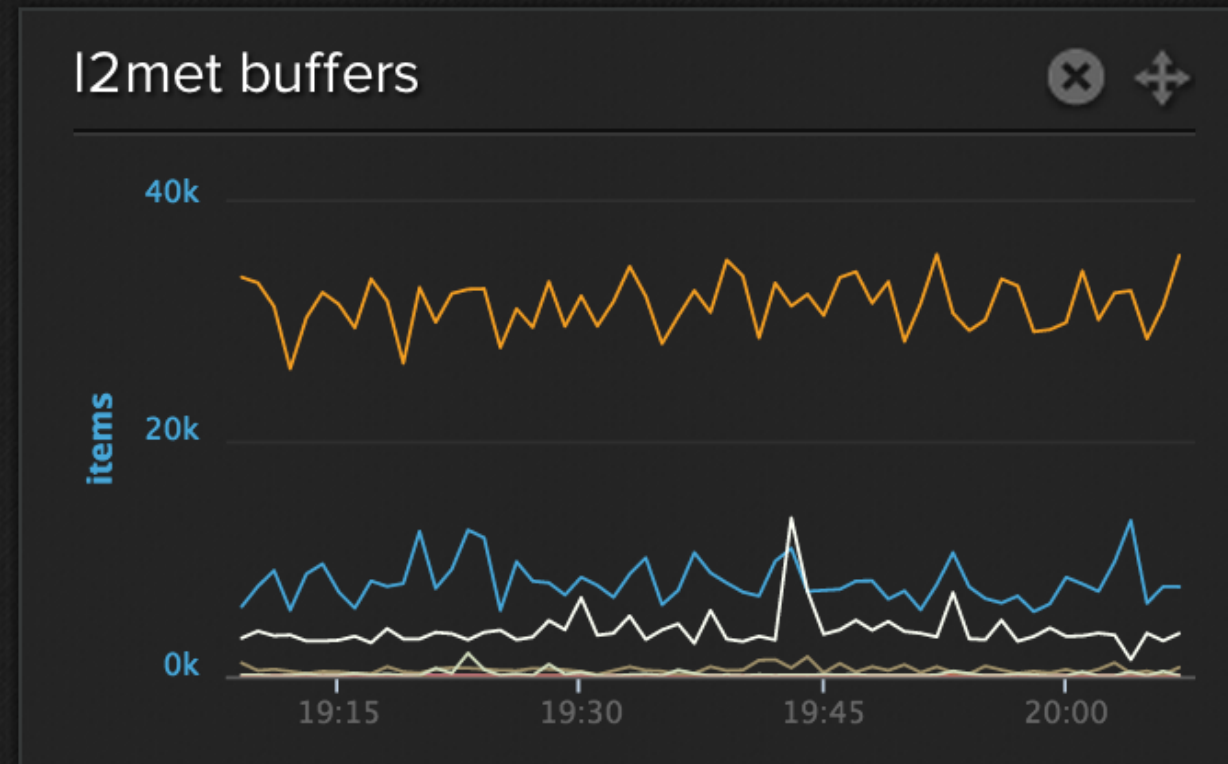
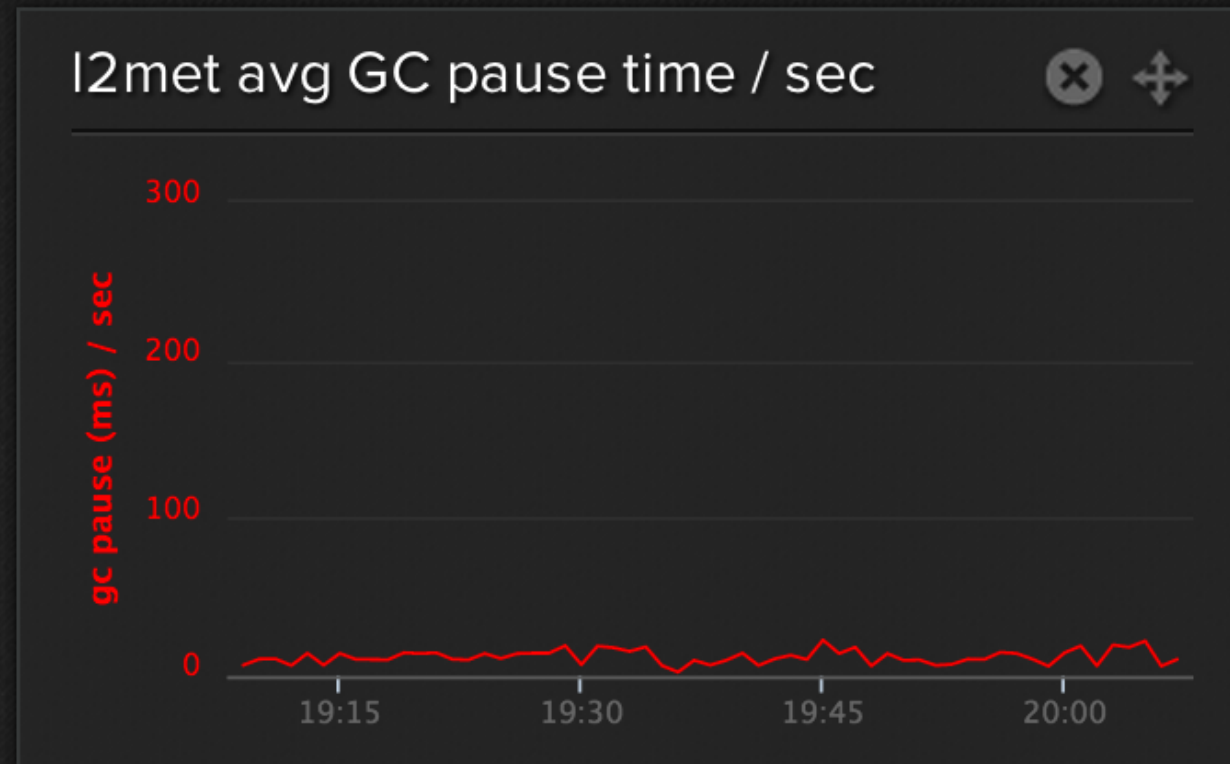
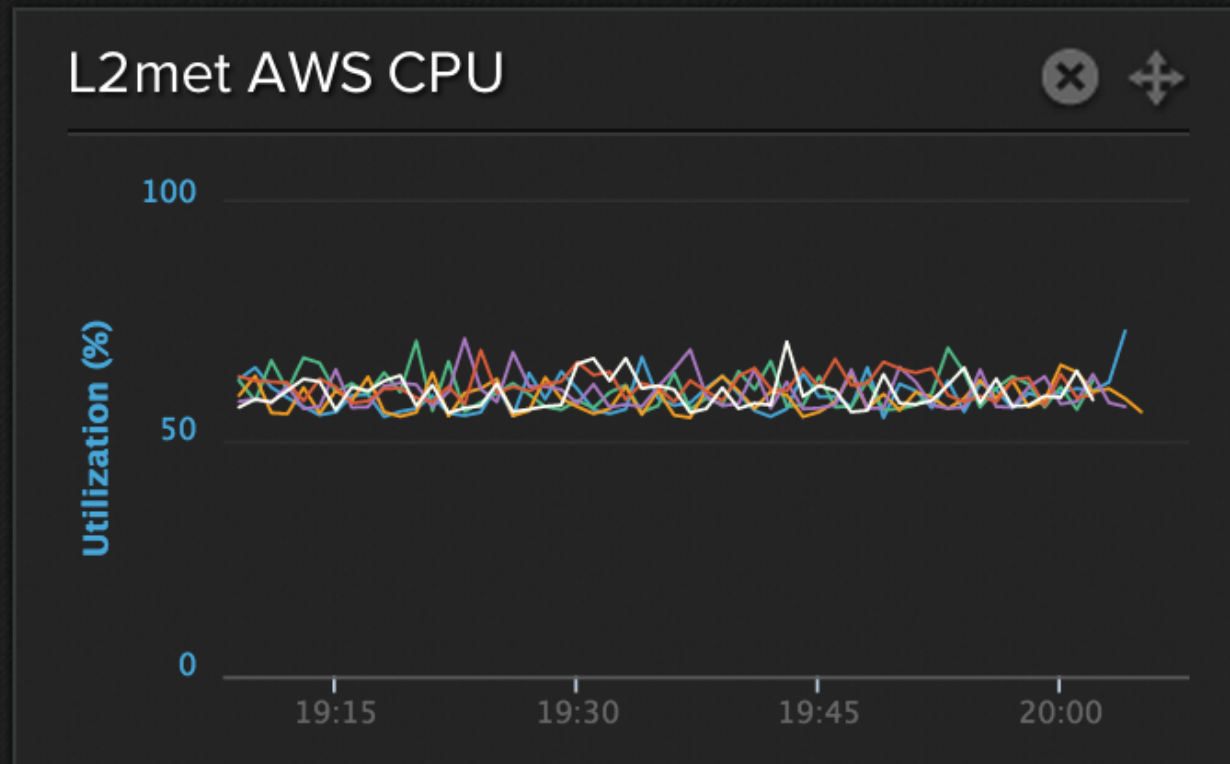


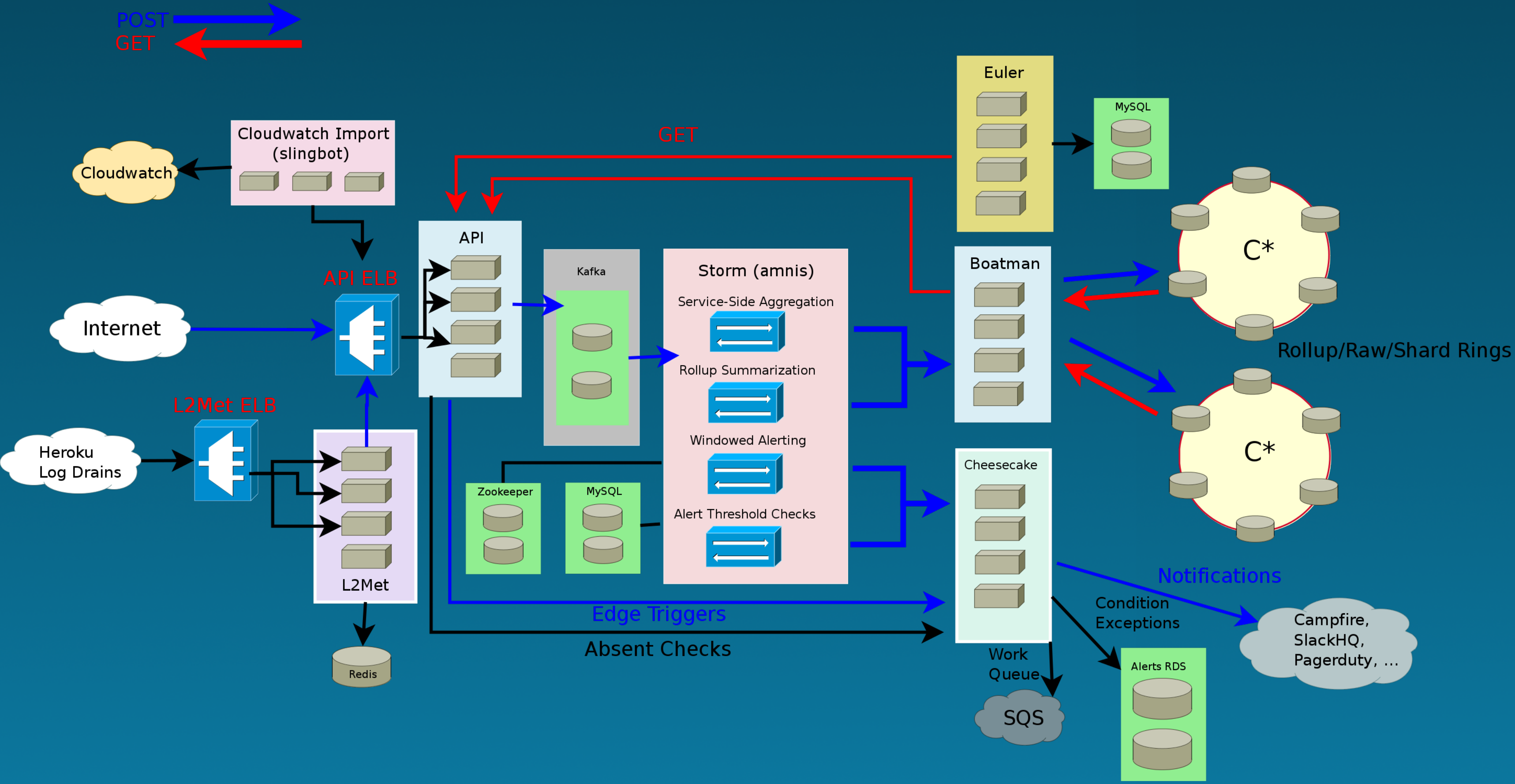
I2met.librato-outlet.outbox alert

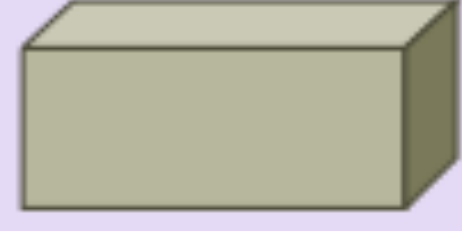
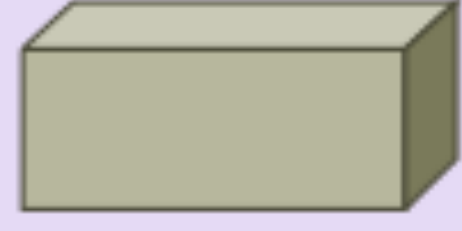
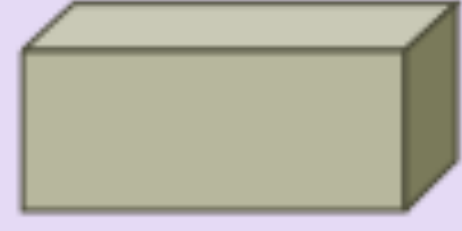
This signal represents the max cardinality for any I2met node of the number of pending measurements to the Librato API from I2met. The larger the number, the more pending measurements, and thus an increasing perceptible delay to the customer of metrics that are sourced from Heroku.

This is generally caused by increasing Librato API latencies. The fix is to reduce those latencies to allow the I2met measurements to be POSTed to the API.

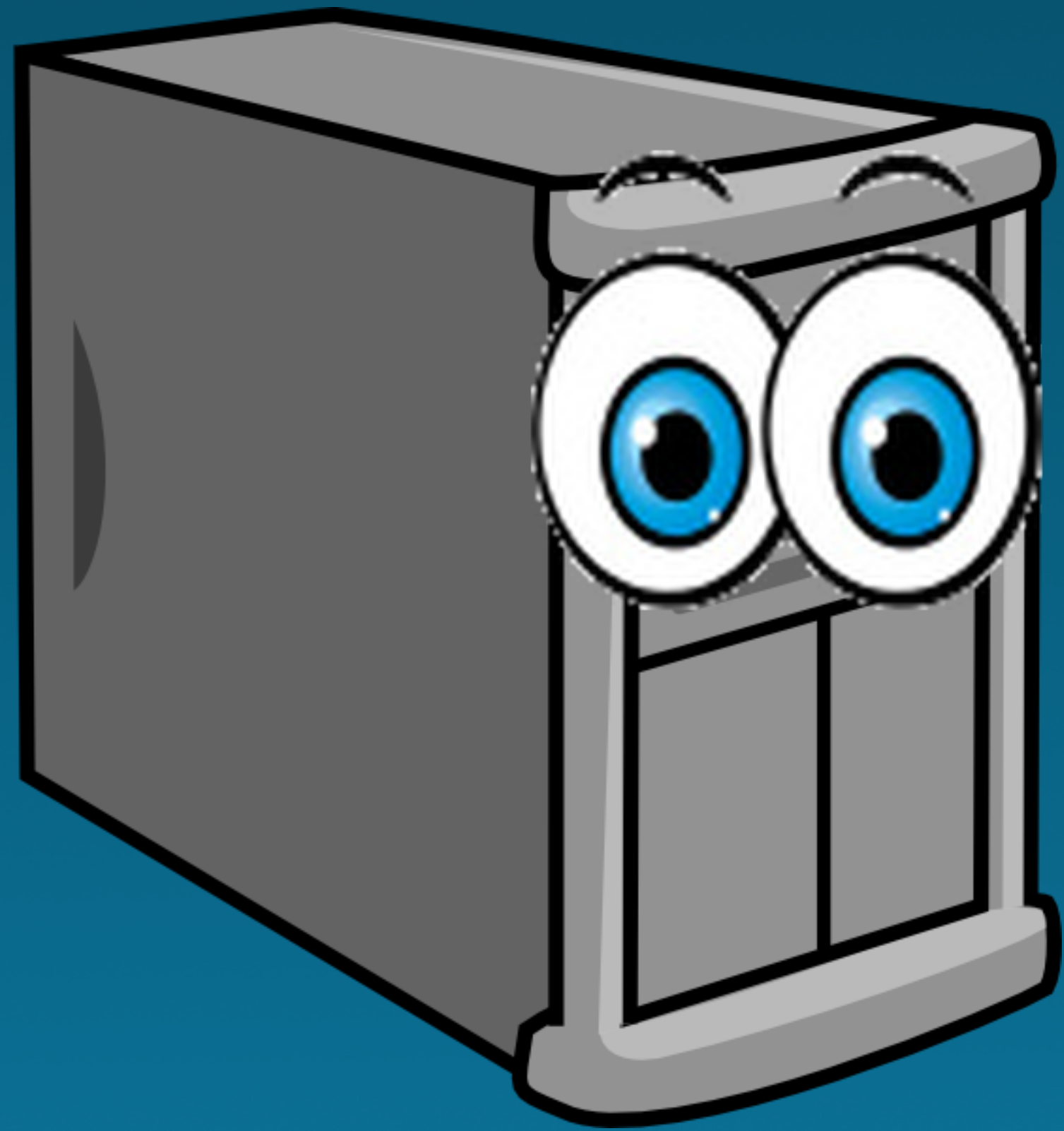
If this alert fires, the immediate action one should take is to post an update to the status page to notify Heroku customers that we are experiencing delays in saving Heroku log metrics to Librato. Note that this also may cause missing measurement alerts to fire, as the alerting system currently has no knowledge of I2met's API backlog.



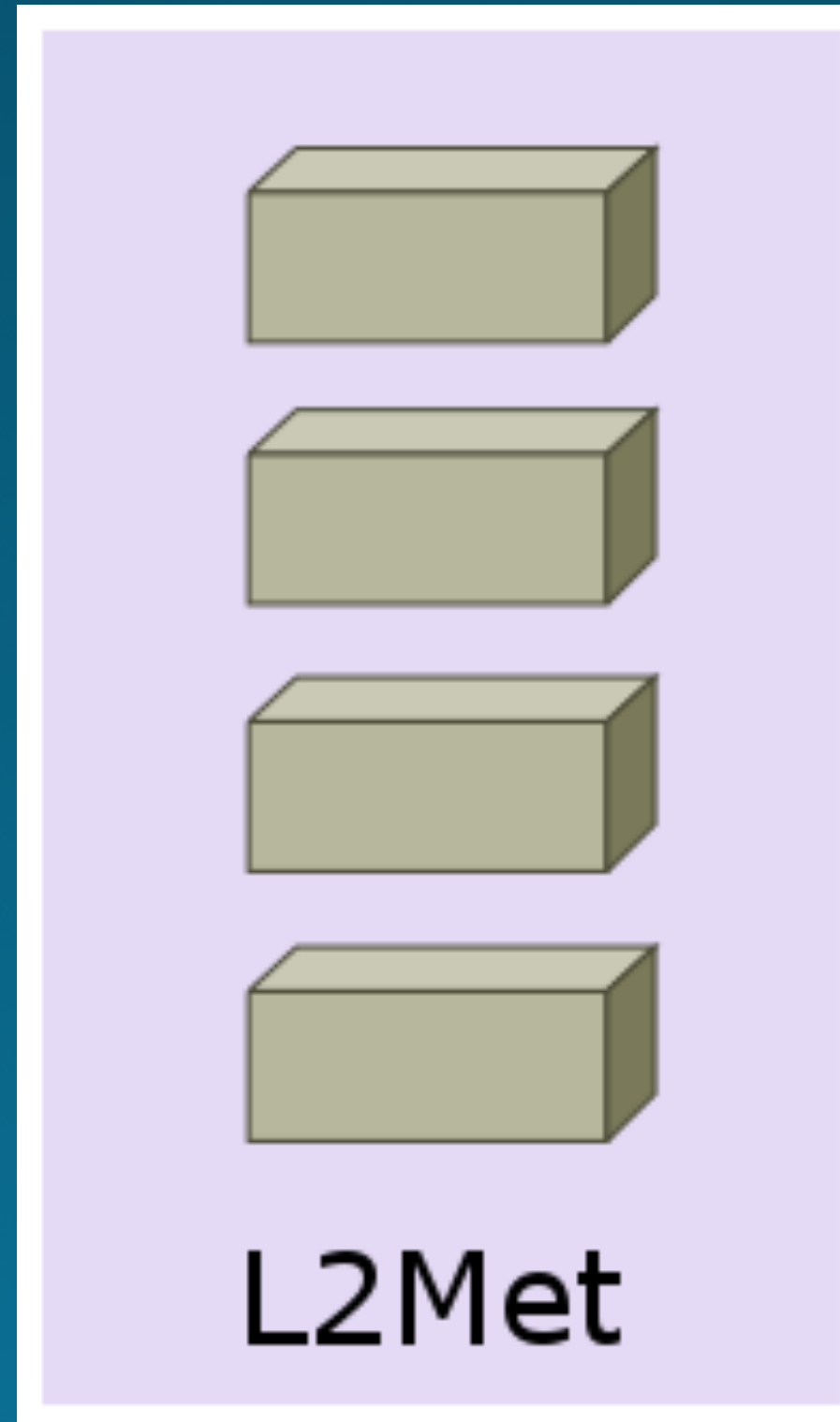


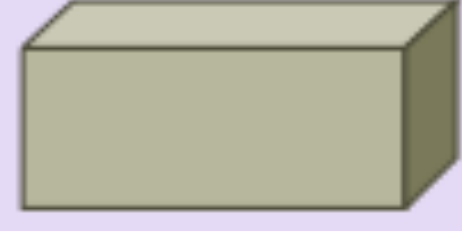
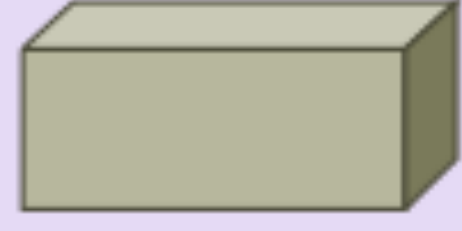
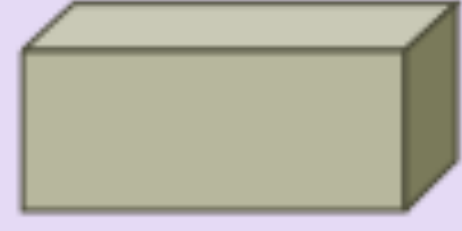


L2Met

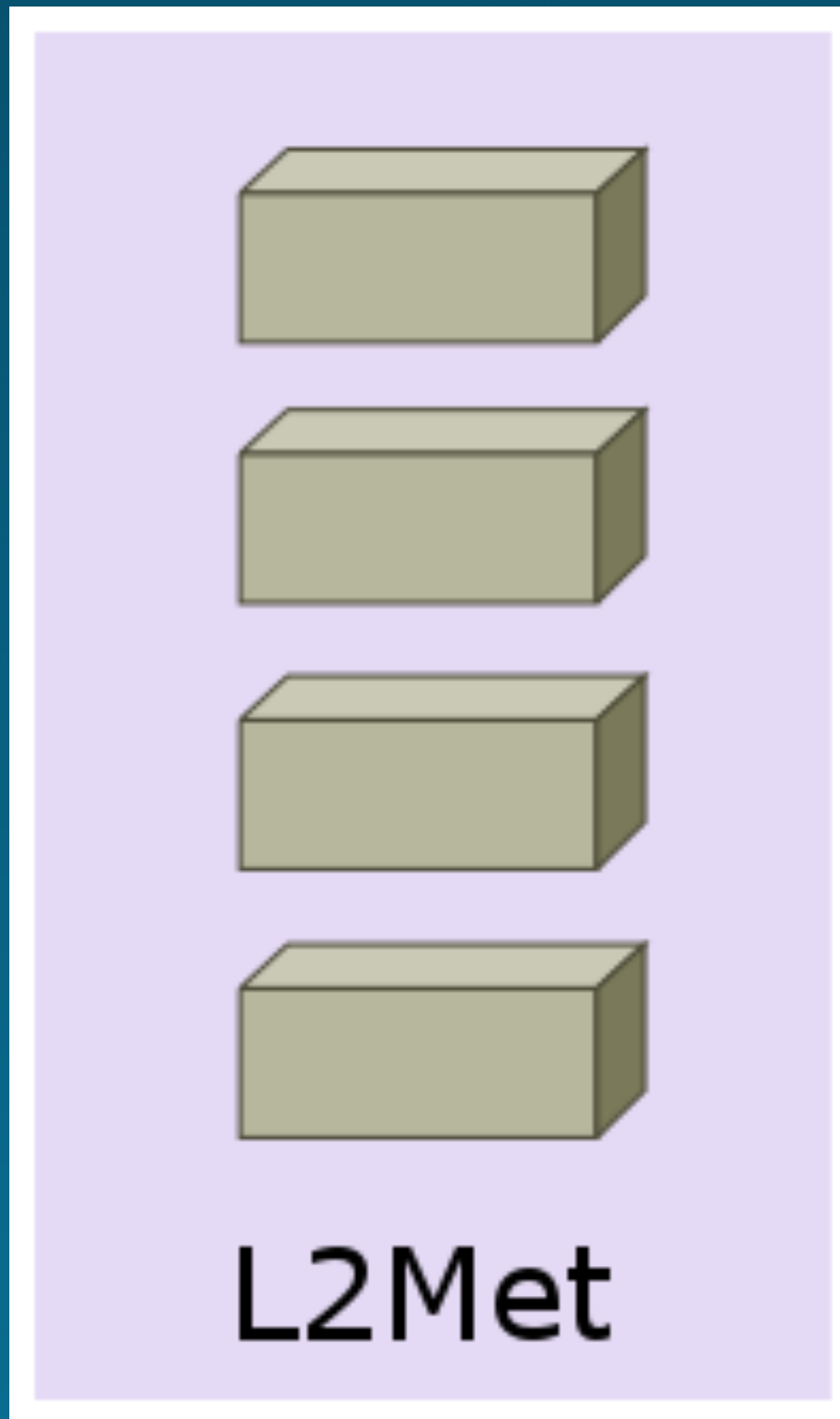


tim.mycorp.com

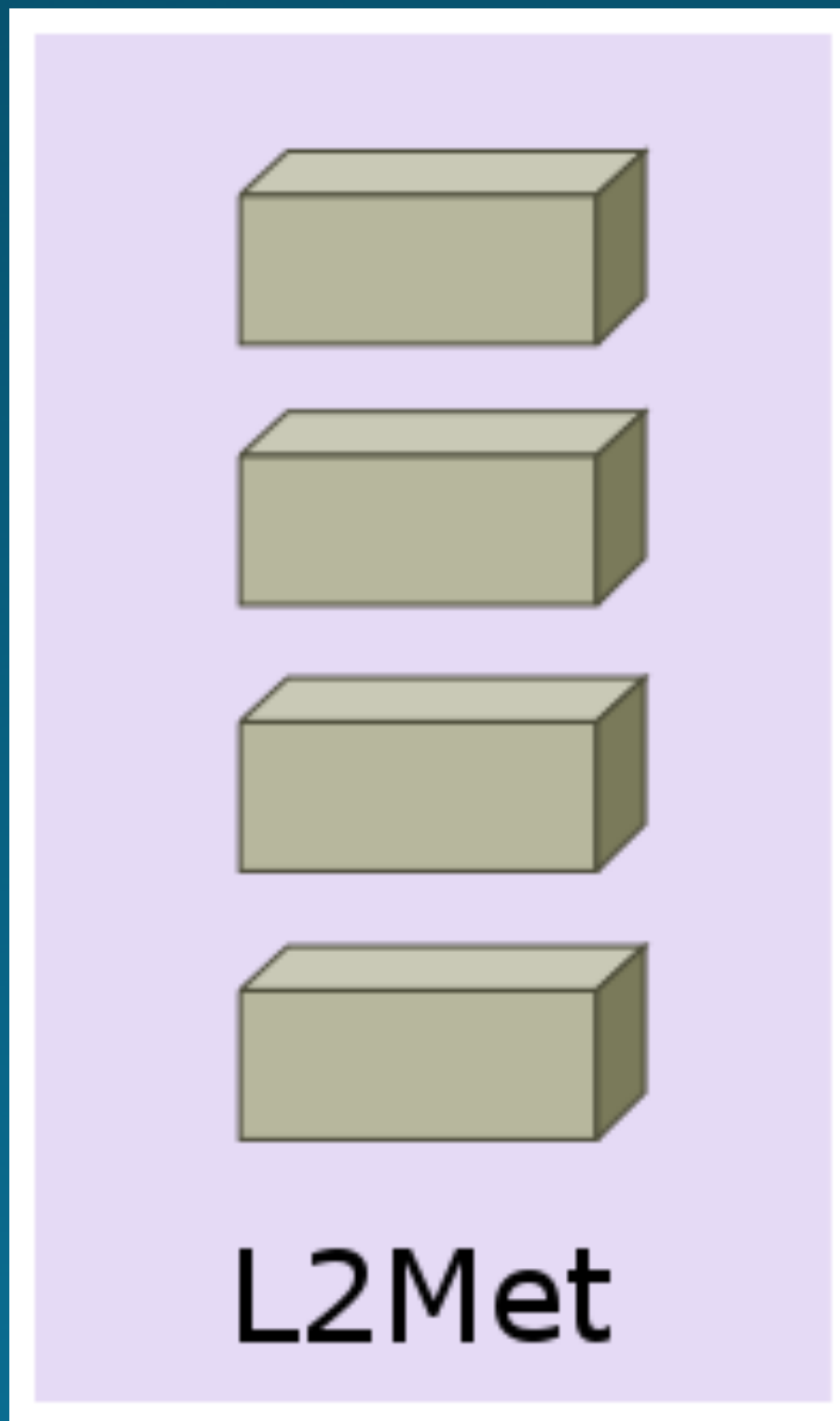




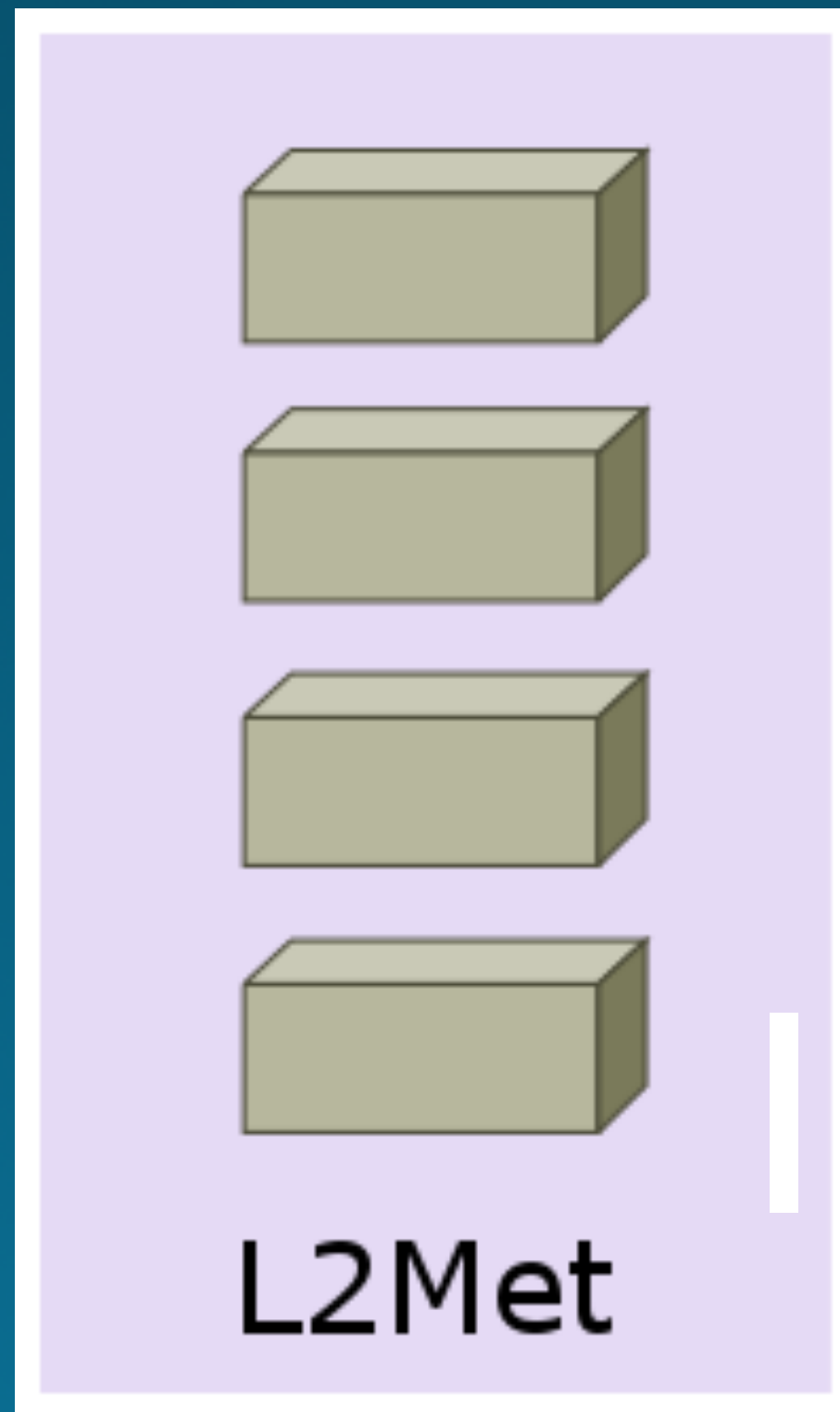
L2Met



It Scales



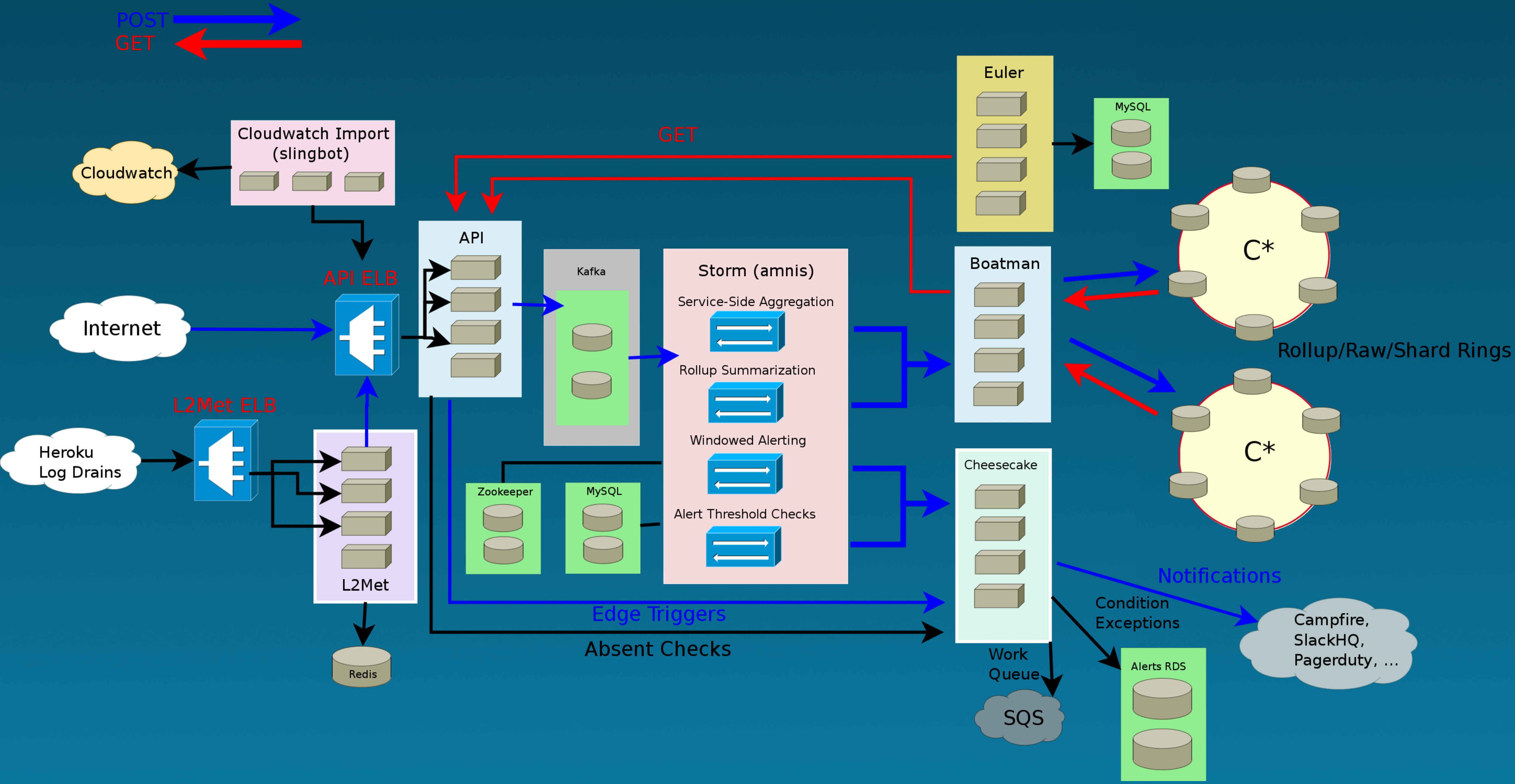
It Scales
It's resilient



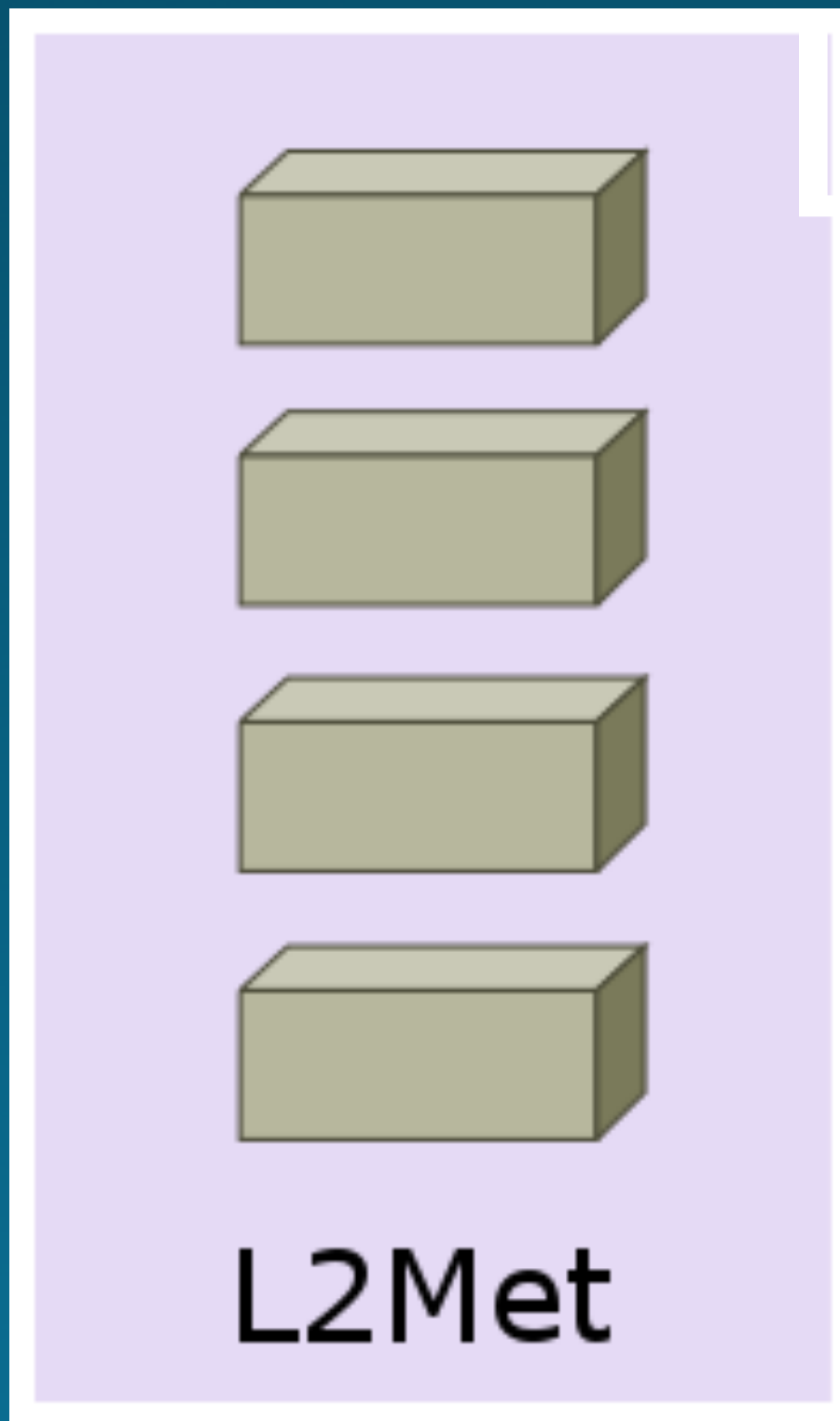
It Scales

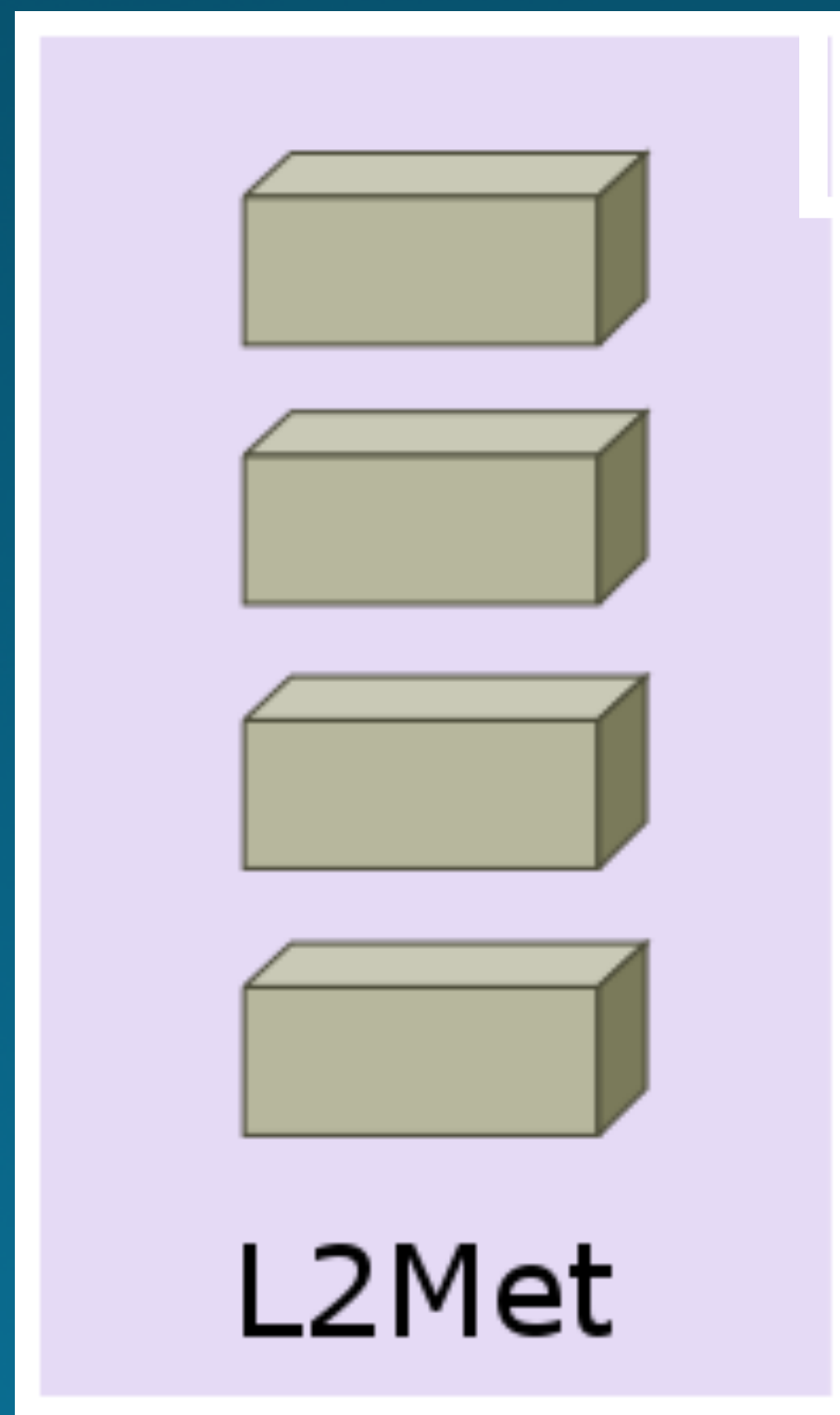
It's Resilient

I can change how it work



Latency, Queues, Worker

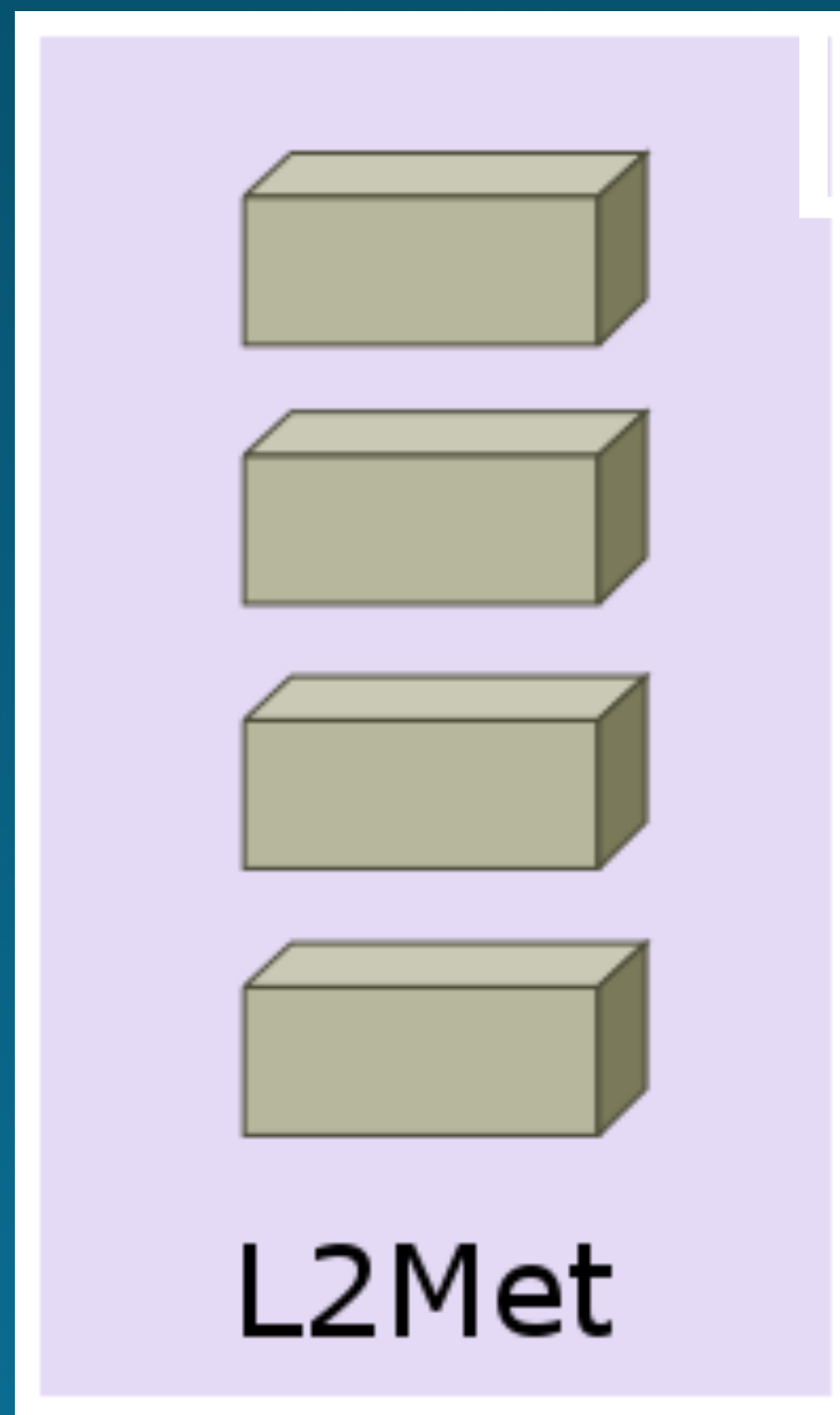




L2Met

Latency, Queues, Worker

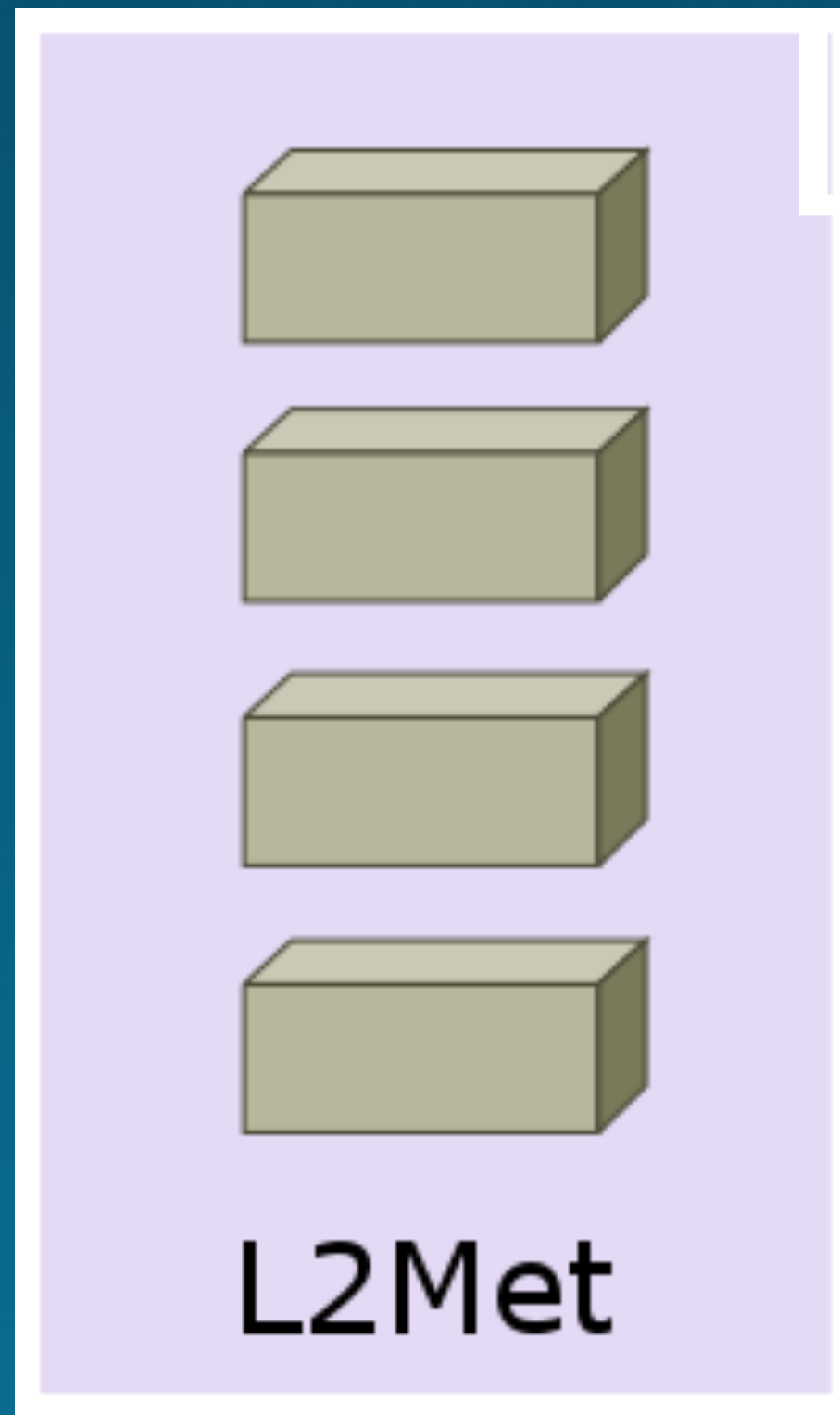
Monitored from within..



Latency, Queues, Worker

Monitored from within..

...by Developers



Latency, Queues, Worker

Monitored from within..

...by Developers

Summarized at the service level

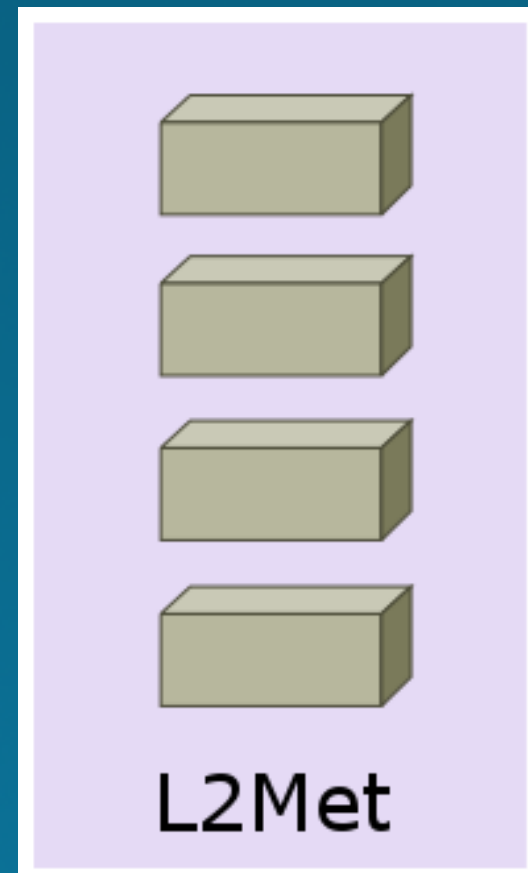
Summarized at the **service** level



Can be polled **externally**

State Data about **hosts** the order of **minutes**

Operations controls and configures hosts and services



Must be instrumented **internally**

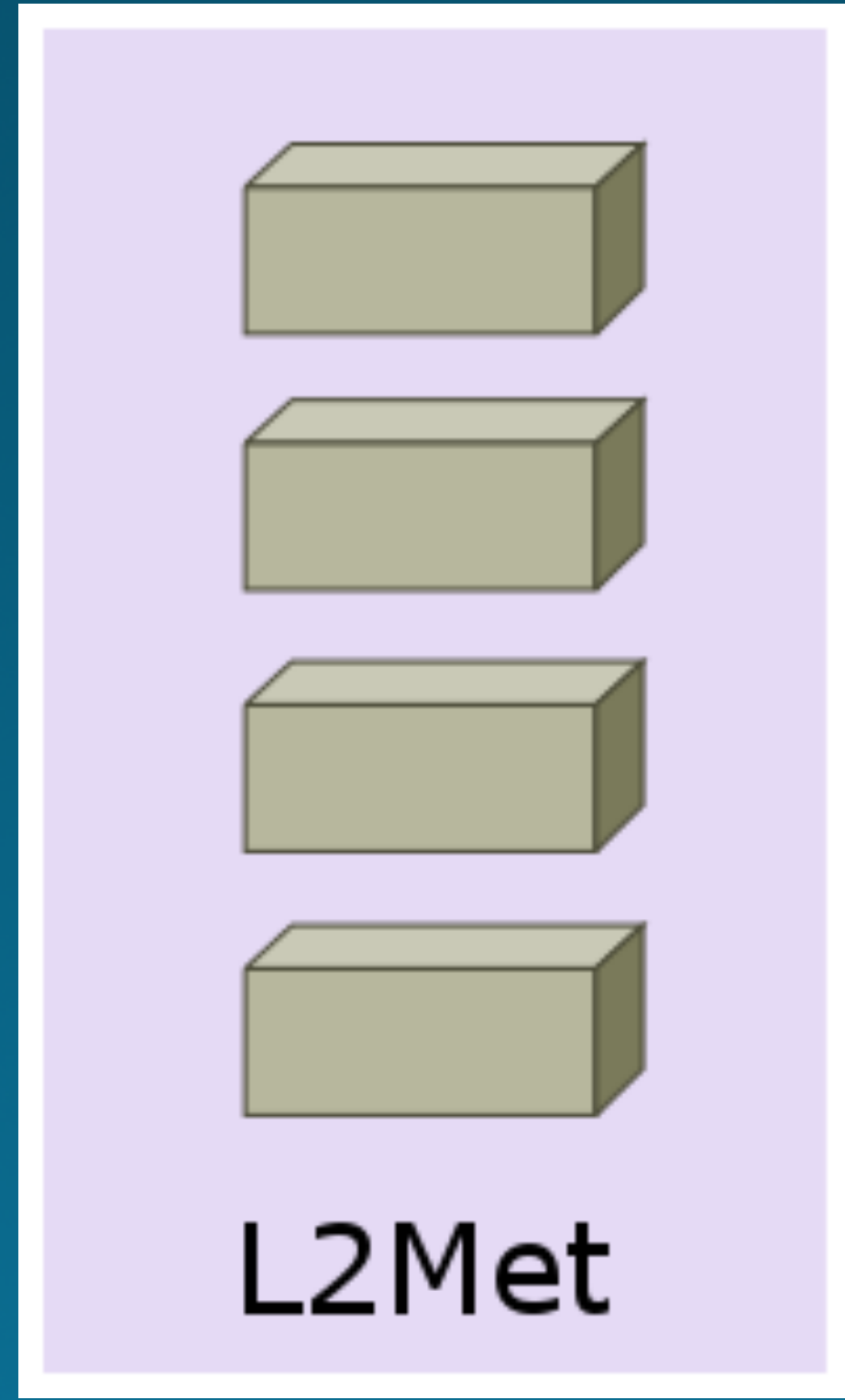
Performance Data about **services** the order of **seconds**

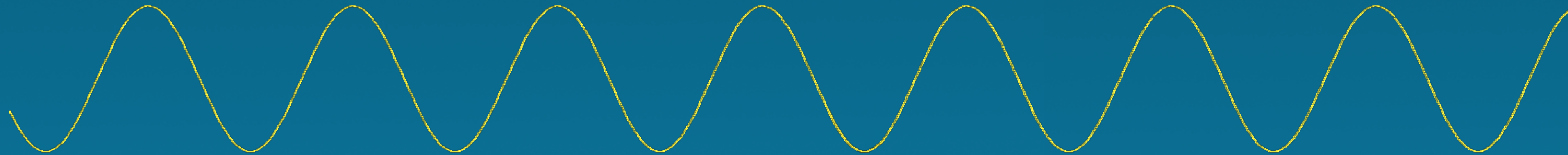
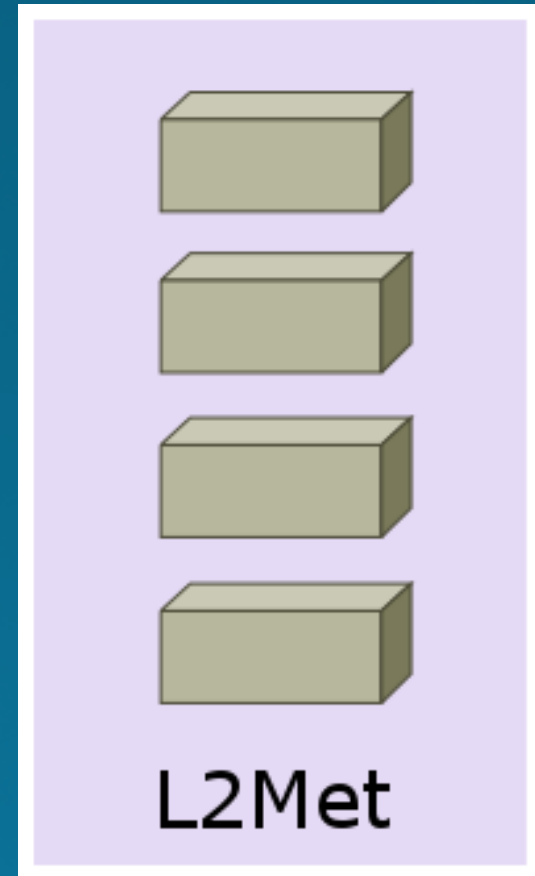
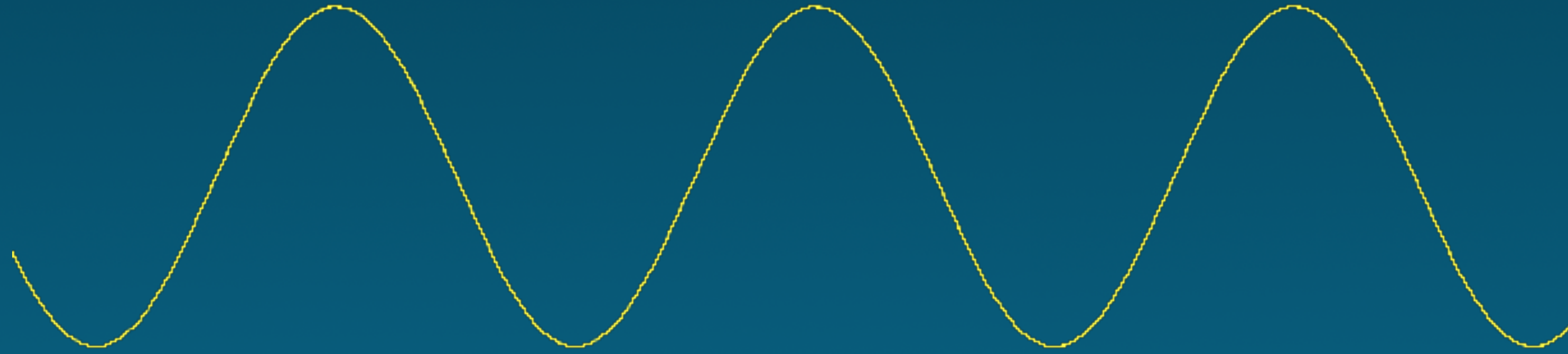
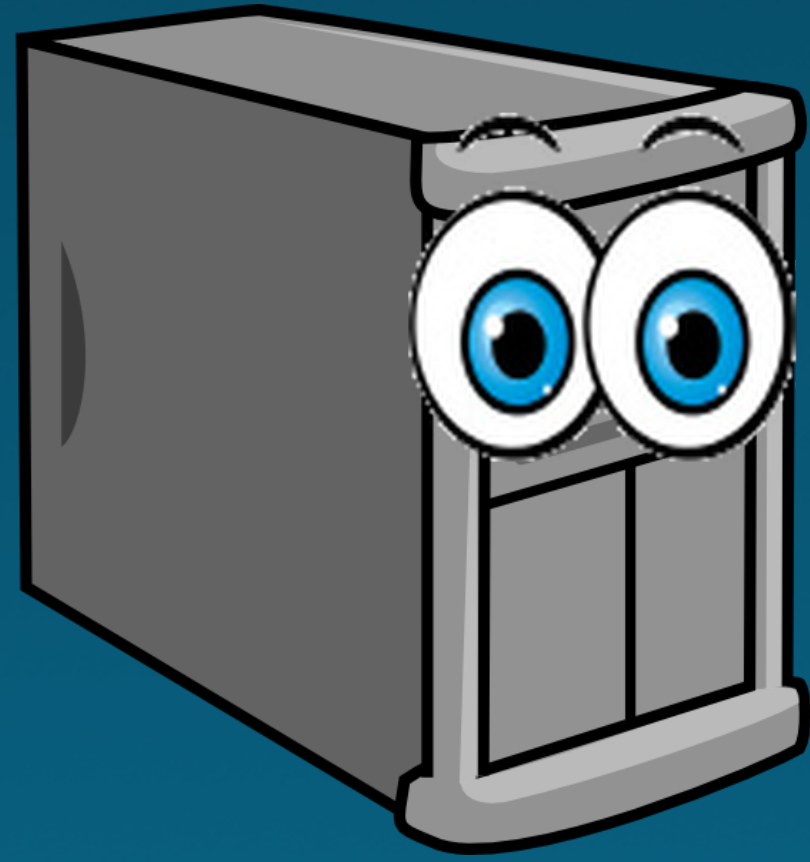
Any engineer can create new ad-hoc metrics

internally instrumented

metrics measured every few seconds

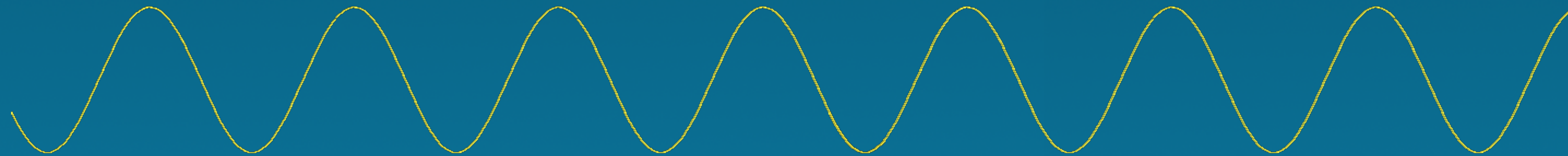
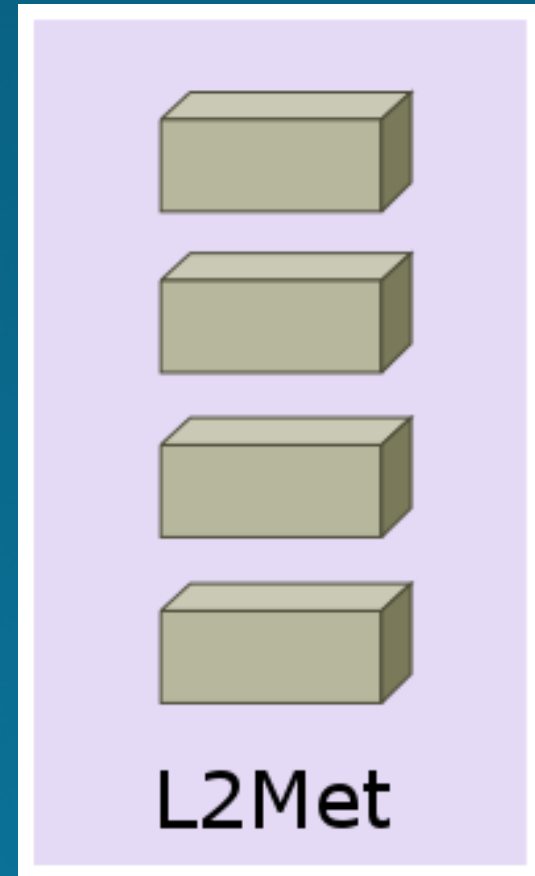
write-accessible by every engineer

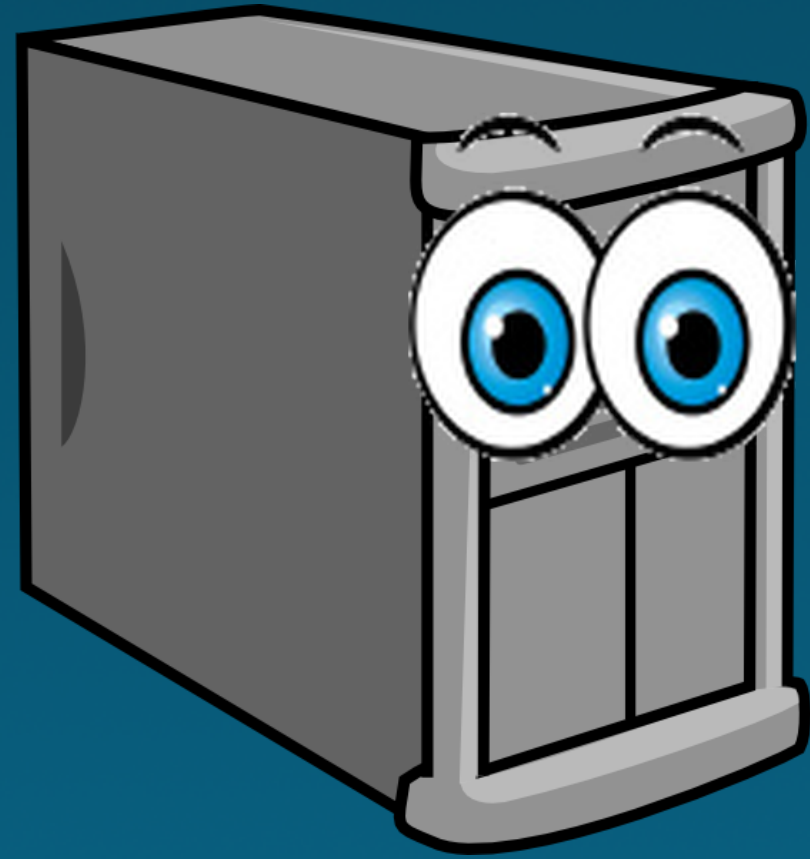






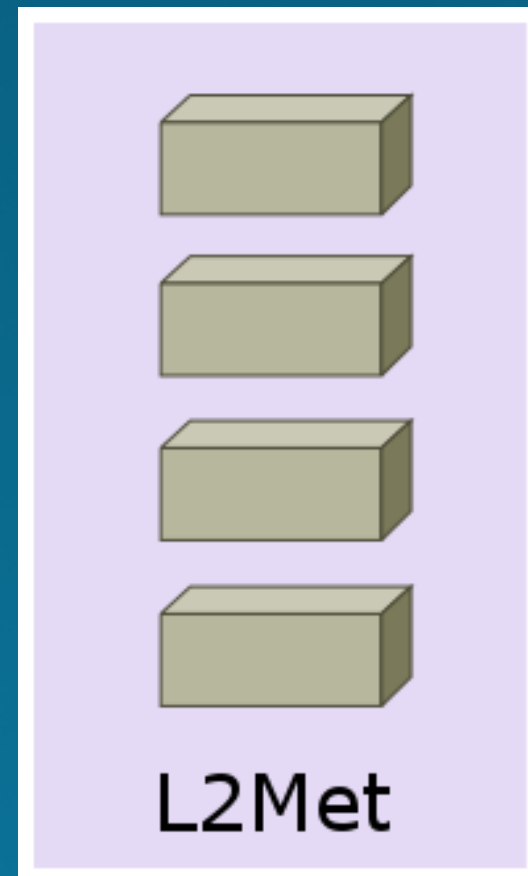
Undermines Credibility





Undermines Credibility

Silo's Knowledge

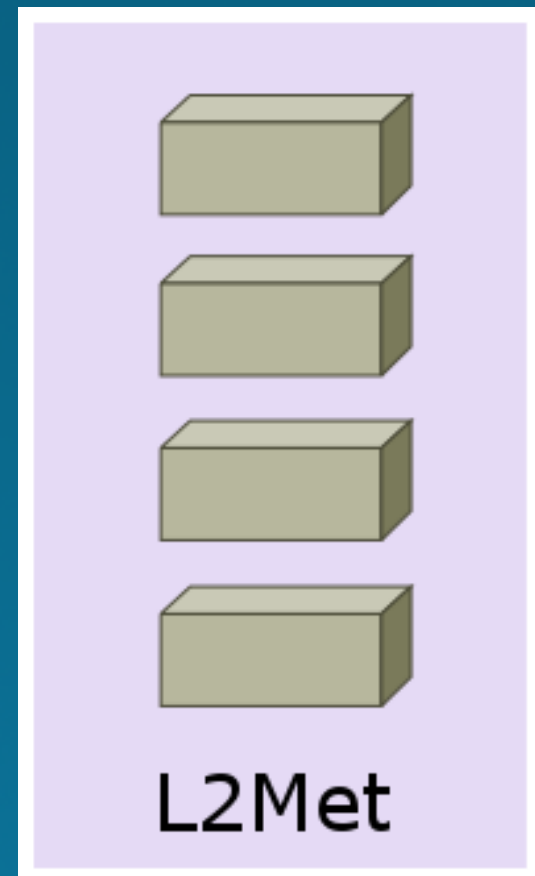


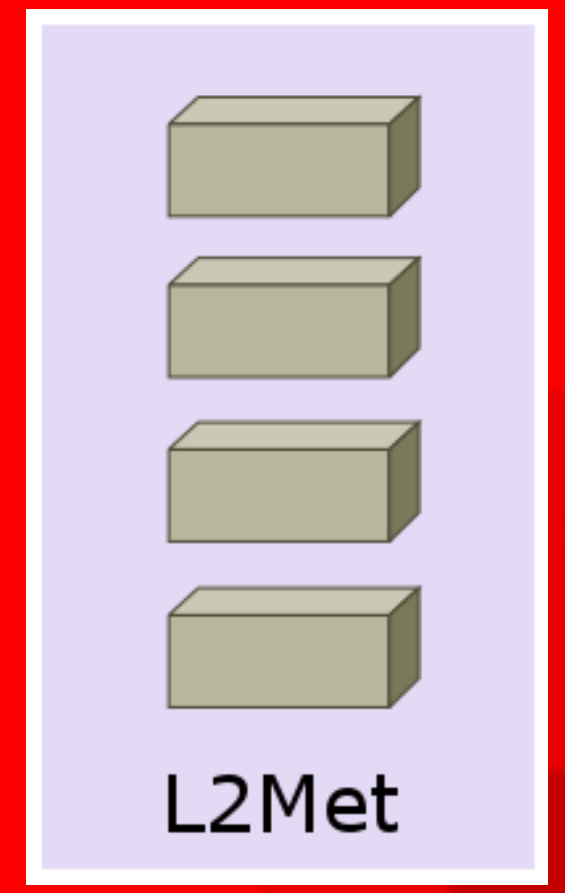
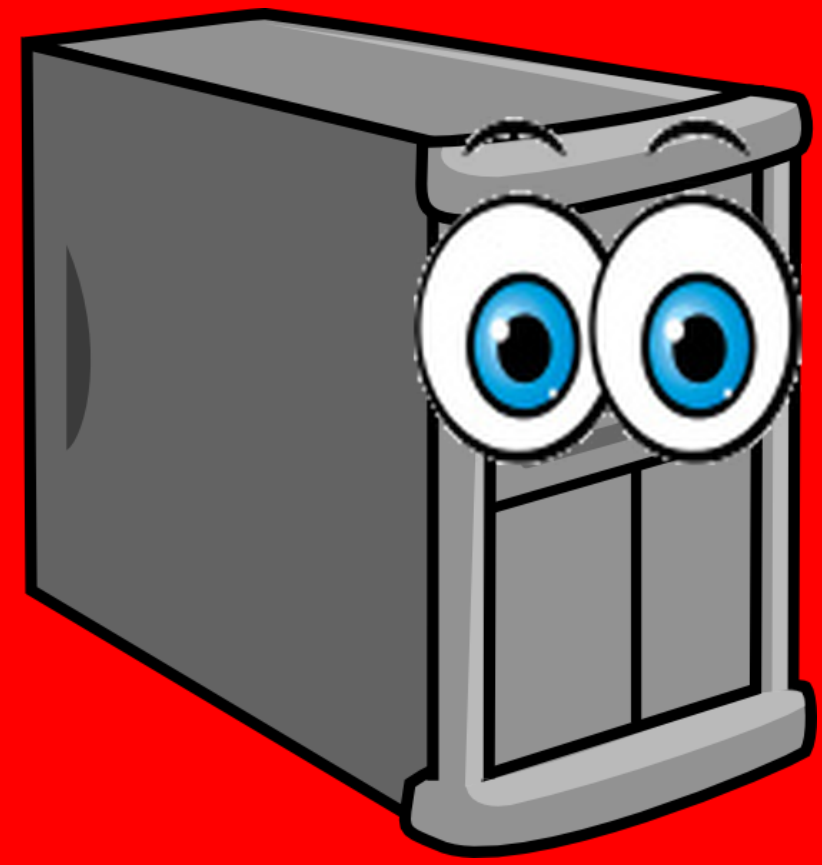


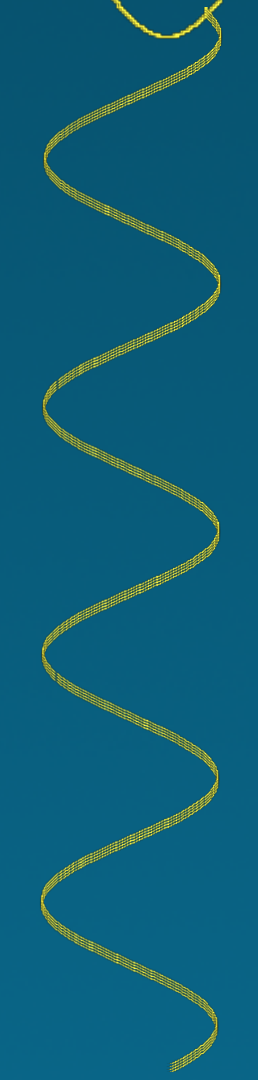
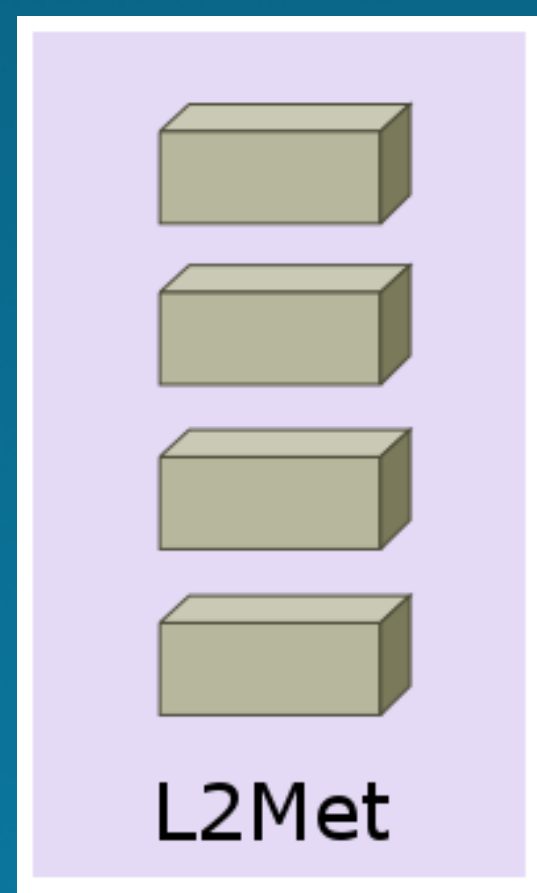
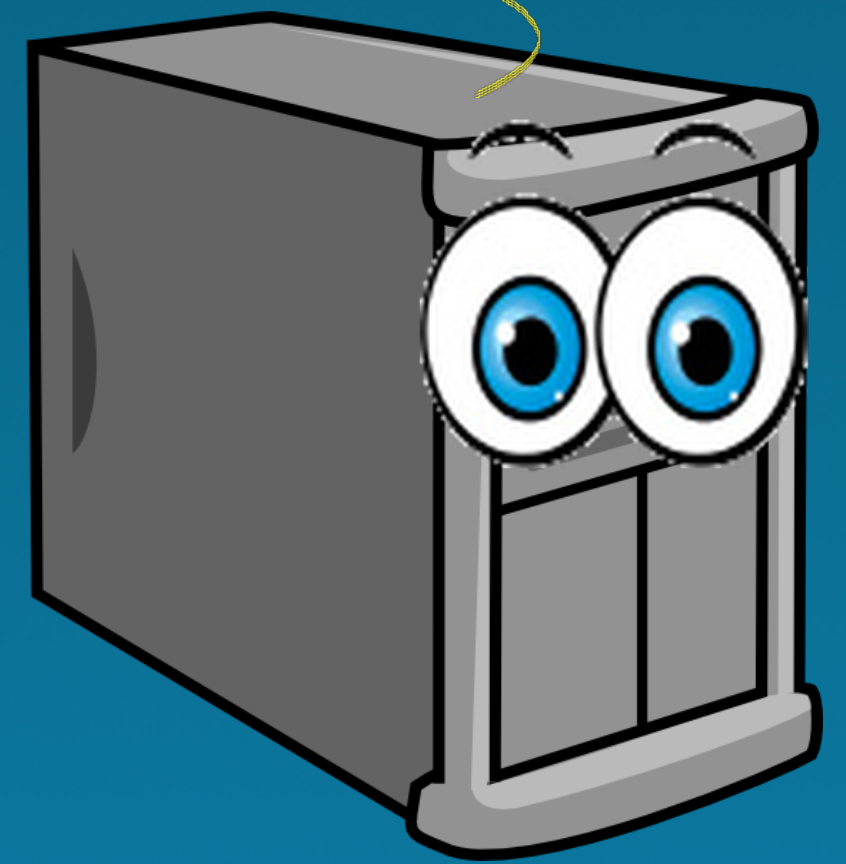
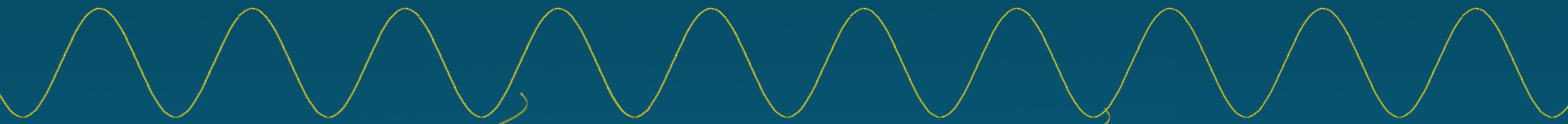
Undermines Credibility

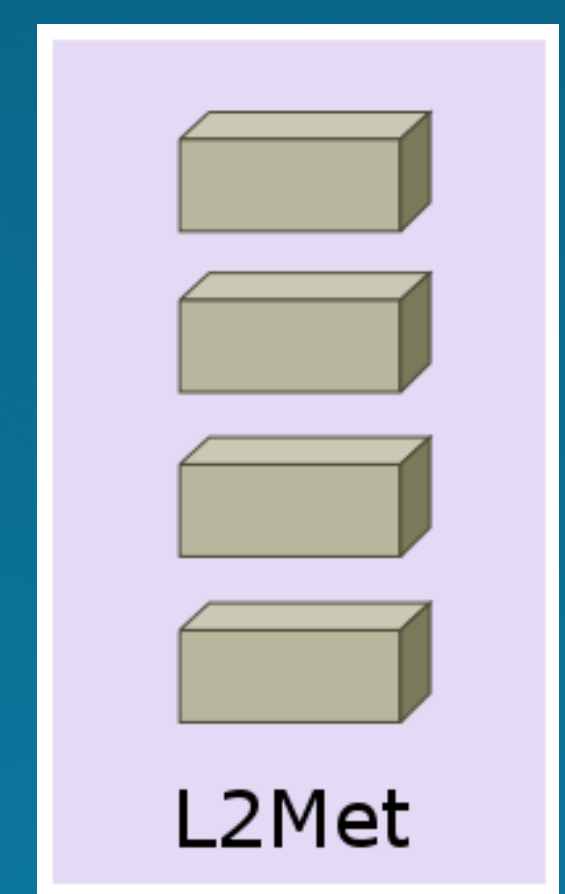
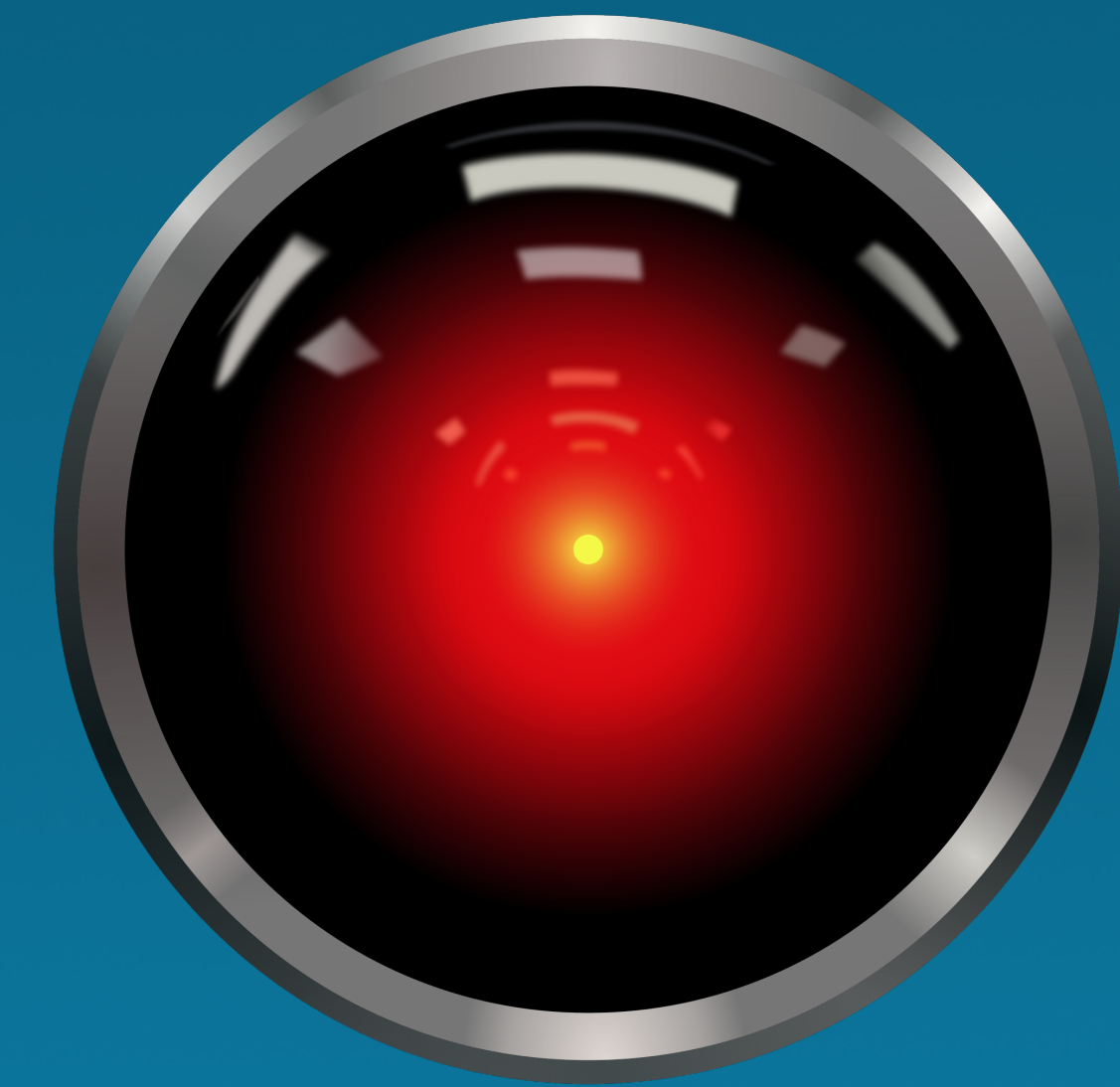
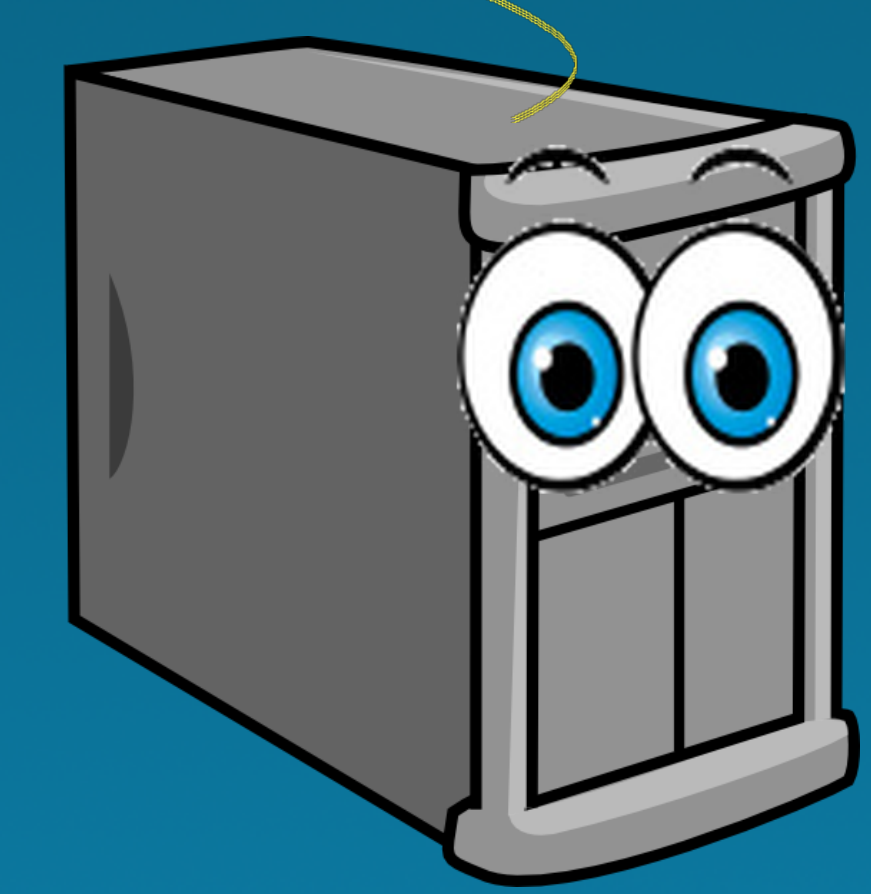
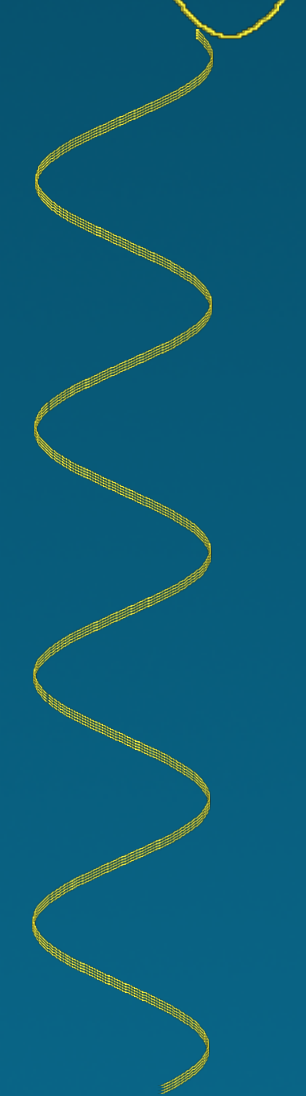
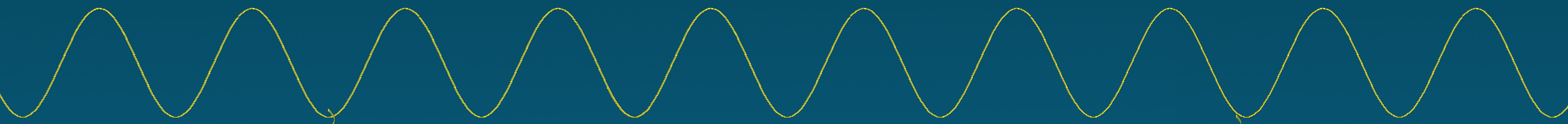
Silo's Knowledge

Multiplies Burden





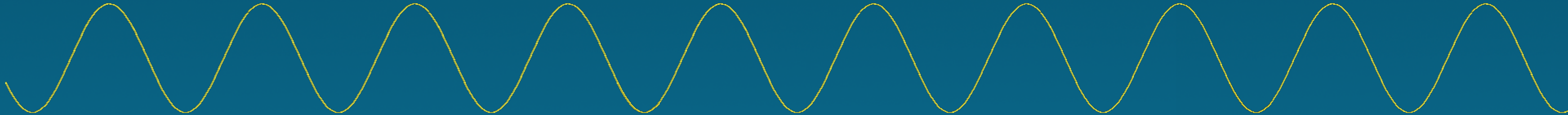




L2Met

Heka

<http://hekad.readthedocs.org/en/v0.7.2/>



Riemann

<http://riemann.io/>

DANGER

LIVE Demo Ahead!

Questions?

