Day 6


```
roshni@LAPTOP-1VNKAF6I: $ sudo useradd \
    --system \
    --no-create-home \
    --shell /bin/false prometheus
[sudo] password for roshni:
roshni@LAPTOP-1VNKAF6I: $ wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-am
d64.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/
--2025-03-22 06:28:31--  https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.ta
r.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/6838921/2f9b7b37-63a0-428b-adb5-02944
82fd743?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20250322%2Fus-east-1%2Fs3%2Faws4_request&
X-Amz-Date=20250322T062828Z&X-Amz-Expires=300&X-Amz-Signature=69fdd89440900928bf246f442aa53b1a8b9132cb2257c36be1bc990f5908a7
f7&X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.47.1.linux-amd64.tar.gz&res
ponse-content-type=application%2Foctet-stream [following]
--2025-03-22 06:28:31--  https://objects.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%2Fs3%
2Faws4_request&X-Amz-Date=20250322T062828Z&X-Amz-Expires=300&X-Amz-Signature=69fdd89440900928bf246f442aa53b1a8b9132cb2257c36
be1bc990f5908a7f7&X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.47.1.linux-a
md64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.108.133, 185.199.109.133, 185.199.110.133
, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.108.133|:443... connected.
```



```
prometheus-2.47.1.linux-amd64. 100%[===================================================>]  91.28M  31.4MB/s    in 2.9s

2025-03-22 06:28:36 (31.4 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
roshni@LAPTOP-1VNKAF6I:~/prometheus-2.47.1.linux-amd64$ cd
rm -rf prometheus-2.47.1.linux-amd64.tar.gz
prometheus --version
sudo vim /etc/systemd/system/prometheus.service
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
roshni@LAPTOP-1VNKAF6I: $
```



```
  tags:            netgo,builtinassets,stringlabels
roshni@LAPTOP-1VNKAF6I: $ sudo systemctl enable prometheus
sudo systemctl start prometheus
sudo systemctl status prometheus
journalctl -u prometheus -f --no-pager
Created symlink /etc/systemd/system/multi-user.target.wants/prometheus.service → /etc/systemd/system/prometheus.service.
● prometheus.service - Prometheus
     Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabled)
     Active: active (running) since Sat 2025-03-22 06:40:23 UTC; 77ms ago
   Main PID: 41538 (prometheus)
      Tasks: 12 (limit: 9375)
     Memory: 19.1M ()
     CGroup: /system.slice/prometheus.service
             └─41538 /usr/local/bin/prometheus --config.file=/etc/prometheus/prometheus.yml --storage.tsdb.path=/data --web
```

```
--2025-03-22 06:42:25--  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=20250322T064212Z&X-Amz-Expires=300&X-Amz-Signature=984b419e506787341bcba340d11ea6b0793b94579632191
ef86259c8bbdc3f51&X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.6.1.linux
-amd64.tar.gz&response-content-type=application%2Foctet-stream
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: 10368103 (9.9M) [application/octet-stream]
Saving to: 'node_exporter-1.6.1.linux-amd64.tar.gz'

node_exporter-1.6.1.linux-amd6 100%[===================================================>]   9.89M  5.83MB/s    in 1.7s

2025-03-22 06:42:30 (5.83 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
roshni@LAPTOP-1VNKAF6I: $ sudo mv \
  node_exporter-1.6.1.linux-amd64/node_exporter \
  /usr/local/bin/
roshni@LAPTOP-1VNKAF6I: $ rm -rf node_exporter*
roshni@LAPTOP-1VNKAF6I: $ 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
```

```
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
roshni@LAPTOP-1VNKAF6I: $ sudo mv \
  node_exporter-1.6.1.linux-amd64/node_exporter \
  /usr/local/bin/
roshni@LAPTOP-1VNKAF6I: $ rm -rf node_exporter*
roshni@LAPTOP-1VNKAF6I: $ 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
roshni@LAPTOP-1VNKAF6I: $ sudo vim /etc/systemd/system/node_exporter.service
roshni@LAPTOP-1VNKAF6I: $ 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.servic
e.
● node_exporter.service - Node Exporter
     Loaded: loaded (/etc/systemd/system/node_exporter.service; enabled; preset: enabled)
     Active: active (running) since Sat 2025-03-22 06:44:11 UTC; 18ms ago
   Main PID: 42445 (node_exporter)
      Tasks: 6 (limit: 9375)
     Memory: 3.2M ()
     CGroup: /system.slice/node_exporter.service
             └─42445 /usr/local/bin/node_exporter --collector.logind
```
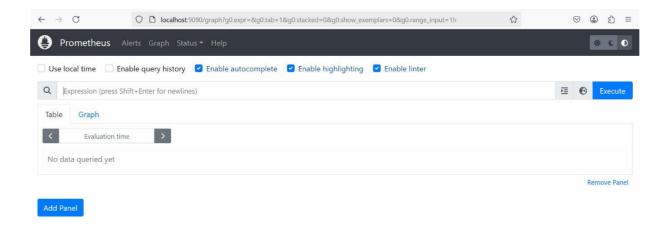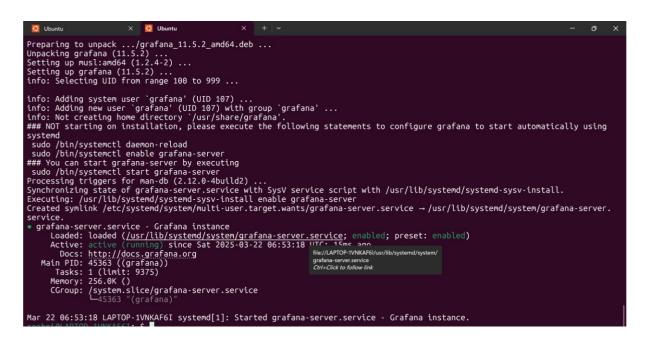
```
# my global config
global:
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          # - alertmanager:9093

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  # - "first_rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config.
  - job_name: "prometheus"

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]

~
"/etc/prometheus/prometheus.yml" 29L, 934B                                                    1,1           All
```
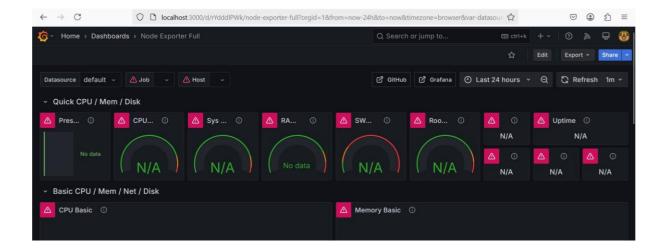
HELP go_gc_duration_seconds A summary of the pause duration of garbage collection cycles.
TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 5.4686e-05
go_gc_duration_seconds{quantile="0.25"} 0.000186026
go_gc_duration_seconds{quantile="0.5"} 0.000308405
go_gc_duration_seconds{quantile="0.75"} 0.000496461
go_gc_duration_seconds{quantile="1"} 0.00130687
go_gc_duration_seconds_sum 0.019302263
go_gc_duration_seconds_count 55
HELP go_goroutines Number of goroutines that currently exist.
TYPE go_goroutines gauge
go_goroutines 37
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 2.7526936e+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 3.83911104e+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 1.503615e+06
HELP go_memstats_frees_total Total number of frees.
TYPE go_memstats_frees_total counter
go_memstats_frees_total 2.339056e+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 4.765128e+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 2.7526936e+07
HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
TYPE go_memstats_heap_idle_bytes gauge

localhost:9090/metrics

Home > Connections > Data sources > prometheus-1

Search or jump to...

prometheus-1

Type: Prometheus

Type Prometheus | Alerting Supported | Explore data | Build a dashboard

⚙ Settings   **▦ Dashboards**

Name ⓘ prometheus-1   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://localhost:9090/

localhost:3000/d/rYdddlPWk/node-exporter-full?orgId=1&from=now-24h&to=now&timezone=browser&var-datasour

Home > Dashboards > Node Exporter Full

Search or jump to...

Edit | Export ˅ | Share ˅

Datasource default ˅ | ⚠ Job ˅ | ⚠ Host ˅

GitHub | Grafana | ⏱ Last 24 hours ˅ | ↻ Refresh 1m ˅

⚠ CPU Basic ⓘ

No data

⚠ Memory Basic ⓘ

No data
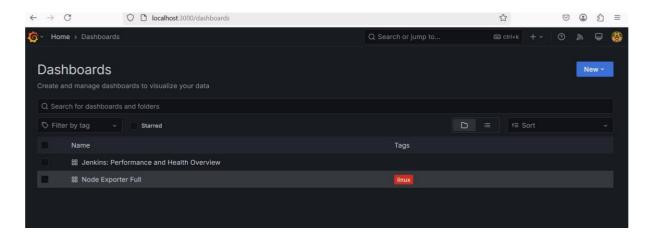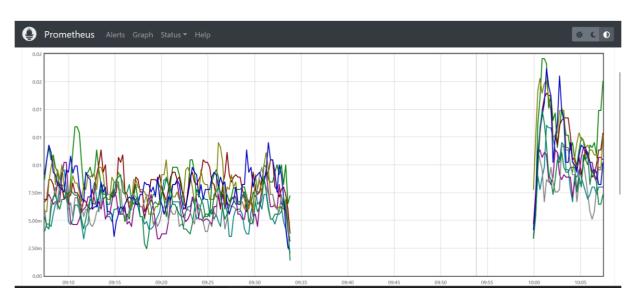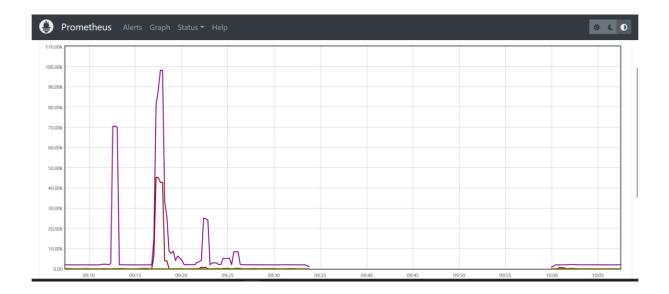
⚠ Network Traffic Basic ⓘ

⚠ Disk Space Used Basic ⓘ

Prometheus is an open-source system monitoring and alerting toolkit originally built at SoundCloud. It is now a standalone open-source 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

------X------X------X-----X
https://grafana.com/dashboards/405
https://grafana.com/dashboards/1860
https://grafana.com/dashboards/5174
https://grafana.com/dashboards/9096

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