

PROMETHEUS BASICS

Prometheus is an open-source system monitoring and alerting toolkit originally built at SoundCloud. It is now a standalone opensource project. Prometheus joined the Cloud Native Computing Foundation in 2016 as the second hosted project, after Kubernetes.

Features

1. A multi-dimensional data model with time series data identified by metric name and key/value pairs
2. PromQL, a flexible query language to leverage this dimensionality
3. No reliance on distributed storage; single server nodes are autonomous
4. Time series collection happens via a pull model over HTTP
5. Pushing time series is supported via an intermediary gateway
6. Targets are discovered via service discovery or static configuration
7. Multiple modes of graphing and dashboarding support

Prometheus Installation: (Commands with output)

```
sudo useradd \
--system \
--no-create-home \
--shell /bin/false Prometheus
```

```
wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-
amd64.tar.gz
tar -xvf prometheus-2.47.1.linux-amd64.tar.gz
sudo mkdir -p /data /etc/prometheus
cd prometheus-2.47.1.linux-amd64/
sudo mv prometheus promtool /usr/local/bin/
sudo mv consoles/ console_libraries/ /etc/prometheus/
sudo mv prometheus.yml /etc/prometheus/prometheus.yml
sudo chown -R prometheus:prometheus /etc/prometheus/ /data/
```

```
cd
rm -rf prometheus-2.47.1.linux-amd64.tar.gz
prometheus --version
sudo vim /etc/systemd/system/prometheus.service
```

```
Windows PowerShell * Ubuntu + 
-U, --user-group      create a group with the same name as the user
-Z, --selinux-user SEUSER   use a specific SEUSER for the SELinux user mapping
--extrausers          Use the extra users database

prasandh_raaju@DESKTOP-S03TDPN: $ wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
--2025-03-22 06:28:29 - https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objec...t.githubusercontent.com/github-production-release-asset-2e65be/6838921/2f9b7b37-63a0-428b-adb5-0294482fd743?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20250322%2Fus-east-1%2Fs%2Faws4_request&X-Amz-Date=20250322T062830Z&X-Amz-Expires=300&X-Amz-Signature=69fe1104149cf4f143fa8f736bd89913e28008b2bbc73deba3a64ed5db6108X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.47.1.linux-amd64.tar.g... [following]
--2025-03-22 06:28:30 - https://objec...t.githubusercontent.com/github-production-release-asset-2e65be/6838921/2f9b7b37-63a0-428b-adb5-0294482fd743?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20250322%2Fus-east-1%2Fs%2Faws4_request&X-Amz-Date=20250322T062830Z&X-Amz-Expires=300&X-Amz-Signature=69fe1104149cf4f143fa8f736bd89913e28008b2bbc73deba3a64ed5db6108X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.47.1.linux-amd64.tar.g... [following]
Resolving objects.githubusercontent.com (objects.githubusercontent.com)...185.199.110.133, 185.199.111.133, 185.199.108.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.110.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95713066 (91M) [application/octet-stream]
Saving to: 'prometheus-2.47.1.linux-amd64.tar.gz'

[  5% [=====]  0.00M/s eta 3m 58s ] 46.04M --.-KB/s eta 3m 58s

prometheus-2.47.1.linux-amd64.tar.gz 50%[=====] 46.04M --.-KB/s eta 3m 58s
```

```
Windows PowerShell * Ubuntu + 
.47.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2025-03-22 06:34:41 - https://objec...t.githubusercontent.com/github-production-release-asset-2e65be/6838921/2f9b7b37-63a0-428b-adb5-0294482fd743?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20250322%2Fus-east-1%2Fs%2Faws4_request&X-Amz-Date=20250322T063251Z&X-Amz-Expires=300&X-Amz-Signature=4f292f6c8bc5e78f1ef1b65cc57f2ca9688086a8d28682d562193bcf144034b&X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.47.1.linux-amd64.tar.g... [following]
Resolving objects.githubusercontent.com (objects.githubusercontent.com)...185.199.110.133, 185.199.111.133, 185.199.108.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.110.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95713066 (91M) [application/octet-stream]
Saving to: 'prometheus-2.47.1.linux-amd64.tar.gz'

[ 100%[=====] 95713066/95713066] 91.28M 9.12MB/s in 12s

2025-03-22 06:34:54 (7.92 MB/s) - 'prometheus-2.47.1.linux-amd64.tar.gz' saved [95713066/95713066]

prometheus-2.47.1.linux-amd64/
prometheus-2.47.1.linux-amd64/LICENSE
prometheus-2.47.1.linux-amd64/NOTICE
prometheus-2.47.1.linux-amd64/prometheus.yml
prometheus-2.47.1.linux-amd64/consoles/
prometheus-2.47.1.linux-amd64/consoles/prometheus.html
prometheus-2.47.1.linux-amd64/consoles/prometheus-overview.html
prometheus-2.47.1.linux-amd64/consoles/node-cpu.html
prometheus-2.47.1.linux-amd64/consoles/index.html.example
prometheus-2.47.1.linux-amd64/consoles/node.html
prometheus-2.47.1.linux-amd64/consoles/node-disk.html
prometheus-2.47.1.linux-amd64/consoles/node-overview.html
prometheus-2.47.1.linux-amd64/promtool
prometheus-2.47.1.linux-amd64/console_libraries/
prometheus-2.47.1.linux-amd64/console_libraries/prom.lib
prometheus-2.47.1.linux-amd64/console_libraries/menu.lib
prometheus-2.47.1.linux-amd64/prometheus
mv: cannot overwrite '/etc/prometheus/consoles': Directory not empty
mv: cannot overwrite '/etc/prometheus/console_libraries': Directory not empty
chown: invalid user: 'prometheus:prometheus'
prasandh_raaju@DESKTOP-S03TDPN: /prometheus-2.47.1.linux-amd64/prometheus-2.47.1.linux-amd64 $ cd
rm -rf prometheus-2.47.1.linux-amd64.tar.gz
prometheus --version
prometheus, version 2.47.1 (branch: HEAD, revision: c4d1a8beff37cc004f1dc4ab9d2e73193f51aaeb)
  build user:        root@4829330363be
  build date:       20231004-10:31:16
  go version:      go1.21.1
  platform:        linux/amd64
  tags:             netgo,builtinassets,stringlabels
prasandh_raaju@DESKTOP-S03TDPN: $
```

```

[Unit]
Description=Prometheus
Wants=network-online.target
After=network-online.target
StartLimitIntervalSec=500
StartLimitBurst=5
[Service]
User=prometheus
Group=prometheus
Type=simple
Restart=on-failure
RestartSec=5s
ExecStart=/usr/local/bin/prometheus \
--config.file=/etc/prometheus/prometheus.yml \
--storage.tsdb.path=/data \
--web.console.templates=/etc/prometheus/consoles \
--web.console.libraries=/etc/prometheus/console_libraries \
--web.listen-address=0.0.0.0:9090 \
--web.enable-lifecycle
[Install]
WantedBy=multi-user.target

```

The screenshot shows a Windows desktop environment with a dark theme. On the taskbar, there are three open windows: "Windows PowerShell", "Ubuntu", and a file explorer window displaying the contents of the "/etc/systemd/system/prometheus.service" file. The file content is identical to the one shown in the code block above. The file explorer window has a status bar at the bottom showing "21,26 All" and a date/time stamp "22-03-2025 12:09".

```

[Unit]
Description=Prometheus
Wants=network-online.target
After=network-online.target
StartLimitIntervalSec=500
StartLimitBurst=5
[Service]
User=prometheus
Group=prometheus
Type=simple
Restart=on-failure
RestartSec=5s
ExecStart=/usr/local/bin/prometheus \
--config.file=/etc/prometheus/prometheus.yml \
--storage.tsdb.path=/data \
--web.console.templates=/etc/prometheus/consoles \
--web.console.libraries=/etc/prometheus/console_libraries \
--web.listen-address=0.0.0.0:9090 \
--web.enable-lifecycle
[Install]
WantedBy=multi-user.target

```

```

sudo systemctl enable prometheus
sudo systemctl start prometheus
sudo systemctl status prometheus
journalctl -u prometheus -f --no-pager

```

```

Windows PowerShell * Ubuntu *
prometheus-2.47.1.linux-amd64/
prometheus-2.47.1.linux-amd64/LICENSE
prometheus-2.47.1.linux-amd64/NOTICE
prometheus-2.47.1.linux-amd64/prometheus.yml
prometheus-2.47.1.linux-amd64/consoles/
prometheus-2.47.1.linux-amd64/consoles/prometheus.html
prometheus-2.47.1.linux-amd64/consoles/prometheus-overview.html
prometheus-2.47.1.linux-amd64/consoles/node-cpu.html
prometheus-2.47.1.linux-amd64/consoles/index.html.example
prometheus-2.47.1.linux-amd64/consoles/node.html
prometheus-2.47.1.linux-amd64/consoles/node-disk.html
prometheus-2.47.1.linux-amd64/consoles/node-overview.html
prometheus-2.47.1.linux-amd64/promtool
prometheus-2.47.1.linux-amd64/console_libraries/
prometheus-2.47.1.linux-amd64/console_libraries/prom.lib
prometheus-2.47.1.linux-amd64/console_libraries/menu.lib
prometheus-2.47.1.linux-amd64/prometheus
mv: cannot overwrite '/etc/prometheus/consoles': Directory not empty
mv: cannot overwrite '/etc/prometheus/console_libraries': Directory not empty
prasanndh_raaju@DESKTOP-S03TDPN: /prometheus-2.47.1.linux-amd64$ sudo vim /etc/systemd/system/prometheus.service
prasanndh_raaju@DESKTOP-S03TDPN: /prometheus-2.47.1.linux-amd64$ sudo systemctl enable prometheus
sudo systemctl start prometheus
sudo systemctl status prometheus
journalctl -u prometheus -f --no-pager
Job for prometheus.service failed because the control process exited with error code.
See "systemctl status prometheus.service" and "journalctl -xeu prometheus.service" for details.
* prometheus.service - Prometheus
  Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabled)
    Active: failed (Result: exit-code) since Sat 2025-03-22 06:40:52 UTC; 3min 25s ago
      Duration: 8ms
     Main PID: 59343 (code=exited, status=217/USER)

Mar 22 06:40:52 DESKTOP-S03TDPN systemd[1]: prometheus.service: Scheduled restart job, restart counter is at 5.
Mar 22 06:40:52 DESKTOP-S03TDPN systemd[1]: prometheus.service: Start request repeated too quickly.
Mar 22 06:40:52 DESKTOP-S03TDPN systemd[1]: prometheus.service: Failed with result 'exit-code'.
Mar 22 06:40:52 DESKTOP-S03TDPN systemd[1]: Failed to start prometheus.service - Prometheus.
Mar 22 06:41:04 DESKTOP-S03TDPN systemd[1]: prometheus.service: Start request repeated too quickly.
Mar 22 06:41:04 DESKTOP-S03TDPN systemd[1]: Failed with result 'exit-code'.
Mar 22 06:41:04 DESKTOP-S03TDPN systemd[1]: Failed to start prometheus.service - Prometheus.
Mar 22 06:44:18 DESKTOP-S03TDPN systemd[1]: prometheus.service: Start request repeated too quickly.
Mar 22 06:44:18 DESKTOP-S03TDPN systemd[1]: prometheus.service: Failed with result 'exit-code'.
Mar 22 06:44:18 DESKTOP-S03TDPN systemd[1]: Failed to start prometheus.service - Prometheus.
Invalid unit name "prometheus -f --no-pager" escaped as "prometheus\xc2\xa0-f\xc2\xa0--no-pager" (maybe you should use systemd-escape?).
-- No entries --
prasanndh_raaju@DESKTOP-S03TDPN: /prometheus-2.47.1.linux-amd64$ 

```

```

sudo useradd \
--system \
--no-create-home \
--shell /bin/false node_exporter

```

```

wget https://github.com/prometheus/node_exporter/releases/download/v1.6.1/node_exporter-1.6.1.linux-amd64.tar.gz
tar -xvf node_exporter-1.6.1.linux-amd64.tar.gz

```

```

sudo mv \
node_exporter-1.6.1.linux-amd64/node_exporter \
/usr/local/bin/

```

```
rm -rf node_exporter*
```

```
node_exporter --version
```

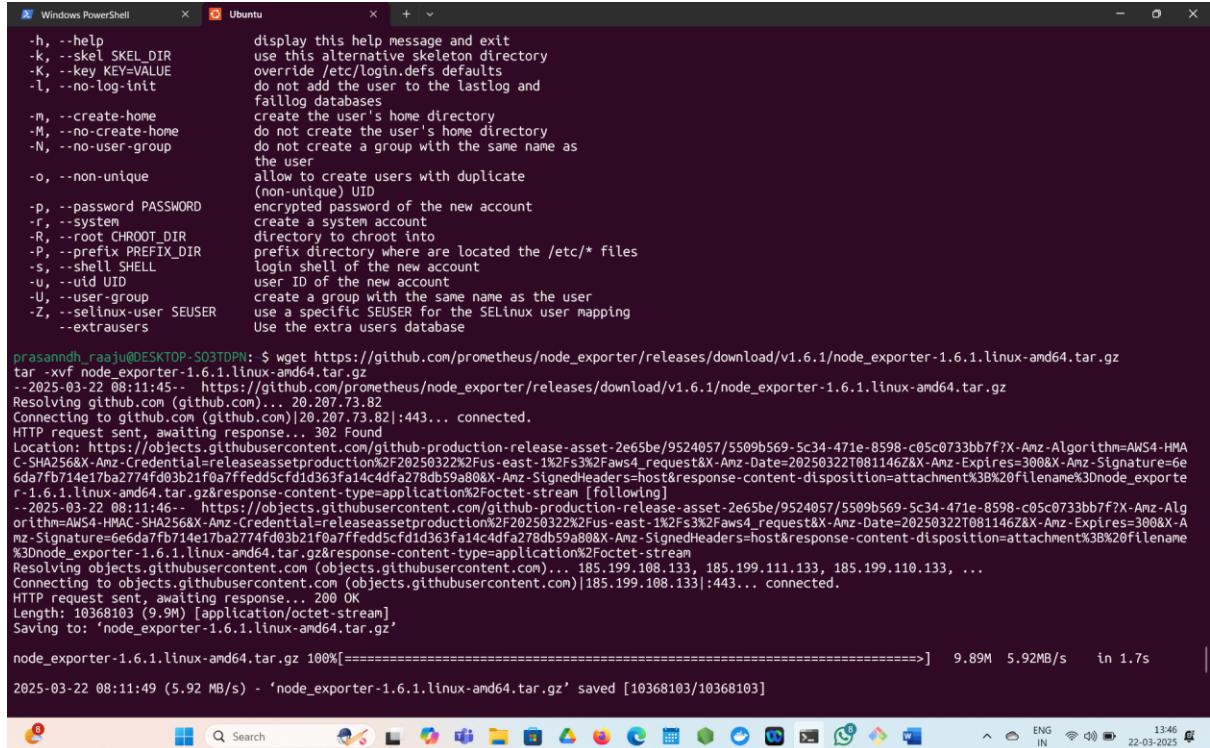
```
sudo vim /etc/systemd/system/node_exporter.service
```

```

[Unit]
Description=Node Exporter
Wants=network-online.target
After=network-online.target
StartLimitIntervalSec=500
StartLimitBurst=5
[Service]

```

```
User=node_exporter
Group=node_exporter
Type=simple
Restart=on-failure
RestartSec=5s
ExecStart=/usr/local/bin/node_exporter \
--collector.logind
[Install]
WantedBy=multi-user.target
```



```
-h, --help
--skel_SKEL_DIR
-K, --key KEY=VALUE
-l, --no-log-init
-m, --create-home
-M, --no-create-home
-N, --no-user-group
-o, --non-unique
-p, --password PASSWORD
-r, --system
-R, --root CHROOT_DIR
-P, --prefix PREFIX_DIR
-s, --shell SHELL
-u, --uid UID
-U, --user-group
-Z, --selinux-user SEUSER
--extrausers
display this help message and exit
use this alternative skeleton directory
override /etc/login.defs defaults
do not add the user to the lastlog and
faillog databases
create the user's home directory
do not create the user's home directory
do not create a group with the same name as
the user
allow to create users with duplicate
(non-unique) UID
encrypted password of the new account
create a system account
directory to chroot into
prefix directory where are located the /etc/* files
login shell of the new account
user ID of the new account
create a group with the same name as the user
use a specific SEUSER for the SELinux user mapping
Use the extra users database

prasandh.raaju@DESKTOP-S03TPN: $ wget https://github.com/prometheus/node_exporter/releases/download/v1.6.1/node_exporter-1.6.1.linux-amd64.tar.gz
tar -xvf node_exporter-1.6.1.linux-amd64.tar.gz
--2025-03-22 08:11:45- https://github.com/prometheus/node_exporter/releases/download/v1.6.1/node_exporter-1.6.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/5509b569-5c34-471e-8598-c05c0733bb7f?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20250322%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20250322T081146Z&X-Amz-Expires=300&X-Amz-Signature=6e6da7fb714e17ba2774fd03b21f0a7ffed5cfdd363fa14c4dfa278db59a808X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.6.1.linux-amd64.tar.gz&response-content-type=application/x-zip-compressed [following]
--2025-03-22 08:11:46- https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/5509b569-5c34-471e-8598-c05c0733bb7f?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20250322%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20250322T081146Z&X-Amz-Expires=300&X-Amz-Signature=6e6da7fb714e17ba2774fd03b21f0a7ffed5cfdd363fa14c4dfa278db59a808X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.6.1.linux-amd64.tar.gz&response-content-type=application/x-zip-compressed [following]
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.108.133, 185.199.111.133, 185.199.110.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.108.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10368103 (9.9M) [application/octet-stream]
Saving to: 'node_exporter-1.6.1.linux-amd64.tar.gz'

node_exporter-1.6.1.linux-amd64.tar.gz 100%[=====] 9.89M 5.92MB/s in 1.7s
2025-03-22 08:11:49 (5.92 MB/s) - 'node_exporter-1.6.1.linux-amd64.tar.gz' saved [10368103/10368103]
```

```
sudo systemctl enable node_exporter
sudo systemctl start node_exporter
sudo systemctl status node_exporter
journalctl -u node_exporter -f --no-pager
```

```
sudo vim /etc/prometheus/prometheus.yml
```

```

2025-03-22 08:11:49 (5.92 MB/s) - 'node_exporter-1.6.1.linux-amd64.tar.gz' saved [10368103/10368103]

node_exporter-1.6.1.linux-amd64/
node_exporter-1.6.1.linux-amd64/NOTICE
node_exporter-1.6.1.linux-amd64/node_exporter
node_exporter-1.6.1.linux-amd64/LICENSE
prasanndh_raaju@DESKTOP-S03TDPN: $ sudo mv \_
    node_exporter-1.6.1.linux-amd64/node_exporter \
    /usr/local/bin/
prasanndh_raaju@DESKTOP-S03TDPN: $ rm -rf node_exporter*
prasanndh_raaju@DESKTOP-S03TDPN: $ node_exporter --version
node_exporter, version 1.6.1 (branch: HEAD, revision: 4a1b77600c1873a8233f3ffb55afcedbb63b8d84)
  build user:          root@586879db11e5
  build date:        20230717-12:10:52
  go version:       go1.20.6
  platform:         linux/amd64
  tags:             netgo osusergo static_build
prasanndh_raaju@DESKTOP-S03TDPN: $ sudo vim /etc/systemd/system/node_exporter.service
prasanndh_raaju@DESKTOP-S03TDPN: $ sudo systemctl enable node_exporter
sudo systemctl start node_exporter
sudo systemctl status node_exporter
journalctl -u node_exporter -f --no-pager
Created symlink /etc/systemd/system/multi-user.target.wants/node_exporter.service → /etc/systemd/system/node_exporter.service.
● node_exporter.service - Node Exporter
   Loaded: loaded (/etc/systemd/system/node_exporter.service; enabled; preset: enabled)
     Active: activating (auto-restart) (Result: exit-code) since Sat 2025-03-22 08:13:15 UTC; 20ms ago
       Process: 80415 ExecStart=/usr/local/bin/node_exporter --collector.logind (code=exited, status=217/USER)
      Main PID: 80415 (code=exited, status=217/USER)
      Status: Failed to determine user credentials: No such process
      Mar 22 08:13:15 DESKTOP-S03TDPN (node_exporter)[80415]: node_exporter.service: Failed to determine user credentials: No such process
      Mar 22 08:13:15 DESKTOP-S03TDPN systemd[1]: node_exporter.service: Main process exited, code=exited, status=217/USER
      Mar 22 08:13:15 DESKTOP-S03TDPN systemd[1]: node_exporter.service: Failed with result 'exit-code'.
      Mar 22 08:13:20 DESKTOP-S03TDPN systemd[1]: node_exporter.service: Scheduled restart job, restart counter is at 1.
      Mar 22 08:13:20 DESKTOP-S03TDPN systemd[1]: Started node_exporter.service - Node Exporter.
      Mar 22 08:13:20 DESKTOP-S03TDPN (node_exporter)[80437]: node_exporter.service: Failed to determine user credentials: No such process
      Mar 22 08:13:20 DESKTOP-S03TDPN systemd[1]: node_exporter.service: Main process exited, code=exited, status=217/USER
      Mar 22 08:13:20 DESKTOP-S03TDPN systemd[1]: node_exporter.service: Failed with result 'exit-code'.
^C
prasanndh_raaju@DESKTOP-S03TDPN: $ sudo vim /etc/prometheus/prometheus.yml
prasanndh_raaju@DESKTOP-S03TDPN: $ prontool check config /etc/prometheus/prometheus.yml
Checking /etc/prometheus/prometheus.yml
SUCCESS: /etc/prometheus/prometheus.yml is valid prometheus config file syntax
prasanndh_raaju@DESKTOP-S03TDPN: $

```

```

- job_name: node_export
  static_configs:
    - targets: ["localhost:9100"]

```

```

- job_name: 'jenkins'
  metrics_path: '/prometheus'
  static_configs:
    - targets: ['localhost:8080']

```

Targets

All scrape pools ▾ All Unhealthy Collapse All Filter by endpoint or labels Unknown Unhealthy Healthy

jenkins (0/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:8080/prometheus	DOWN	instance="localhost:8080" job="jenkins"	12.439s ago	4.953ms	server returned HTTP status 403 Forbidden

node_export (0/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9100/metrics	DOWN	instance="localhost:9100" job="node_export"	5.988s ago	2.837ms	Get "http://localhost:9100/metrics": dial tcp 127.0.0.1:9100: connect: connection refused

prometheus (1/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	14.638s ago	5.953ms	

Targets

All scrape pools ▾ All Unhealthy Collapse All Filter by endpoint or labels Unknown Unhealthy Healthy

jenkins (0/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:8080/prometheus	DOWN	instance="localhost:8080" job="jenkins"	2.526s ago	4.435ms	server returned HTTP status 403 Forbidden

node_export (0/1 up) show less

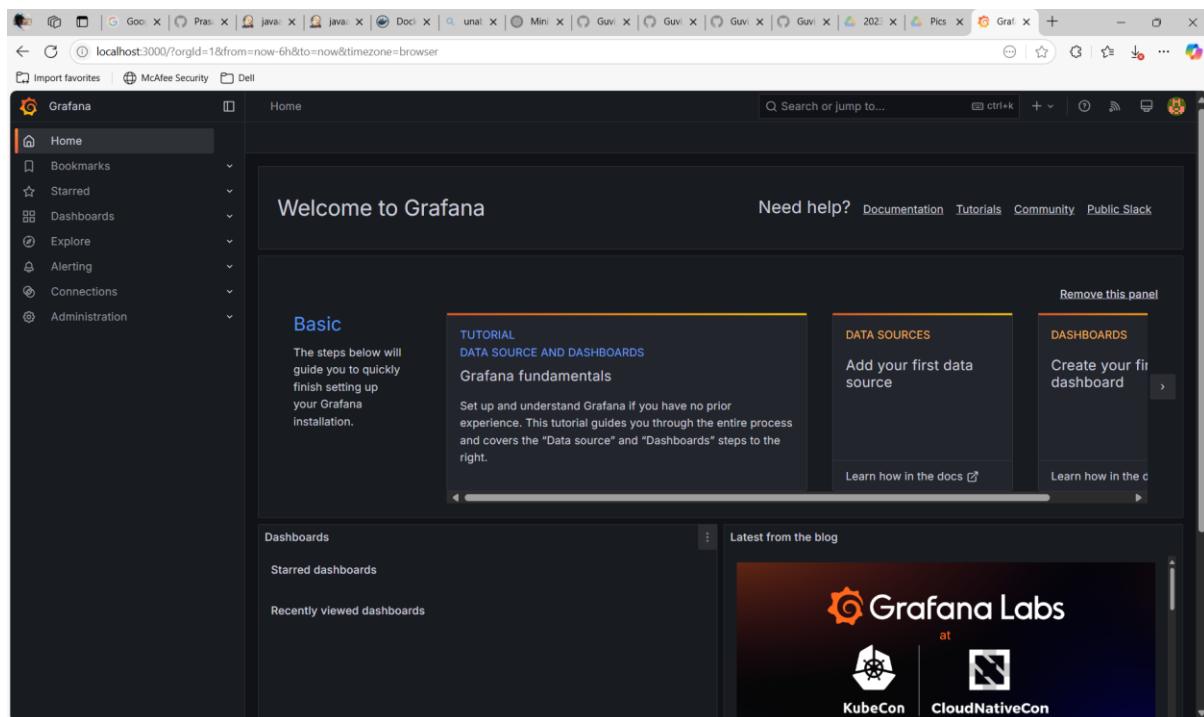
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9100/metrics	DOWN	instance="localhost:9100" job="node_export"	11.77s ago	0.542ms	Get "http://localhost:9100/metrics": dial tcp 127.0.0.1:9100: connect: connection refused

prometheus (1/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	4.726s ago	10.437ms	

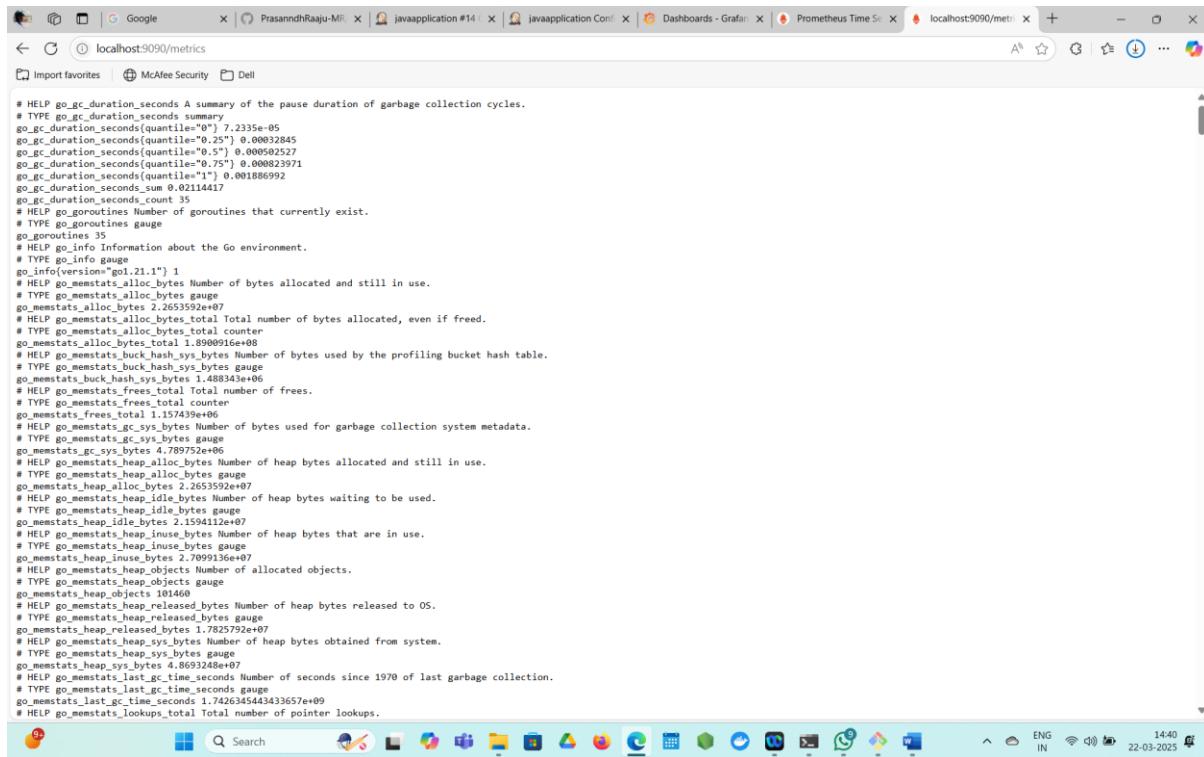
Grafana: (Commands & Output)

```
sudo apt-get install -y apt-transport-https software-properties-common
wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list
sudo apt-get update
sudo apt-get -y install grafana
sudo systemctl enable grafana-server
sudo systemctl start grafana-server
sudo systemctl status grafana-server
```

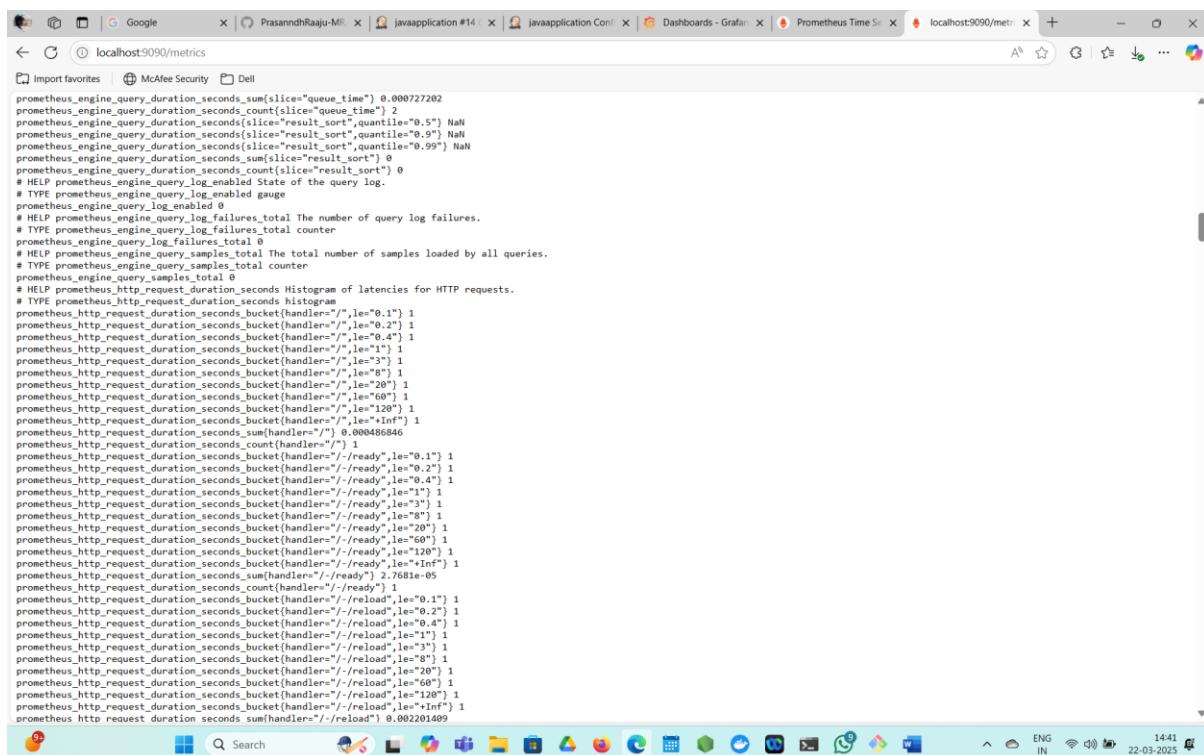


Metrics Running and Verifying:

- <http://localhost:9090/metrics>



```
# HELP go_gc_duration_seconds A summary of the pause duration of garbage collection cycles.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 7.2335e-05
go_gc_duration_seconds{quantile="0.25"} 0.00032845
go_gc_duration_seconds{quantile="0.5"} 0.000502527
go_gc_duration_seconds{quantile="0.75"} 0.000823971
go_gc_duration_seconds{quantile="1"} 0.001066992
go_gc_duration_seconds_sum 0.02114417
go_gc_duration_seconds_count 35
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 1
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.21.1"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 2.2653592e+07
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 1.8900916e+08
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_sys_bytes gauge
go_memstats_buck_hash_sys_bytes 1.488343e+06
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 1.157439e+06
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 4.789752e+06
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 1.7825792e+07
# HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
# TYPE go_memstats_heap_idle_bytes gauge
go_memstats_heap_idle_bytes 2.1594112e+07
# HELP go_memstats_heap_inuse_bytes Number of heap bytes that are in use.
# TYPE go_memstats_heap_inuse_bytes gauge
go_memstats_heap_inuse_bytes 7.095136e+07
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 101460
# HELP go_memstats_heap_released_bytes Number of heap bytes released to OS.
# TYPE go_memstats_heap_released_bytes gauge
go_memstats_heap_released_bytes 1.7825792e+07
# HELP go_memstats_heap_sys_bytes Number of heap bytes obtained from system.
# TYPE go_memstats_heap_sys_bytes gauge
go_memstats_heap_sys_bytes 4.8693249e+07
# HELP go_memstats_last_gc_time_seconds Number of seconds since 1970 of last garbage collection.
# TYPE go_memstats_last_gc_time_seconds gauge
go_memstats_last_gc_time_seconds 1.742634543433657e+09
# HELP go_memstats_lookups_total Total number of pointer lookups.
```



```
prometheus_engine_query_duration_seconds_sum(slice="queue_time") 0.000727202
prometheus_engine_query_duration_seconds_count(slice="queue_time") 2
prometheus_engine_query_duration_seconds{slice="result_sort",quantile="0.5"} NaN
prometheus_engine_query_duration_seconds{slice="result_sort",quantile="0.9"} NaN
prometheus_engine_query_duration_seconds{slice="result_sort",quantile="0.99"} NaN
prometheus_engine_query_duration_seconds{slice="result_sort",quantile="1"} 0
prometheus_engine_query_duration_seconds{slice="result_sort",quantile="1",handler="result_sort"} 0
# HELP prometheus_engine_query_log_enabled State of the query log.
# TYPE prometheus_engine_query_log_enabled gauge
prometheus_engine_query_log_enabled 0
# HELP prometheus_engine_query_log_failures_total The number of query log failures.
# TYPE prometheus_engine_query_log_failures_total counter
prometheus_engine_query_log_failures_total 0
# HELP prometheus_engine_query_samples_total The total number of samples loaded by all queries.
# TYPE prometheus_engine_query_samples_total counter
prometheus_engine_query_samples_total 0
# HELP prometheus_http_request_duration_seconds Histogram of latencies for HTTP requests.
# TYPE prometheus_http_request_duration_seconds histogram
prometheus_http_request_duration_seconds_bucket{handler="/",le="0.1"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="0.2"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="0.4"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="1"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="3"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="8"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="28"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="60"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="120"} 1
prometheus_http_request_duration_seconds_bucket{handler="/",le="Inf"} 1
prometheus_http_request_duration_seconds_sum(handlers="/") 0.000486846
prometheus_http_request_duration_seconds_count(handlers="/") 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="0.1"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="0.2"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="0.4"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="1"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="3"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="8"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="20"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="60"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="120"} 1
prometheus_http_request_duration_seconds_bucket{handler="/ready",le="Inf"} 1
prometheus_http_request_duration_seconds_sum(handlers="/ready") 2.7081e-05
prometheus_http_request_duration_seconds_count(handlers="/ready") 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="0.1"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="0.2"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="0.4"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="1"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="3"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="8"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="20"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="60"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="120"} 1
prometheus_http_request_duration_seconds_bucket{handler="/reload",le="Inf"} 1
prometheus_http_request_duration_seconds_sum(handlers="/reload") 0.00201409
```

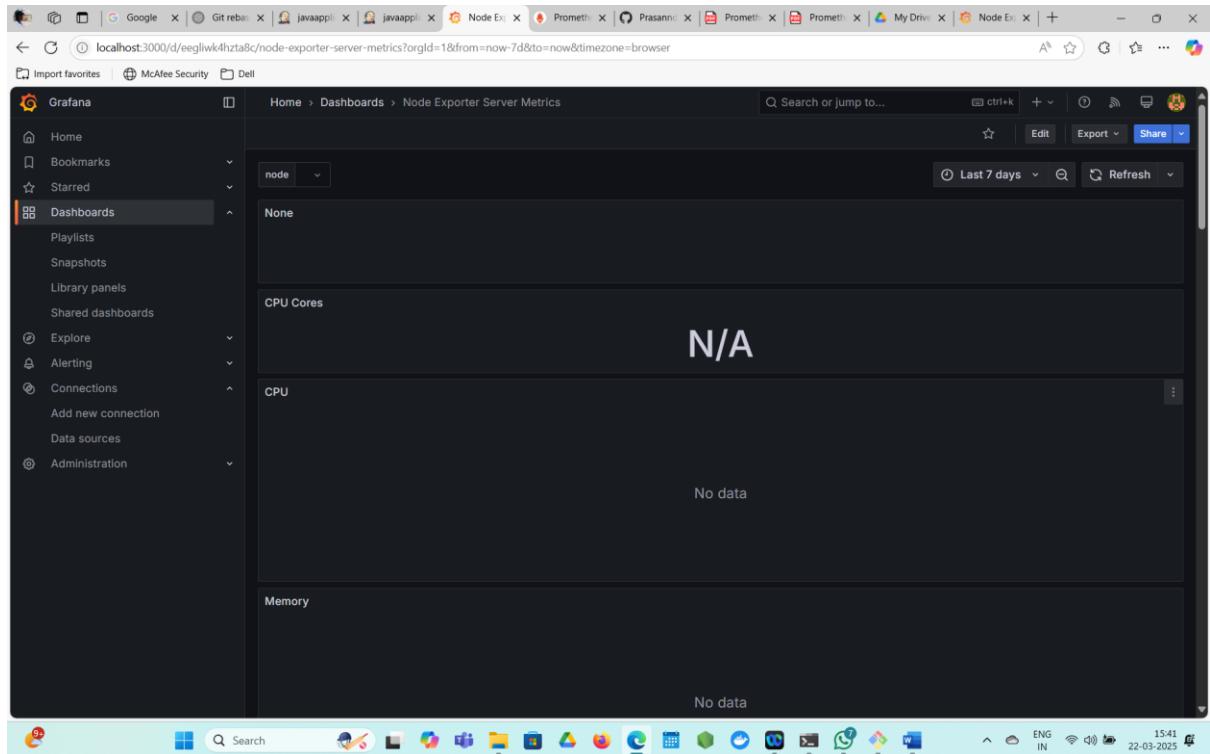
```

# HELP prometheus_tsd_vertical_compactions_total Total number of compactions done on overlapping blocks.
# TYPE prometheus_tsd_vertical_compactions_total counter
prometheus_tsd_vertical_compactions_total 0
# HELP prometheus_tsd_wal_completed_pages_total Total number of completed pages.
# TYPE prometheus_tsd_wal_completed_pages_total counter
prometheus_tsd_wal_completed_pages_total 26
# HELP prometheus_tsd_wal_page_flushes_total Total number of page flushes.
# TYPE prometheus_tsd_wal_page_flushes_total counter
prometheus_tsd_wal_page_flushes_total 683
# HELP prometheus_tsd_wal_segment_current Write log segment index that TSDB is currently writing to.
# TYPE prometheus_tsd_wal_segment_current gauge
prometheus_tsd_wal_segment_current 0
# HELP prometheus_tsd_wal_storage_size_bytes Size of the write log directory.
# TYPE prometheus_tsd_wal_storage_size_bytes gauge
prometheus_tsd_wal_storage_size_bytes 662878
# HELP prometheus_tsd_wal_truncate_duration_seconds Duration of WAL truncation.
# TYPE prometheus_tsd_wal_truncate_duration_seconds summary
prometheus_tsd_wal_truncate_duration_seconds_sum 0
prometheus_tsd_wal_truncate_duration_seconds_count 0
# HELP prometheus_tsd_wal_truncations_failed_total Total number of write log truncations that failed.
# TYPE prometheus_tsd_wal_truncations_failed_total counter
prometheus_tsd_wal_truncations_failed_total 0
# HELP prometheus_tsd_wal_truncations_total Total number of write log truncations attempted.
# TYPE prometheus_tsd_wal_truncations_total counter
prometheus_tsd_wal_truncations_total 0
# HELP prometheus_tsd_wal_writes_failed_total Total number of write log writes that failed.
# TYPE prometheus_tsd_wal_writes_failed_total counter
prometheus_tsd_wal_writes_failed_total 0
# HELP prometheus_web_federation_errors_total Total number of errors that occurred while sending federation responses.
# TYPE prometheus_web_federation_errors_total counter
prometheus_web_federation_errors_total 0
# HELP prometheus_web_federation_warnings_total Total number of warnings that occurred while sending federation responses.
# TYPE prometheus_web_federation_warnings_total counter
prometheus_web_federation_warnings_total 0
# HELP promhttp_metric_handler_requests_in_flight Current number of scrapes being served.
# TYPE promhttp_metric_handler_requests_in_flight gauge
promhttp_metric_handler_requests_in_flight 0
# HELP promhttp_metric_handler_requests_total Total number of scrapes by HTTP status code.
# TYPE promhttp_metric_handler_requests_total counter
promhttp_metric_handler_requests_total{codes="200"} 235
promhttp_metric_handler_requests_total{codes="500"} 0
promhttp_metric_handler_requests_total{codes="503"} 0

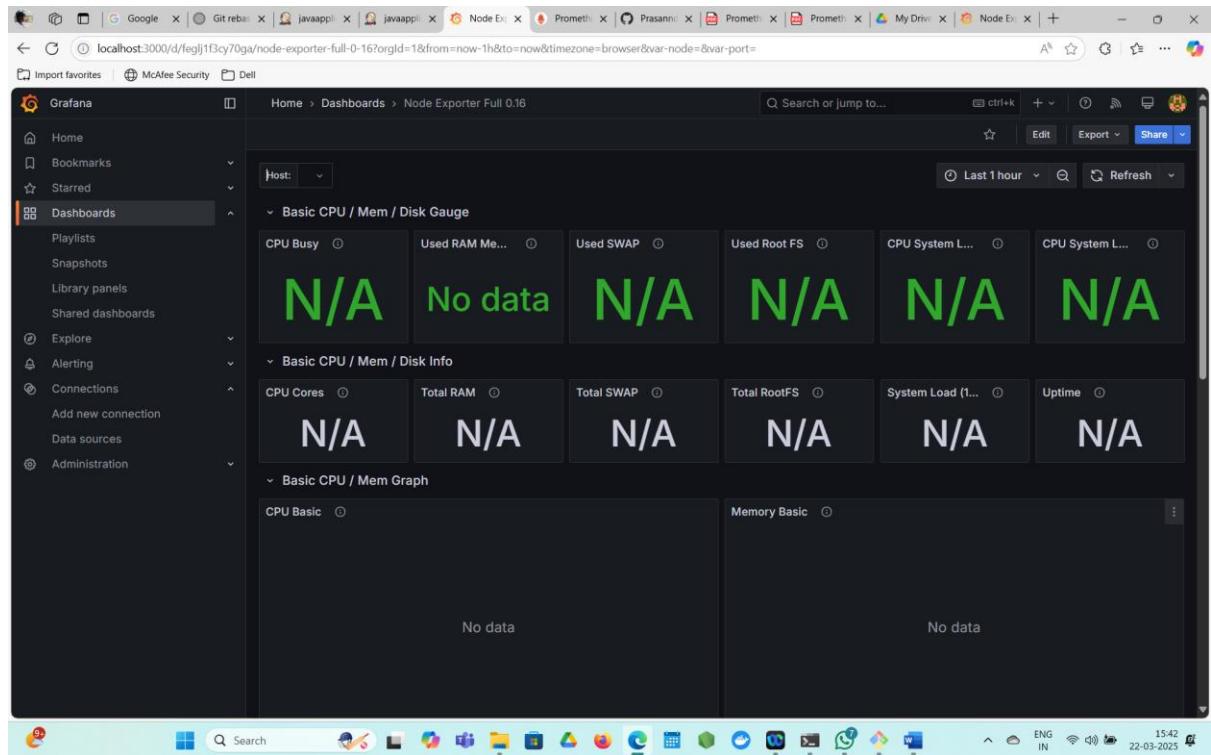
```

DASHBOARD

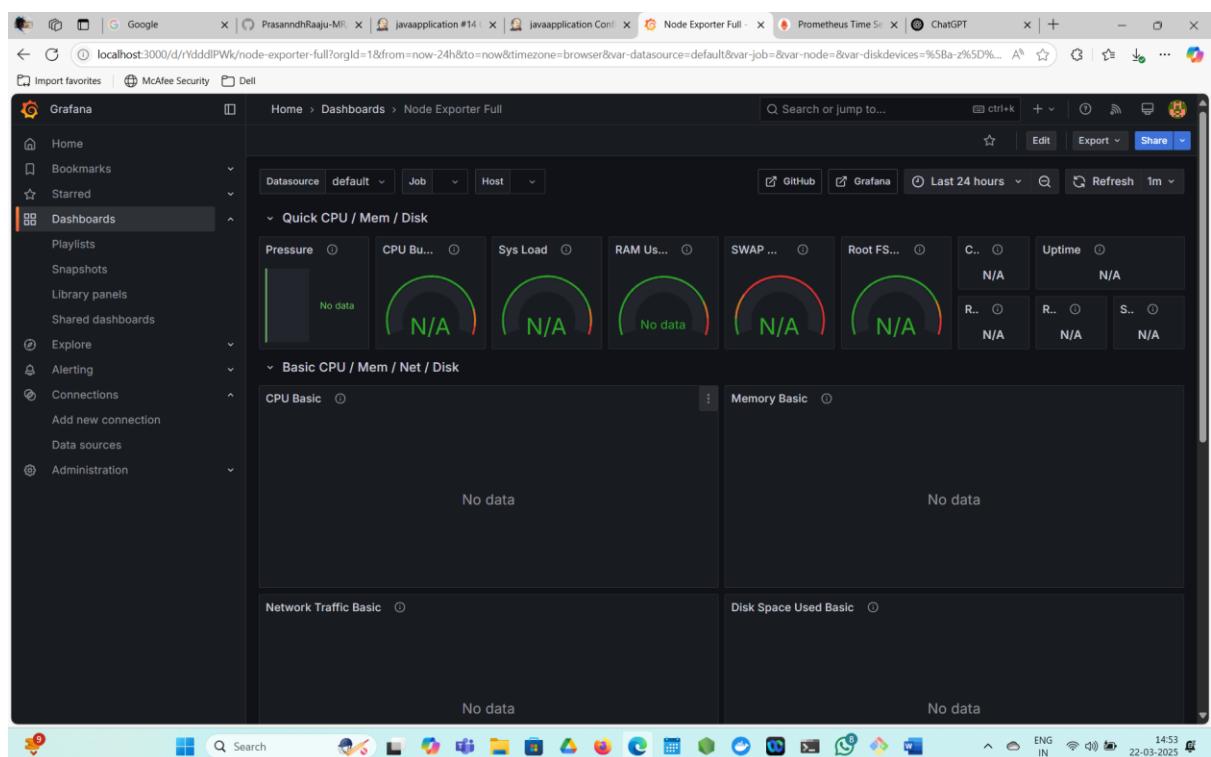
405: <https://grafana.com/dashboards/405>

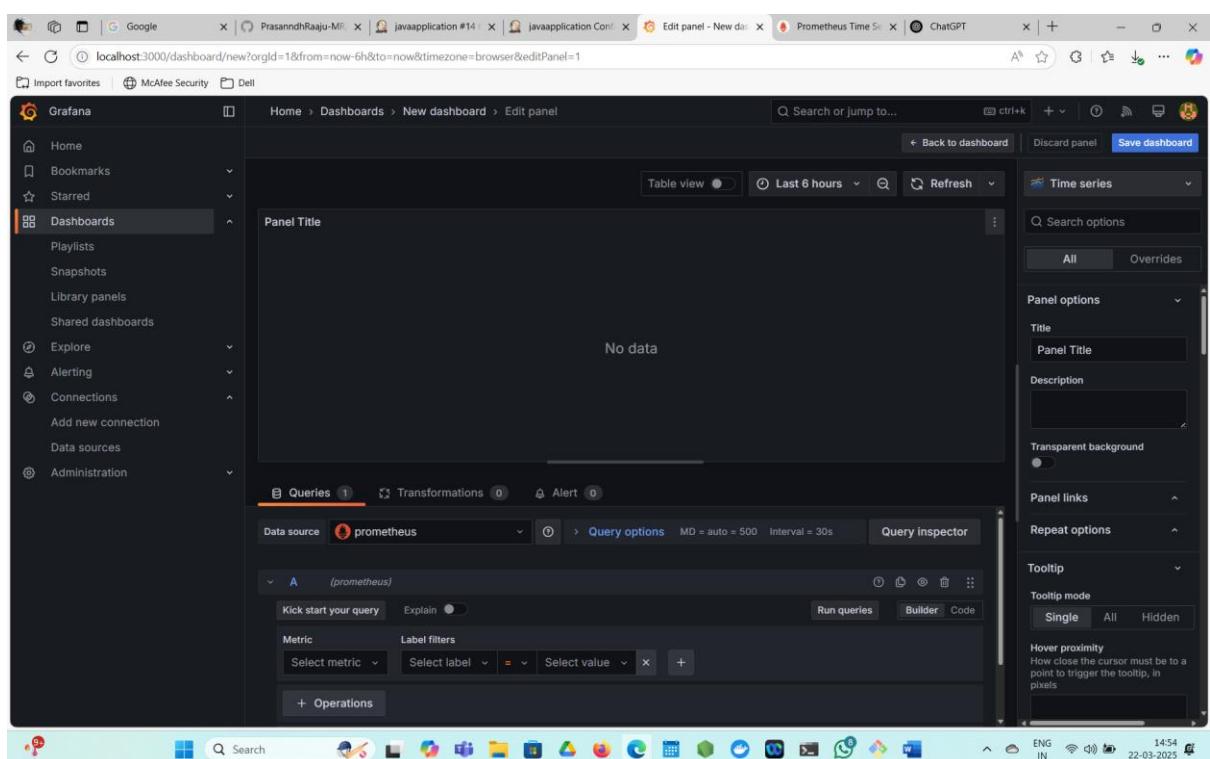
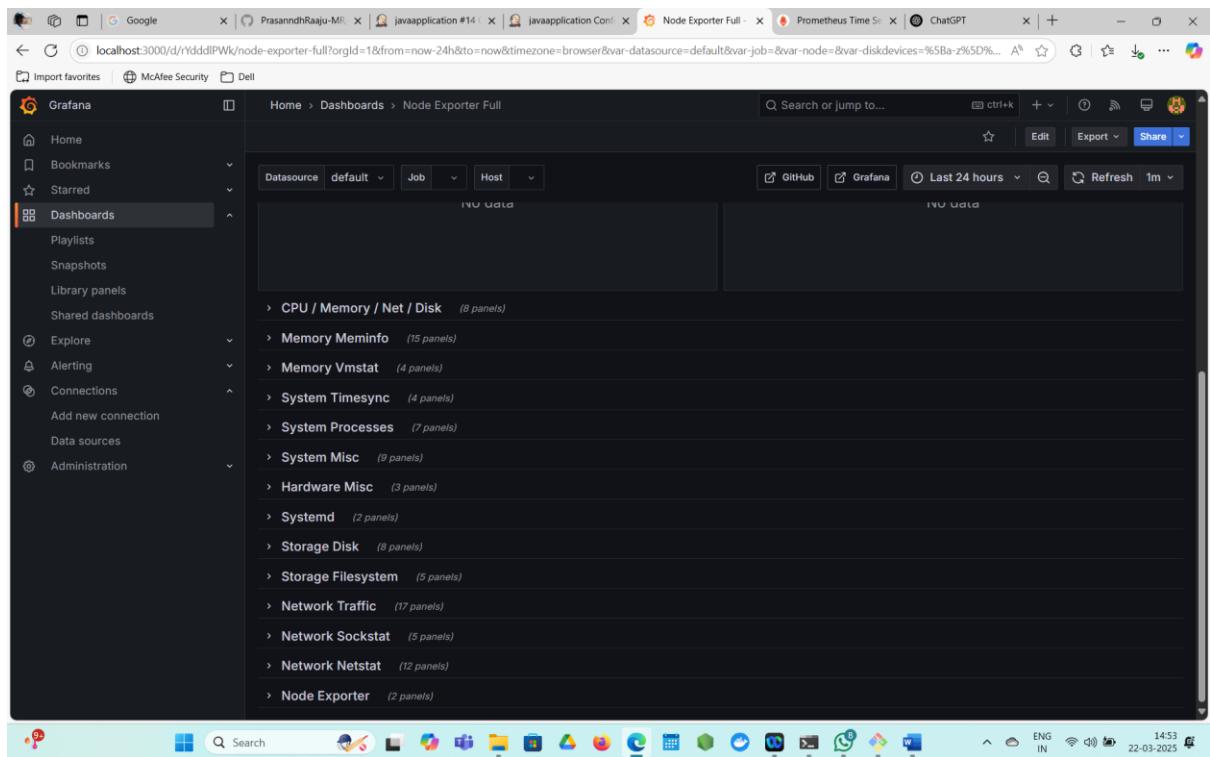


5174: <https://grafana.com/dashboards/5174>

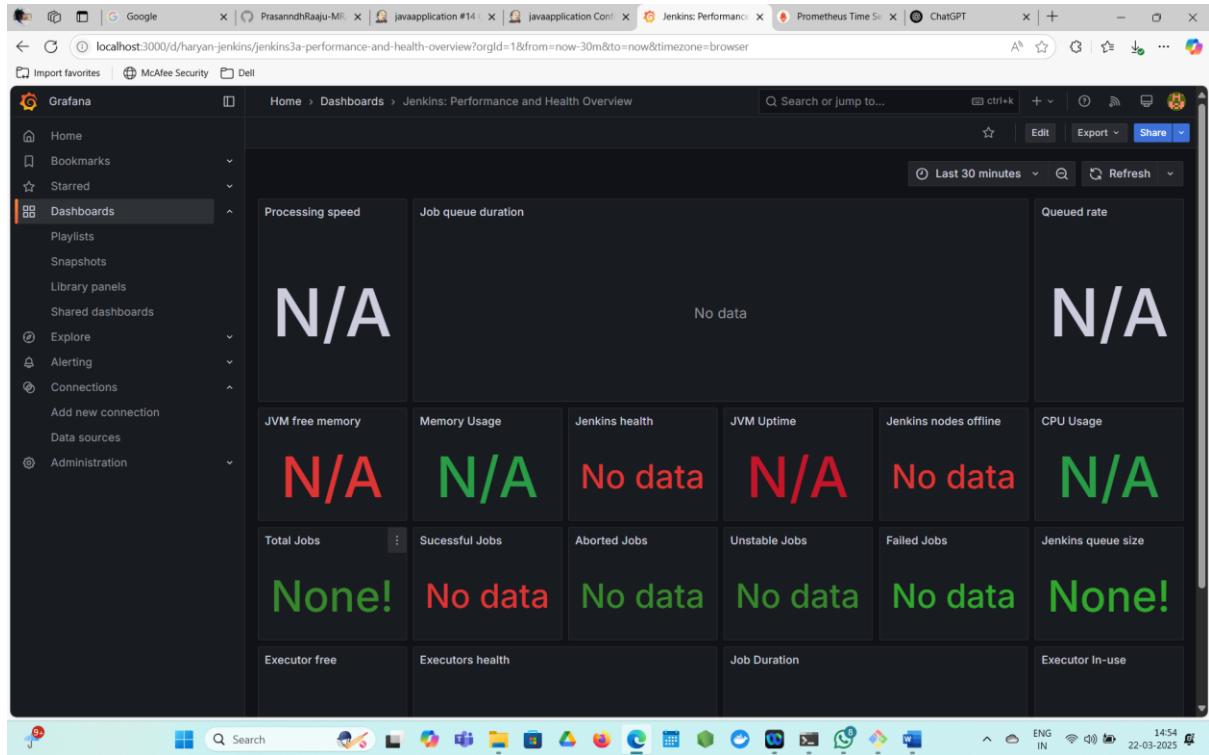


1860: <https://grafana.com/dashboards/1860>

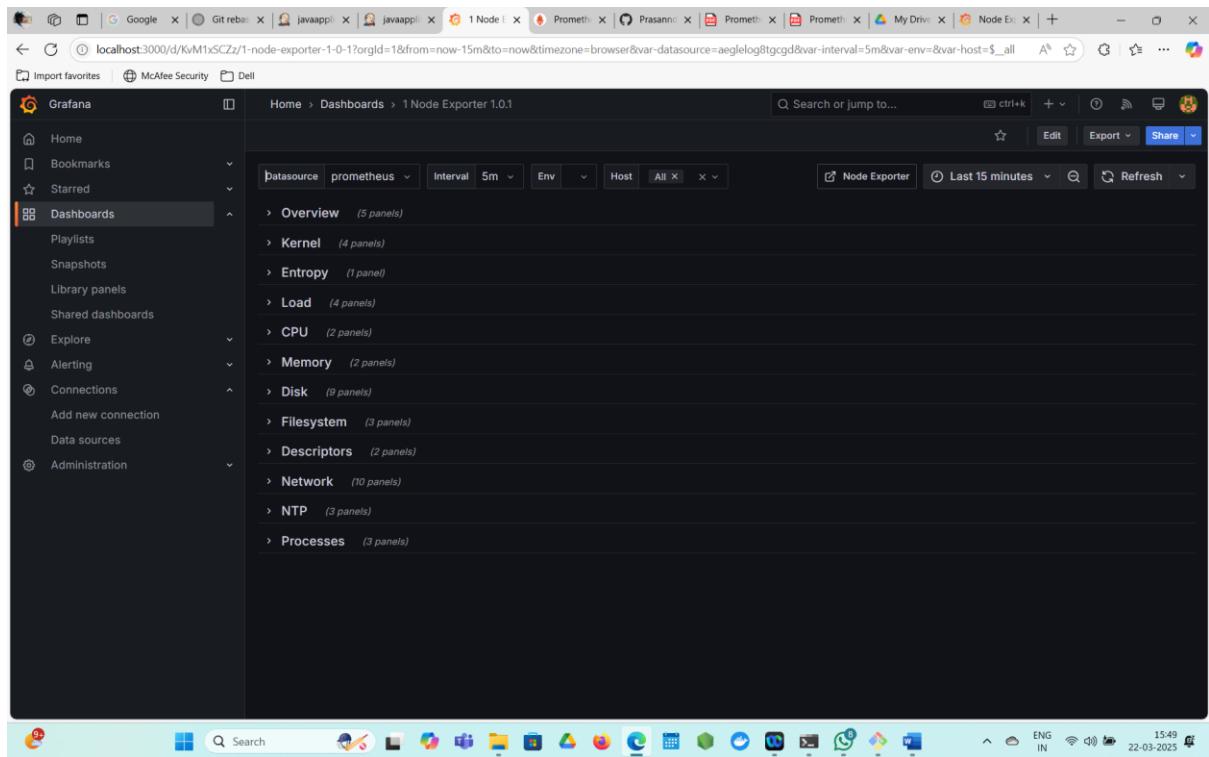




9964: <https://grafana.com/dashboards/9964>



9096: <https://grafana.com/dashboards/9096>

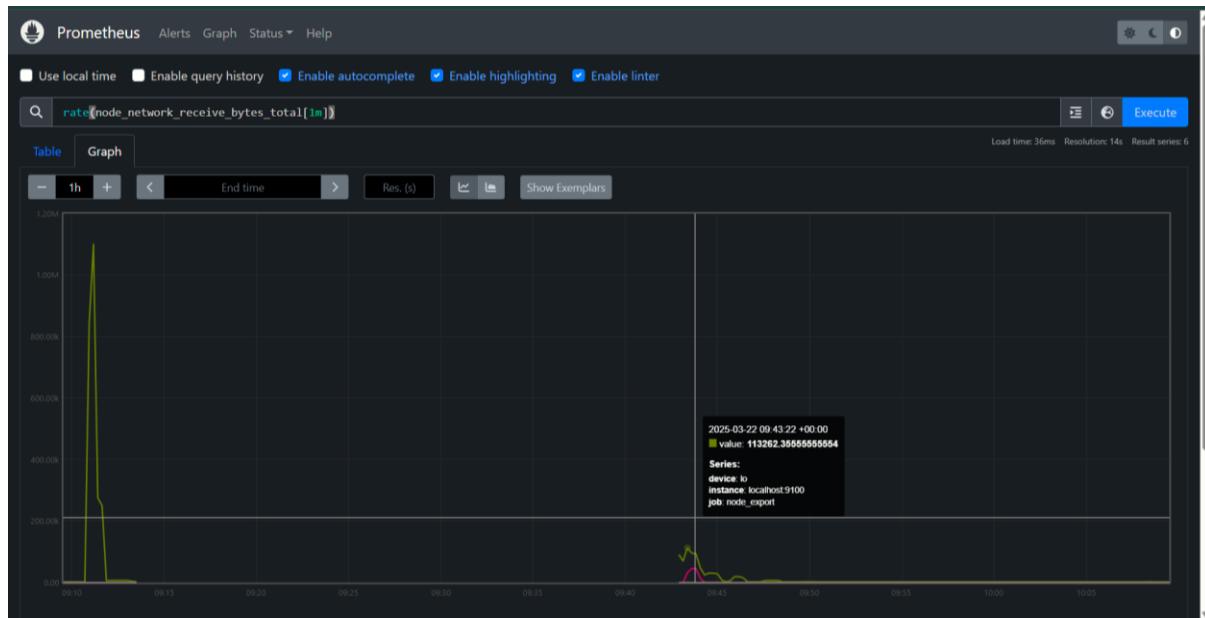


Grafana Graph View with Query:

→ `rate(node_cpu_seconds_total{mode="system"}[1m])`



→ `rate(node_network_receive_bytes_total[1m])`



→ node_load15

