

Day - 18

Demo On Prometheus And Grafana

Introduction:-

Prometheus:-

It is a open source monitoring and Alerting System that helps you collect and Store metrics about applications and infrastructure and analyse the health and performance.

Example:- CPU Usage, Memory Usage, Network traffic and/or application metrics.

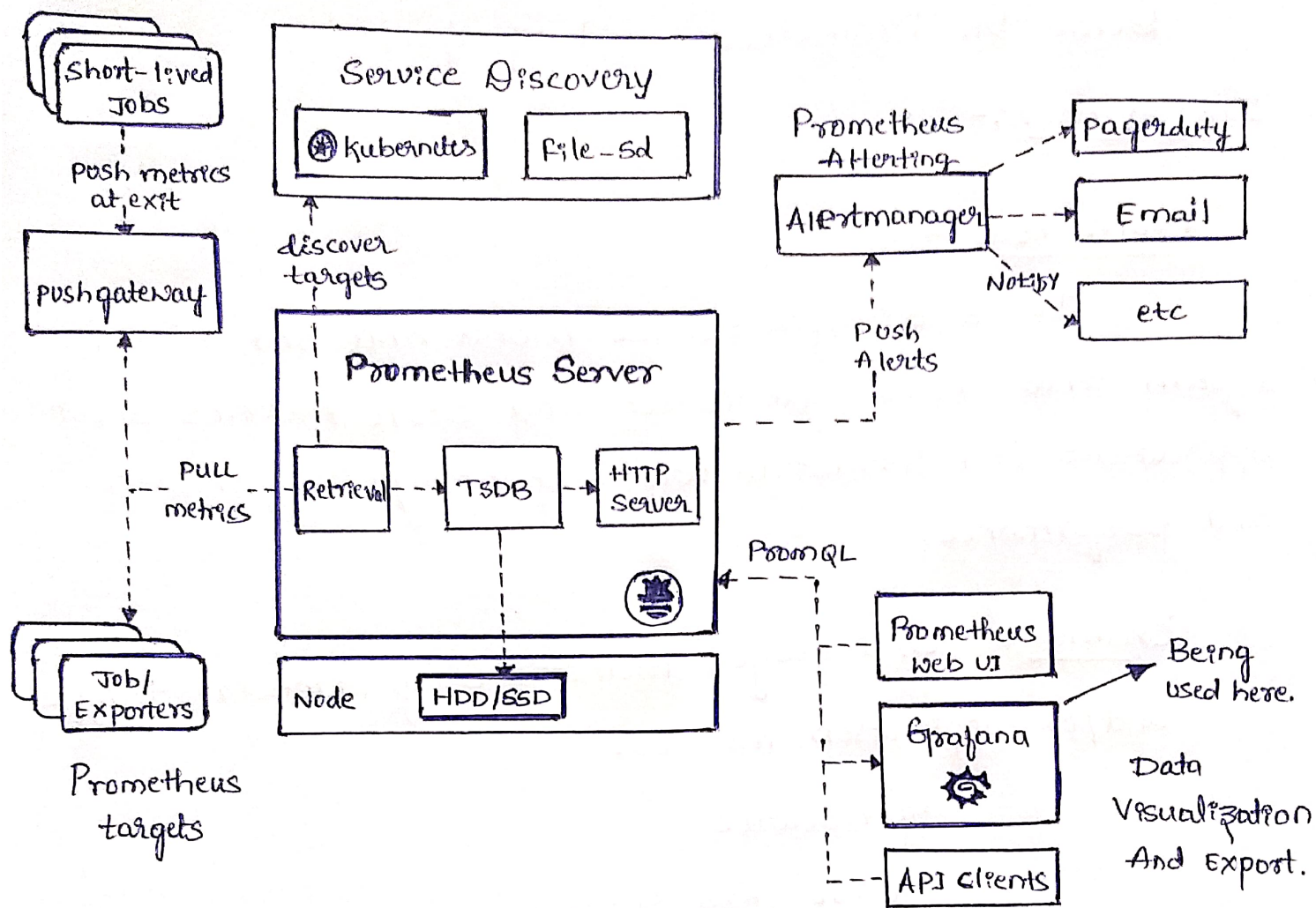
- OpenSource
- Native k8s Support
- powerful Query Language PromQL
- Scalability
- Integrations

Grafana:-

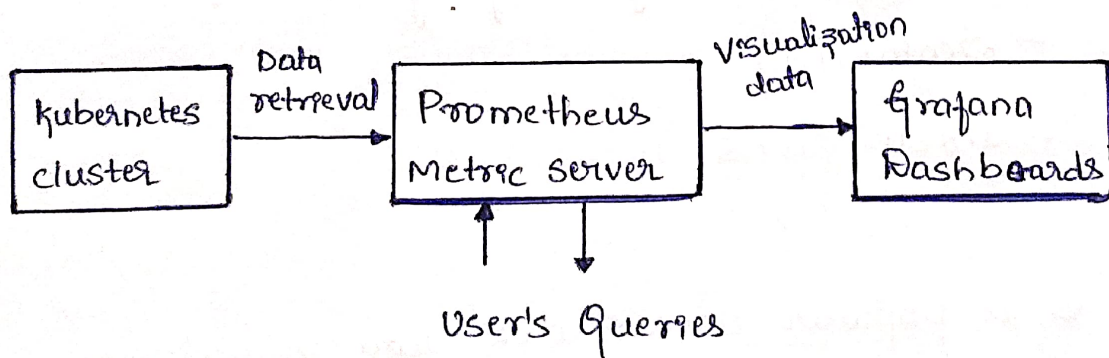
- It is a popular open source data visualization and analytics platform that allow you to create custom dashboards and visualization based on a variety of data sources.

- It has support for so many integrations such as Prometheus, Elastic Search and influx DB.

→ Prometheus Architecture:-



In a NutShell we can Consider:



Lets move to handson, Consider prerequisites below for this particular handson.

1) kubernetes cluster (Here iam using minikube)

2) Helm (Install from helm documentation based on OS - requirement)

→ Illustrative Steps Involved:-

- 1) cluster creation (2 CPU's, 4GB RAM)
- 2) Install prometheus using helm
- 3) Install Grafana using helm.
- 4) Create respective svc through Nodeport to access over browser.
- 5) Import Grafana Dashboard of your choice.
(I used 6417 Dashboard)
- 6) Explore both Dashboard.
- 7) Cleanup all resource.

→ Prometheus:-

```
# helm repo add prometheus-community
```

```
https://prometheus-community.github.io/helm-charts
```

```
# helm repo update
```

```
# helm install prometheus prometheus-community/-  
prometheus.
```

```
# kubectl expose service prometheus-server  
--type=Nodeport --target-port=9090 --name=  
prometheus-server-ext
```

Access Dashboard @ <minikubeIP>:Nodeport

→ Grafana:-

```
# helm repo add grafana https://grafana.github.io/helm-charts
```

```
# helm repo update
```

```
# helm install grafana grafana/grafana
```

```
# kubectl expose service grafana --type=Nodeport  
--target-port=3000 --name=grafana-ext
```

Access Dashboard @ $\langle \text{minikubeIp} \rangle : \text{Nodeport}$

1) Setup datasource as prometheus and provide prometheus dashboard link and save.

2) Import the dashboard of your choice and Explore.