

DevOps Monitoring Deep Dive

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Job History :

Wallex - DevOps/Infra Team

Zarinpal - DevOps Team

Digikala - DevOps/Infra Team

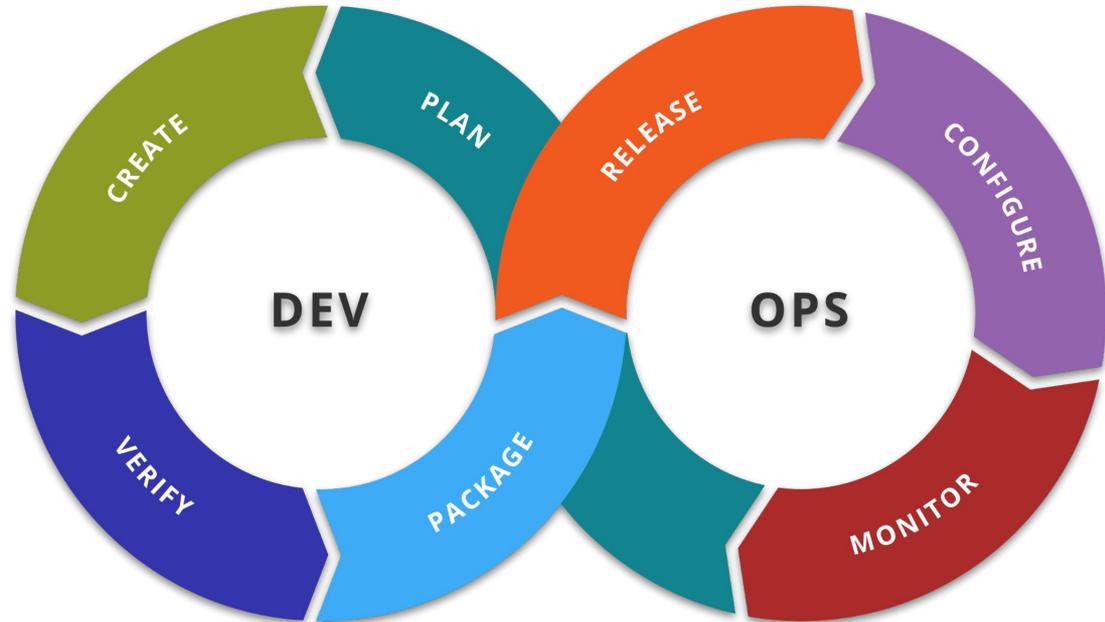
Jainjas - Infra Team

Shabdiz Telecom Network - NOC Team

And ...

Monitoring In DevOps

- Tshoot
- Quality Of Service
- Reliability



Observability Vs Monitoring



Types of Monitoring

Black Box

Monitoring from the Outside

Polling, Uptime, pings, etc

Status from 3rd Party Systems you rely on

White Box

Monitoring from the Inside

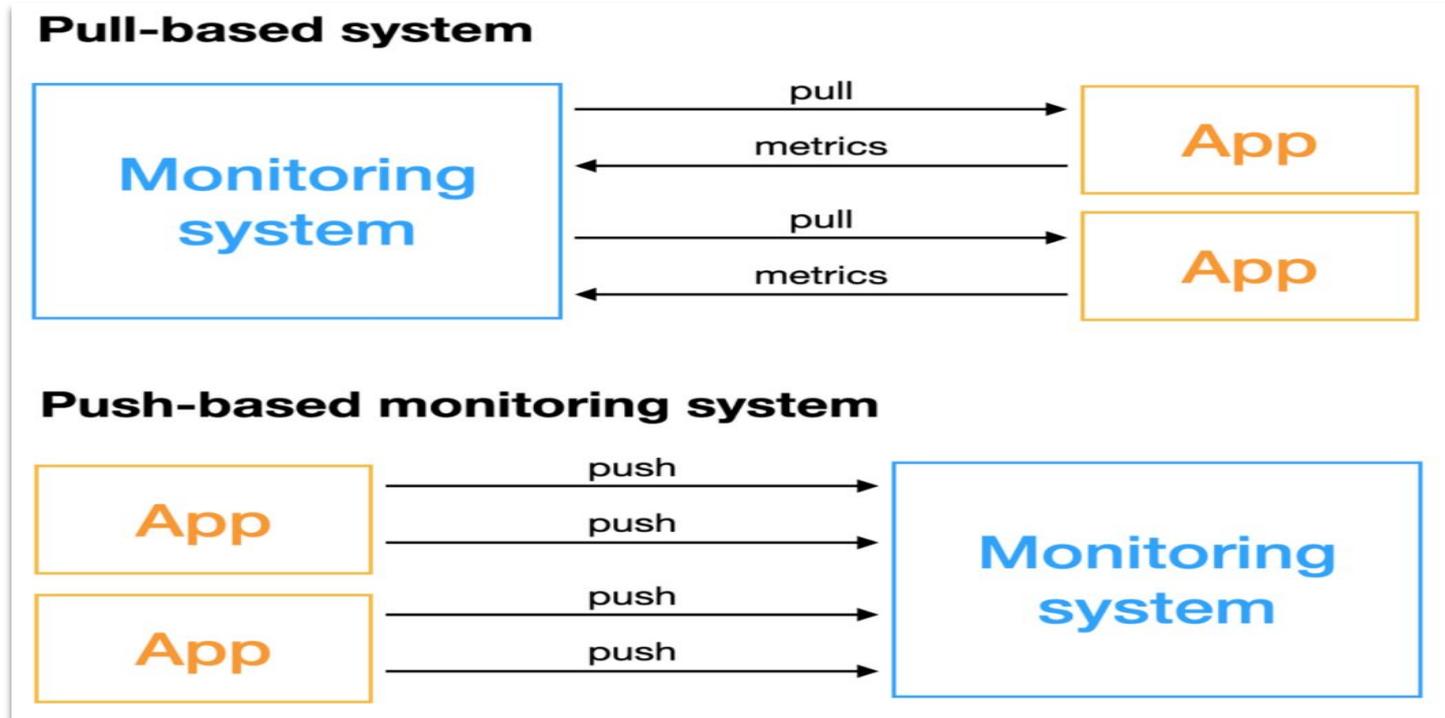
Metrics, Logs and Traces

Systems you own and can instrument

What Are Good Monitoring Tools?

- Early detection
- Real-time alerts
- Improve reliability
- Identify threats
- Cost effectiveness

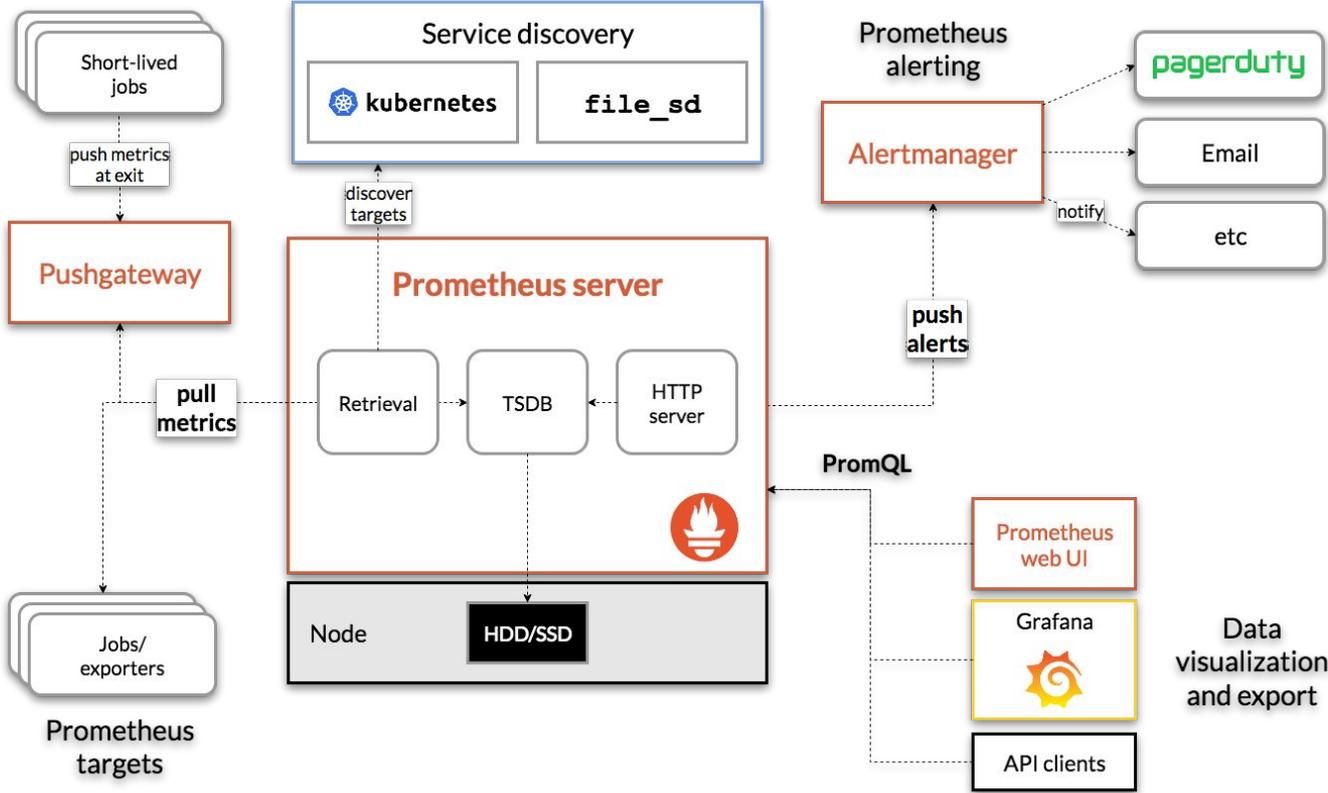
Pull Vs Push Base Monitoring



Best Practices

- **Keep It Simple**
- **Reduce False Alarm**
- **Culture in Tech Team**
- **Create Watchdog For Monitoring System**
- **Use Automation**

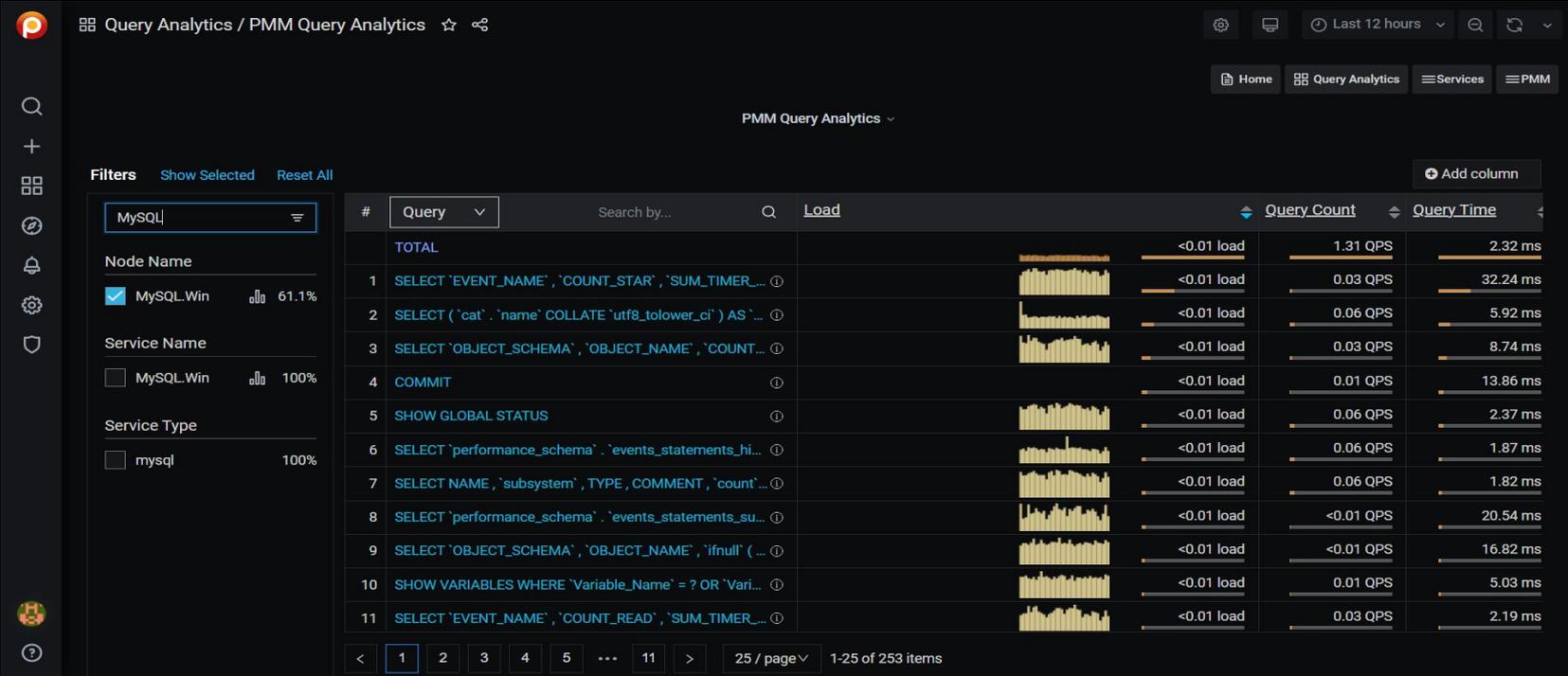
Prometheus Architecture



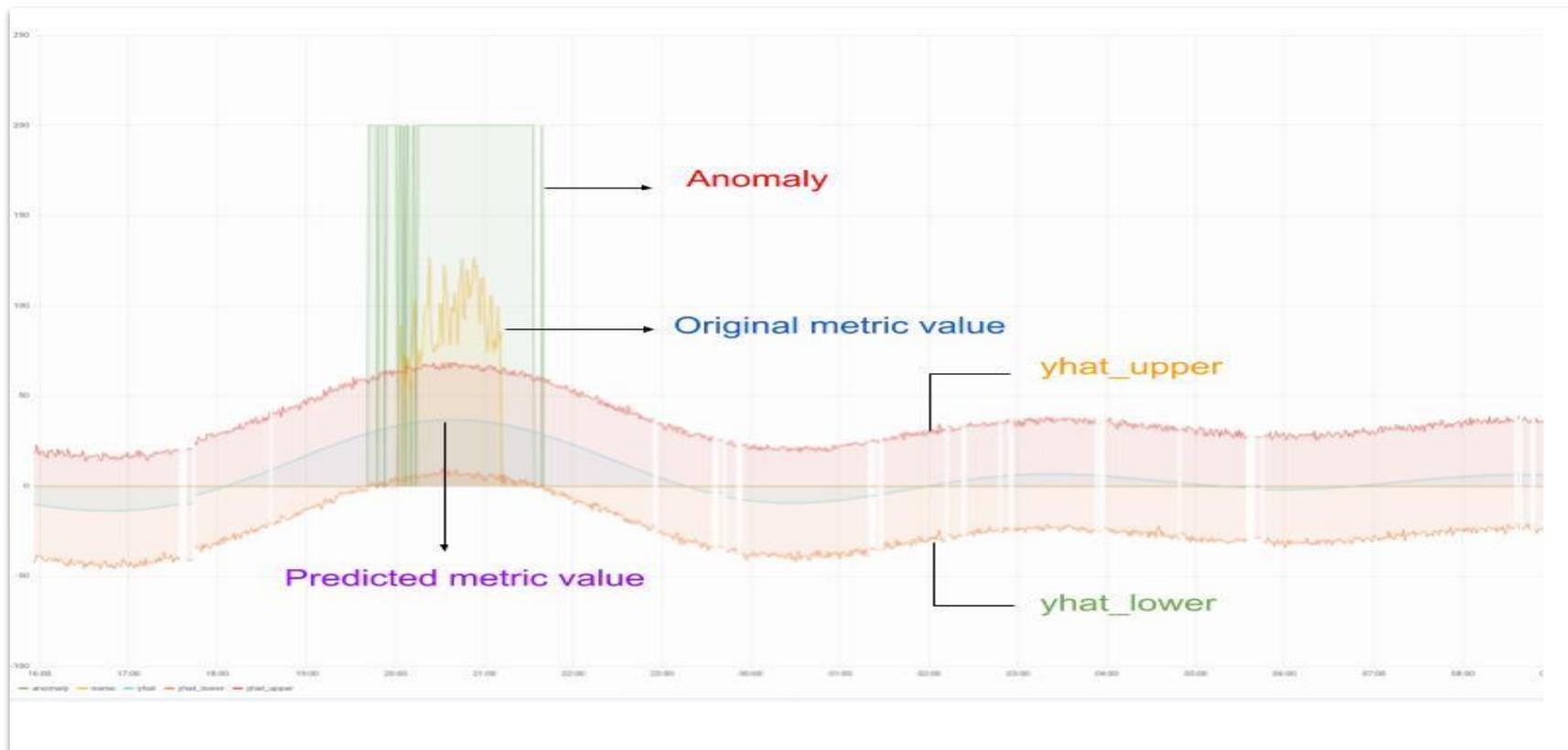
Application Performance Monitoring



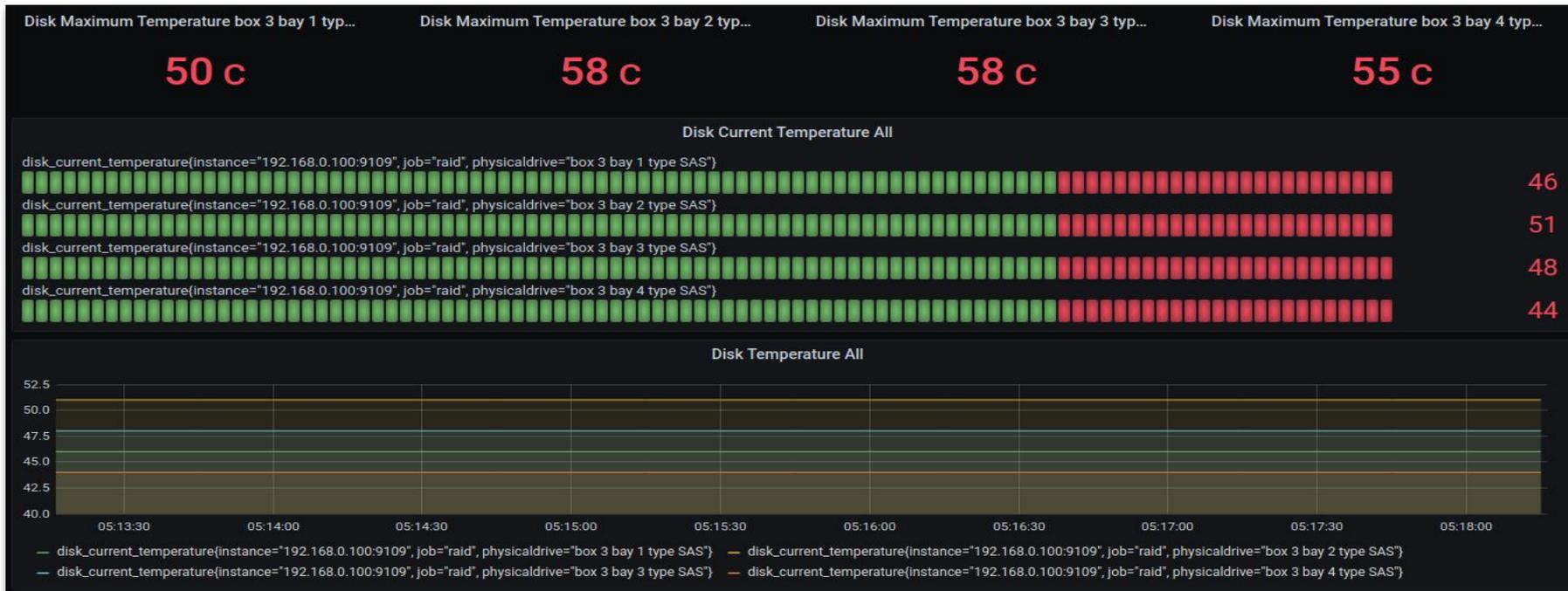
Database Performance Monitoring



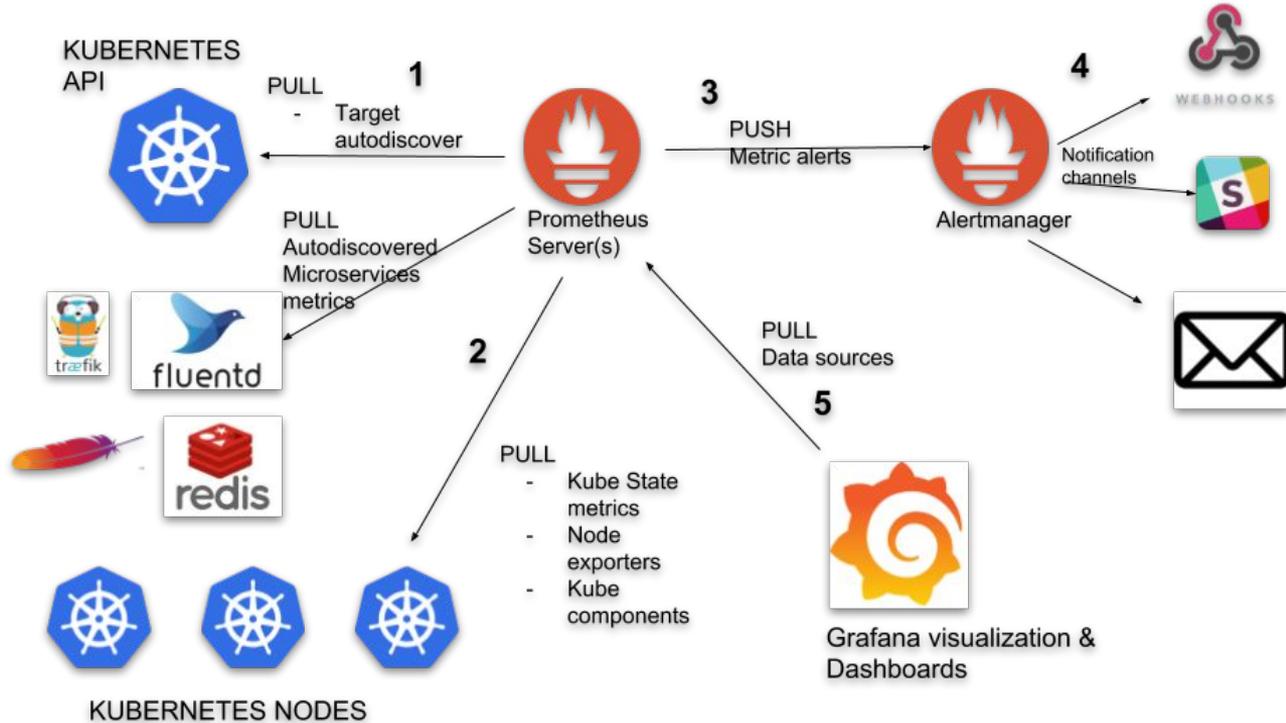
Anomaly Detection



Custom Exporters



Kubernetes Monitoring



Alerting



AlertManager APP 7:45 PM

[FIRING:2]

Alerts Firing:

- node2.stage: Device's CPU usage has exceeded threshold of 80 with a value of 96.35%.
- node2.stage: System has 89.98% of CPU steal.

[Show less...](#)



AlertManager APP 7:52 PM

[RESOLVED]

Alerts Resolved:

- node2.stage: System has 90.11% of CPU steal.
- node2.stage: Device's CPU usage has exceeded threshold of 80 with a value of 97.61%.

[Show less...](#)



AlertManager APP 10:52 PM

[FIRING:1] [high_memory_load @ ecs-10-0-4-182.dev](#)

System memory usage is high at 94.24%.

Creating an Environment

- Install On OS
- Docker
- Kubernetes