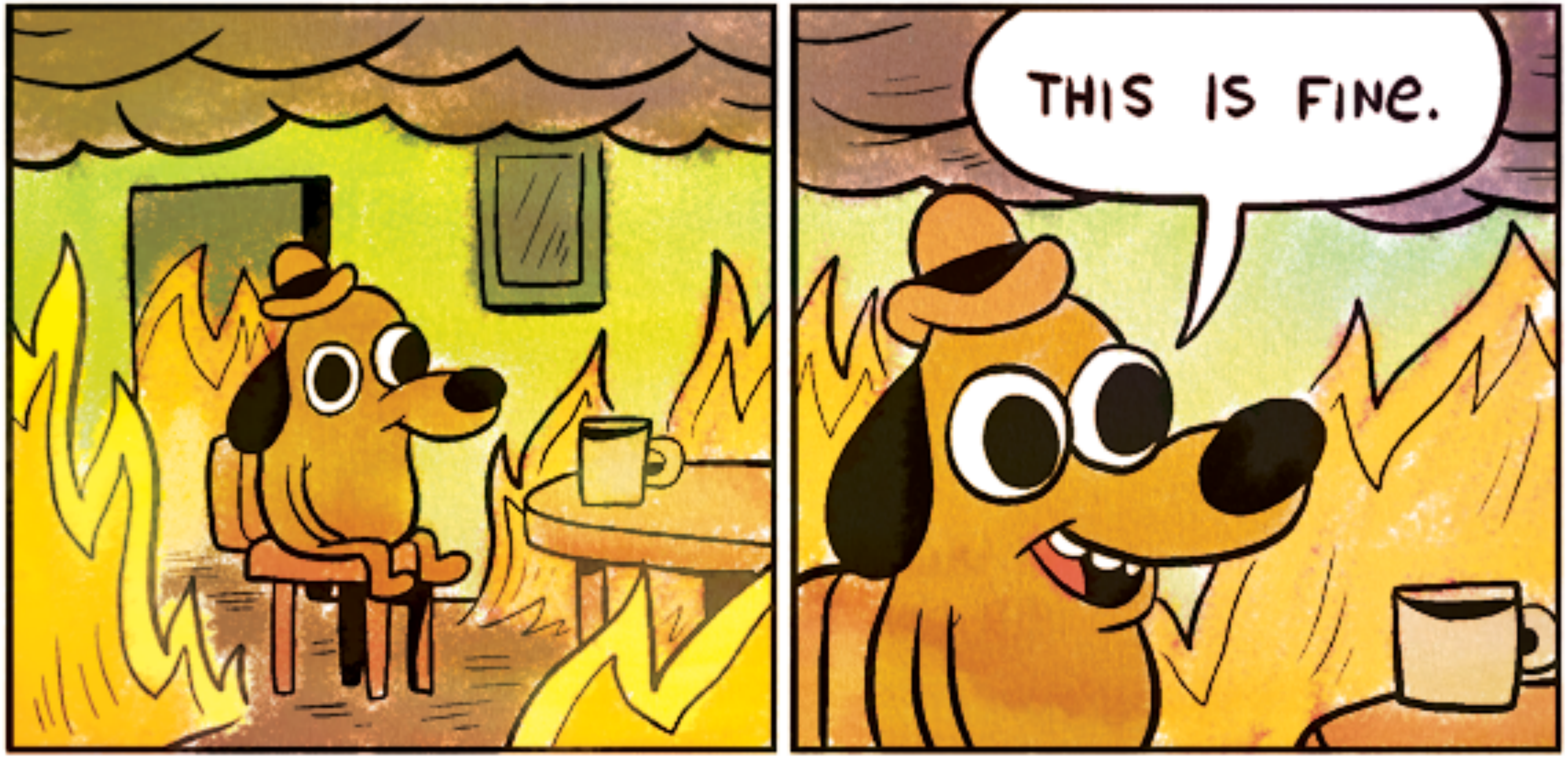
SCALE YOUR AUDITING EVENTS

Philipp Krenn @xeraa

elastic


THIS IS FINE.

Learn about a breach

FROM THE PRESS OR USERS

Learn about a breach

ATTACKERS ASKING FOR A RANSOM

Learn about a breach

CLOUD PROVIDER'S BILL

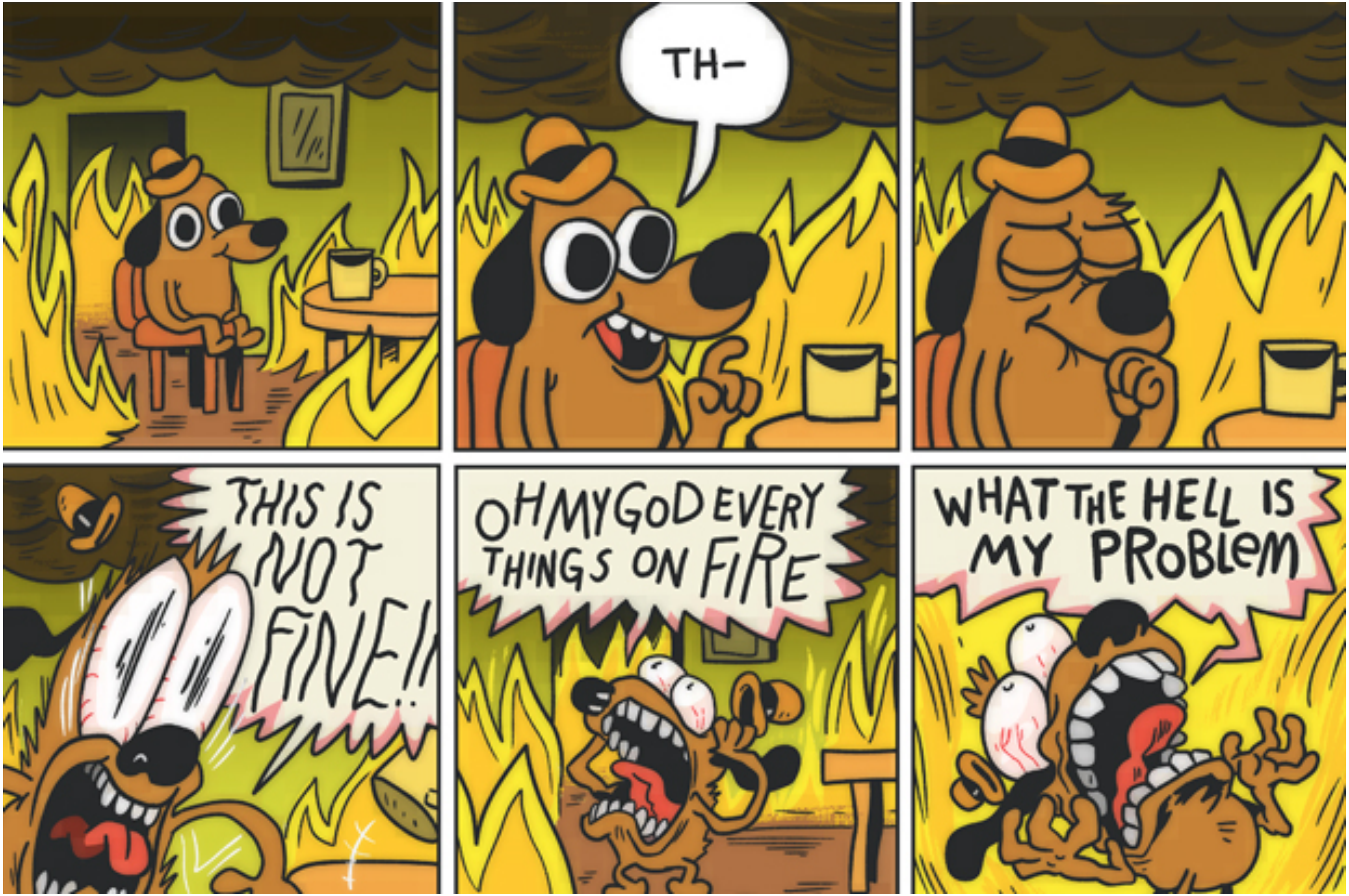
Learn about a breach

YOURSELF AFTER THE FACT

Learn about a breach

YOURSELF & YOU CAN PROVE NO HARM

elastic


TH-
THIS IS NOT FINE!!
OHMYGOD EVERY THINGS ON FIRE
WHAT THE HELL IS MY PROBLEM

No silver bullet 🔫

AUDITD

https://github.com/linux-audit

"auditd is the userspace component to the Linux Auditing System. It's responsible for writing audit records to the disk. Viewing the logs is done with the `ausearch` or `aureport` utilities."

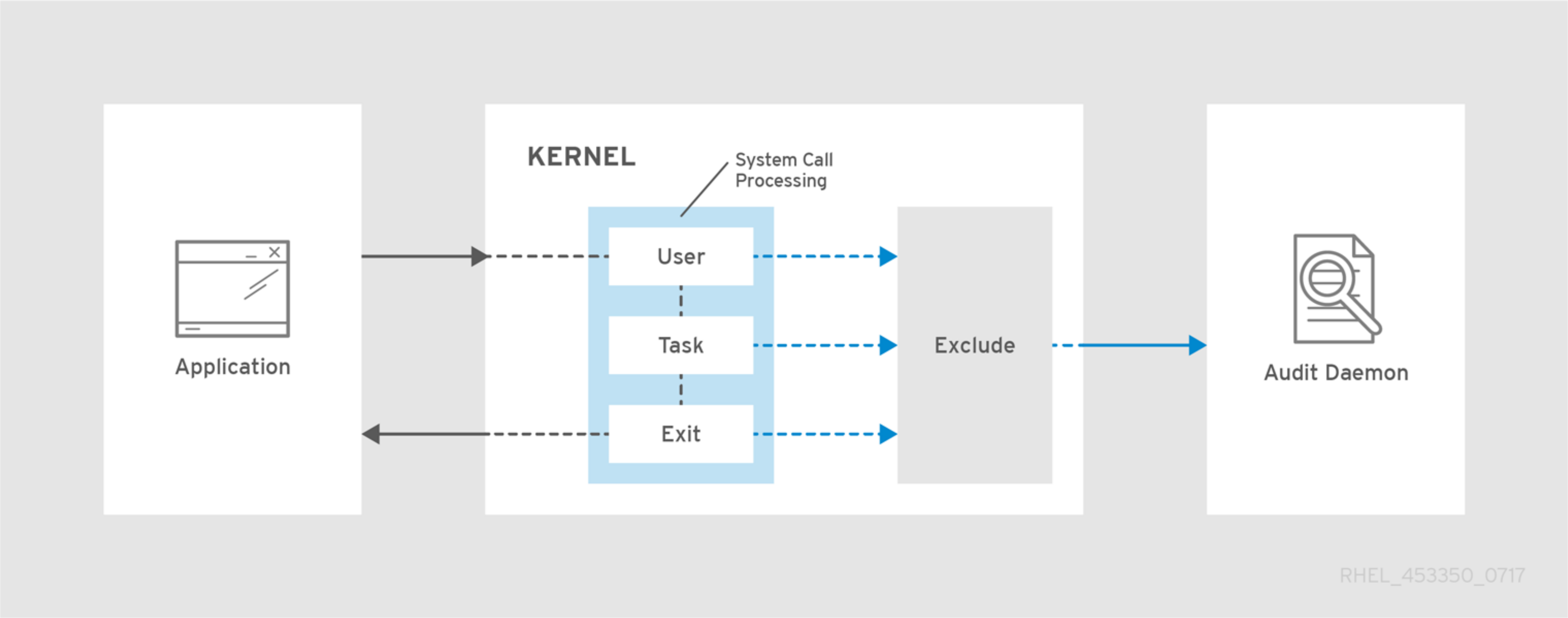
MONITOR

File and network access

System calls

Commands run by a user

Security events


Application
KERNEL
System Call Processing
User
Task
Exit
Exclude
Audit Daemon
RHEL_453350_0717

https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/security_guide/chap-system_auditing

Demo

Understanding Logs

https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/security_guide/sec-understanding_audit_log_files

More Rules

https://github.com/linux-audit/audit-userspace/tree/master/rules

NAMESPACES WIP

https://github.com/linux-audit/audit-kernel/issues/32#issuecomment-395052938

ALL THE THINGS!

Problem

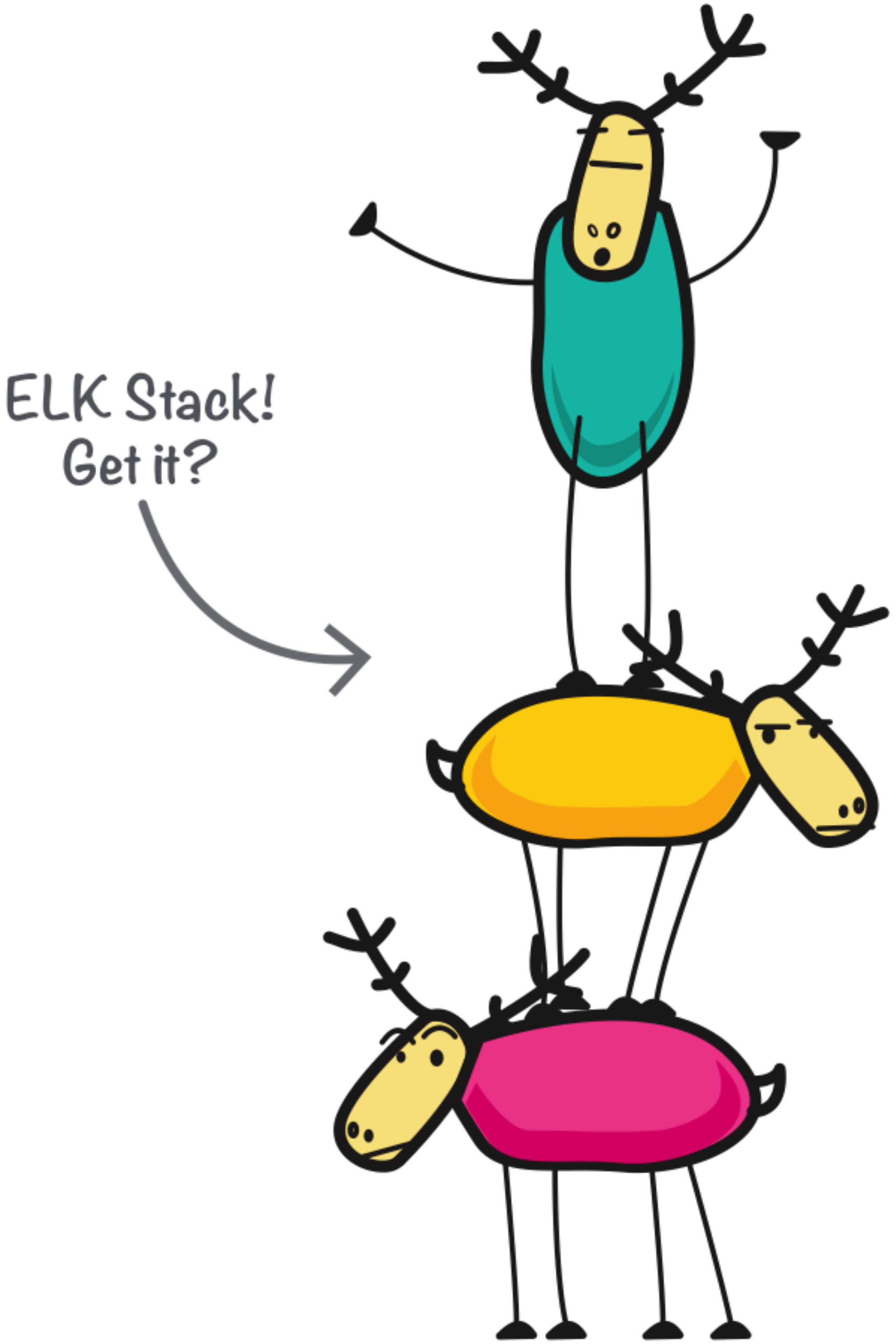
HOW TO CENTRALIZE?

elastic

Developer 🥑

Disclaimer

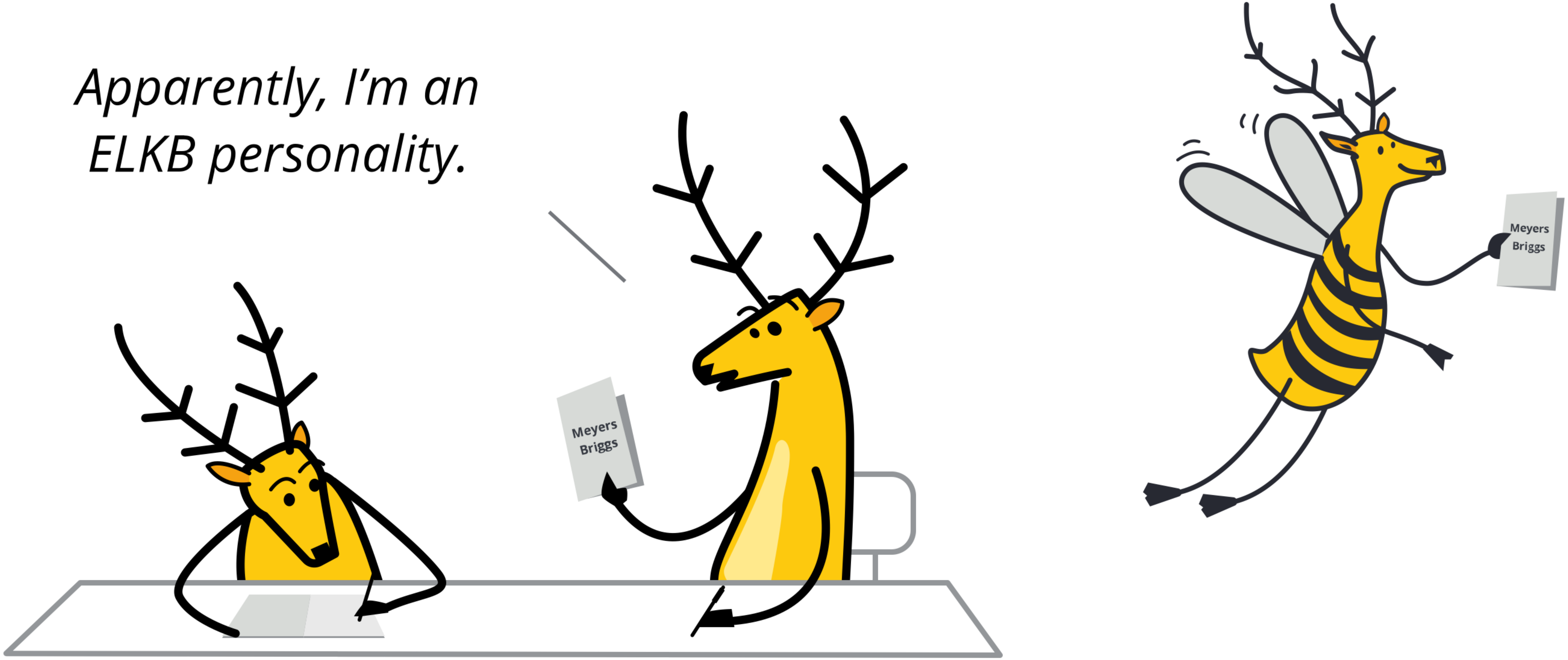
I build highly monitored Hello World apps

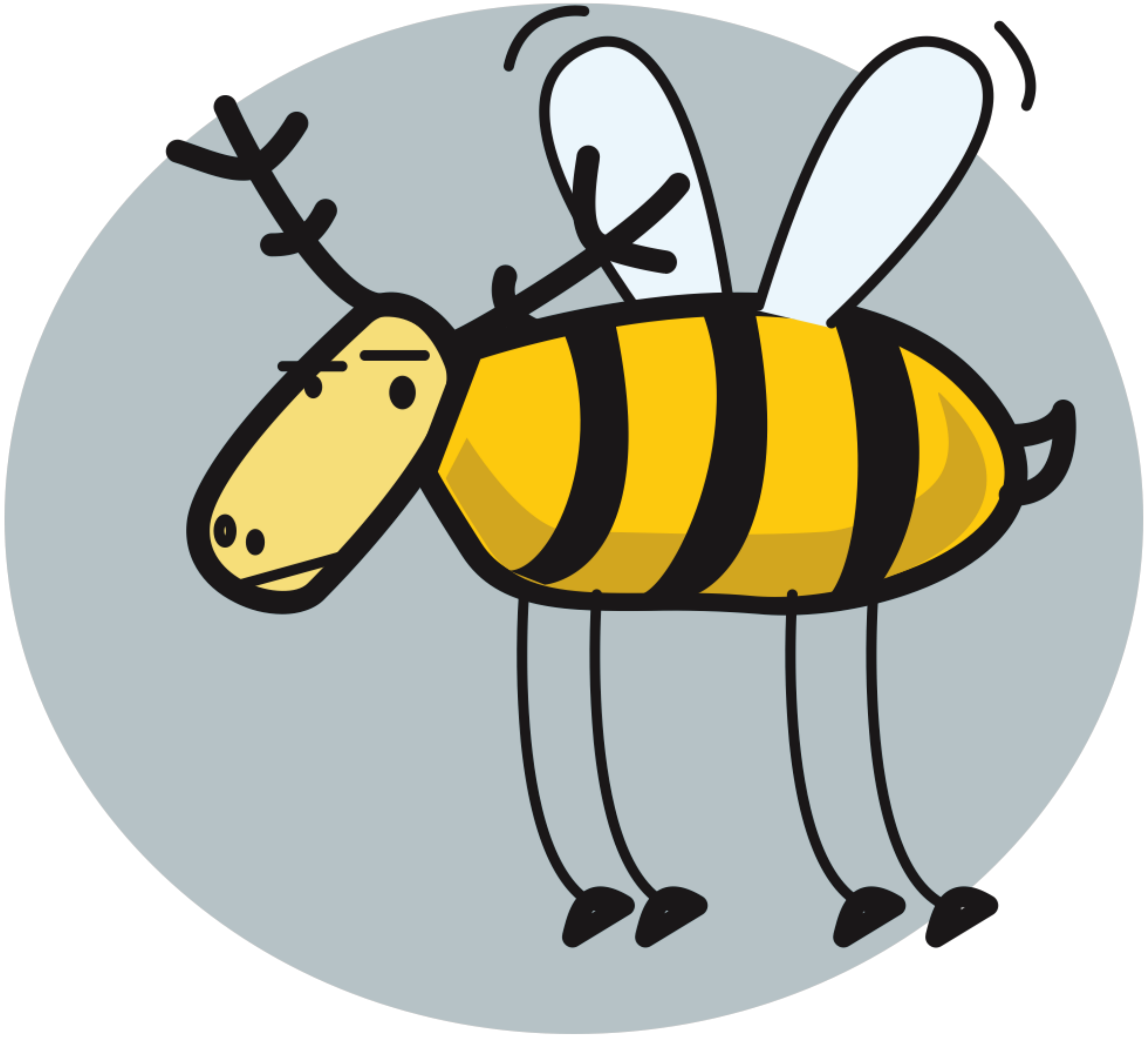

ELK Stack!
Get it?

E Elasticsearch

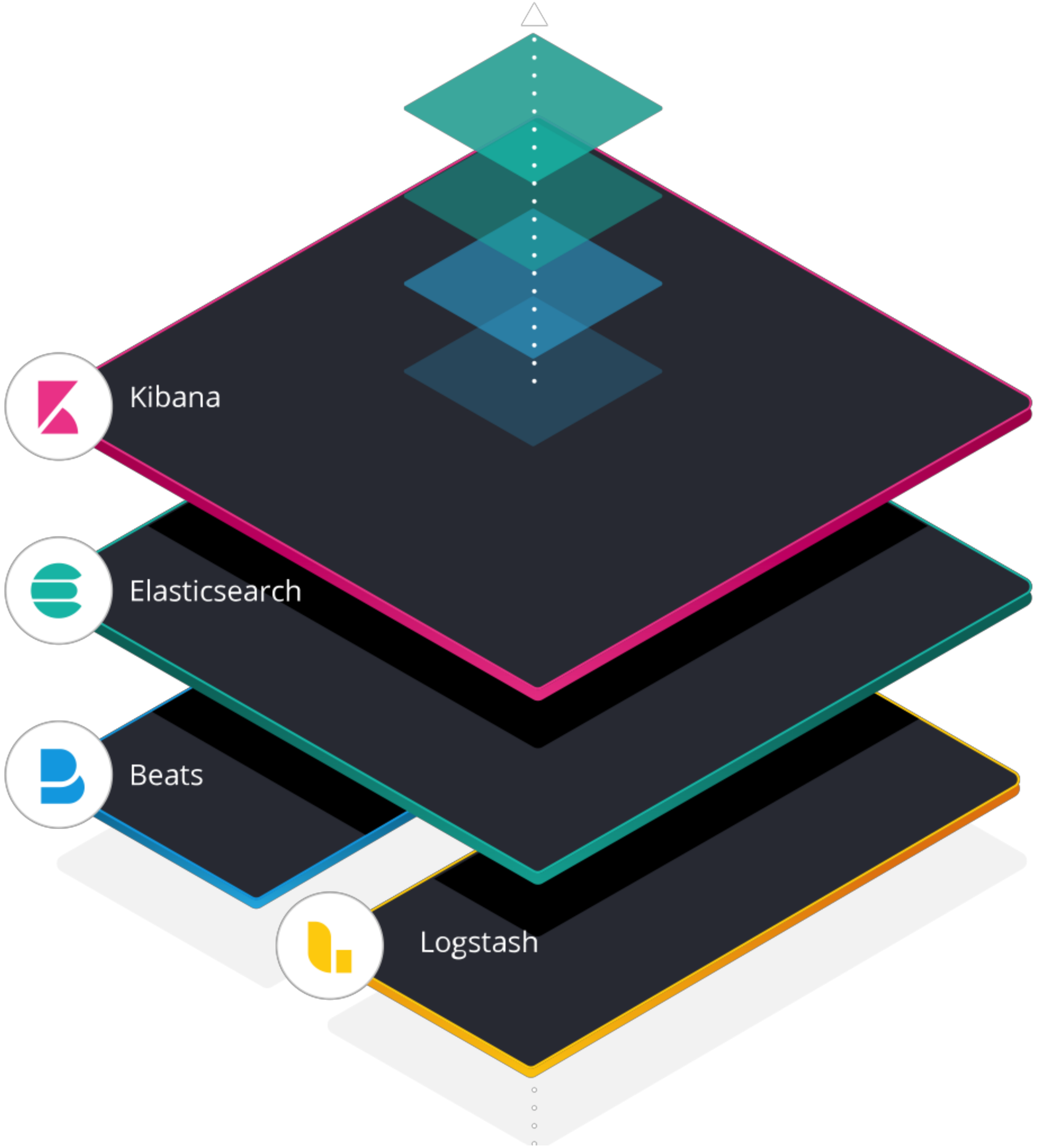
L Logstash

K Kibana


Apparently, I'm an ELKB personality.
Meyers Briggs
Meyers Briggs



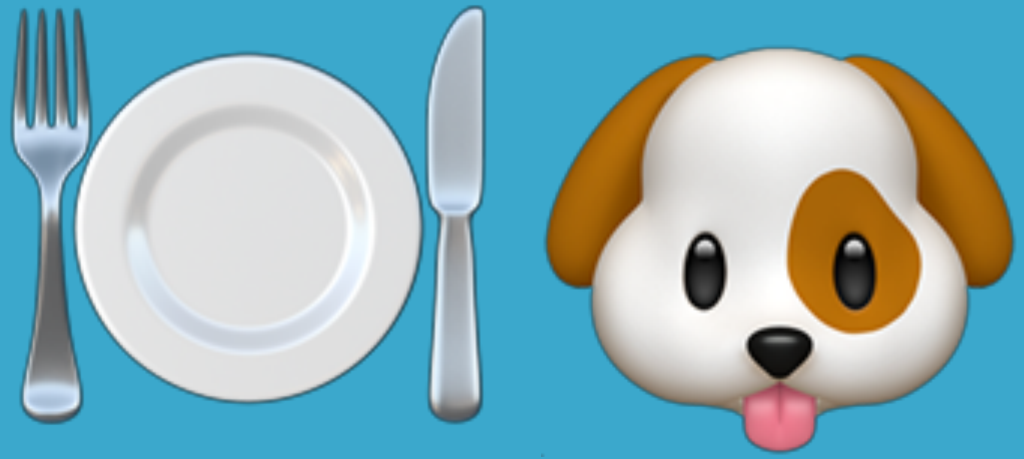
elastic stack


Kibana
Elasticsearch
Beats
Logstash

Filebeat Module: Auditd

elastic

Demo



elastic cloud

https://cloud.elastic.co

AUDITBEAT

elastic

AUDITD MODULE

Correlate related events

Resolve UIDs to user names

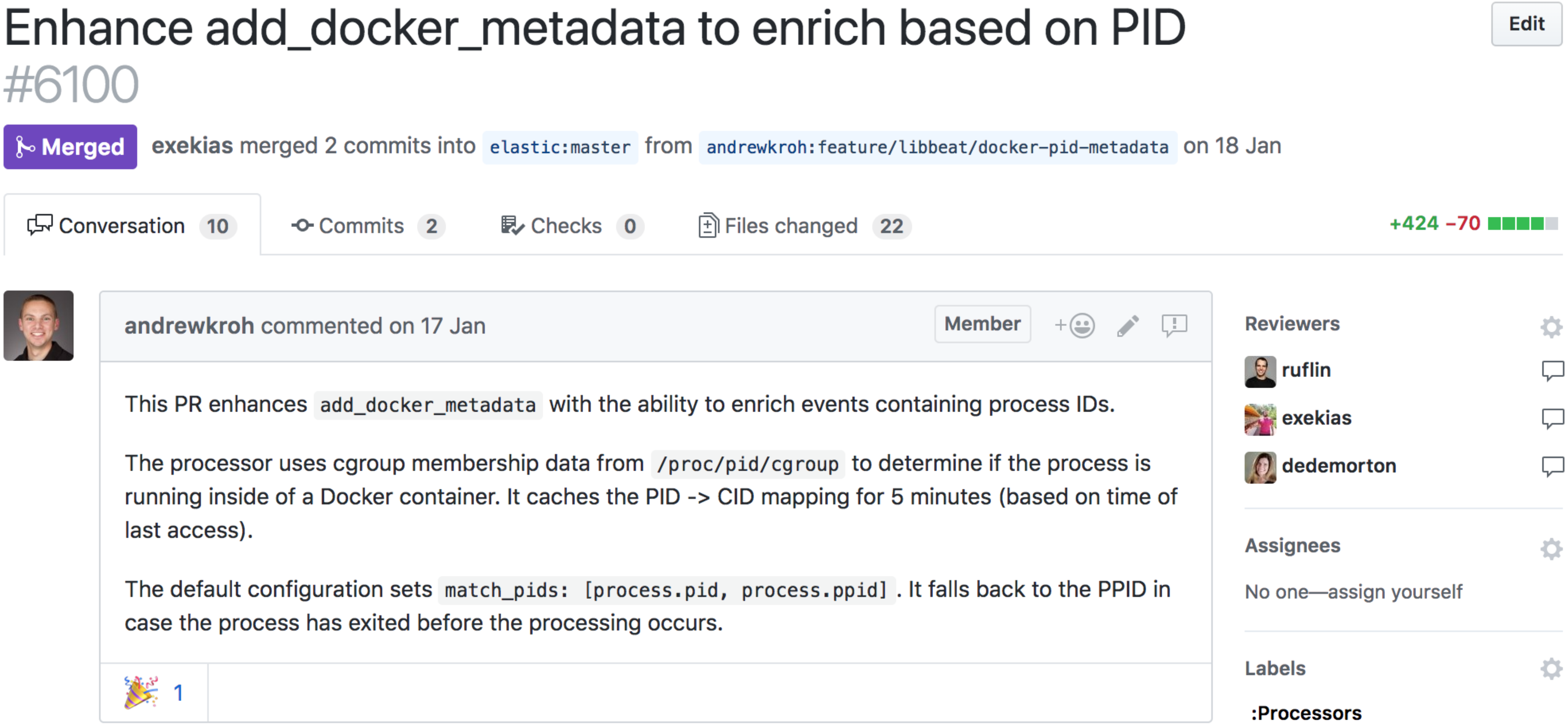
Native Elasticsearch integration

AUDITD MODULE

eBPF powers on older kernels

Easier configuration

Written in Golang



Enhance add_docker_metadata to enrich based on PID #6100

Merged **exekias** merged 2 commits into `elastic:master` from `andrewkroh:feature/libbeat/docker-pid-metadata` on 18 Jan

andrewkroh commented on 17 Jan

This PR enhances `add_docker_metadata` with the ability to enrich events containing process IDs.

The processor uses cgroup membership data from `/proc/pid/cgroup` to determine if the process is running inside of a Docker container. It caches the PID -> CID mapping for 5 minutes (based on time of last access).

The default configuration sets `match_pids: [process.pid, process.ppid]`. It falls back to the PPID in case the process has exited before the processing occurs.

Reviewers

ruflin
exekias
dedemorton

Assignees

No one—assign yourself

Labels

:Processors

GO-LIBAUDIT

https://github.com/elastic/go-libaudit

go-libaudit is a library for communicating with the Linux Audit Framework

Demo

elastic

SYSTEM MODULE

Easier configuration for host, process, socket, user

Added in 6.6 — not based on Auditd

Demo

FILE INTEGRITY MODULE

inotify (Linux)
fsevents (macOS)
ReadDirectoryChangesW (Windows)

hash_types

blake2b_256, blake2b_384, blake2b_512, md5, sha1, sha224, sha256, sha384, sha512, sha512_224, sha512_256, sha3_224, sha3_256, sha3_384, sha3_512, xxh64

Demo

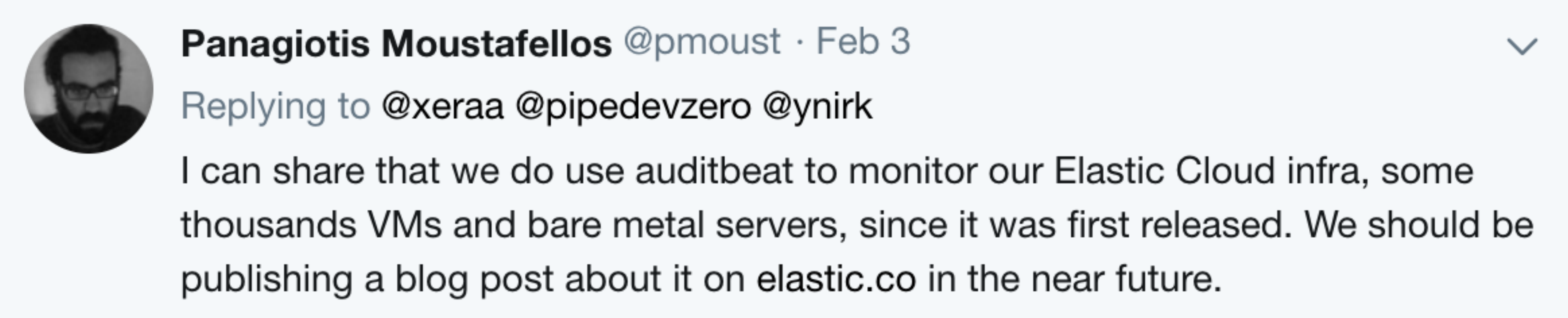
elastic

CONCLUSION

Auditd

Auditbeat

Logs, Dashboards,...



Panagiotis Moustafellos @pmoust · Feb 3

Replying to @xeraa @pipedevzero @ynirk

I can share that we do use auditbeat to monitor our Elastic Cloud infra, some thousands VMs and bare metal servers, since it was first released. We should be publishing a blog post about it on elastic.co in the near future.

Code

https://github.com/xeraa/auditbeat-in-action

Similar Solutions

https://github.com/slackhq/go-audit

https://github.com/Scribery/aushape

QUESTIONS?

Philipp Krenn @xeraa

PS: Sticker

elastic