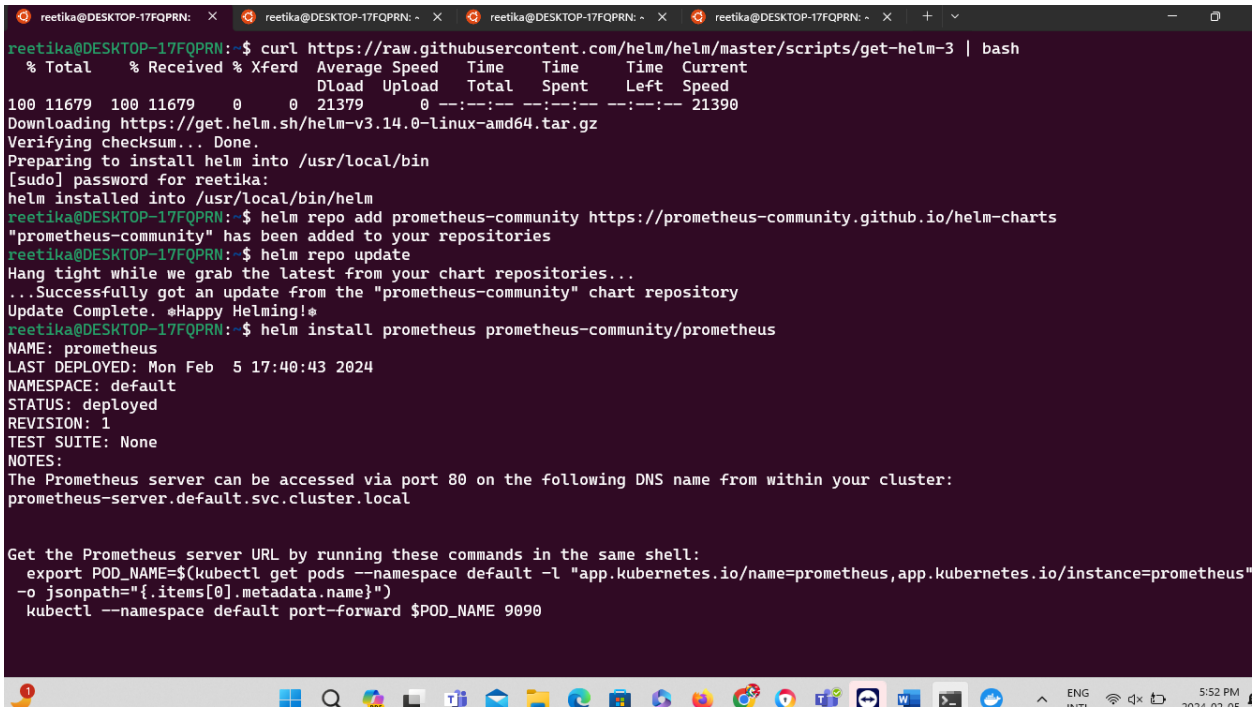
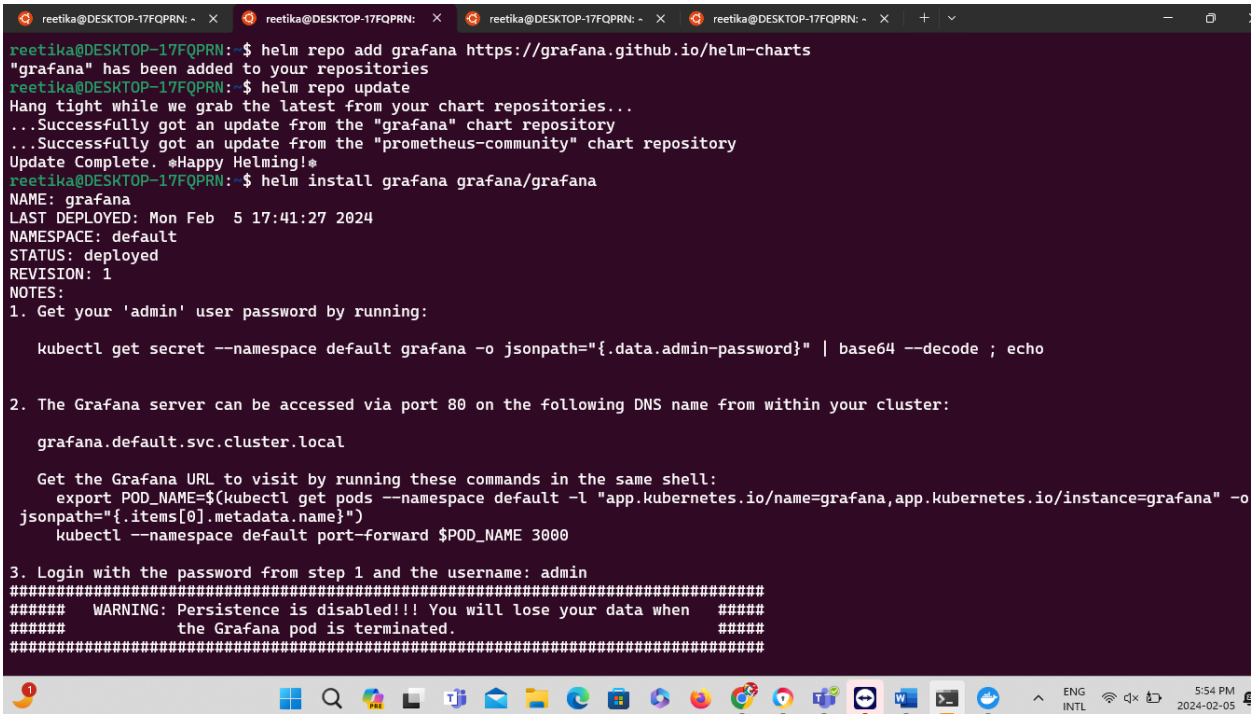
Lab – 5

Reetika (101496084)



```
reetika@DESKTOP-17FQPRN:~$ curl https://raw.githubusercontent.com/helm/helm/master/scripts/get-helm-3 | bash
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 11679  100 11679    0     0  21379      0 --:--:-- --:--:-- --:--:-- 21390
Downloading https://get.helm.sh/helm-v3.14.0-linux-amd64.tar.gz
Verifying checksum... Done.
Preparing to install helm into /usr/local/bin
[sudo] password for reetika:
helm installed into /usr/local/bin/helm
reetika@DESKTOP-17FQPRN:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
reetika@DESKTOP-17FQPRN:~$ 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!⎈
reetika@DESKTOP-17FQPRN:~$ helm install prometheus prometheus-community/prometheus
NAME: prometheus
LAST DEPLOYED: Mon Feb  5 17:40:43 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
```



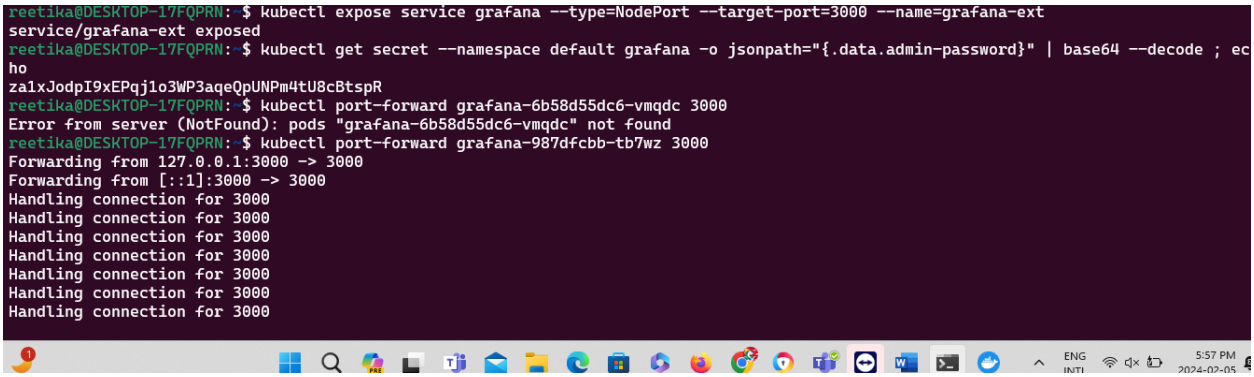
```
reetika@DESKTOP-17FQPRN:~$ helm repo add grafana https://grafana.github.io/helm-charts
"grafana" has been added to your repositories
reetika@DESKTOP-17FQPRN:~$ helm repo update
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "grafana" chart repository
...Successfully got an update from the "prometheus-community" chart repository
Update Complete. ⎈Happy Helming!⎈
reetika@DESKTOP-17FQPRN:~$ helm install grafana grafana/grafana
NAME: grafana
LAST DEPLOYED: Mon Feb  5 17:41:27 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.                            #####
#################################################################################
```

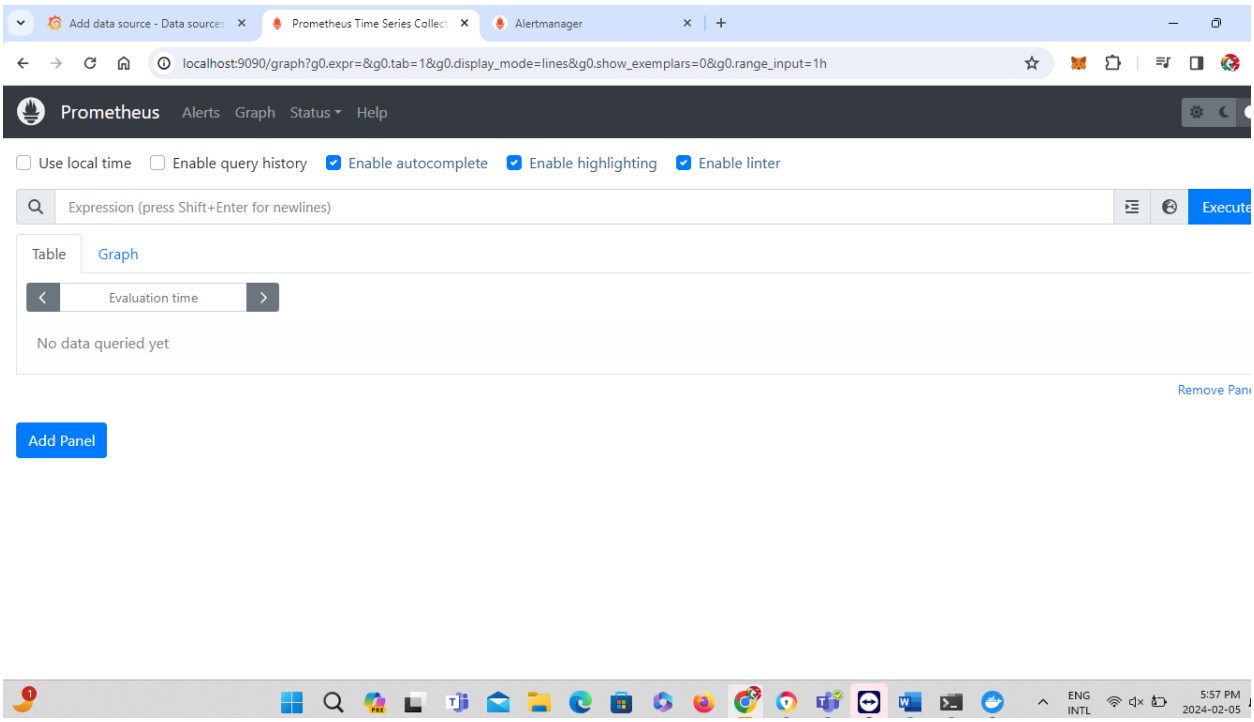
```
reetika@DESKTOP-17FQPRN:~$ kubectl get pods
NAME                                          READY   STATUS    RESTARTS        AGE
dapp-5f85856bf7-glfht                         1/1     Running   1 (17m ago)     7d19h
demo-pod                                      1/1     Running   2 (17m ago)     11d
ganache-7b4c86b4c5-cm6hd                      1/1     Running   1 (17m ago)     7d19h
ganache-7b4c86b4c5-qmxbb                      1/1     Running   1 (17m ago)     7d20h
grafana-987dfcbb-tb7wz                        1/1     Running   0               6m50s
kubectl-pod1                                  1/1     Running   1 (17m ago)     7d18h
mongo-express-deployment-b88f6d45f-hnvth      1/1     Running   4 (12m ago)     14d
mongodb-stateful-set-0                        1/1     Running   3 (17m ago)     14d
mongodb-stateful-set-1                        1/1     Running   3 (17m ago)     14d
my-pod                                        1/1     Running   17 (17m ago)    10d
nginx-deployment-584fbb974d-4ktcp             1/1     Running   5               16d
nginx-deployment-584fbb974d-dfr8p             1/1     Running   5 (17m ago)     16d
nginx-deployment-584fbb974d-lrlpf             1/1     Running   5 (17m ago)     16d
nginx-m5pzr                                   1/1     Running   5 (17m ago)     17d
note-deployment-74cc946cd8-25gfq              1/1     Running   4 (17m ago)     14d
note-deployment-74cc946cd8-2t56b              1/1     Running   4               14d
note-server-deployment-6fb5fcb67f-txvrh       1/1     Running   4 (9m16s ago)   14d
note-server-deployment-6fb5fcb67f-wnnb4       1/1     Running   3 (17m ago)     14d
prometheus-alertmanager-0                     1/1     Running   0               7m31s
prometheus-kube-state-metrics-745b475957-2ml86   1/1     Running   0               7m35s
prometheus-prometheus-node-exporter-fbndl     1/1     Running   0               7m35s
prometheus-prometheus-pushgateway-6ccd698d79-mhf94   1/1     Running   0               7m35s
prometheus-server-5c99dfc547-vc8qs            2/2     Running   0               7m35s
react-95c5d68df-n2lg2                         1/1     Running   1 (17m ago)     7d19h
web-0                                         0/1     Pending   0               17d
web-db44c7d4f-4x6nf                           1/1     Running   5 (17m ago)     17d
web-db44c7d4f-csflf                           1/1     Running   5               17d
web-db44c7d4f-hpqpw                           1/1     Running   5 (17m ago)     17d
```

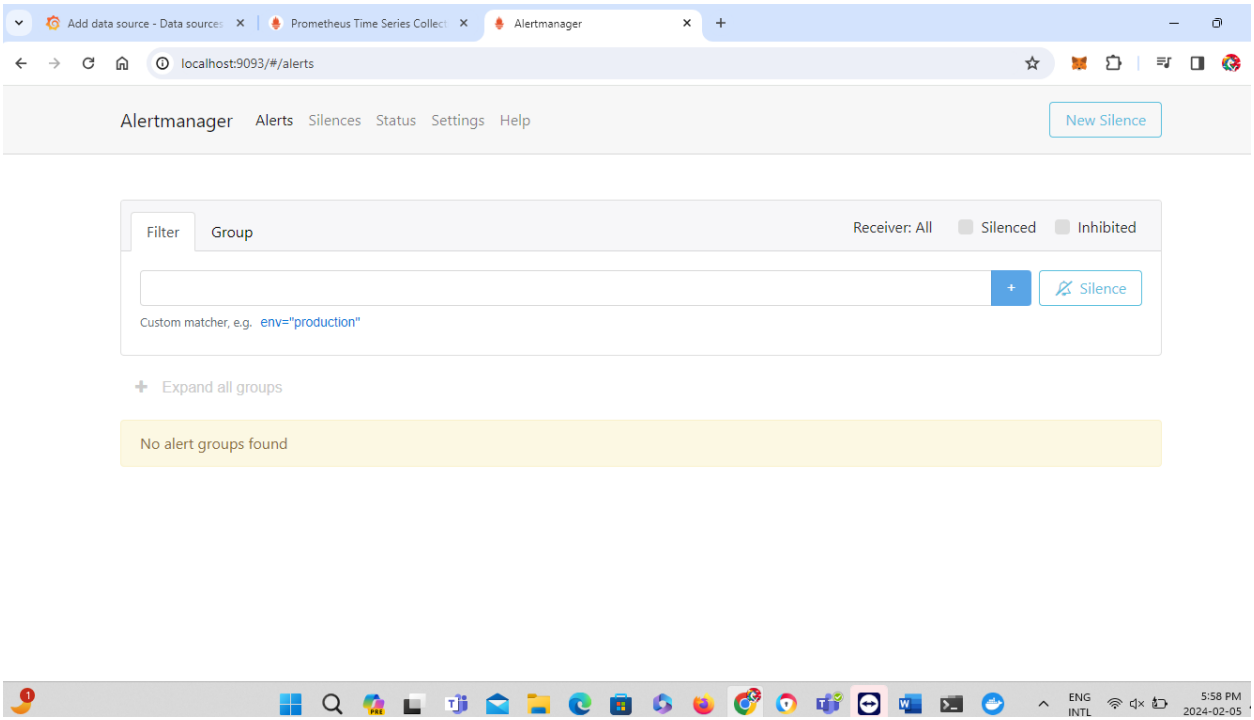
```
reetika@DESKTOP-17FQPRN:~$ kubectl get svc
NAME                                TYPE           CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
dapp                                ClusterIP      10.106.187.168   <none>        4000/TCP         7d20h
ganache                             ClusterIP      10.102.72.128    <none>        8545/TCP         7d20h
grafana                             ClusterIP      10.99.74.71      <none>        80/TCP           7m3s
kubernetes                          ClusterIP      10.96.0.1        <none>        443/TCP          17d
mongo-express-service               LoadBalancer   10.96.71.190     127.0.0.1     8081:30095/TCP   14d
mongodb-service                     ClusterIP      10.107.163.164   <none>        27017/TCP        14d
nginx                               ClusterIP      10.97.106.120    <none>        80/TCP           17d
note-server-service                 ClusterIP      10.107.135.176   <none>        5000/TCP         14d
note-service                        LoadBalancer   10.111.85.249    127.0.0.1     3000:31749/TCP   14d
prometheus-alertmanager             ClusterIP      10.104.28.104    <none>        9093/TCP         7m48s
prometheus-alertmanager-headless    ClusterIP      None             <none>        9093/TCP         7m48s
prometheus-kube-state-metrics       ClusterIP      10.96.42.146     <none>        8080/TCP         7m48s
prometheus-prometheus-node-exporter ClusterIP      10.101.14.254    <none>        9100/TCP         7m48s
prometheus-prometheus-pushgateway   ClusterIP      10.105.80.148    <none>        9091/TCP         7m48s
prometheus-server                   ClusterIP      10.108.218.74    <none>        80/TCP           7m48s
react                               LoadBalancer   10.97.187.183    127.0.0.1     3001:30901/TCP   7d20h
reetika@DESKTOP-17FQPRN:~$
```

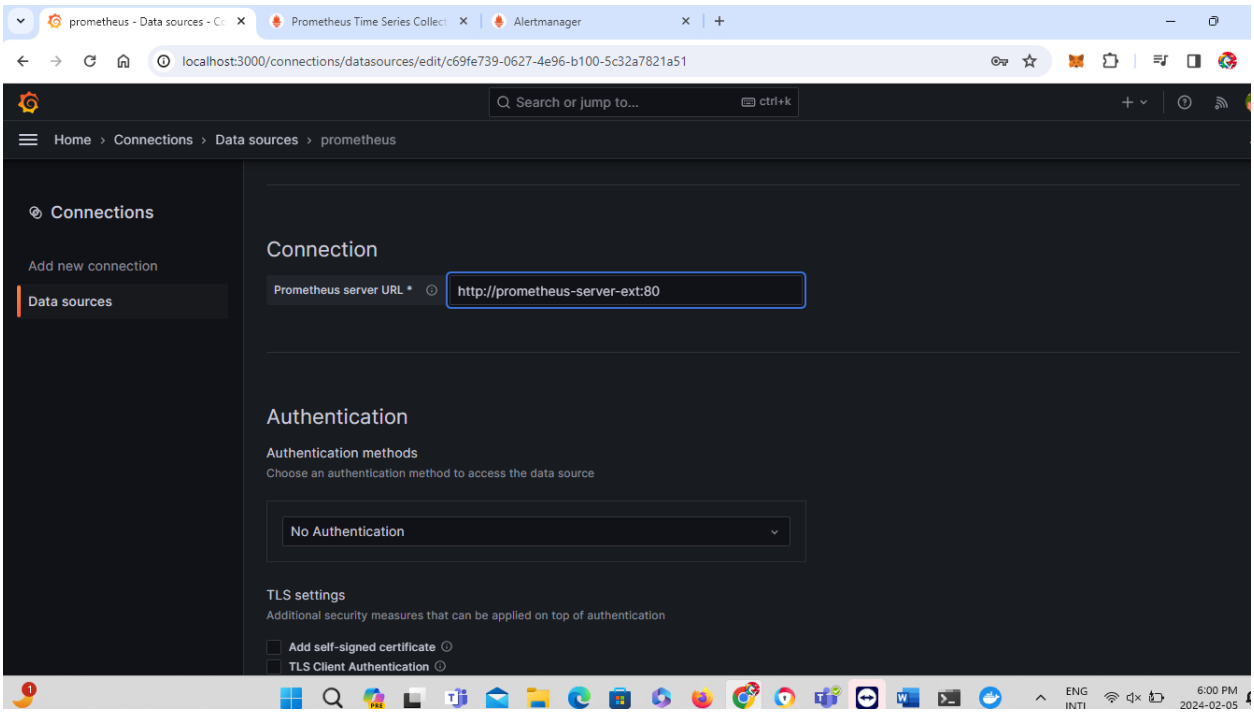
```
reetika@DESKTOP-17FQPRN:~$ kubectl expose service prometheus-server --type=NodePort --target-port=9090 --name=prometheus-server-ext
service/prometheus-server-ext exposed
reetika@DESKTOP-17FQPRN:~$ kubectl port-forward prometheus-server-5c99dfc547-vc8qs 9090
Forwarding from 127.0.0.1:9090 -> 9090
Forwarding from [::1]:9090 -> 9090
Handling connection for 9090
Handling connection for 9090
Handling connection for 9090
```

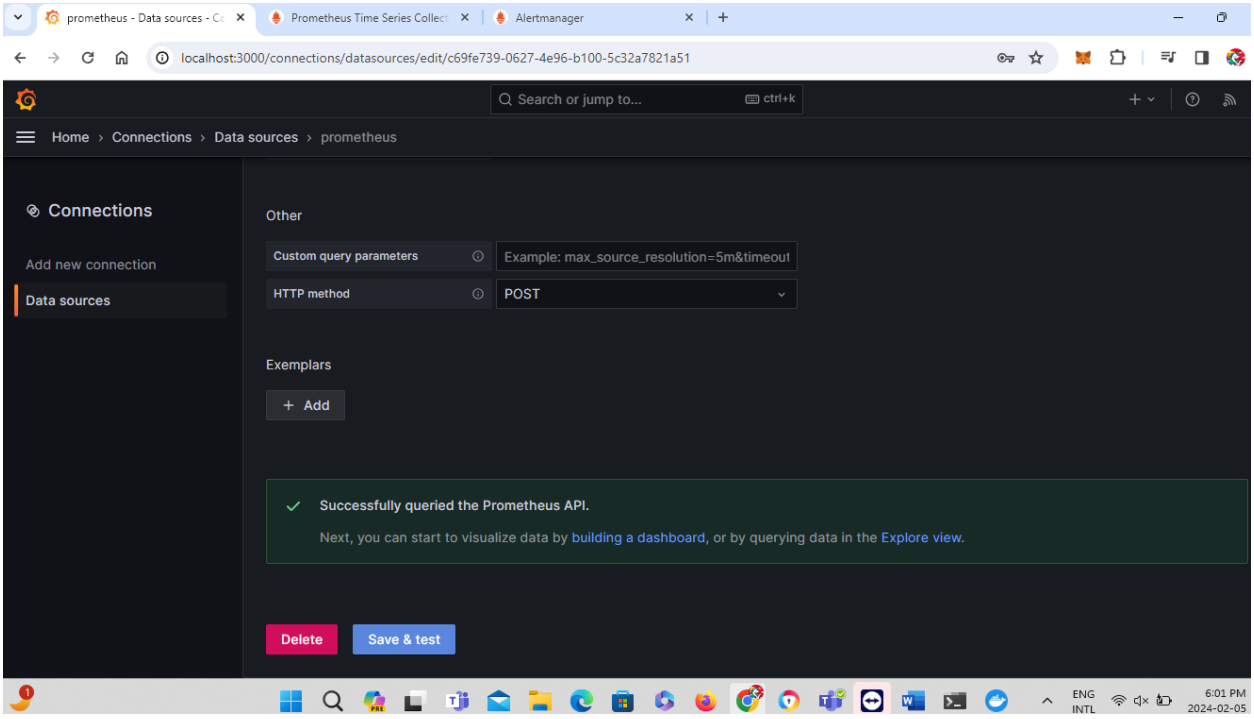
reetika@DESKTOP-17FQPRN:~$ kubectl port-forward prometheus-alertmanager-0 9093
Forwarding from 127.0.0.1:9093 -> 9093
Forwarding from [::1]:9093 -> 9093
Handling connection for 9093
Handling connection for 9093
Handling connection for 9093
Handling connection for 9093

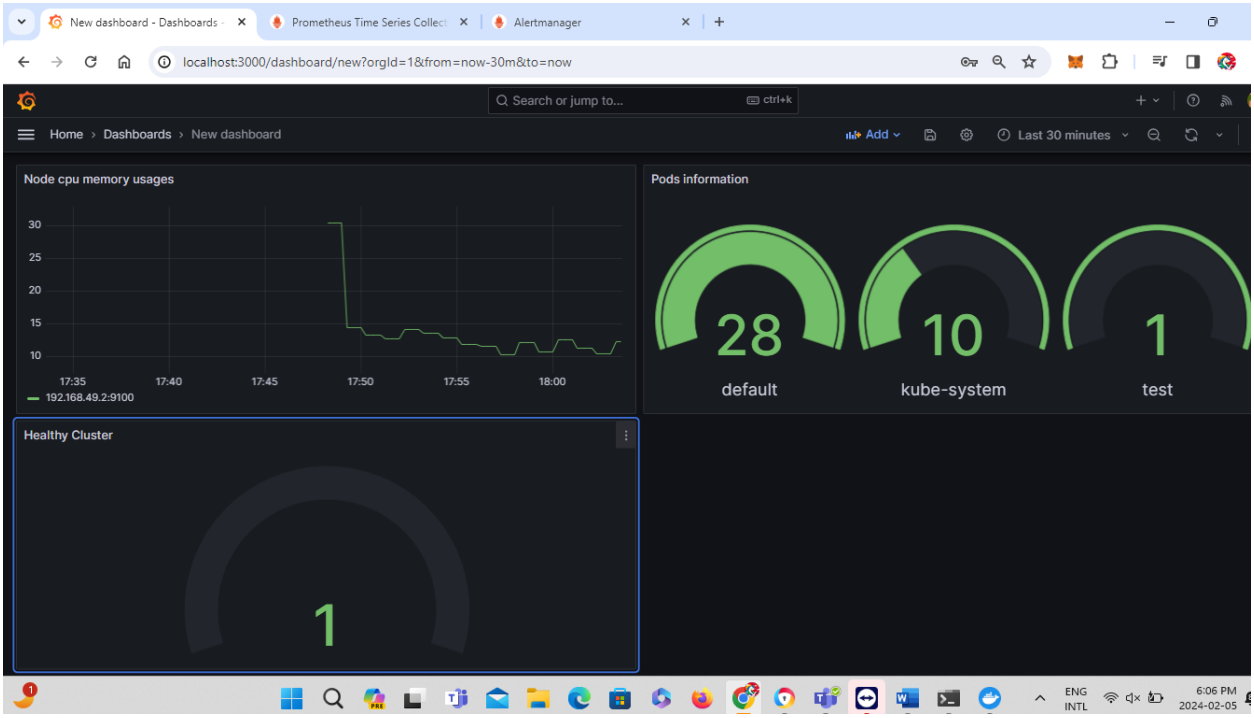

reetika@DESKTOP-17FQPRN:~$ kubectl expose service grafana --type=NodePort --target-port=3000 --name=grafana-ext
service/grafana-ext exposed
reetika@DESKTOP-17FQPRN:~$ kubectl get secret --namespace default grafana -o jsonpath="{.data.admin-password}" | base64 --decode ; ec
ho
za1xJodpI9xEPqj1o3WP3aqeQpUNPm4tU8cBtspR
reetika@DESKTOP-17FQPRN:~$ kubectl port-forward grafana-6b58d55dc6-vmqdc 3000
Error from server (NotFound): pods "grafana-6b58d55dc6-vmqdc" not found
reetika@DESKTOP-17FQPRN:~$ kubectl port-forward grafana-987dfcbb-tb7wz 3000
Forwarding from 127.0.0.1:3000 -> 3000
Forwarding from [::1]:3000 -> 3000
Handling connection for 3000
Handling connection for 3000
Handling connection for 3000
Handling connection for 3000
Handling connection for 3000
Handling connection for 3000
Handling connection for 3000


Add data source - Data sources
Prometheus Time Series Collect
Alertmanager
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
Expression (press Shift+Enter for newlines)
Execute
Table
Graph
Evaluation time
No data queried yet
Remove Pane
Add Panel


Add data source - Data sources
Prometheus Time Series Collect
Alertmanager
localhost:9093/#/alerts
Alertmanager
Alerts
Silences
Status
Settings
Help
New Silence
Filter
Group
Receiver: All
Silenced
Inhibited
Silence
Custom matcher, e.g. env="production"
Expand all groups
No alert groups found
ENG
INTL
5:58 PM
2024-02-05


prometheus - Data sources - Co
Prometheus Time Series Collect
Alertmanager
localhost:3000/connections/datasources/edit/c69fe739-0627-4e96-b100-5c32a7821a51
Search or jump to...
ctrl+k
Home
Connections
Data sources
prometheus
Connections
Add new connection
Data sources
Connection
Prometheus server URL *
http://prometheus-server-ext:80
Authentication
Authentication methods
Choose an authentication method to access the data source
No Authentication
TLS settings
Additional security measures that can be applied on top of authentication
Add self-signed certificate
TLS Client Authentication
ENG
INTL
6:00 PM
2024-02-05


prometheus - Data sources - Co
Prometheus Time Series Collect
Alertmanager
localhost:3000/connections/datasources/edit/c69fe739-0627-4e96-b100-5c32a7821a51
Search or jump to...
ctrl+k
Home › Connections › Data sources › prometheus
Connections
Add new connection
Data sources
Other
Custom query parameters
Example: max_source_resolution=5m&timeout
HTTP method
POST
Exemplars
+ Add
Successfully queried the Prometheus API.
Next, you can start to visualize data by building a dashboard, or by querying data in the Explore view.
Delete
Save & test
ENG
INTL
6:01 PM
2024-02-05


New dashboard - Dashboards
Prometheus Time Series Collect
Alertmanager
localhost:3000/dashboard/new?orgId=1&from=now-30m&to=now
Search or jump to...
ctrl+k
Home › Dashboards › New dashboard
Add
Last 30 minutes
Node cpu memory usages
30
25
20
15
10
17:35
17:40
17:45
17:50
17:55
18:00
192.168.49.2:9100
Pods information
28
default
10
kube-system
1
test
Healthy Cluster
1
ENG
INTL
6:06 PM
2024-02-05