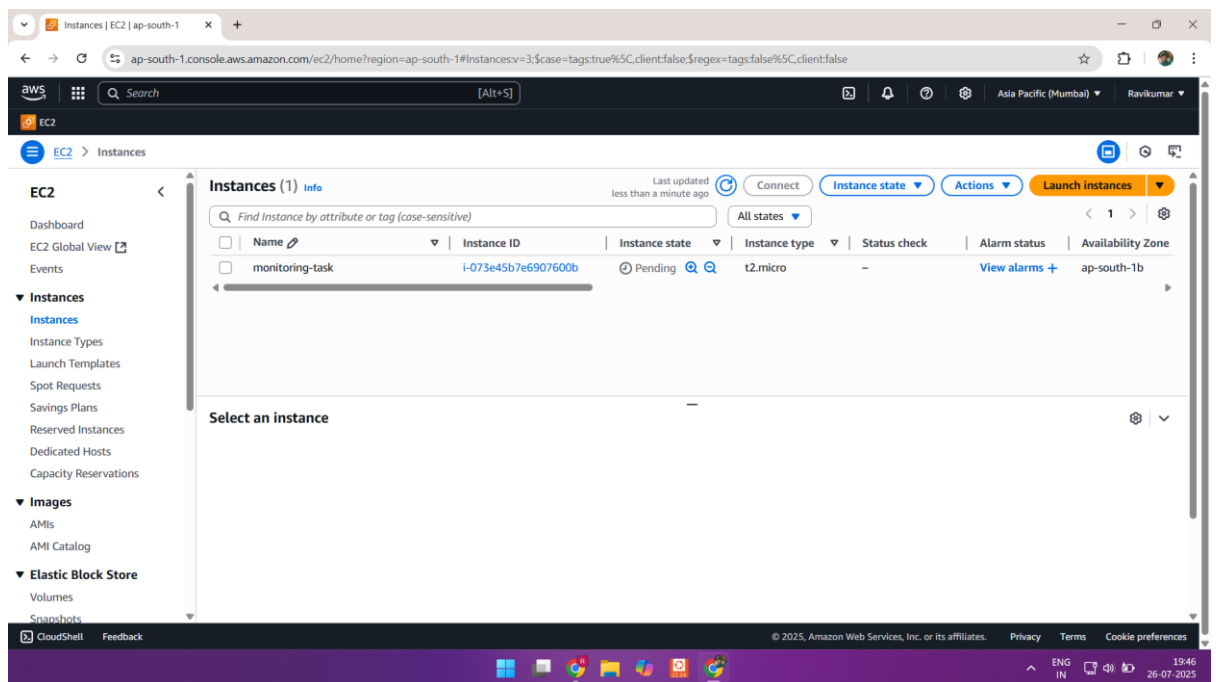Install Prometheus and Grafana on a Linux EC2 machine, connect Prometheus to Grafana, and create a dashboard to view metrics.

1. First I create a EC2 instance and connect with ubuntu through putty. Then I installed a promethus and node exporter in ubuntu using commends, during installation promethus.yml file need to create and give it to the port for node exporter target port is 9100, for Promethus target port 9090, this is the default port no, we need to give on that yaml file.

2. After installed both need to check in browser through public ip followed by port, for public ip with 9090 promethus dashboard will be open, for pubilc ip with 9100 port node exporter metrics should be open.

3. After we need to install grafana in ubuntu using installation commends. For this default pot no is 3000, after successfully installed, open in browser public ip with port 3000, it will show login, both user and password should admin for default, after that inside dashboard we need to connect promethus to Grafana in dashboard, connection -> data source -> add the promethus plugin make the localhost ip then save and test.

4. After that import dashboard -> put on 1860 in dashboard id then import, it will open the node exporter full dashboard metrics, its connected promethus with node exporter to Grafana.

```
Check GRUB_DISABLE_OS_PROBER documentation entry.
Adding boot menu entry for UEFI Firmware Settings ...
done
Scanning processes...
Scanning candidates...
Scanning linux images...

Pending kernel upgrade!
Running kernel version:
  6.8.0-1029-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.14.0-1009-aws.

Restarting the system to load the new kernel will not be handled automatically, so you should consider rebooting.

Restarting services...
 systemctl restart acpid.service chrony.service cron.service multipathd.service packagekit.service polkit.service rsyslog.service ssh.service

Service restarts being deferred:
 systemctl restart ModemManager.service
 /etc/needrestart/restart.d/dbus.service
 systemctl restart getty@tty1.service
 systemctl restart networkd-dispatcher.service
 systemctl restart serial-getty@ttyS0.service
 systemctl restart systemd-logind.service
 systemctl restart unattended-upgrades.service

No containers need to be restarted.

User sessions running outdated binaries:
 ubuntu @ session #1: apt[1520], sshd[852,1112]
 ubuntu @ user manager service: systemd[1006]

No VM guests are running outdated hypervisor (qemu) binaries on this host.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.4-1ubuntu4.1).
wget set to manually installed.
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
tar is already the newest version (1.35+dfsg-3build1).
tar set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
ubuntu@ip-172-31-9-90:~$ cd /opt
sudo wget https://github.com/prometheus/prometheus/releases/download/v2.51.1/prometheus-2.51.1.linux-amd64.tar.gz
sudo tar -xvf prometheus-2.51.1.linux-amd64.tar.gz
sudo mv prometheus-2.51.1.linux-amd64 prometheus
cd prometheus
```

```
sudo wget https://github.com/prometheus/prometheus/releases/download/v2.51.1/prometheus-2.51.1.linux-amd64.tar.gz
sudo tar -xvf prometheus-2.51.1.linux-amd64.tar.gz
sudo mv prometheus-2.51.1.linux-amd64 prometheus
cd prometheus
--2025-07-26 14:18:49--  https://github.com/prometheus/prometheus/releases/download/v2.51.1/prometheus-2.51.1.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://release-assets.githubusercontent.com/github-production-release-asset/6838921/9190288d-9efa-4866-bb6b-ec1cc7741ef2?sp=r&sv=2018-11-09&sr=b&spr=https&se=2025-07-26T14%3A52%3A44Z&rscd=attachment%3B+filename%3Dprometheus-2.51.1.linux-amd64.tar.gz&rsct=application%2Foctet-stream&skoid=96c2d410-5711-43a1-aedd-ab1947aa7ab0&sktid=398a6654-997b-47e9-b12b-9515b896b4de&skt=2025-07-26T13%3A51%3A57&ske=2025-07-26T14%3A52%3A44Z&sks=b&skv=2018-11-09&sig=WwHrOX9QIiI%2Bt7uq7LdgpPT2FQ3Qpt7M7bOmMJm3VJA%3D&jwt=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJnaXRooNWTuY29tTiwiYXVkIjoicmVzEWFzZS3lhc3NldHMuZ2l0aHVidXNlcmNvbnRlbnQuY29tIiwia2V5Ijoia2V5MSIsImV4cCI6MTc1MzUzOTgyOSwibmJmIjoxNzUzNTM5NTI5LCJwYXRoIjoicmVzEWFzZWFzc2V0cHJvZHVjdGlvbi5iSibG9iLmNvcmUu
d2luZG93cy5uZXQifQ.ZZtSbrn4OwNv3kG7TDTTC1_fVUHNfAmIRW6Th5jmZ-A&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.51.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2025-07-26 14:18:49--  https://release-assets.githubusercontent.com/github-production-release-asset/6838921/9190288d-9efa-4866-bb6b-ec1cc7741ef2?sp=r&sv=2018-11-09&sr=b&spr=https&se=2025-07-26T14%3A52%3A44Z&rscd=attachment%3B+filename%3Dprometheus-2.51.1.linux-amd64.tar.gz&rsct=application%2Foctet-stream&skoid=96c2d410-5711-43a1-aedd-ab1947aa7ab0&sktid=398a6654-997b-47e9-b12b-9515b896b4de&skt=2025-07-26T13%3A51%3A57&ske=2025-07-26T14%3A52%3A44Z&sks=b&skv=2018-11-09&sig=WwHrOX9QIiI%2Bt7uq7LdgpPT2FQ3Qpt7M7bOmMJm3VJA%3D&jwt=eyJpc3MiOiJnaXRooNWIuY29tIiwiYXVkIjoicmVzEWFzZS3lhc3N1dHMuZ2l0aHVidXNlcmNvbnRlbnQuY29tIiwia2V5Ijoia2V5MSIsImV4cCI6MTc1MzUzOTgyOSwibmJmIjoxNzUzNTM5NTI5LCJwYXRoIjoicmVzEWFzZWFzc2V0cHJvZHVjdGlvbi5iSibG9iLmNvcmUud2luZG93cy5uZXQifQ.ZZtSbrn4OwNv3kG7TDTTC1_fVUHNfAmIRW6Th5jmZ-A&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.51.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving release-assets.githubusercontent.com (release-assets.githubusercontent.com)... 185.199.110.133, 185.199.111.133, 185.199.108.133, ...
Connecting to release-assets.githubusercontent.com (release-assets.githubusercontent.com)|185.199.110.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 101689120 (97M) [application/octet-stream]
Saving to: 'prometheus-2.51.1.linux-amd64.tar.gz'

prometheus-2.51.1.linux-amd64.tar.gz      100%[==================================================================================================================>]  96.98M  30.5MB/s    in 3.2s

2025-07-26 14:18:53 (30.5 MB/s) - 'prometheus-2.51.1.linux-amd64.tar.gz' saved [101689120/101689120]

prometheus-2.51.1.linux-amd64/
prometheus-2.51.1.linux-amd64/promtool
prometheus-2.51.1.linux-amd64/NOTICE
prometheus-2.51.1.linux-amd64/consoles/
prometheus-2.51.1.linux-amd64/consoles/prometheus.html
prometheus-2.51.1.linux-amd64/consoles/index.html.example
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prometheus-2.51.1.linux-amd64/consoles/node-disk.html
prometheus-2.51.1.linux-amd64/prometheus.yml
prometheus-2.51.1.linux-amd64/LICENSE
prometheus-2.51.1.linux-amd64/console_libraries/
prometheus-2.51.1.linux-amd64/console_libraries/prom.lib
prometheus-2.51.1.linux-amd64/console_libraries/menu.lib
prometheus-2.51.1.linux-amd64/prometheus
ubuntu@ip-172-31-9-90:/opt/prometheus$ sudo nano prometheus.yml
```

```
GNU nano 7.2                                                           prometheus.yml *
# 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"]
  - job_name: 'node-exporter'
    static_configs:
      - targets: ['localhost:9100']
```

```
^G Help        ^O Write Out   ^W Where Is    ^K Cut         ^T Execute     ^C Location    M-U Undo       M-A Set Mark   ^T To Bracket  M-P Previous   ^B Back
^X Exit        ^R Read File   ^\ Replace     ^U Paste       ^J Justify     ^_ Go To Line  M-E Redo       M-6 Copy       M-] Where Was  M-W Next       M-F Forward
```

```
--2025-07-26 14:18:49--  https://github.com/prometheus/prometheus/releases/download/v2.51.1/prometheus-2.51.1.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://release-assets.githubusercontent.com/github-production-release-asset/6838921/9190288d-9efa-4866-bb6b-ec1cc7741ef2?sp=r&sv=2018-11-09&sr=b&spr=https&se=2025-07-26T14%3A52%3A44Z&rscd=attachment%3B+filename%3Dprometheus-2.51.1.linux-amd64.tar.gz&rsct=application%2Foctet-stream&skoid=96c2d410-5711-43a1-aedd-ab1947aa7ab0&sktid=398a6654-997b-47e9-b12b-9515b896b4de&skt=2025-07-26T13%3A51%3A57Z&ske=2025-07-26T14%3A52%3A44Z&sks=b&skv=2018-11-09&sig=WvWHrOX9QIiI%2Bt7uq7LdgpPT2FQ3Qpt7M7bOmMJm3VJA%3D&jwt=eyJhbGci0iJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJnaXRodWIuY29tIiwiYXVkIjoicmVsZWFzZSlhc3NldHMuZ2l0aHVidXNlcmNvbnRlbnQuY29tIiwia2V5Ijoia2V5MSIsImV4cCI6MTc1MzUz0Tgy0SwibmJmIjoxNzUzNTM5NTI5LCJwYXRoIjoicmVsZWFzZWFzc2V0cHJvZHVjdGlvbi5ibG9iLmNvcmUud2luZG93cy5uZXQifQ.ZZtSbrn40wNv3kG7TDTTCl_fVUHNfAmIRW6Th5jmZ-A&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.51.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
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Connecting to release-assets.githubusercontent.com (release-assets.githubusercontent.com)|185.199.110.133|:443... connected.
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prometheus-2.51.1.linux-amd64.tar.gz        100%[===================================================================================>]  96.98M  30.5MB/s    in 3.2s

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prometheus-2.51.1.linux-amd64/consoles/node-disk.html
prometheus-2.51.1.linux-amd64/prometheus.yml
prometheus-2.51.1.linux-amd64/LICENSE
prometheus-2.51.1.linux-amd64/console_libraries/
prometheus-2.51.1.linux-amd64/console_libraries/prom.lib
prometheus-2.51.1.linux-amd64/console_libraries/menu.lib
prometheus-2.51.1.linux-amd64/prometheus
ubuntu@ip-172-31-9-90:/opt/prometheus$ sudo nano prometheus.yml
ubuntu@ip-172-31-9-90:/opt/prometheus$ sudo useradd --no-create-home --shell /bin/false prometheus
sudo mkdir /etc/prometheus
sudo cp prometheus.yml /etc/prometheus/
sudo cp -r consoles/ console_libraries/ /etc/prometheus/
sudo chown -R prometheus:prometheus /etc/prometheus /opt/prometheus
```

```
GNU nano 7.2                                    /etc/systemd/system/prometheus.service *
[Unit]
Description=Prometheus Monitoring
Wants=network-online.target
After=network-online.target

[Service]
User=prometheus
ExecStart=/opt/prometheus/prometheus \
  --config.file=/etc/prometheus/prometheus.yml \
  --storage.tsdb.path=/opt/prometheus/data

[Install]
WantedBy=default.target
```

```
^G Help          ^O Write Out     ^W Where Is      ^K Cut           ^T Execute       ^C Location      M-U Undo         M-A Set Mark     M-] To Bracket   M-Q Previous     ^B Back
^X Exit          ^R Read File     ^\ Replace       ^U Paste         ^J Justify       ^_ Go To Line    M-E Redo         M-6 Copy         ^Q Where Was     M-W Next         ^F Forward
```

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
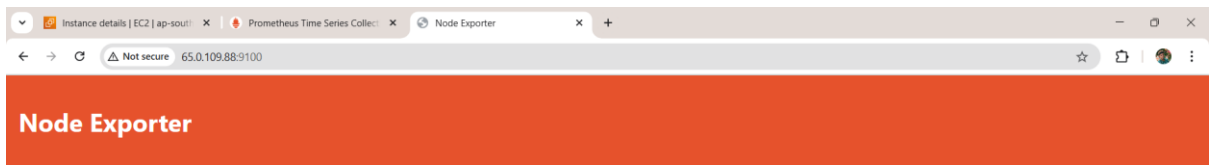
Node Exporter

Prometheus Node Exporter

Version: (version=1.8.1, branch=HEAD, revision=400c3979931613db930ea035f39ce7b377cdbb5b)

- Metrics

ubuntu@ip-172-31-9-90:/opt$ sudo apt install -y software-properties-common
sudo add-apt-repository "deb https://packages.grafana.com/oss/deb stable main"
wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
sudo apt update
sudo apt install grafana -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.49.2).
software-properties-common set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
Repository: 'deb https://packages.grafana.com/oss/deb stable main'
Description:
Archive for codename: stable components: main
More info: https://packages.grafana.com/oss/deb
Adding repository.
Press [ENTER] to continue or Ctrl-c to cancel.
Adding deb entry to /etc/apt/sources.list.d/archive_uri-https_packages_grafana_com_oss_deb-noble.list
Adding disabled deb-src entry to /etc/apt/sources.list.d/archive_uri-https_packages_grafana_com_oss_deb-noble.list
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:4 https://packages.grafana.com/oss/deb stable InRelease [7661 B]
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Err:4 https://packages.grafana.com/oss/deb stable InRelease
  The following signatures couldn't be verified because the public key is not available: NO_PUBKEY 963FA27710458545
Reading package lists... 5%

```
ubuntu@ip-172-31-9-90: /opt
Setting up musl:amd64 (1.2.4-2) ...
Setting up grafana (12.1.0) ...
info: Selecting UID from range 100 to 999 ...

info: Adding system user `grafana' (UID 111) ...
info: Adding new user `grafana' (UID 111) with group `grafana' ...
info: Not creating home directory `/usr/share/grafana'.
### NOT starting on installation, please execute the following statements to configure grafana to start automatically using systemd
 sudo /bin/systemctl daemon-reload
 sudo /bin/systemctl enable grafana-server
### You can start grafana-server by executing
 sudo /bin/systemctl start grafana-server
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning candidates...
Scanning linux images...

Pending kernel upgrade!
Running kernel version:
  6.8.0-1029-aws
Diagnostics:
  The currently running kernel version is not the expected kernel version 6.14.0-1009-aws.

Restarting the system to load the new kernel will not be handled automatically, so you should consider rebooting.

Restarting services...

Service restarts being deferred:
 /etc/needrestart/restart.d/dbus.service
 systemctl restart getty@tty1.service
 systemctl restart networkd-dispatcher.service
 systemctl restart serial-getty@ttyS0.service
 systemctl restart systemd-logind.service
 systemctl restart unattended-upgrades.service

No containers need to be restarted.

User sessions running outdated binaries:
 ubuntu @ session #1: sshd[852,1112]
 ubuntu @ user manager service: systemd[1006]

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-9-90:/opt$ sudo systemctl daemon-reload
sudo systemctl enable grafana-server
sudo systemctl start grafana-server
Synchronizing state of grafana-server.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable grafana-server
Created symlink /etc/systemd/system/multi-user.target.wants/grafana-server.service → /usr/lib/systemd/system/grafana-server.service.
ubuntu@ip-172-31-9-90:/opt$
```

Instance details | EC2 | ap-south | Prometheus Time Series Collec | Node Exporter | Grafana

Not secure 65.0.109.88:3000/login

Welcome to Grafana

Email or username

email or username

Password

password

Log in

Forgot your password?

Documentation | Support | Community | Open Source | Grafana v12.1.0 (ccd7b6ce7e)