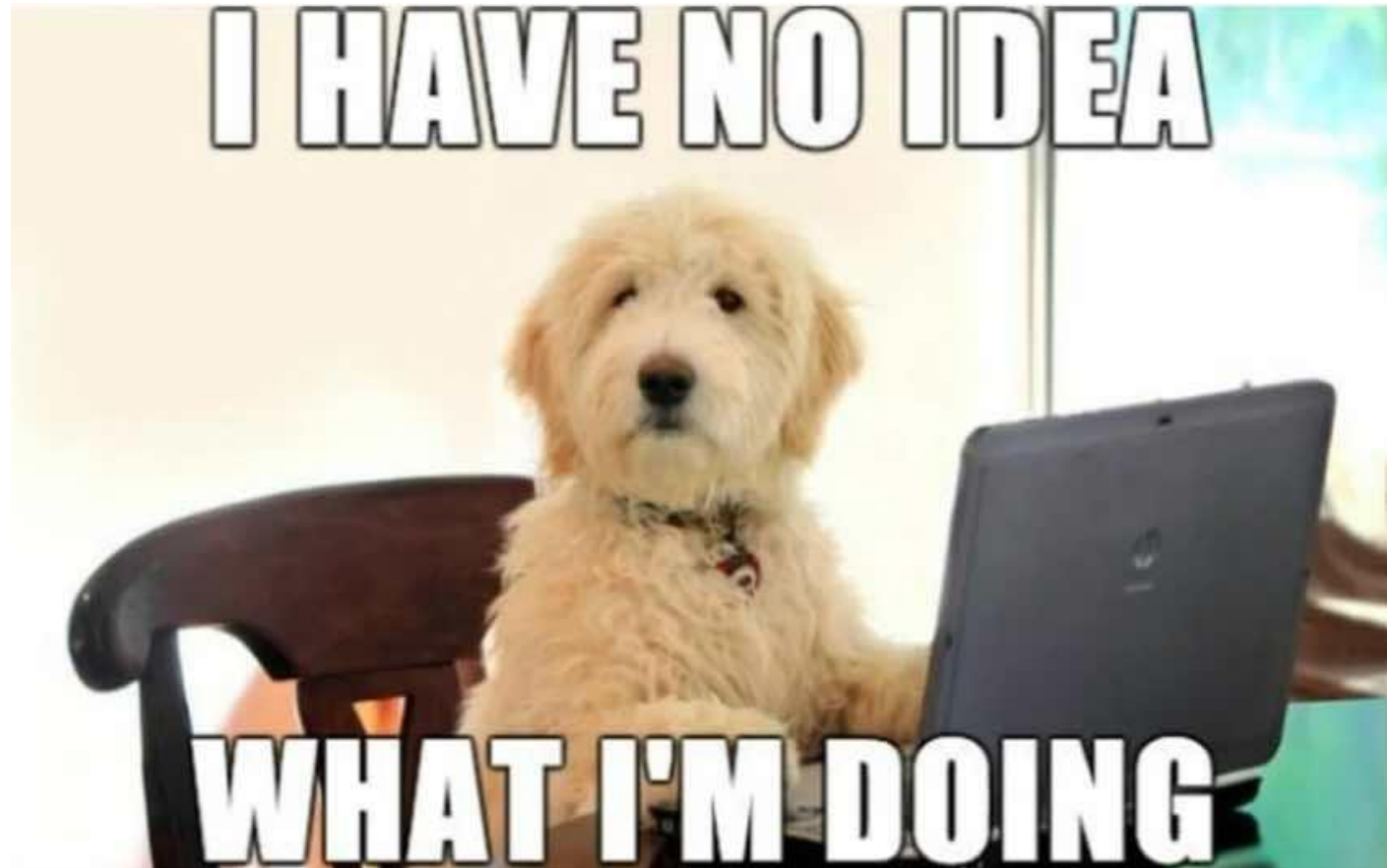




PROMETHEUS BASICS

Sc3p73R





WHAT IS PROMETHEUS

- Prometheus is an open-source monitoring tool that collects metrics data, and provide tools to visualize the collected data
- In additions, Prometheus allows you to generate alerts when metrics reach a user specified threshold
- Prometheus collets metrics by scraping targets who expose metrics through an HTTP endpoint
- Scraped metrics are then stored in a time series database which can be queried using Prometheus built-in query language PromQL



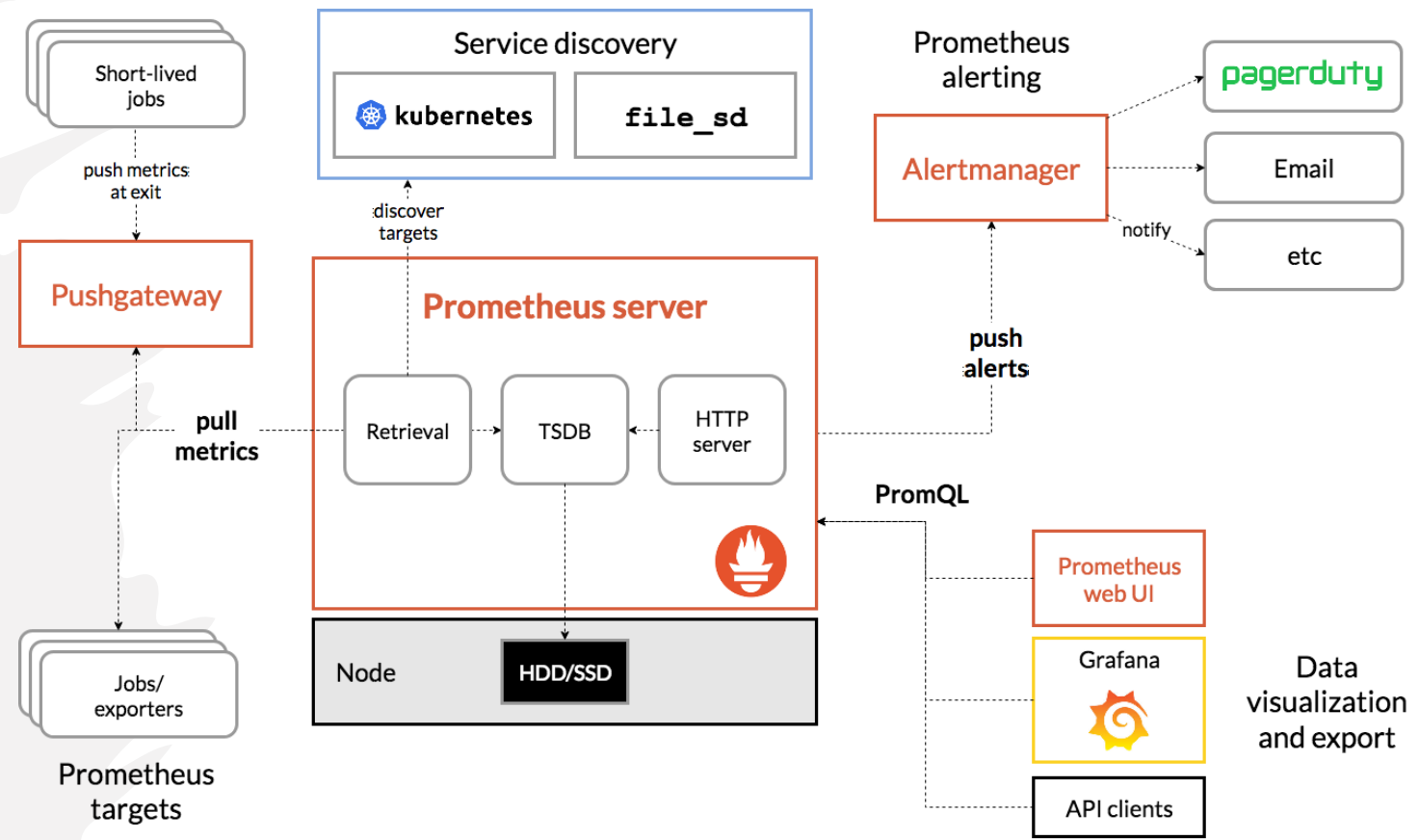
PROMETHEUS BACKGROUND

- Prometheus was originally sponsored by SoundCloud but in 2016 it joined the Cloud Native Computing Foundation
- Prometheus is primarily written GoLang
- Documentation for Prometheus can be found

<https://prometheus.io/docs>



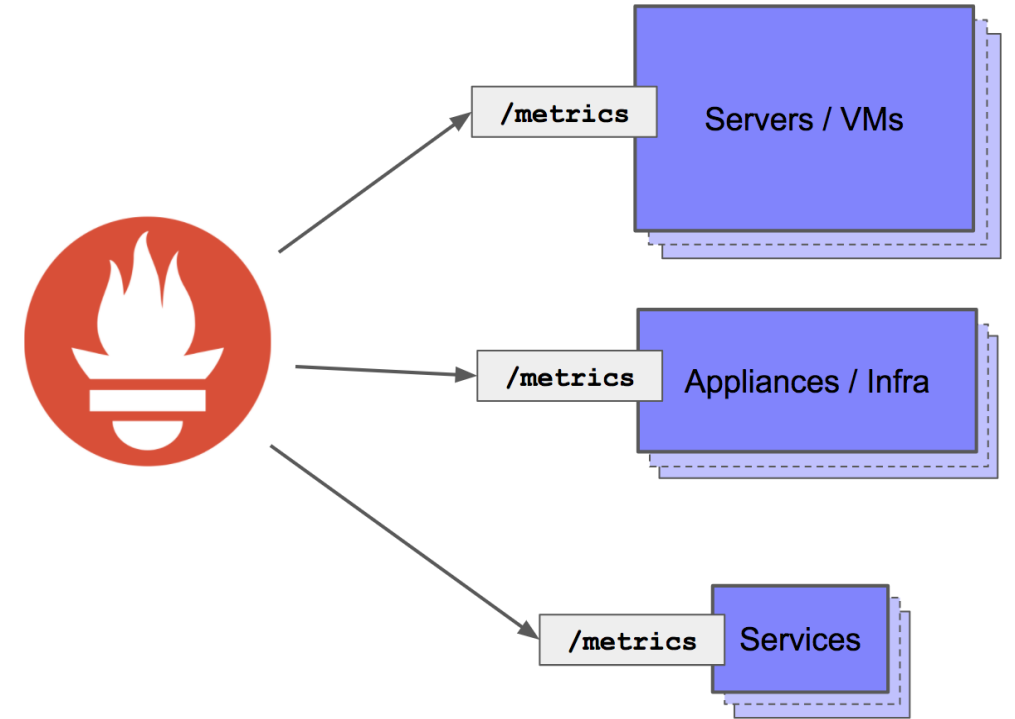
PROMETHEUS ARCHITECTURE





COLLECTING METRICS

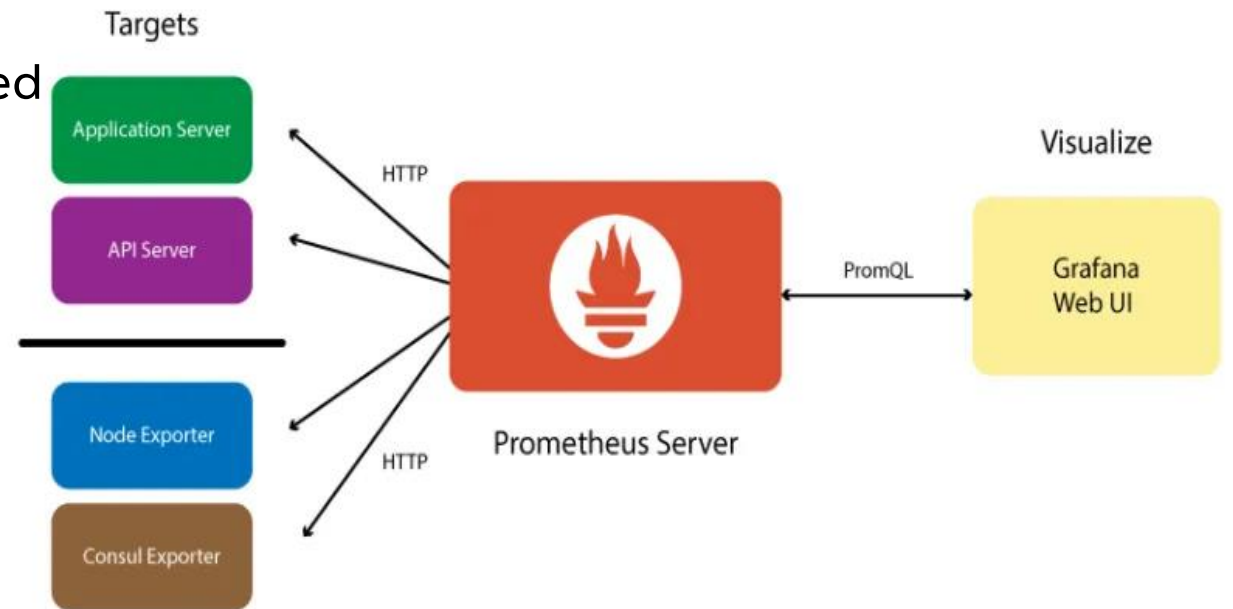
- Prometheus collects metrics by sending http requests to **/metrics** endpoint of each target
- Prometheus can be configured to use a different path other than /metrics





EXPORTER WORK

- Most system by default don't collect metrics and expose them on an HTTP endpoint to be consumed by a Prometheus Server
- **Exporter** collect metrics and expose them in a format Prometheus expects





PROMETHEUS INSTALLATION

<https://prometheus.io/download/>

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prometheus.io/download/

Gmail

prometheus

The Prometheus monitoring system and time series database. [prometheus/prometheus](#)

2.47.0 / 2023-09-06 [Release notes](#)

File name	OS	Arch	Size	SHA256 Checksum
prometheus-2.47.0.darwin-amd64.tar.gz	darwin	amd64	91.49 MiB	095b6d32ef3d756bb2b826c8301208b5a1d59a7f02fb4be343bad3112aa9fcd5
prometheus-2.47.0.linux-amd64.tar.gz	linux	amd64	91.29 MiB	277ad9f110ded8e326bc885848952941e839fa38dd3237e36415f0fa35a04424
prometheus-2.47.0.windows-amd64.zip	windows	amd64	94.35 MiB	54e5e6cda4a629f112c09cb1d9093180468bb3a270ef3cefad5c701ee92b5f55

2.45.0 / 2023-06-23 [LTS](#) [Release notes](#)

File name	OS	Arch	Size	SHA256 Checksum
prometheus-2.45.0.darwin-amd64.tar.gz	darwin	amd64	87.24 MiB	e65d4ca0676bec55d21947290d51a62126cba829f7a8cec93808a35f17e63174
prometheus-2.45.0.linux-amd64.tar.gz	linux	amd64	86.97 MiB	1c7f489a3cc919c1ed0df2ae673a280309dc4a3eaa6ee3411e7d1f4bdec4d4c5
prometheus-2.45.0.windows-amd64.zip	windows	amd64	88.94 MiB	c50feaf6b9f7bcf3d0caa3575122afcd470f1313824c480e715c4c80eb34f436

alertmanager

[prometheus/alertmanager](#)



PROMETHEUS DOWNLOAD

```
$ wget https://github.com/prometheus/prometheus/releases/download/v2.45.0/prometheus-2.45.0.linux-amd64.tar.gz
```

```
$ tar xvf prometheus-2.45.0.linux-amd64.tar.gz
```

```
$ cd prometheus-2.45.0.linux-amd64
```

```
$ ./prometheus
```



SETUP FOR PROMETHEUS

```
$ sudo groupadd --system prometheus
```

```
$ sudo useradd -s /sbin/nologin --system -g prometheus prometheus
```

```
$ sudo mkdir /var/lib/prometheus && sudo mkdir /etc/prometheus
```

```
$ wget https://github.com/prometheus/prometheus/releases/download/v2.45.0/prometheus-2.45.0.linux-amd64.tar.gz
```

```
$ tar vxf prometheus*.tar.gz && cd prometheus*/
```



MOVE BINARY FILE & SET OWNER

```
$ sudo mv prometheus /usr/local/bin
```

```
$ sudo mv promtool /usr/local/bin
```

```
$ sudo chown Prometheus:Prometheus /usr/local/bin/Prometheus
```

```
$ sudo chown prometheus:prometheus /usr/local/bin/promtool
```



MOVE THE CONFIGURATION FILE & SET OWNER

```
$ sudo mv consoles /etc/prometheus
```

```
$ sudo mv console_libraries /etc/prometheus
```

```
$ sudo mv Prometheus.yml /etc/prometheus
```

```
$ sudo chown -R prometheus:prometheus /etc/prometheus/
```

```
$ sudo chown -R prometheus:prometheus /var/lib/prometheus
```



CREATE PROMETHEUS SYSTEMD SERVICE

```
$ sudo nano /etc/systemd/system/prometheus.service
```

```
[Unit]
```

```
Description=Prometheus
```

```
Wants=network-online.target
```

```
After=network-online.target
```

```
[Service]
```

```
User=prometheus
```

```
Group=prometheus
```

```
Type=simple
```

```
ExecStart=/usr/local/bin/prometheus \
```

```
--config.file /etc/prometheus/prometheus.yml \
```

```
--storage.tsdb.path /var/lib/prometheus/ \
```

```
--web.console.templates=/etc/prometheus/consoles \
```

```
--web.console.libraries=/etc/prometheus/console_libraries
```

```
[Install]
```

```
WantedBy=multi-user.target
```



RUN PROMETHEUS SERVICE

\$ sudo systemctl daemon-reload

\$ sudo systemctl start prometheus

\$ sudo systemctl enable prometheus

\$ sudo systemctl status prometheus



If you have any questions ...
please keep it yourself. I'm not
google



THANK YOU

Htet Oo Wai Yan

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<https://vitaltechmm.tech>