Install Helm using brew

```
hafelago@DESKTOP-208TC4I:~$ brew install helm
==> Auto-updating Homebrew...
Adjust how often this is run with HOMEBREW_AUTO_UPDATE_SECS or disable with
HOMEBREW_NO_AUTO_UPDATE. Hide these hints with HOMEBREW_NO_ENV_HINTS (see `man brew`).
==> Homebrew collects anonymous analytics.
Read the analytics documentation (and how to opt-out) here:
  https://docs.brew.sh/Analytics
No analytics have been recorded yet (nor will be during this `brew` run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
  https://github.com/Homebrew/brew#donations

==> Auto-updated Homebrew!
Updated 2 taps (homebrew/core and homebrew/cask).
==> New Formulae
apache-flink-cdc        jsontoolkit          nvtop              pedump              vedic
cloudflare-cli4         libvirt-python       ocicl              span-lite
haproxy@2.8             llama.cpp            openfa             stripe-cli
==> New Casks
bias-fx                 font-playwrite-au-vic    font-playwrite-in          font-playwrite-us-trad
blitz-gg                font-playwrite-ca        font-playwrite-it-moderna   font-playwrite-za
canon-ufrii-driver      font-playwrite-de-la     font-playwrite-it-trad      hopper-disassembler
core-tunnel             font-playwrite-es        font-playwrite-mx           mac-mouse-fix@2
font-playwrite-au-nsw   font-playwrite-es-deco   font-playwrite-ng-modern    nessus
font-playwrite-au-qld   font-playwrite-fr-moderne font-playwrite-nz
font-playwrite-au-sa    font-playwrite-id        font-playwrite-tz
font-playwrite-au-tas   font-playwrite-ie        font-playwrite-us-modern
```

Helm version

```
hafelago@DESKTOP-208TC4I:~$ helm version
version.BuildInfo{Version:"v3.15.1", GitCommit:"e211f2aa62992bd72586b395de50979e31231829", GitTreeState:"clean", GoVersi
on:"go1.22.3"}
hafelago@DESKTOP-208TC4I:~$
```

Install prometheus

```
hafelago@DESKTOP-208TC4I:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" already exists with the same configuration, skipping
hafelago@DESKTOP-208TC4I:~$ helm install my-prometheus prometheus-community/prometheus --version 25.21.0
```

```
NAME: my-prometheus
LAST DEPLOYED: Sat Jun  1 14:20:32 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:
my-prometheus-server.default.svc.cluster.local
```

```
hafelago@DESKTOP-208TC4I:~$ kubectl get all
NAME                                                      READY   STATUS    RESTARTS   AGE
pod/my-prometheus-alertmanager-0                          1/1     Running   0          4m40s
pod/my-prometheus-kube-state-metrics-586d9754b8-67gsk     1/1     Running   0          4m40s
pod/my-prometheus-prometheus-node-exporter-7rfw5          1/1     Running   0          4m40s
pod/my-prometheus-prometheus-pushgateway-54b7f4fd4c-pbvcp 1/1     Running   0          4m40s
pod/my-prometheus-server-56dc5c5fbd-dhmvj                 2/2     Running   0          4m40s

NAME                                             TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)    AGE
service/kubernetes                               ClusterIP   10.96.0.1        <none>        443/TCP    62m
service/my-prometheus-alertmanager              ClusterIP   10.104.226.142   <none>        9093/TCP   4m40s
service/my-prometheus-alertmanager-headless     ClusterIP   None             <none>        9093/TCP   4m40s
service/my-prometheus-kube-state-metrics        ClusterIP   10.106.240.161   <none>        8080/TCP   4m40s
service/my-prometheus-prometheus-node-exporter  ClusterIP   10.104.136.74    <none>        9100/TCP   4m40s
service/my-prometheus-prometheus-pushgateway    ClusterIP   10.102.87.29     <none>        9091/TCP   4m40s
service/my-prometheus-server                    ClusterIP   10.111.74.254    <none>        80/TCP     4m40s

NAME                                                      DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR            AGE
daemonset.apps/my-prometheus-prometheus-node-exporter    1         1         1       1            1           kubernetes.io/os=linux  4m40s

NAME                                              READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/my-prometheus-kube-state-metrics  1/1     1            1           4m40s
deployment.apps/my-prometheus-prometheus-pushgateway 1/1  1            1           4m40s
deployment.apps/my-prometheus-server              1/1     1            1           4m40s

NAME                                                         DESIRED   CURRENT   READY   AGE
replicaset.apps/my-prometheus-kube-state-metrics-586d9754b8 1         1         1       4m40s
replicaset.apps/my-prometheus-prometheus-pushgateway-54b7f4fd4c 1     1         1       4m40s
replicaset.apps/my-prometheus-server-56dc5c5fbd             1         1         1       4m40s

NAME                                          READY   AGE
statefulset.apps/my-prometheus-alertmanager   1/1     4m40s
hafelago@DESKTOP-208TC4I:~$
```

```
hafelago@DESKTOP-208TC4I:~$ helm ls --all-namespaces
NAME            NAMESPACE   REVISION   UPDATED                                    STATUS     CHART              APP VERSION
my-prometheus   default     1          2024-06-01 14:20:32.231965846 -0400 EDT    deployed   prometheus-25.21.0 v2.52.0
hafelago@DESKTOP-208TC4I:~$
```

```
hafelago@DESKTOP-208TC4I:~$  export POD_NAME=$(kubectl get pods --namespace default -l "app.kubernetes.io/name=prometheus,app.kubernetes.io/instance=my-prometheus" -o jsonpath="{.items[0].metadata.r
  kubectl --namespace default port-forward $POD_NAME 9090
Forwarding from 127.0.0.1:9090 -> 9090
Forwarding from [::1]:9090 -> 9090
Handling connection for 9090
Handling connection for 9090
Handling connection for 9090
```

prometheus
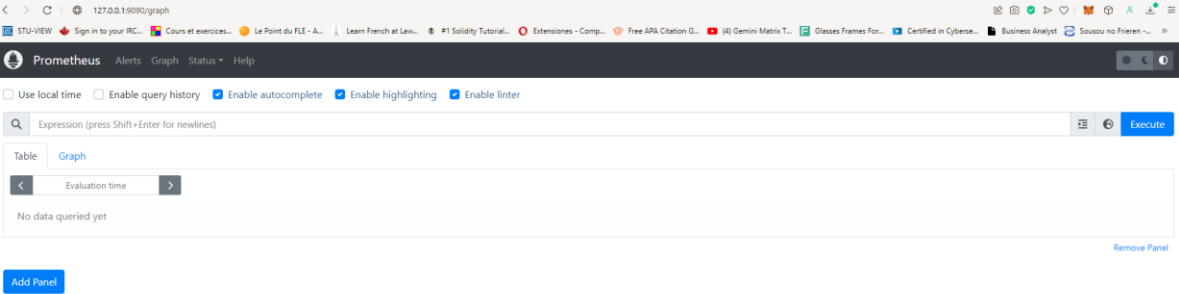
Expose prometheus server

```
hafelago@DESKTOP-208TC4I:~$ kubectl get services --namespace default
NAME                                    TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)     AGE
kubernetes                              ClusterIP   10.96.0.1        <none>        443/TCP     74m
my-prometheus-alertmanager              ClusterIP   10.104.226.142   <none>        9093/TCP    17m
my-prometheus-alertmanager-headless     ClusterIP   None             <none>        9093/TCP    17m
my-prometheus-kube-state-metrics        ClusterIP   10.106.240.161   <none>        8080/TCP    17m
my-prometheus-prometheus-node-exporter  ClusterIP   10.104.136.74    <none>        9100/TCP    17m
my-prometheus-prometheus-pushgateway    ClusterIP   10.102.87.29     <none>        9091/TCP    17m
my-prometheus-server                    ClusterIP   10.111.74.254    <none>        80/TCP      17m
hafelago@DESKTOP-208TC4I:~$ kubectl expose service my-prometheus-server --type=NodePort --target-port=9090 --name=promet
heus-server-ext
service/prometheus-server-ext exposed
hafelago@DESKTOP-208TC4I:~$
```

Check the service

```
hafelago@DESKTOP-208TC4I:~$ kubectl expose service my-prometheus-server --type=NodePort --target-port=9090 --name=prome
heus-server-ext
service/prometheus-server-ext exposed
hafelago@DESKTOP-208TC4I:~$ kubectl get svc
NAME                                    TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)        AGE
kubernetes                              ClusterIP   10.96.0.1        <none>        443/TCP        76m
my-prometheus-alertmanager              ClusterIP   10.104.226.142   <none>        9093/TCP       18m
my-prometheus-alertmanager-headless     ClusterIP   None             <none>        9093/TCP       18m
my-prometheus-kube-state-metrics        ClusterIP   10.106.240.161   <none>        8080/TCP       18m
my-prometheus-prometheus-node-exporter  ClusterIP   10.104.136.74    <none>        9100/TCP       18m
my-prometheus-prometheus-pushgateway    ClusterIP   10.102.87.29     <none>        9091/TCP       18m
my-prometheus-server                    ClusterIP   10.111.74.254    <none>        80/TCP         18m
prometheus-server-ext                   NodePort    10.100.111.92    <none>        80:30183/TCP   73s
hafelago@DESKTOP-208TC4I:~$
```
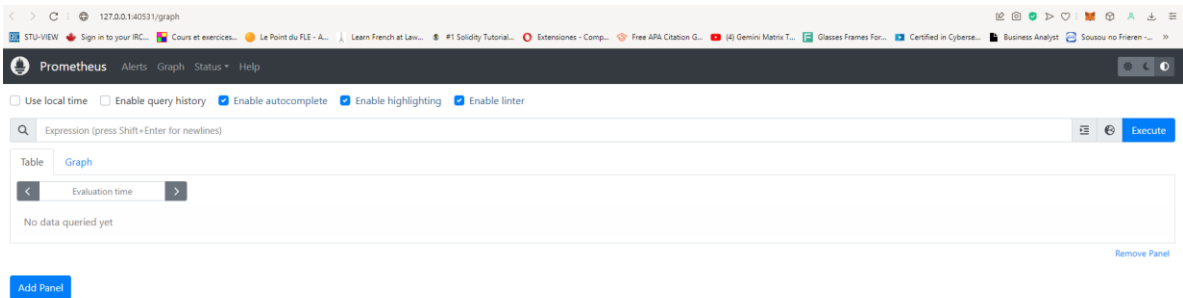
Minikube IP

```
hafelago@DESKTOP-208TC4I:~$ minikube ip
192.168.49.2
hafelago@DESKTOP-208TC4I:~$
```

Prometheus Server

Grafana

```
hafelago@DESKTOP-208TC4I:~$ helm repo add grafana https://grafana.github.io/helm-charts
"grafana" has been added to your repositories
hafelago@DESKTOP-208TC4I:~$ helm repo list
NAME                    URL
prometheus-community    https://prometheus-community.github.io/helm-charts
grafana                 https://grafana.github.io/helm-charts
hafelago@DESKTOP-208TC4I:~$ 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 chart repository
Update Complete. ⎈Happy Helming!⎈
hafelago@DESKTOP-208TC4I:~$ helm repo list
NAME                    URL
prometheus-community    https://prometheus-community.github.io/helm-charts
grafana                 https://grafana.github.io/helm-charts
hafelago@DESKTOP-208TC4I:~$ helm install grafana grafana/grafana
NAME: grafana
LAST DEPLOYED: Sat Jun  1 15:56:13 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.                            #####
#################################################################################
hafelago@DESKTOP-208TC4I:~$
```

```
hafelago@DESKTOP-208TC4I:~$ kubectl get svc
NAME                                       TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)        AGE
grafana                                    ClusterIP   10.96.173.78     <none>        80/TCP         3m55s
grafana-ext                                NodePort    10.111.75.114    <none>        80:31664/TCP   10s
kubernetes                                 ClusterIP   10.96.0.1        <none>        443/TCP        157m
my-prometheus-alertmanager                 ClusterIP   10.104.226.142   <none>        9093/TCP       99m
my-prometheus-alertmanager-headless        ClusterIP   None             <none>        9093/TCP       99m
my-prometheus-kube-state-metrics           ClusterIP   10.106.240.161   <none>        8080/TCP       99m
my-prometheus-prometheus-node-exporter     ClusterIP   10.104.136.74    <none>        9100/TCP       99m
my-prometheus-prometheus-pushgateway       ClusterIP   10.102.87.29     <none>        9091/TCP       99m
my-prometheus-server                       ClusterIP   10.111.74.254    <none>        80/TCP         99m
prometheus-server-ext                      NodePort    10.100.111.92    <none>        80:30183/TCP   81m
hafelago@DESKTOP-208TC4I:~$
```

Get password

hafelago@DESKTOP-208TC4I:~$ kubectl get secret --namespace default grafana -o jsonpath="{.data.admin-password}" | base64
--decode ; echo no
GEwzqRWfEVrBnsAYFdTmvKze25ENuShYsZzPcXLs
hafelago@DESKTOP-208TC4I:~$
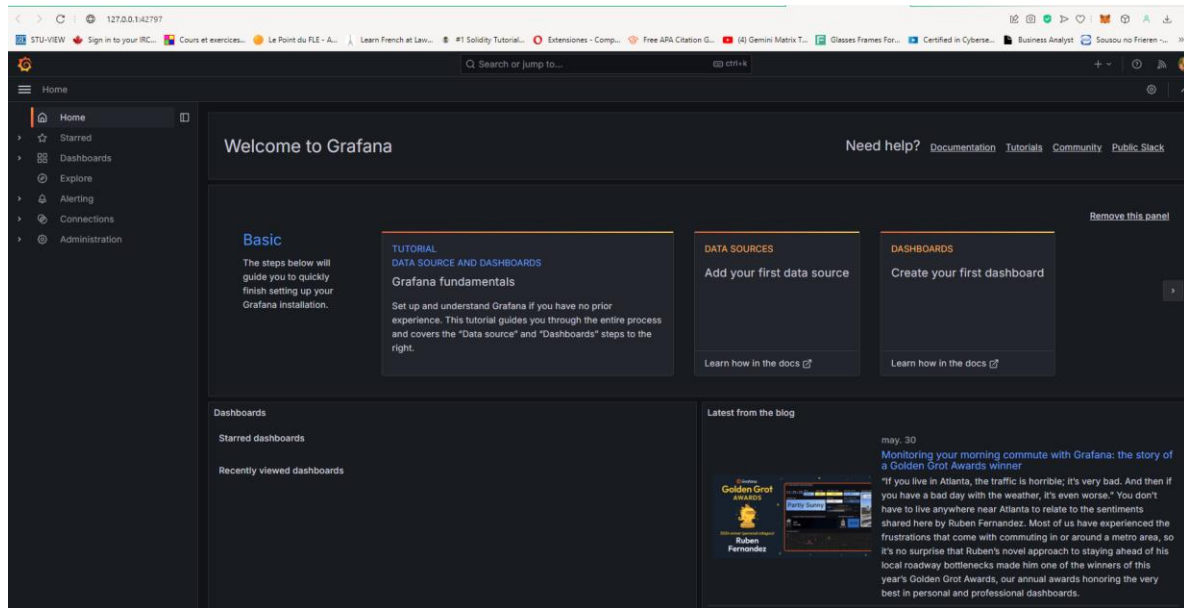
Connect Prometheus as Data source to Grafana

Graffana Dashboard using query from prometheus