

## Monitoring and Logging

```
curl -fsSL -o get_helm.sh https://raw.githubusercontent.com/helm/helm/main/scripts/get-helm-3
```

```
chmod 700 get_helm.sh
```

```
./get_helm.sh
```

```
macbook@Ulugbek-2 lab5 % curl -fsSL -o get_helm.sh https://raw.githubusercontent.com/helm/helm/main/scripts/get-helm-3
chmod 700 get_helm.sh
./get_helm.sh
Downloading https://get.helm.sh/helm-v3.14.0-darwin-arm64.tar.gz
Verifying checksum... Done.
Preparing to install helm into /usr/local/bin
Password:
helm installed into /usr/local/bin/helm
macbook@Ulugbek-2 lab5 %
```

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

```
macbook@Ulugbek-2 lab5 % helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
macbook@Ulugbek-2 lab5 %
```

```
helm repo update
```

```
macbook@Ulugbek-2 lab5 % helm repo update
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "prometheus-community" chart repository
Update Complete. *Happy Helming!*
macbook@Ulugbek-2 lab5 %
```

```
helm install prometheus prometheus-community/prometheus
```

```
macbook@Ulugbek-2 lab5 % helm install prometheus prometheus-community/prometheus
NAME: prometheus
LAST DEPLOYED: Sun Feb  4 14:55:43 2024
NAMESPACE: default
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
The Prometheus server can be accessed via port 80 on the following DNS name from within your cluster:
prometheus-server.default.svc.cluster.local

Get the Prometheus server URL by running these commands in the same shell:
  export POD_NAME=$(kubectl get pods --namespace default -l "app.kubernetes.io/name=prometheus,app.kubernetes.io/instance=prometheus" -o jsonpath="{.items[0].metadata.name}")
  kubectl --namespace default port-forward $POD_NAME 9090

The Prometheus alertmanager can be accessed via port 9093 on the following DNS name from within your cluster:
prometheus-alertmanager.default.svc.cluster.local

Get the Alertmanager URL by running these commands in the same shell:
  export POD_NAME=$(kubectl get pods --namespace default -l "app.kubernetes.io/name=alertmanager,app.kubernetes.io/instance=prometheus" -o jsonpath="{.items[0].metadata.name}")
  kubectl --namespace default port-forward $POD_NAME 9093

#####
##### WARNING: Pod Security Policy has been disabled by default since #####
##### it deprecated after k8s 1.25+. use #####
##### (index .Values "prometheus-node-exporter" "rbac" #####
##### "pspEnabled") with (index .Values #####
##### "prometheus-node-exporter" "rbac" "pspAnnotations") #####
##### in case you still need it. #####
#####

The Prometheus PushGateway can be accessed via port 9091 on the following DNS name from within your cluster:
prometheus-prometheus-pushgateway.default.svc.cluster.local

Get the PushGateway URL by running these commands in the same shell:
  export POD_NAME=$(kubectl get pods --namespace default -l "app=prometheus-pushgateway,component=pushgateway" -o jsonpath="{.items[0].metadata.name}")
  kubectl --namespace default port-forward $POD_NAME 9091

For more information on running Prometheus, visit:
https://prometheus.io/
macbook@Ulugbek-2 lab5 %
```

## kubectl get pods

```
macbook@Ulugbek-2 lab5 % kubectl get pods
NAME                                READY   STATUS              RESTARTS   AGE
ethereum-docker-test-4fsqx         3/3     Running             3 (3d22h ago)   6d19h
ethereum-docker-test-fx4rf         0/1     ImagePullBackOff    0           6d20h
ethereum-docker-test-mxtlv         0/1     ImagePullBackOff    0           6d20h
mongo-express-deployment-b88f6d45f-sq5q2  1/1     Running             2 (3d22h ago)   13d
mongodb-stateful-set-0             1/1     Running             3 (3d22h ago)   13d
mongodb-stateful-set-1             1/1     Running             3 (3d22h ago)   13d
prometheus-alertmanager-0          1/1     Running             0           104s
prometheus-kube-state-metrics-745b475957-mqwp  1/1     Running             0           104s
prometheus-prometheus-node-exporter-rbd5v  1/1     Running             0           104s
prometheus-prometheus-pushgateway-6ccd698d79-8gkg5  1/1     Running             0           104s
prometheus-server-5c99dfc547-h24sc  2/2     Running             0           104s
macbook@Ulugbek-2 lab5 %
```

## kubectl get svc

```
macbook@Ulugbek-2 lab5 % kubectl get svc
NAME                                TYPE           CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
kubernetes                         ClusterIP       10.96.0.1       <none>           443/TCP          13d
mongo-express-service              LoadBalancer   10.100.64.200   <pending>        8081:31926/TCP   13d
mongodb-service                   ClusterIP       10.105.11.239   <none>           27017/TCP        13d
prometheus-alertmanager            ClusterIP       10.108.130.105   <none>           9093/TCP         2m28s
prometheus-alertmanager-headless   ClusterIP       None            <none>           9093/TCP         2m28s
prometheus-kube-state-metrics      ClusterIP       10.96.120.126   <none>           8080/TCP         2m28s
prometheus-prometheus-node-exporter ClusterIP       10.105.246.35   <none>           9100/TCP         2m28s
prometheus-prometheus-pushgateway  ClusterIP       10.105.115.28   <none>           9091/TCP         2m28s
prometheus-server                  ClusterIP       10.106.183.122   <none>           80/TCP           2m28s
react-app                          ClusterIP       10.103.177.226   <none>           80/TCP           6d19h
macbook@Ulugbek-2 lab5 %
```

kubectl expose service prometheus-server --type=NodePort --target-port=9090 --name=prometheus-server-ext

```
macbook@Ulugbek-2 lab5 % kubectl expose service prometheus-server --type=NodePort --target-port=9090 --name=prometheus-server-ext
service/prometheus-server-ext exposed
macbook@Ulugbek-2 lab5 %
```

## kubectl get svc

```
macbook@Ulugbek-2 lab5 % kubectl get svc
NAME                                TYPE           CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
kubernetes                         ClusterIP       10.96.0.1       <none>           443/TCP          13d
mongo-express-service              LoadBalancer   10.100.64.200   <pending>        8081:31926/TCP   13d
mongodb-service                   ClusterIP       10.105.11.239   <none>           27017/TCP        13d
prometheus-alertmanager            ClusterIP       10.108.130.105   <none>           9093/TCP         16m
prometheus-alertmanager-headless   ClusterIP       None            <none>           9093/TCP         16m
prometheus-kube-state-metrics      ClusterIP       10.96.120.126   <none>           8080/TCP         16m
prometheus-prometheus-node-exporter ClusterIP       10.105.246.35   <none>           9100/TCP         16m
prometheus-prometheus-pushgateway  ClusterIP       10.105.115.28   <none>           9091/TCP         16m
prometheus-server                  ClusterIP       10.106.183.122   <none>           80/TCP           16m
prometheus-server-ext              NodePort        10.110.50.82    <none>           80:31664/TCP     38s
react-app                          ClusterIP       10.103.177.226   <none>           80/TCP           6d19h
macbook@Ulugbek-2 lab5 %
```

## minikube ip

```
macbook@Ulugbek-2 lab5 % minikube ip
192.168.58.2
macbook@Ulugbek-2 lab5 %
```

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

```
macbook@Ulugbek-2 lab5 % helm repo add grafana https://grafana.github.io/helm-charts
"grafana" has been added to your repositories
macbook@Ulugbek-2 lab5 %
```

## helm repo update

```
macbook@Ulugbek-2 lab5 % helm repo update
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "grafana" chart repository
...Successfully got an update from the "prometheus-community" chart repository
Update Complete. *Happy Helming!*
macbook@Ulugbek-2 lab5 %
```

## helm install grafana grafana/grafana

```
macbook@Ulugbek-2 lab5 % helm install grafana grafana/grafana
NAME: grafana
LAST DEPLOYED: Sun Feb  4 16:08:31 2024
NAMESPACE: default
STATUS: deployed
REVISION: 1
NOTES:
1. Get your 'admin' user password by running:

    kubectl get secret --namespace default grafana -o jsonpath="{.data.admin-password}" | base64 --decode ; echo

2. The Grafana server can be accessed via port 80 on the following DNS name from within your cluster:

    grafana.default.svc.cluster.local

    Get the Grafana URL to visit by running these commands in the same shell:
    export POD_NAME=$(kubectl get pods --namespace default -l "app.kubernetes.io/name=grafana,app.kubernetes.io/instance=grafana" -o jsonpath="{.items[0].metadata.name}")
    kubectl --namespace default port-forward $POD_NAME 3000

3. Login with the password from step 1 and the username: admin
#####
##### WARNING: Persistence is disabled!!! You will lose your data when #####
##### the Grafana pod is terminated. #####
#####
macbook@Ulugbek-2 lab5 %
```

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

```
macbook@Ulugbek-2 lab5 % kubectl expose service grafana --type=NodePort --target-port=3000 --name=grafana-ext
service/grafana-ext exposed
macbook@Ulugbek-2 lab5 %
```

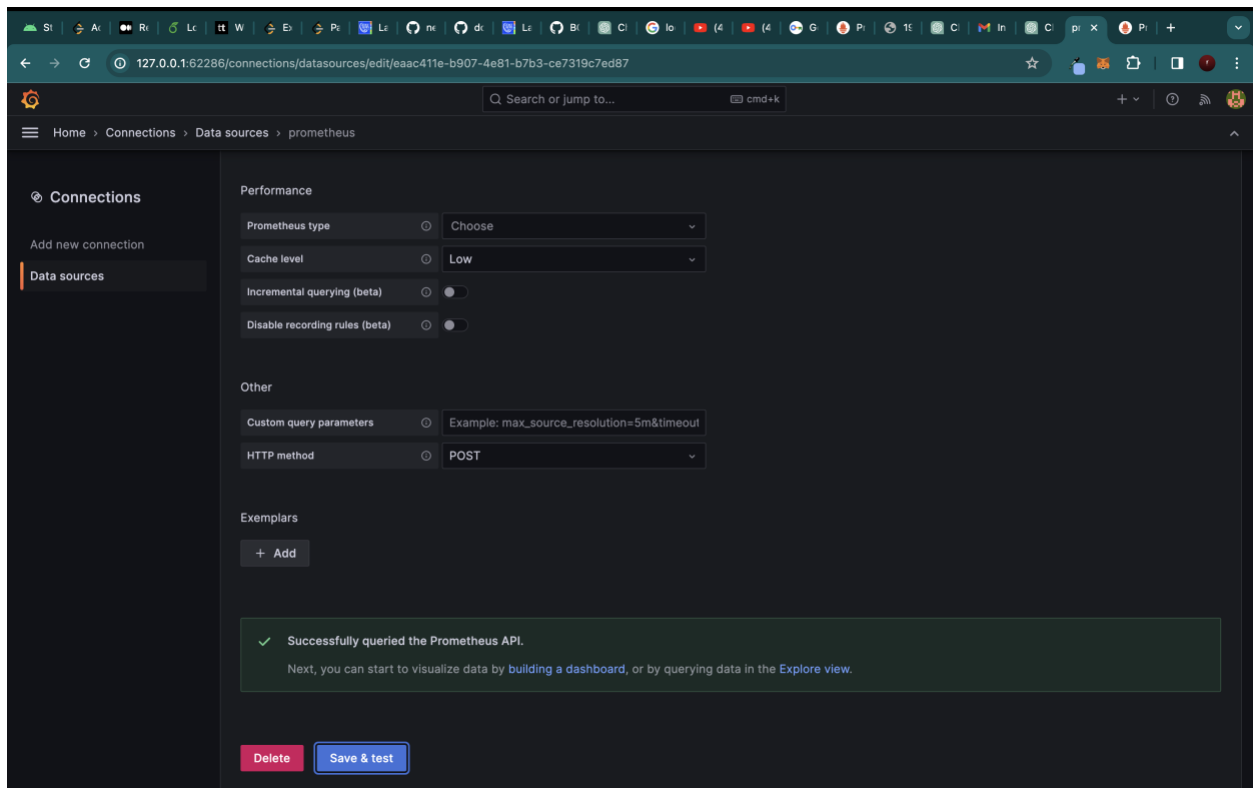
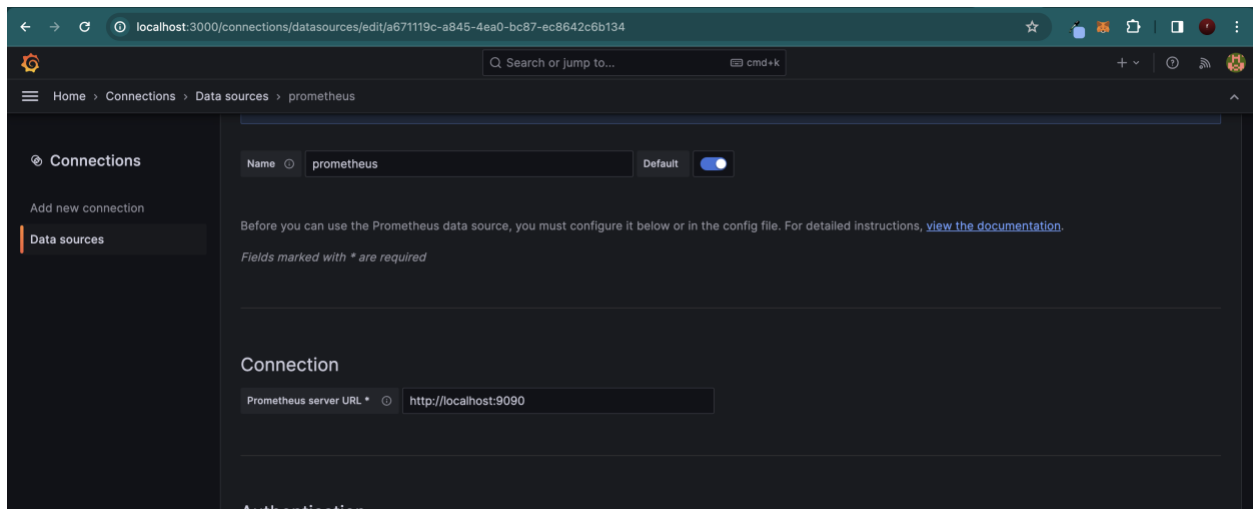
## kubectl get secret --namespace default grafana -o jsonpath="{.data.admin-password}" | base64 --decode ; echo

```
macbook@Ulugbek-2 lab5 % kubectl get secret --namespace default grafana -o jsonpath="{.data.admin-password}" | base64 --decode ; echo
Mdg3h40ShpkzMGQcgE57FA8mXIpaCLsBRoJ3IKNA
macbook@Ulugbek-2 lab5 %
```

## Kubectl get cm

```
macbook@Ulugbek-2 lab5 % kubectl get cm

NAME          DATA  AGE
grafana        1      15m
kube-root-ca.crt 1      13d
prometheus-alertmanager 1      88m
prometheus-server 6      88m
macbook@Ulugbek-2 lab5 %
```



State Add Repo Log it Welc Explr Pasc Lab nelat dock Lab BCD Chat prom (4) h (4) H Goo F X +

localhost:9090/graph?g0.expr=&g0.tab=1&g0.display\_mode=lines&g0.show\_exemplars=0&g0.range\_input=1h

Prometheus Alerts Graph Status Help

☐ Use local time ☐ Enable query history ☒ Enable autocomplete ☒ Enable highlighting ☒ Enable linter

Q Expression (press Shift+Enter for newlines) [List Icon] [Refresh Icon] Execute

Table Graph

< Evaluation time >

No data queried yet

Remove Panel

Add Panel

Playlists

Snapshots

Library panels

Public dashboards

Import dashboard from file or Grafana.com

### Importing dashboard from Grafana.com

Published by	jeremy b
Updated on	2020-12-23 17:47:42

### Options

Name

Prometheus 2.0 Overview

Folder

Dashboards

Unique identifier (UID)

The unique identifier (UID) of a dashboard can be used for uniquely identify a dashboard between multiple Grafana installs. The UID allows having consistent URLs for accessing dashboards so changing the title of a dashboard will not break any bookmarked links to that dashboard.

Change uid

prometheus

A prometheus server with prometheus server metrics

Import Cancel



