Monitoring Task

Task Description:

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

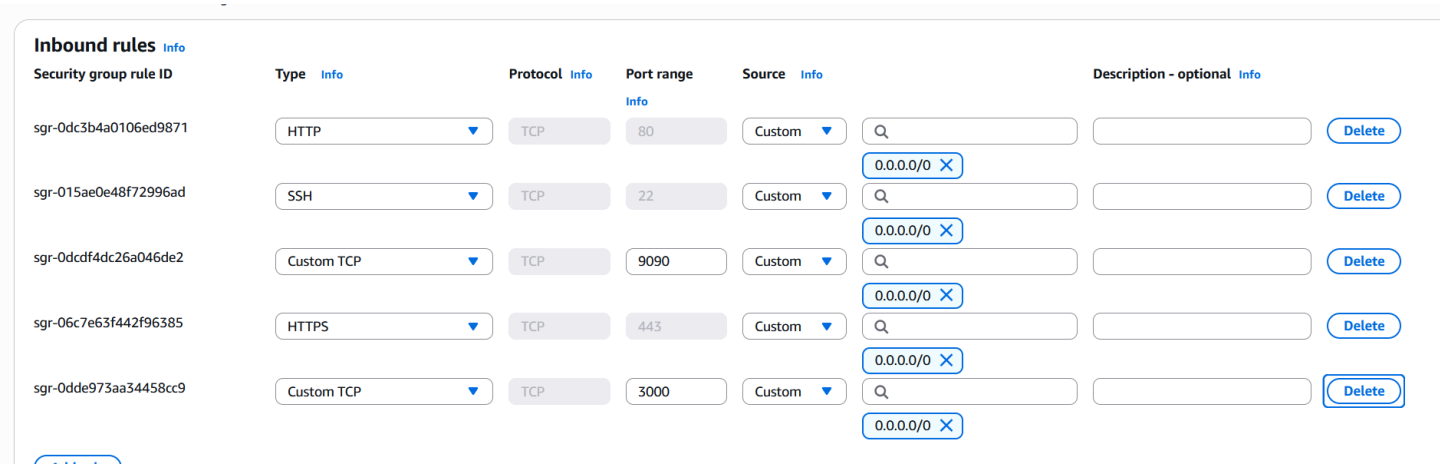
➔ Step 1: Install Prometheus

```
ubuntu@ip-172-31-41-190:~$ cd /tmp
curl -s https://api.github.com/repos/prometheus/prometheus/releases/latest \
| grep browser_download_url \
| grep linux-amd64 \
| cut -d '"' -f 4 \
| wget -i -
--2025-09-02 14:07:03--  https://github.com/prometheus/prometheus/releases/download/v3.5.0/prometheus-3.5.0.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
```

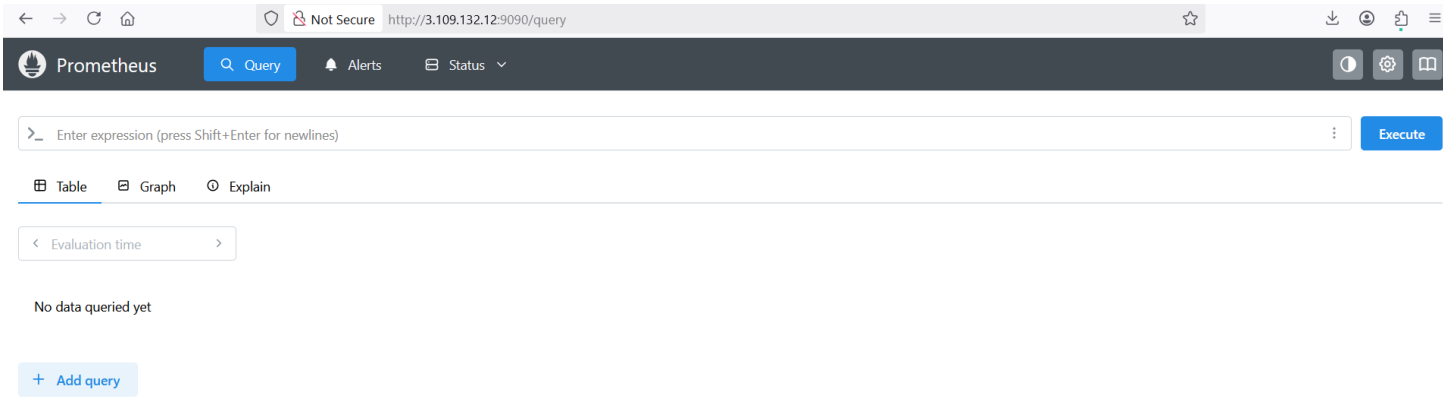
```
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ ^[[200~ls /usr/local/bin/ | grep prometheus~
ls: command not found
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ ls /usr/local/bin/ | grep prometheus
prometheus
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ ls /etc/prometheus/
prometheus.yml
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo useradd --no-create-home --shell /bin/false prometheus
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo chown -R prometheus:prometheus /etc/prometheus /var/lib/prometheus
sudo chown prometheus:prometheus /usr/local/bin/prometheus /usr/local/bin/promtool
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo nano /etc/systemd/system/prometheus.service
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo systemctl daemon-reload
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo systemctl enable prometheus
Created symlink /etc/systemd/system/multi-user.target.wants/prometheus.service → /etc/systemd/system/prometheus.service.
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo systemctl start prometheus
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ sudo systemctl status prometheus
● prometheus.service - Prometheus
     Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-09-02 14:11:47 UTC; 8s ago
   Main PID: 6777 (prometheus)
      Tasks: 6 (limit: 1121)
     Memory: 15.6M (peak: 15.9M)
        CPU: 60ms
     CGroup: /system.slice/prometheus.service
             └─6777 /usr/local/bin/prometheus --config.file=/etc/prometheus/prometheus.yml --storage.tsdb.path=/var/lib/prometheus --web.console.templates=/e
```

```
ubuntu@ip-172-31-41-190:/tmp/prometheus-3.5.0.linux-amd64$ cd ~
ubuntu@ip-172-31-41-190:~$ sudo apt-get install -y software-properties-common
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.49.3).
software-properties-common set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
ubuntu@ip-172-31-41-190:~$ sudo apt-get install -y apt-transport-https
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
```

➔ Step 2: Open the ports 9090(Prometheus) and 3000(Grafana)



➔ Step 3: open the port 9090 to check.

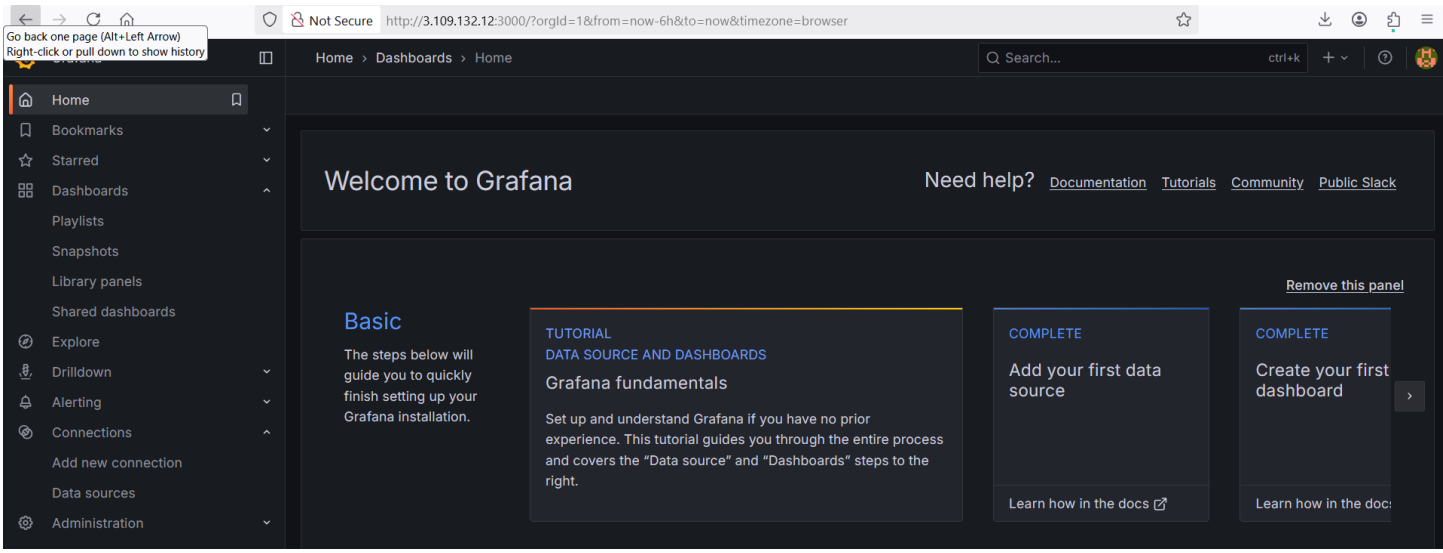


➔ Step 4: Install Grafana

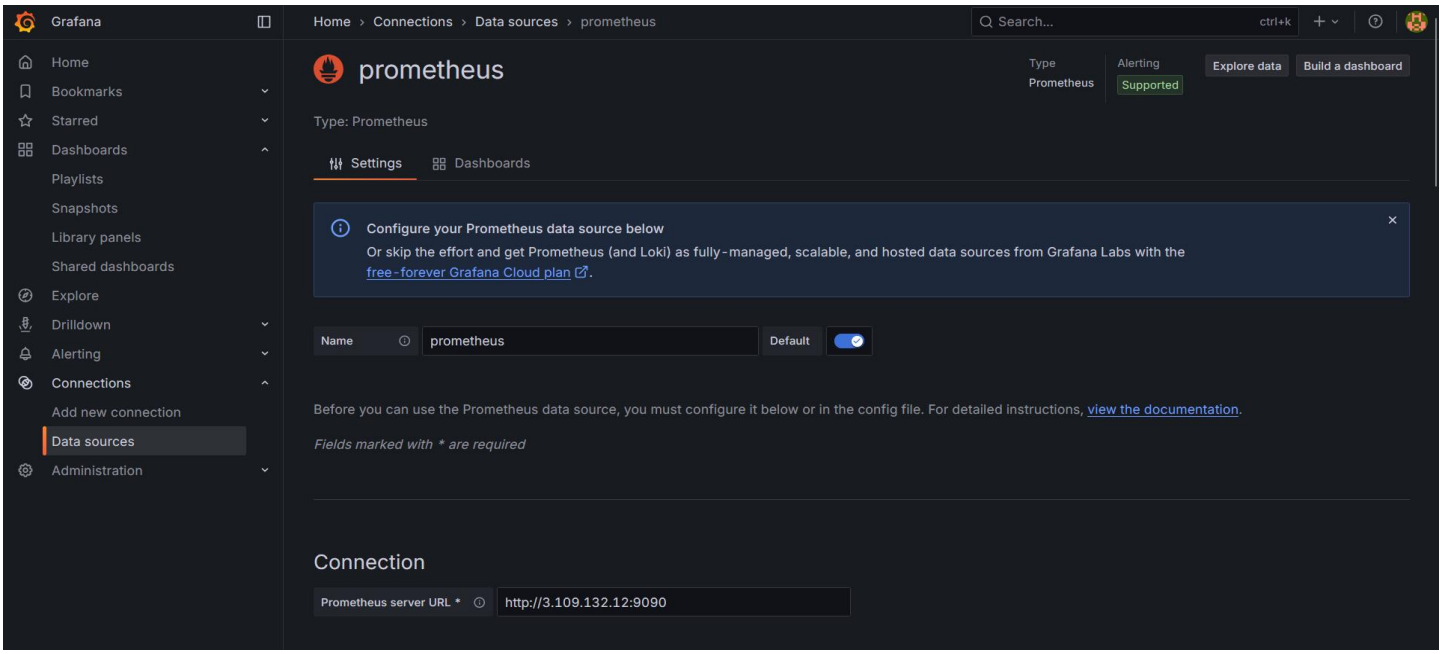
```
ubuntu@ip-172-31-41-190:~$ wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee /etc/apt/sources.list.d/grafana.list
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
deb https://packages.grafana.com/oss/deb stable main
ubuntu@ip-172-31-41-190:~$ sudo apt-get update
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 [7660 B]
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:6 https://packages.grafana.com/oss/deb stable/main amd64 Packages [431 kB]
Fetched 439 kB in 3s (155 kB/s)
Reading package lists... Done
W: https://packages.grafana.com/oss/deb/dists/stable/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-ke
y(8) for details.
ubuntu@ip-172-31-41-190:~$ sudo apt-get install grafana -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  musl
The following NEW packages will be installed:
```

```
ubuntu@ip-172-31-41-190:~$ sudo systemctl daemon-reload
ubuntu@ip-172-31-41-190:~$ sudo systemctl enable 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-172-31-41-190:~$ sudo systemctl start grafana-server
ubuntu@ip-172-31-41-190:~$ sudo systemctl status grafana-server
● grafana-server.service - Grafana instance
     Loaded: loaded (/usr/lib/systemd/system/grafana-server.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-09-02 14:20:49 UTC; 6s ago
       Docs: http://docs.grafana.org
   Main PID: 7812 (grafana)
      Tasks: 7 (limit: 1121)
     Memory: 223.3M (peak: 223.7M)
        CPU: 1.942s
     CGroup: /system.slice/grafana-server.service
             └─7812 /usr/share/grafana/bin/grafana server --config=/etc/grafana/grafana.ini --pidfile=/run/grafana/grafana-server.pid --packaging=deb cfg:de
```

➔ Step 5: Hit the port 3000 to check if its running



➔ Step 6: Connect the Prometheus port to Grafana



➔ Step 7: Run queries to check the visualization