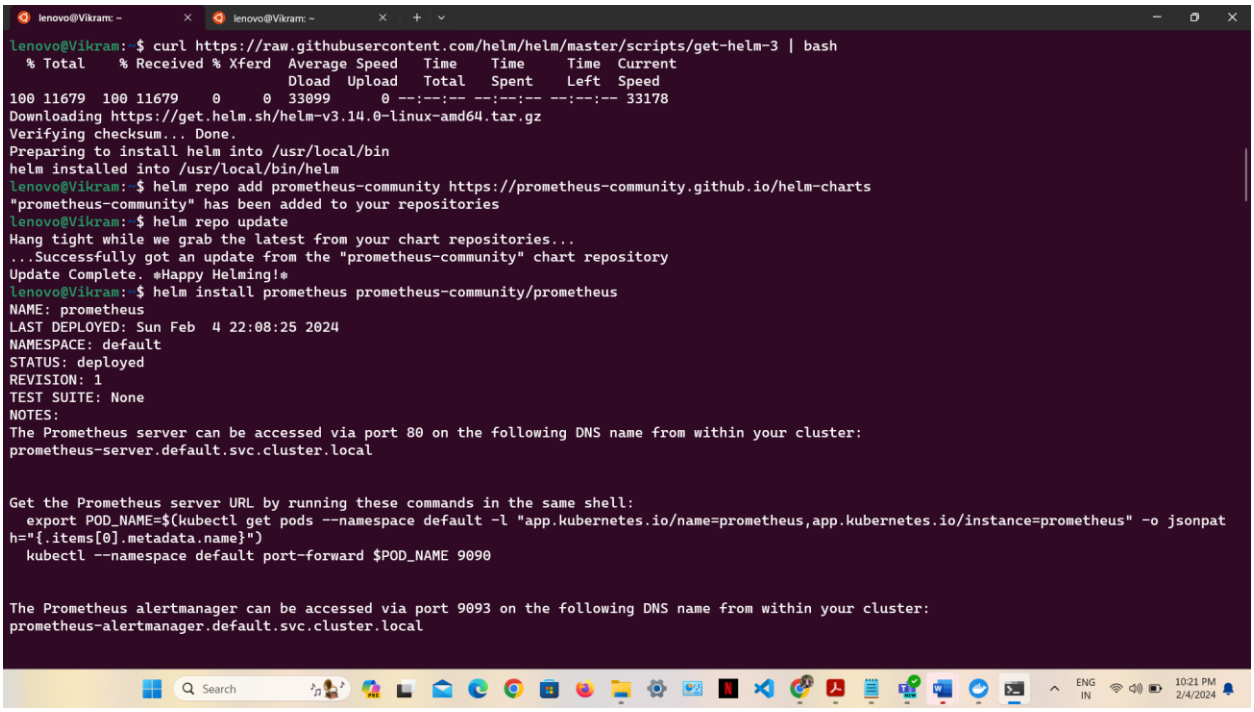
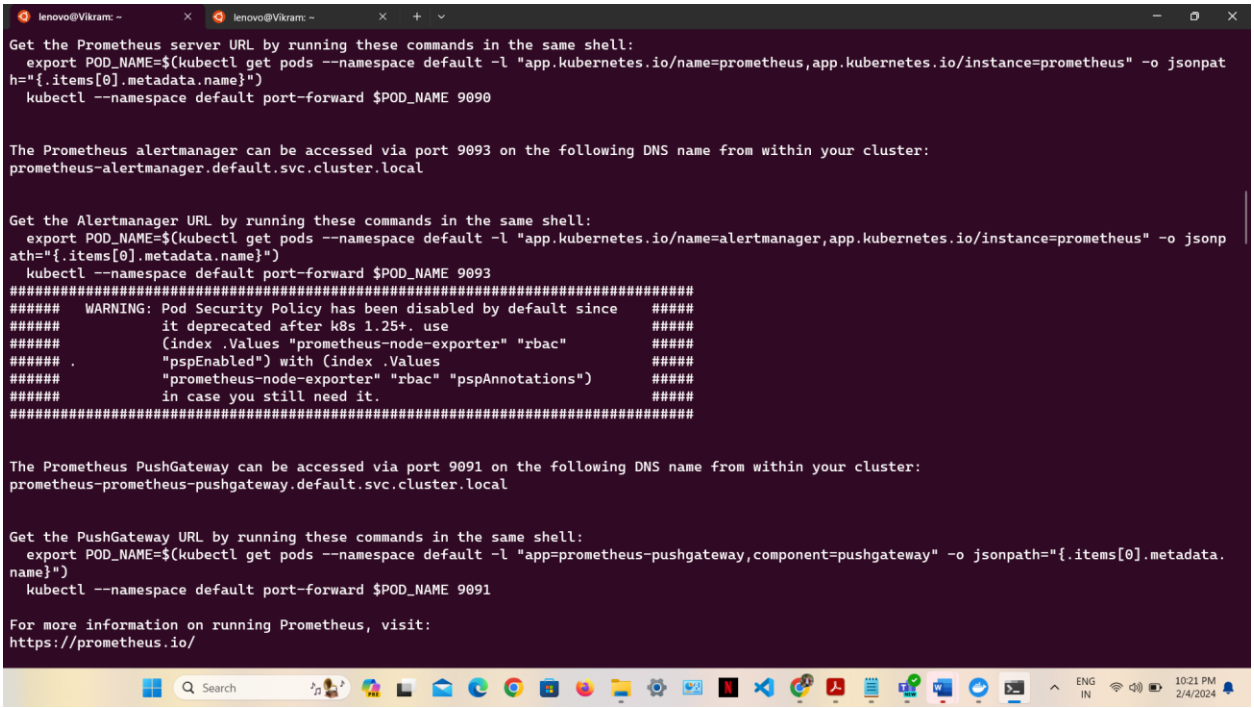
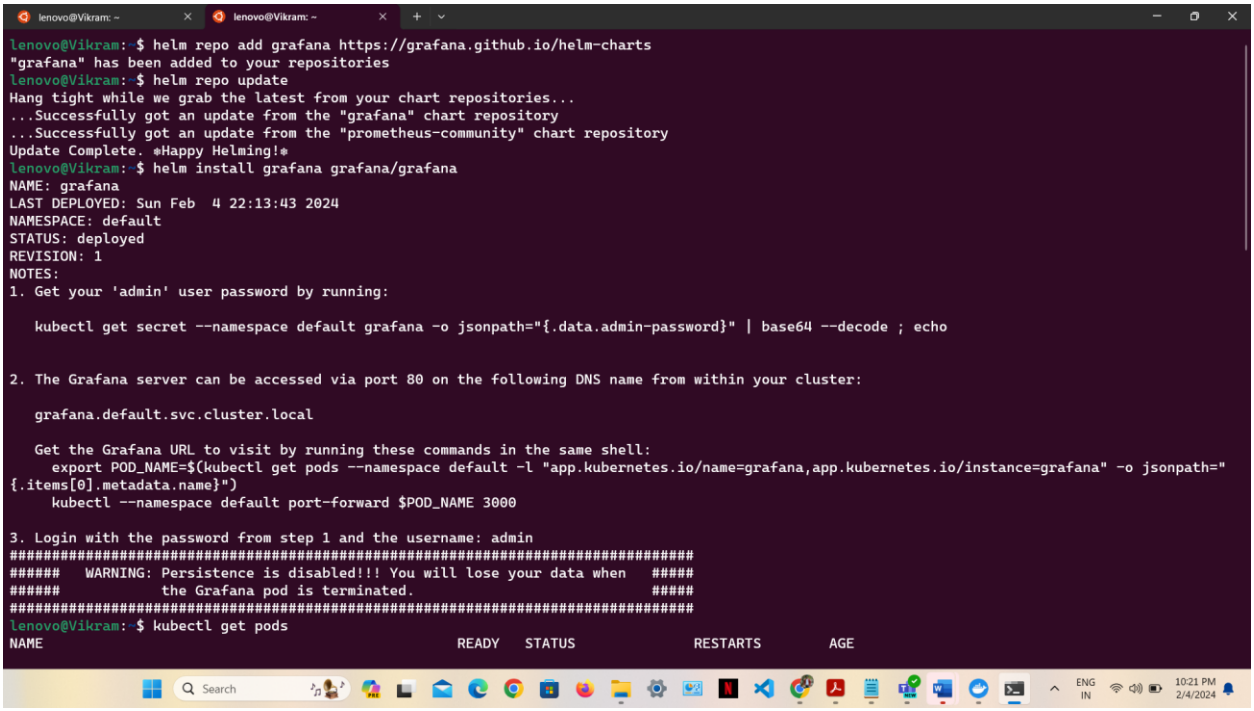
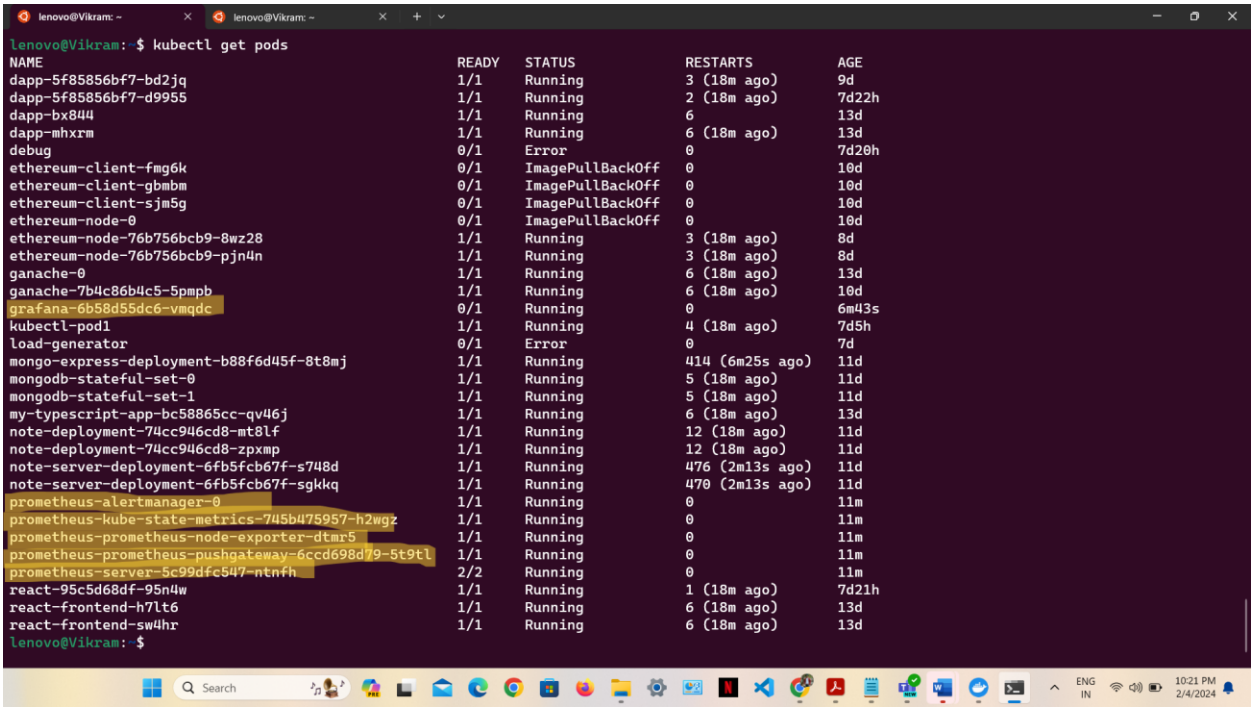
Vikram Singh (101501507)

Lab-5






lenovo@Vikram: ~
lenovo@Vikram: ~
lenovo@Vikram:~$ helm repo add grafana https://grafana.github.io/helm-charts
"grafana" has been added to your repositories
lenovo@Vikram:~$ 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!⎈
lenovo@Vikram:~$ helm install grafana grafana/grafana
NAME: grafana
LAST DEPLOYED: Sun Feb 4 22:13:43 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 $POD_NAME 3000
3. Login with the password from step 1 and the username: admin
WARNING: Persistence is disabled!!! You will lose your data when
the Grafana pod is terminated.
lenovo@Vikram:~$ kubectl get pods
NAME READY STATUS RESTARTS AGE
Search
ENG
IN
10:21 PM
2/4/2024


lenovo@Vikram: ~
lenovo@Vikram: ~
lenovo@Vikram:~$ kubectl get pods
NAME READY STATUS RESTARTS AGE
dapp-5f85856bf7-bd2jq 1/1 Running 3 (18m ago) 9d
dapp-5f85856bf7-d9955 1/1 Running 2 (18m ago) 7d22h
dapp-bx844 1/1 Running 6 13d
dapp-mhxrm 1/1 Running 6 (18m ago) 13d
debug 0/1 Error 0 7d20h
ethereum-client-fmg6k 0/1 ImagePullBackOff 0 10d
ethereum-client-gbmbm 0/1 ImagePullBackOff 0 10d
ethereum-client-sjm5g 0/1 ImagePullBackOff 0 10d
ethereum-node-0 0/1 ImagePullBackOff 0 10d
ethereum-node-76b756bcb9-8wz28 1/1 Running 3 (18m ago) 8d
ethereum-node-76b756bcb9-pjn4n 1/1 Running 3 (18m ago) 8d
ganache-0 1/1 Running 6 (18m ago) 13d
ganache-7b4c86b4c5-5pmpb 1/1 Running 6 (18m ago) 10d
grafana-6b58d55dc6-vmqdc 0/1 Running 0 6m43s
kubectl-pod1 1/1 Running 4 (18m ago) 7d5h
load-generator 0/1 Error 0 7d
mongo-express-deployment-b88f6d45f-8t8mj 1/1 Running 414 (6m25s ago) 11d
mongodb-stateful-set-0 1/1 Running 5 (18m ago) 11d
mongodb-stateful-set-1 1/1 Running 5 (18m ago) 11d
my-typescript-app-bc58865cc-qv46j 1/1 Running 6 (18m ago) 13d
note-deployment-74cc946cd8-mt8lf 1/1 Running 12 (18m ago) 11d
note-deployment-74cc946cd8-zpxmp 1/1 Running 12 (18m ago) 11d
note-server-deployment-6fb5fcb67f-s748d 1/1 Running 476 (2m13s ago) 11d
note-server-deployment-6fb5fcb67f-sgkkq 1/1 Running 470 (2m13s ago) 11d
prometheus-alertmanager-0 1/1 Running 0 11m
prometheus-kube-state-metrics-745b475957-h2wgz 1/1 Running 0 11m
prometheus-prometheus-node-exporter-dtmr5 1/1 Running 0 11m
prometheus-prometheus-pushgateway-6ccd698d79-5t9tl 1/1 Running 0 11m
prometheus-server-5c99dfc547-ntnfh 2/2 Running 0 11m
react-95c5d68df-95n4w 1/1 Running 1 (18m ago) 7d21h
react-frontend-h7lt6 1/1 Running 6 (18m ago) 13d
react-frontend-sw4hr 1/1 Running 6 (18m ago) 13d
lenovo@Vikram:~$
Search
ENG
IN
10:21 PM
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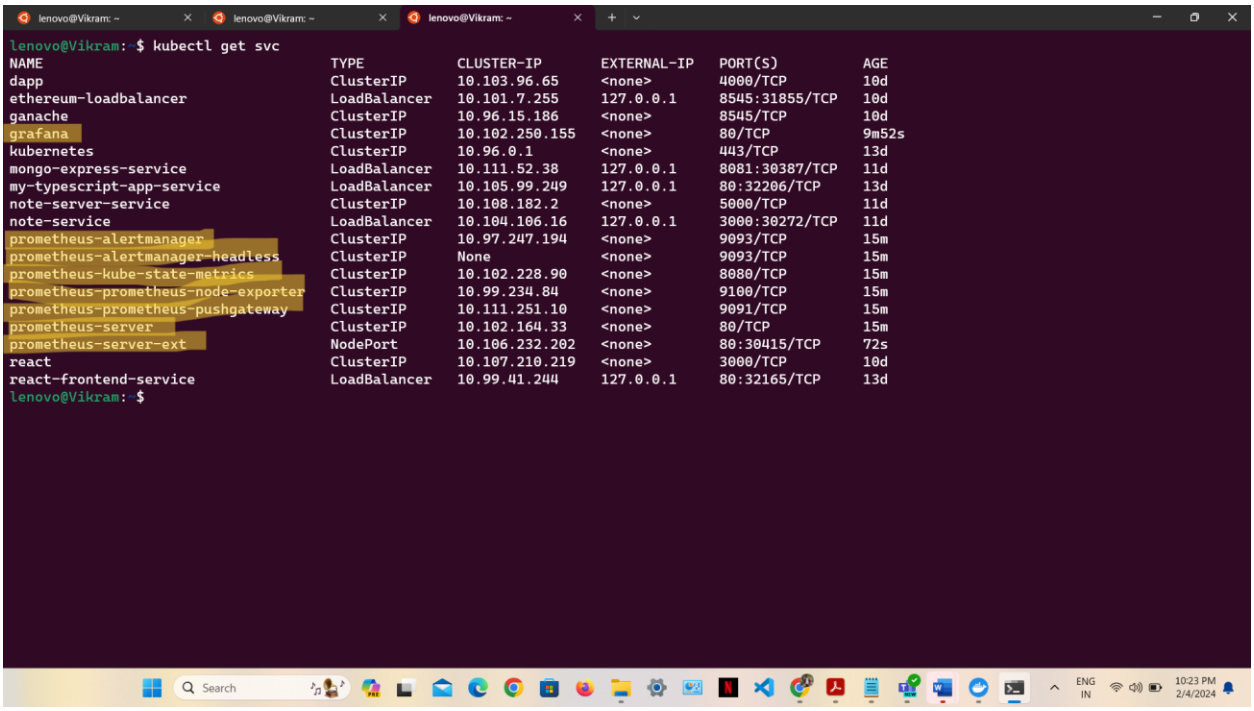
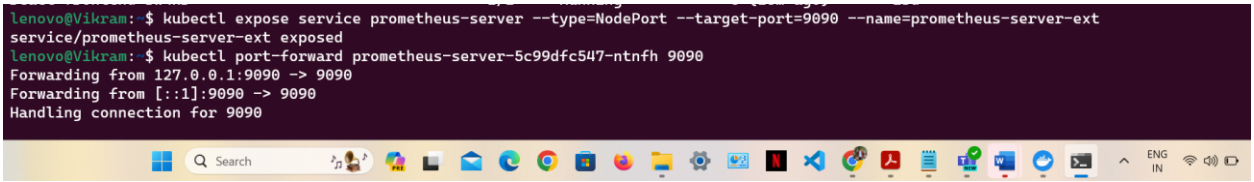
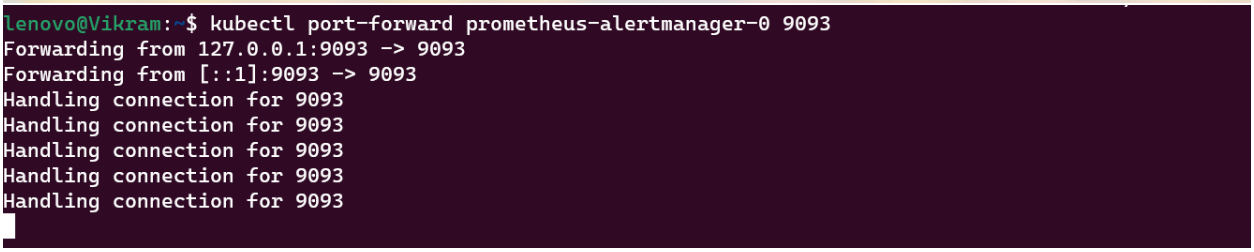
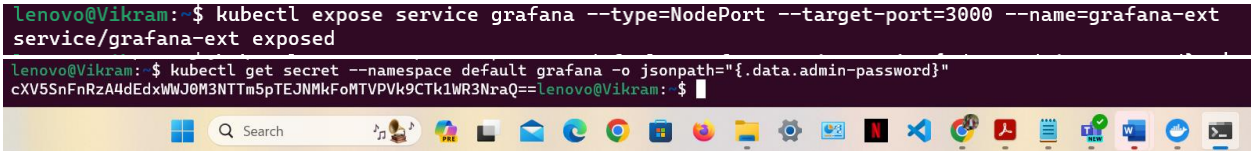
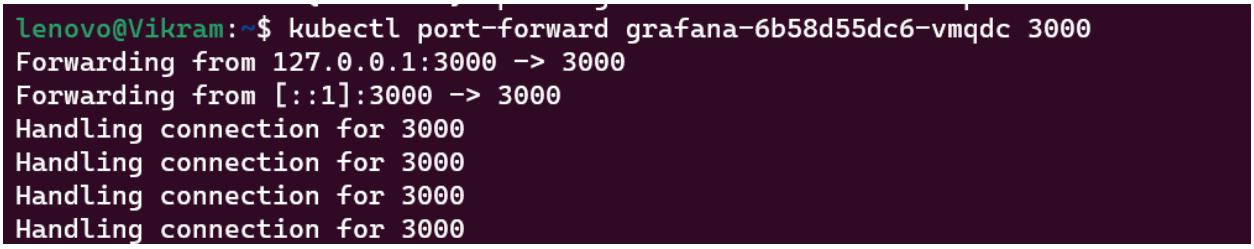
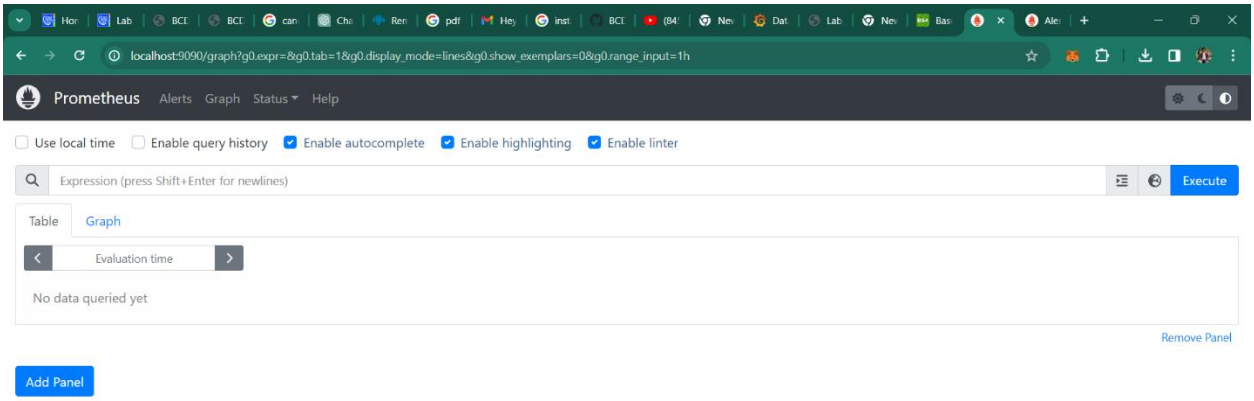

lenovo@Vikram: ~
lenovo@Vikram: ~
lenovo@Vikram: ~
lenovo@Vikram:~$ kubectl get svc
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
dapp ClusterIP 10.103.96.65 <none> 4000/TCP 10d
ethereum-loadbalancer LoadBalancer 10.101.7.255 127.0.0.1 8545:31855/TCP 10d
ganache ClusterIP 10.96.15.186 <none> 8545/TCP 10d
grafana ClusterIP 10.102.250.155 <none> 80/TCP 9m52s
kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 13d
mongo-express-service LoadBalancer 10.111.52.38 127.0.0.1 8081:30387/TCP 11d
my-typescript-app-service LoadBalancer 10.105.99.249 127.0.0.1 80:32206/TCP 13d
note-server-service ClusterIP 10.108.182.2 <none> 5000/TCP 11d
note-service LoadBalancer 10.104.106.16 127.0.0.1 3000:30272/TCP 11d
prometheus-alertmanager ClusterIP 10.97.247.194 <none> 9093/TCP 15m
prometheus-alertmanager-headless ClusterIP None <none> 9093/TCP 15m
prometheus-kube-state-metrics ClusterIP 10.102.228.90 <none> 8080/TCP 15m
prometheus-prometheus-node-exporter ClusterIP 10.99.234.84 <none> 9100/TCP 15m
prometheus-prometheus-pushgateway ClusterIP 10.111.251.10 <none> 9091/TCP 15m
prometheus-server ClusterIP 10.102.164.33 <none> 80/TCP 15m
prometheus-server-ext NodePort 10.106.232.202 <none> 80:30415/TCP 72s
react ClusterIP 10.107.210.219 <none> 3000/TCP 10d
react-frontend-service LoadBalancer 10.99.41.244 127.0.0.1 80:32165/TCP 13d
lenovo@Vikram:~$
Search
ENG IN
10:23 PM 2/4/2024

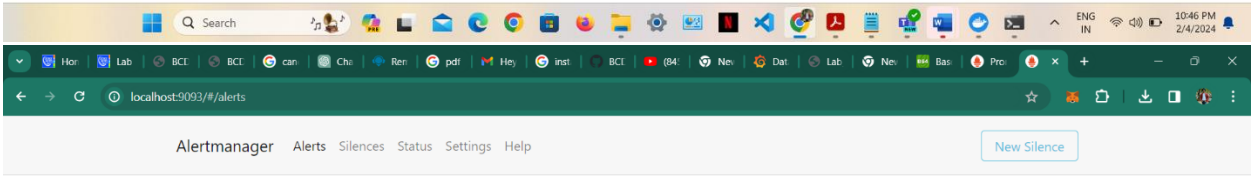

lenovo@Vikram:~$ kubectl expose service prometheus-server --type=NodePort --target-port=9090 --name=prometheus-server-ext
service/prometheus-server-ext exposed
lenovo@Vikram:~$ kubectl port-forward prometheus-server-5c99dfc547-ntnfh 9090
Forwarding from 127.0.0.1:9090 -> 9090
Forwarding from [::1]:9090 -> 9090
Handling connection for 9090
Search
ENG IN


lenovo@Vikram:~$ 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
Handling connection for 9093


lenovo@Vikram:~$ kubectl expose service grafana --type=NodePort --target-port=3000 --name=grafana-ext
service/grafana-ext exposed
lenovo@Vikram:~$ kubectl get secret --namespace default grafana -o jsonpath="{.data.admin-password}"
cXV5SnFnRzA4dEdxWWJ0M3NTTm5pTEJNMkFoMTVPVk9CTk1WR3NraQ==lenovo@Vikram:~$
Search


lenovo@Vikram:~$ kubectl port-forward grafana-6b58d55dc6-vmqdc 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


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 Panel
Add Panel


Search
ENG
IN
10:46 PM
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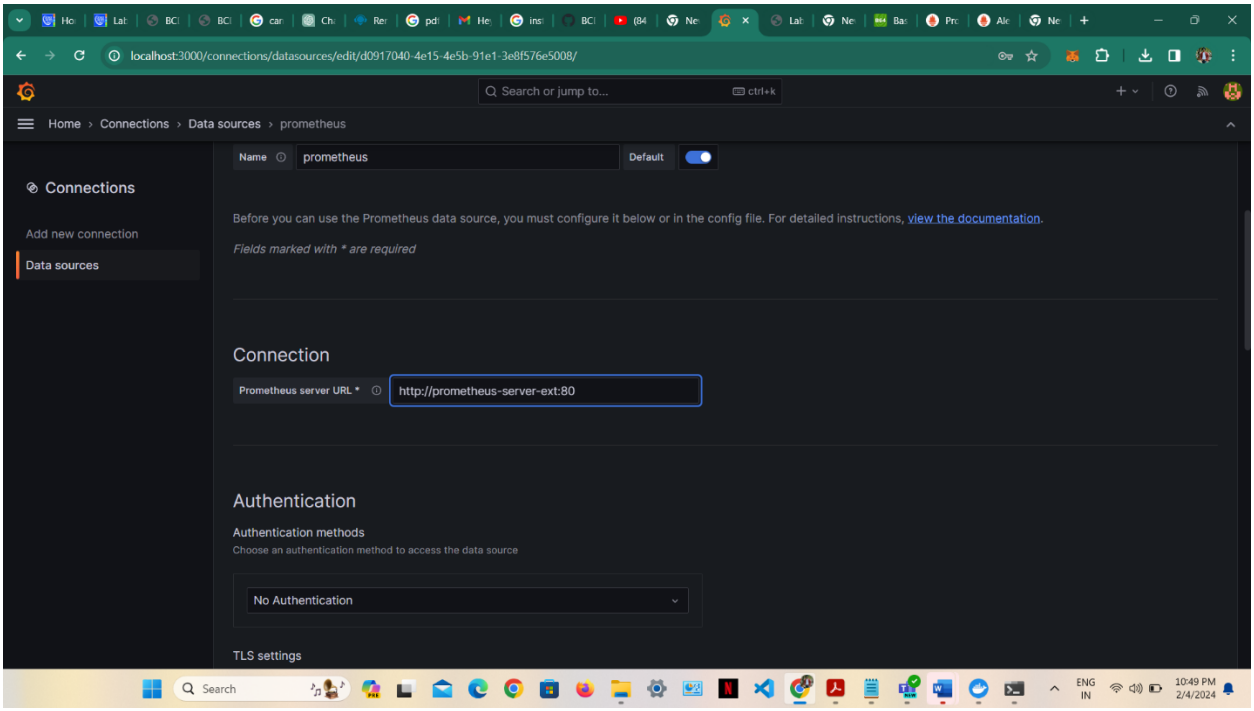
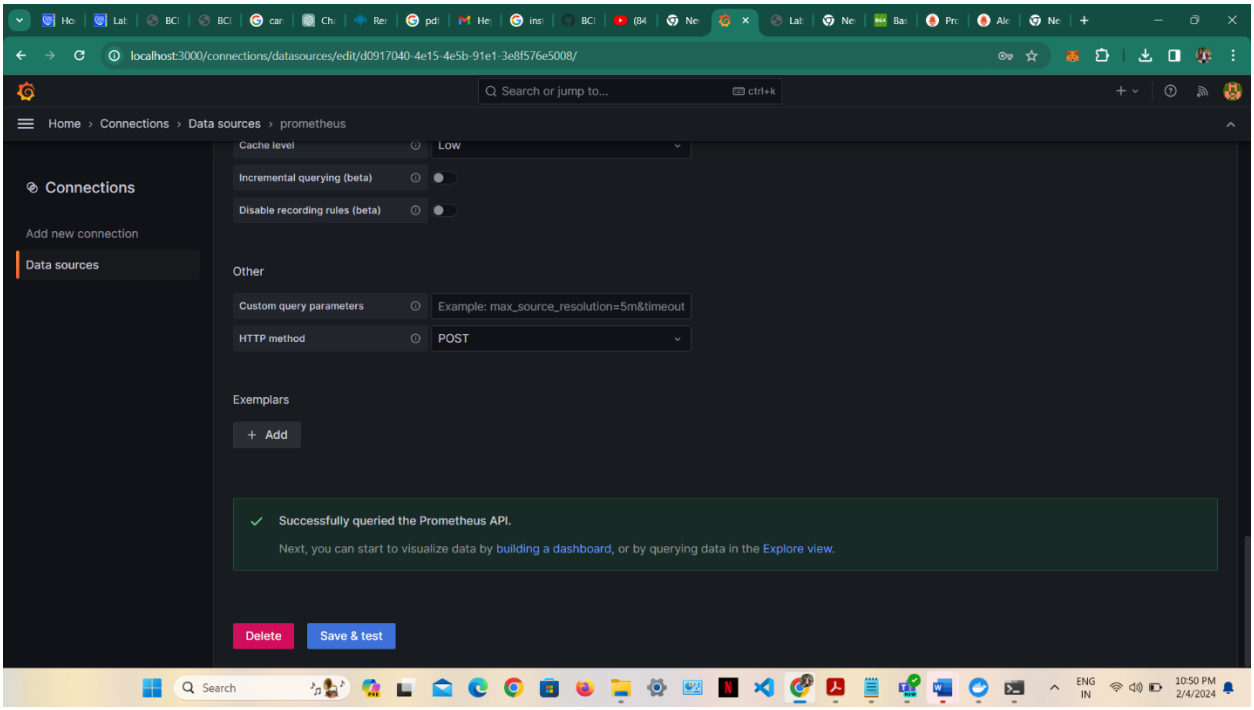
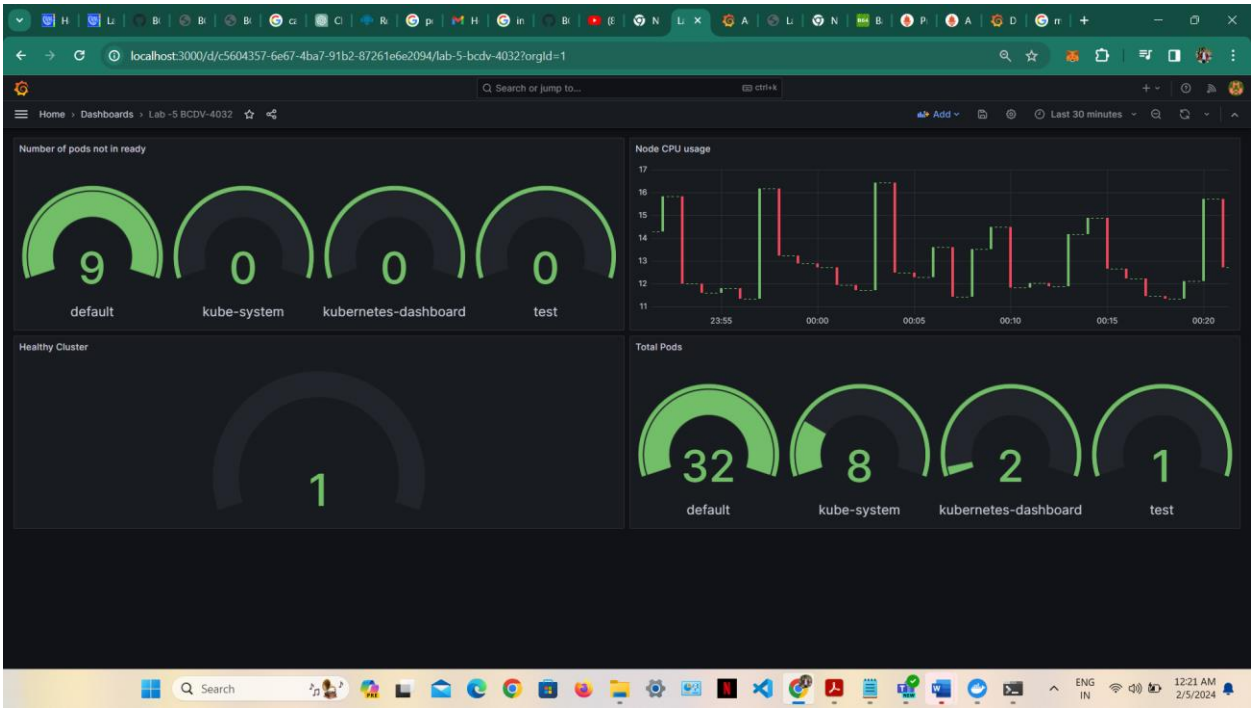
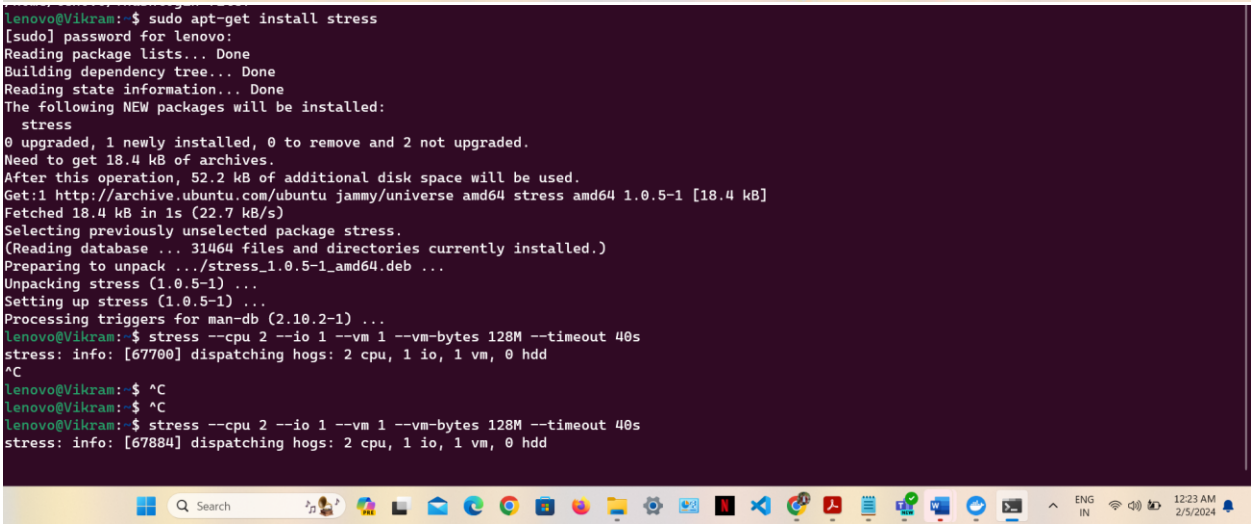
localhost:9093/#/alerts
Alertmanager
Alerts
Silences
Status
Settings
Help
New Silence
Filter
Group
Receiver: All
Silenced
Inhibited
Silence
Custom matcher, e.g. env="production"
Expand all groups
No alert groups found

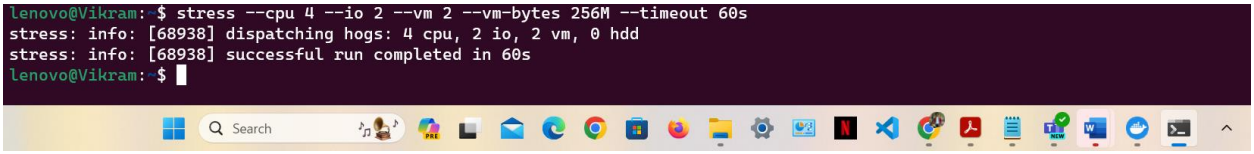

Search
ENG
IN
10:46 PM
2/4/2024

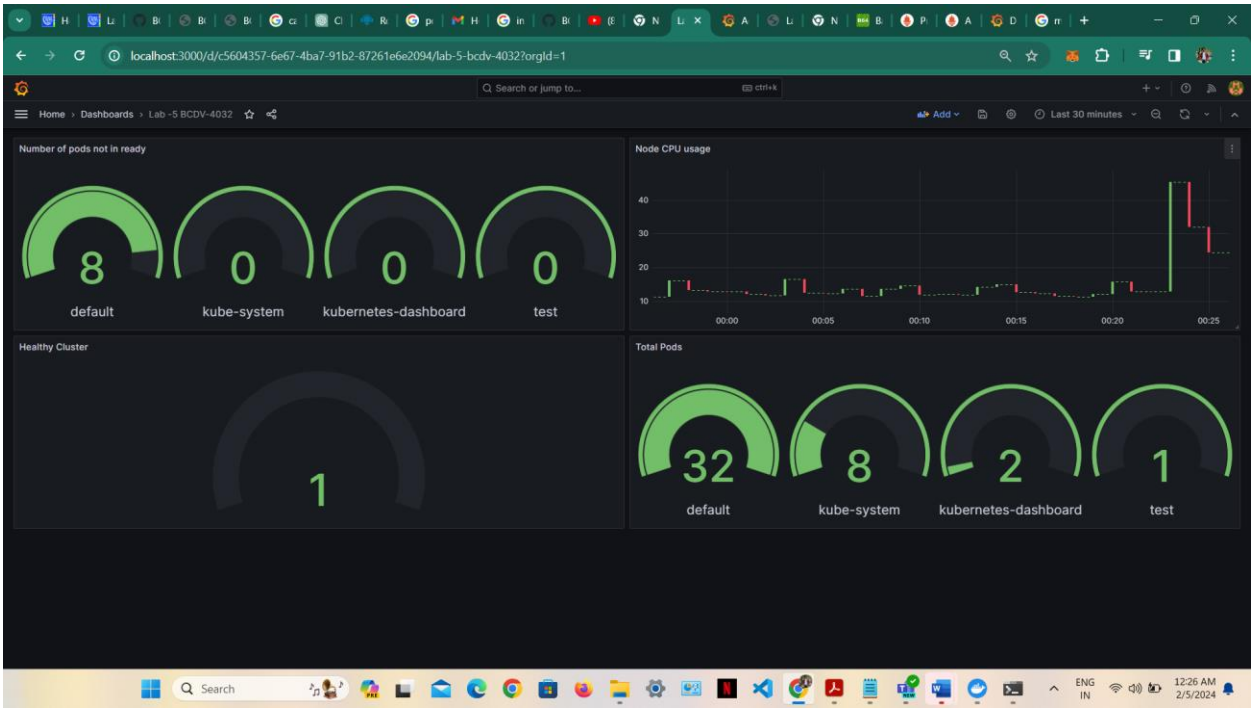

localhost:3000/connections/datasources/edit/d0917040-4e15-4e5b-91e1-3e8f576e5008/
Search or jump to... ctrl+k
Home › Connections › Data sources › prometheus
Connections
Add new connection
Data sources
Name prometheus
Default
Before you can use the Prometheus data source, you must configure it below or in the config file. For detailed instructions, view the documentation.
Fields marked with * are required
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
Search
ENG IN
10:49 PM 2/4/2024


localhost:3000/connections/datasources/edit/d0917040-4e15-4e5b-91e1-3e8f576e5008/
Search or jump to... ctrl+k
Home › Connections › Data sources › prometheus
Cache level Low
Incremental querying (beta)
Disable recording rules (beta)
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
Search
ENG IN
10:50 PM 2/4/2024


localhost:3000/d/c5604357-6e67-4ba7-91b2-87261e6e2094/lab-5-bcdv-4032?orgId=1
Home › Dashboards › Lab -5 BCDV-4032
Last 30 minutes
Number of pods not in ready
9
default
0
kube-system
0
kubernetes-dashboard
0
test
Node CPU usage
17
16
15
14
13
12
11
23:55
00:00
00:05
00:10
00:15
00:20
Healthy Cluster
1
Total Pods
32
default
8
kube-system
2
kubernetes-dashboard
1
test


lenovo@Vikram:~$ sudo apt-get install stress
[sudo] password for lenovo:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
stress
0 upgraded, 1 newly installed, 0 to remove and 2 not upgraded.
Need to get 18.4 kB of archives.
After this operation, 52.2 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/universe amd64 stress amd64 1.0.5-1 [18.4 kB]
Fetched 18.4 kB in 1s (22.7 kB/s)
Selecting previously unselected package stress.
(Reading database ... 31464 files and directories currently installed.)
Preparing to unpack .../stress_1.0.5-1_amd64.deb ...
Unpacking stress (1.0.5-1) ...
Setting up stress (1.0.5-1) ...
Processing triggers for man-db (2.10.2-1) ...
lenovo@Vikram:~$ stress --cpu 2 --io 1 --vm 1 --vm-bytes 128M --timeout 40s
stress: info: [67700] dispatching hogs: 2 cpu, 1 io, 1 vm, 0 hdd
^C
lenovo@Vikram:~$ ^C
lenovo@Vikram:~$ ^C
lenovo@Vikram:~$ stress --cpu 2 --io 1 --vm 1 --vm-bytes 128M --timeout 40s
stress: info: [67884] dispatching hogs: 2 cpu, 1 io, 1 vm, 0 hdd


lenovo@Vikram:~$ stress --cpu 4 --io 2 --vm 2 --vm-bytes 256M --timeout 60s
stress: info: [68938] dispatching hogs: 4 cpu, 2 io, 2 vm, 0 hdd
stress: info: [68938] successful run completed in 60s
lenovo@Vikram:~$


localhost:3000/d/c5604357-6e67-4ba7-91b2-87261e6e2094/lab-5-bcdv-4032?orgId=1
Home › Dashboards › Lab -5 BCDV-4032
Last 30 minutes
Number of pods not in ready
8
default
0
kube-system
0
kubernetes-dashboard
0
test
Node CPU usage
40
30
20
10
00:00
00:05
00:10
00:15
00:20
00:25
Healthy Cluster
1
Total Pods
32
default
8
kube-system
2
kubernetes-dashboard
1
test
Search
ENG
IN
12:26 AM
2/5/2024