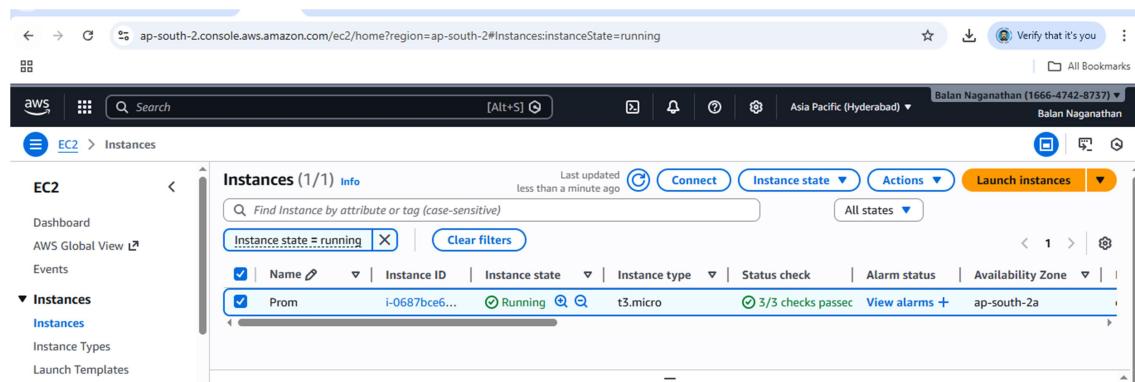


Install Prometheus and Grafana on a Linux EC2 machine, connect Prometheus to Grafana, and create a dashboard to view metrics.

EC2 Instance created with opened Ports 3000,9100,9090



The screenshot shows the AWS EC2 Instances page. The instance 'Prom' is listed, showing it is running on instance ID i-0687bce6... with an t3.micro type, 3/3 checks passed, and located in the ap-south-2a availability zone. The page also includes filters for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability Zone.

Prometheus Config:

```
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"]

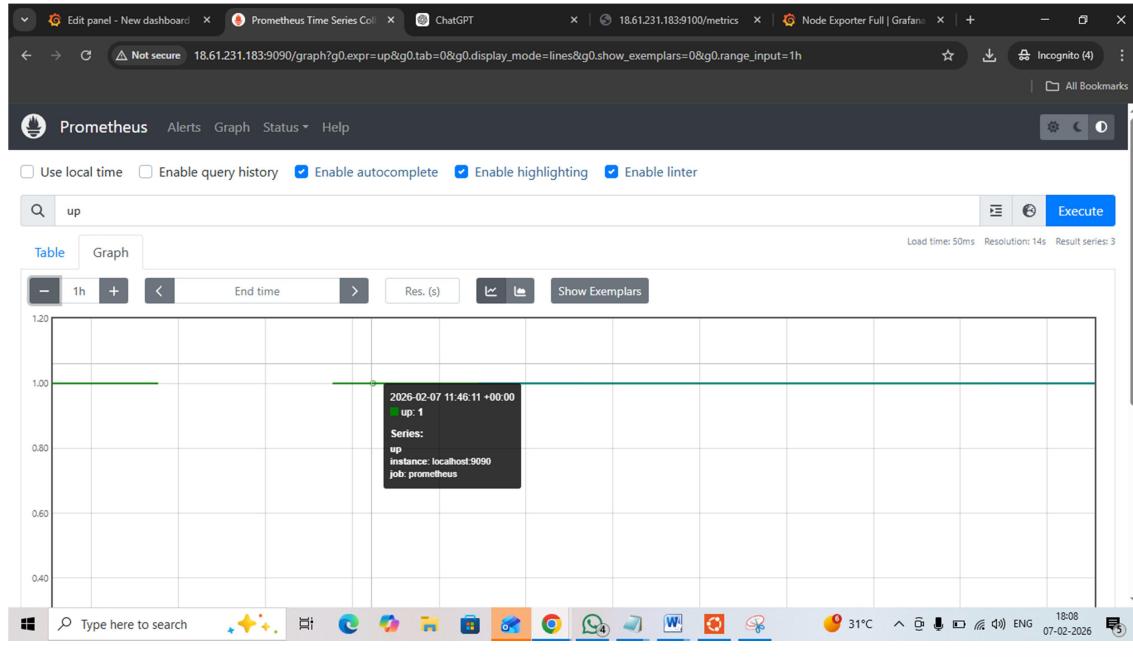
  - job_name: "Node Exporter"
    static_configs:
      - targets: ["localhost:9100"]
root@ip-172-31-6-232:~/node_exporter-1.8.1.linux-amd64#
```

Prometheus ,Grafana,Node exporter status validation

```
root@ip-172-31-6-232:~/node_exporter-1.8.1.linux-amd64# sudo systemctl status prometheus.service
● prometheus.service - Prometheus
   Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabled)
   Active: active (running) since Sat 2026-02-07 11:51:50 UTC; 41min ago
     Main PID: 12064 (prometheus)
        Tasks: 8 (limit: 1008)
       Memory: 33.3M (peak: 44.0M)
          CPU: 1.802s
        CGroup: /system.slice/prometheus.service
                  └─12064 /usr/local/bin/prometheus --config.file=/etc/prometheus/prometheus.yml --storage.tsdb.path=/var/lib/prometheus
```

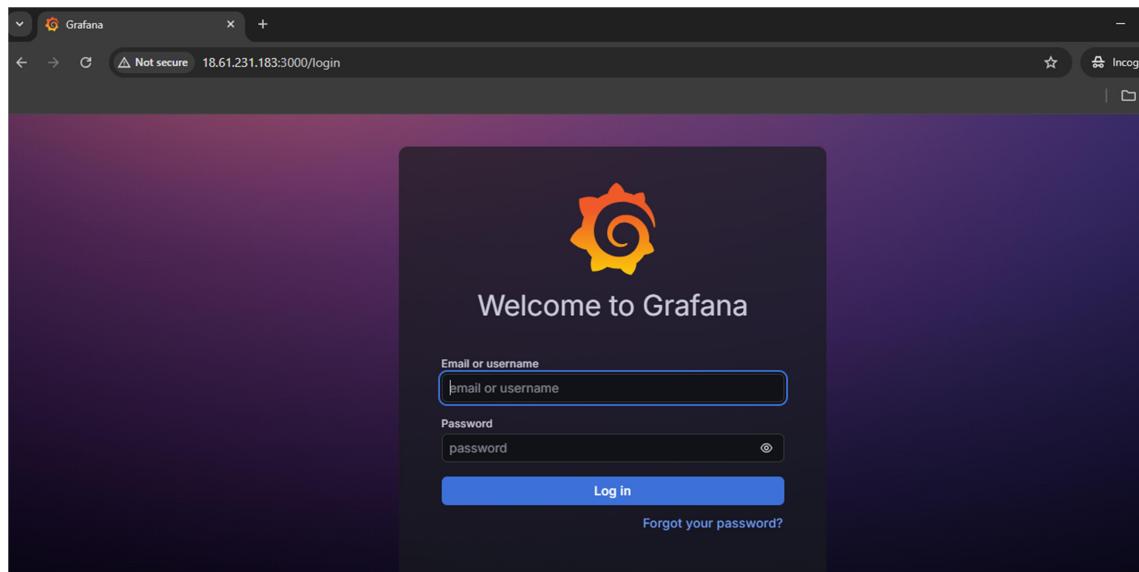
```
root@ip-172-31-6-232:~/node_exporter-1.8.1.linux-amd64# sudo systemctl status node_exporter
● node_exporter.service - Node Exporter
   Loaded: loaded (/etc/systemd/system/node_exporter.service; enabled; preset: enabled)
   Active: active (running) since Sat 2026-02-07 11:02:45 UTC; 1h 31min ago
     Main PID: 11870 (node_exporter)
        Tasks: 4 (limit: 1008)
       Memory: 7.6M (peak: 8.6M)
          CPU: 1.793s
        CGroup: /system.slice/node_exporter.service
                  └─11870 /usr/local/bin/node_exporter
```

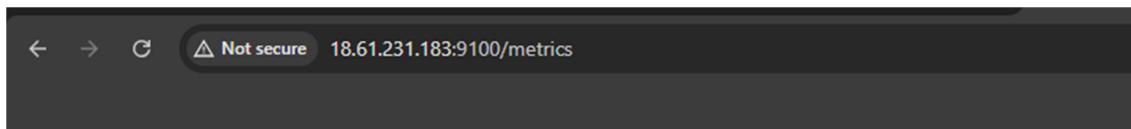
```
root@ip-172-31-6-232:~# sudo systemctl status grafana-server
root@ip-172-31-6-232:~# sudo systemctl status grafana-server
● grafana-server.service - Grafana instance
   Loaded: loaded (/usr/lib/systemd/system/grafana-server.service; enabled; preset: enabled)
   Active: active (running) since Sat 2026-02-07 10:22:43 UTC; 9min ago
     Docs: http://docs.grafana.org
 Main PID: 11226 (grafana)
    Tasks: 15 (limit: 1008)
   Memory: 343.8M (peak: 355.2M)
      CPU: 5.610s
     CGroup: /system.slice/grafana-server.service
             └─11226 /usr/share/grafana/bin/grafana server --config=/etc/grafana/grafana.ini --pidfile=/run/grafana/grafana
```



Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9100/metrics	UP	instance="localhost:9100" job="Node Exporter"	747.000ms ago	10.240ms	

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	748.000ms ago	4.817ms	





```
# 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"} 0
go_gc_duration_seconds{quantile="0.25"} 0
go_gc_duration_seconds{quantile="0.5"} 0
go_gc_duration_seconds{quantile="0.75"} 0
go_gc_duration_seconds{quantile="1"} 0
go_gc_duration_seconds_sum 0
go_gc_duration_seconds_count 0
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 7
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.22.3"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 2.74244e+06
# 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 2.74244e+06
# 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 1.450634e+06
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 1435
# 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 2.101352e+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 2.74244e+06
# 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 3.866624e+06
# 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 4.112384e+06
```

The screenshot shows the Grafana interface with a dark theme. The left sidebar has a 'Dashboards' section highlighted. The main area displays a dashboard titled 'Node Exporter Full' with several panels:

- A top panel for 'Datasource: prometheus' with settings for 'Job: Node Exporter', 'Nodename: ip-172-31-6-232', and 'Instance: localhost:9100'.
- A 'Quick CPU / Mem / Disk' panel showing various metrics with gauges:
 - CPU: 0.1%
 - Mem: 0.0%
 - I/O: 0.3%
 - CPU... (gauge): 0.3%
 - Sys ... (gauge): 0.0%
 - RAM... (gauge): 52.8%
 - SWA... (gauge): N/A
 - Root... (gauge): 50.3%
 - CP... (value): 2
 - RA... (value): 914 MiB
 - SW... (value): 0 B
- A 'Basic CPU / Mem / Net / Disk' panel with two sub-sections:
 - 'CPU Basic': A graph showing CPU usage from 0% to 100%.
 - 'Memory Basic': A graph showing memory usage in MiB, with values: 896 MiB, 768 MiB, 640 MiB, and 512 MiB.