What Prometheus means for monitoring vendors

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Sysdig - PromCon 2018

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What is a monitoring vendor?

Different vendors provide monitoring

- Traditional based vendors

- Database based vendors

- Prometheus added-value vendors

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What is Prometheus?

Multiple meanings for a word

- TSDB: metrics server

- Monitoring stack

- Metrics interface

- A way to instrument your code

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A way to instrument your code

Monitoring vendors had to provide
customers custom metrics

- JMX

- statsd

- expvars

- push to vendor API

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PITA for everyone

- maintain huge code base with little value

- different interfaces between vendors

- not always available for your language

- doesn't work with microservices / Kubernetes

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Trying to fix this problem

- Metrics 2.0

- dogstatsd

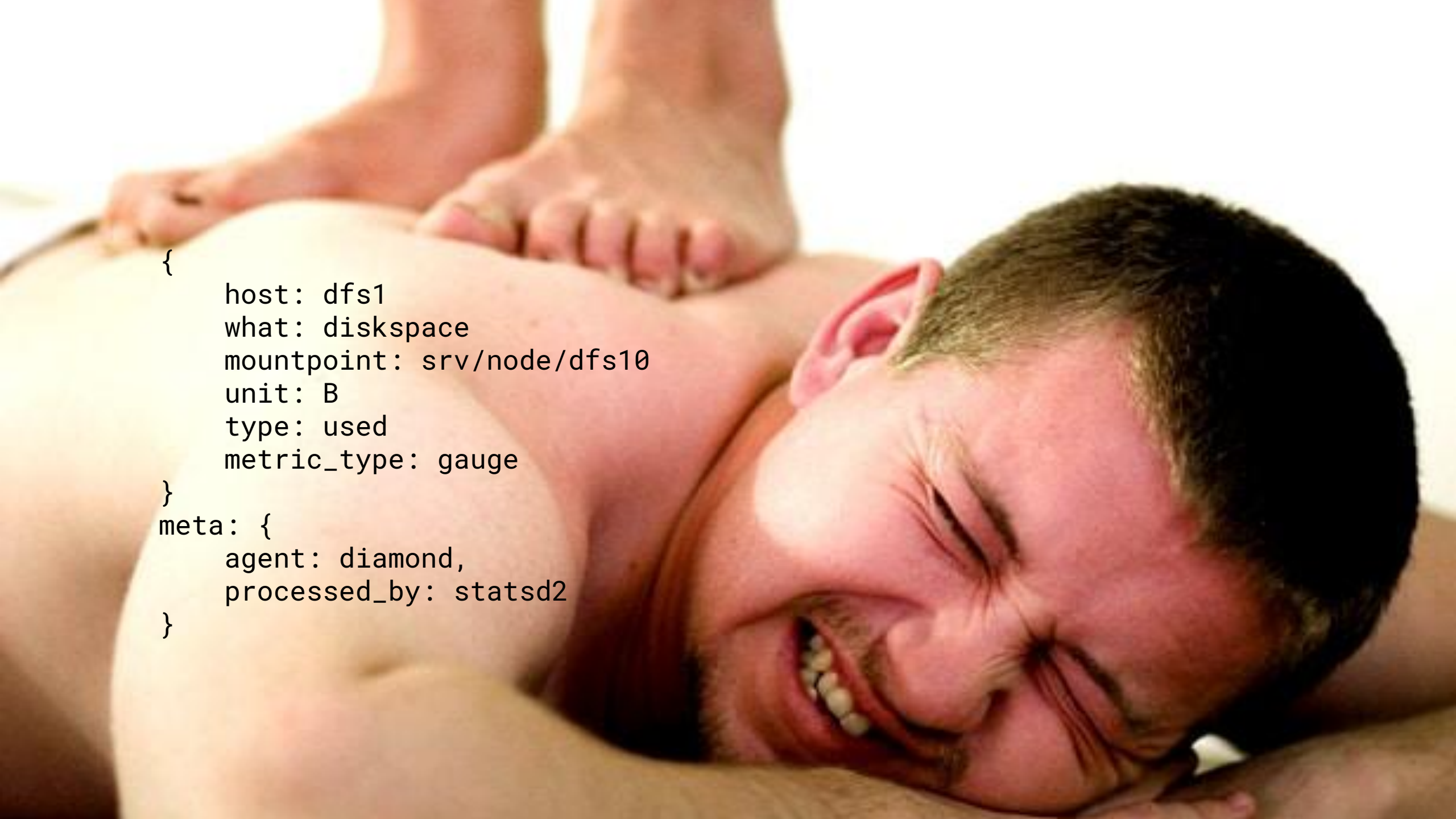- **Prometheus metrics**

- Open Metrics

- Open Census

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Prometheus metrics

- Defacto industry standard for exposing metrics

- Cloud-Native apps support OOB
  - k8s: apiserver, kube-controller-manager, etcd
  - kube-state-metrics
  - services: istio, traefik, coredns, fluentd, rook

- Instrument once, support many

  - Open source and commercial tools

  - Different purposes: infra and APM

- Can we kill checks/exporters/scripts *to massage jsons*?

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```
{
    host: dfs1
    what: diskspace
    mountpoint: srv/node/dfs10
    unit: B
    type: used
    metric_type: gauge
}
meta: {
    agent: diamond,
    processed_by: statsd2
}
```

Monitoring stack

Prometheus monitoring stack

- Prometheus server

- AlertManager

- Grafana

- Exporters

- Push Gateway

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Embracing Prometheus ecosystem

- Prometheus stack DIY

- Different organizations, different needs

- User experience touch points:

  - visualization

  - metric collection

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Visualization: Prometheus UI

- Grafana has become a popular interface

- Some teams don't want to change

- Some teams still prefer vendor's UI

- Give the choice

https://github.com/draios/grafana-sysdig-datasource

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Metric collection

- cadvisor, node_exporter, kube-state-metrics

- Sysdig's commercial agent:

  - eBPF / kernel module syscall tracing
  - per process metrics
  - short lived processes
  - container agnostic
  - host instrumentation vs sidecar

  - Expose metrics as a exporter

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Prometheus metrics server

Prometheus metrics server

- Some orgs want to run Prometheus

  - Alone or with other monitoring tools
  - Provide support to them anyway

  - Challenges:
    - Scalability
    - Multiple backends
    - Long term storage
    - Operations

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Vendors helping with the backend

- Offer hosted Prometheus backend

- Alternative backend (Sysdig):

  - Scalability, LTS, operations, RBAC

  - **PromQL: defacto industry standard for querying metrics**

  - Interface to other services:
    - Kubernetes custom-metrics-api-server

https://github.com/draios/kubernetes-sysdig-metrics-apiserver

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To wrap up

Monitoring vendors and Prometheus

- Some have seen Prometheus as a threat
- We believe it's an opportunity:
  - Metrics standardization
  - Do more:
    - scale with the ecosystem
    - approach new opportunities
    - contribute back to the community
- *Open source users are not lost deals, think how you can provide value to people using open source*

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Sysdig ♥ Prometheus

- Offer Prometheus support

- Allow to mix and match

  - Visualization (Grafana or Sysdig Monitor)

  - Metric collection (Sysdig agent for Prometheus users)

  - Backend (Sysdig backend with Grafana and exporters)

- Contribute back:

  - Sysdig and Sysdig Inspect, Falco, etc.

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Thank you! :)

Help us with the Prometheus user survey:
https://setns.run/2KGIZ9e

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Questions?