

## Prometheus lab1

### 1- What is the different http status code and explain the meaning of each of them ?

Here are the 5 ranges and what they mean:

- 1- Informational responses (100 – 199)
- 2- Successful responses (200 – 299)
- 3- Redirection messages (300 – 399)
- 4- Client error responses (400 – 499)
- 5- Server error responses (500 – 599)

#### - HTTP Status Codes (Important)

200: Success

301: Permanent redirect

302: Found

404: Not Found

410: Gone

451: Unavailable for legal reasons

500: Internal server error

503: Service unavailable

### 2- What database is used by Prometheus?

Prometheus uses its own time-series database to store and retrieve monitoring data.

The Prometheus time-series database is a local, on-disk storage engine that uses a custom format to efficiently store time-series data.

### 3- what is the difference between different metrics types ( counter , gauge , histogram)

1. Counter: A counter is a cumulative metric that represents a monotonically increasing value. Counters are typically used to measure the number of events or requests that occur over time, such as the number of HTTP requests received by a web server. Counters can only increase in value and are reset to zero when the Prometheus server is restarted.  
(how many)
2. Gauge: A gauge is a metric that represents a value that can go up or down over time. Gauges are typically used to measure the current state of a system or application, such as the current CPU utilization of a server. Gauges can be set to any value and can increase or decrease over time.  
(current state)
3. Histogram: A histogram is a metric that represents the distribution of values over a set of predefined buckets. Histograms are typically used to measure the distribution of request latencies or other duration-related metrics, such as the response time of an API endpoint. Histograms allow you to see how many requests fall into different latency buckets (e.g., 0-100ms, 100-500ms, etc.) and how frequently those buckets are hit.  
(how long)

## 4-install prometheus on your localhost or on server in any cloud provider

```
hp@hp-HP-ElliteBook-Folio-9470m:~$ sudo useradd --no-create-home --shell /bin/false prometheus
[sudo] password for hp:
hp@hp-HP-ElliteBook-Folio-9470m:~$ sudo mkdir /etc/prometheus
hp@hp-HP-ElliteBook-Folio-9470m:~$ sudo mkdir /var/lib/prometheus
hp@hp-HP-ElliteBook-Folio-9470m:~$ sudo chown prometheus:prometheus /var/lib/prometheus
hp@hp-HP-ElliteBook-Folio-9470m:~$ cd /tmp/
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp$
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp$ wget https://github.com/prometheus/prometheus/releases/download/v2.35.0/prometheus-2.35.0.linux-amd64.tar.gz
--2023-07-21 19:51:38-- https://github.com/prometheus/prometheus/releases/download/v2.35.0/prometheus-2.35.0.linux-amd64.tar.gz
Resolving github.com (github.com)... 140.82.121.4
Connecting to github.com (github.com)|140.82.121.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/6838921/8f12e681-797c-42c9-97c3-f41bb08df5d9?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20230721%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20230721T165138Z&X-Amz-Expires=300&X-Amz-Signature=c99c77f0777c33759693c24fe2b7c9dbddaf49a452bdc98676562ba37b635831&X-Amz-SignedHeaders=host&actor_id=0&key_id=0&repo_id=6838921&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.35.0.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2023-07-21 19:51:38-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/6838921/8f12e681-797c-42c9-97c3-f41bb08df5d9?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20230721%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20230721T165138Z&X-Amz-Expires=300&X-Amz-Signature=c99c77f0777c33759693c24fe2b7c9dbddaf49a452bdc98676562ba37b635831&X-Amz-SignedHeaders=host&actor_id=0&key_id=0&repo_id=6838921&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.35.0.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.111.133, 185.199.110.133, 185.199.109.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.111.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 80620181 (77M) [application/octet-stream]
Saving to: 'prometheus-2.35.0.linux-amd64.tar.gz'

prometheus-2.35.0.linux-amd64.tar.g 100%[=====] 76.88M 2.02MB/s in 2m 10s

2023-07-21 19:53:49 (606 KB/s) - 'prometheus-2.35.0.linux-amd64.tar.gz' saved [80620181/80620181]
```

```
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp$ ls
config-err-tzaqYP          snap-private-tmp
grilo-plugin-cache-CFRM81  ssh-muZWGSSJxLs
grilo-plugin-cache-F56K81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-colored.service-fab5Uh
grilo-plugin-cache-F56K81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-fwupd.service-V08lSh
grilo-plugin-cache-GIVM81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-ModemManager.service-1W8yMh
grilo-plugin-cache-HVYK81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-switcheroo-control.service-qDbPUG
grilo-plugin-cache-08XM81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-systemd-logind.service-ETBpri
grilo-plugin-cache-PXXK81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-systemd-resolved.service-sj0zLf
grilo-plugin-cache-VJZK81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-systemd-timesyncd.service-dvysZg
grilo-plugin-cache-XBWM81  systemd-private-3d1d68f122ab4a58a545c3322433cac6-upower.service-0xZr5l
grilo-plugin-cache-Y2PM81  Temp-ec8d4ecb-8453-441c-8608-771eb0ae50ef
prometheus-2.35.0.linux-amd64.tar.gz  tracker-extract-files.1000
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp$ tar -xvf prometheus-2.35.0.linux-amd64.tar.gz
prometheus-2.35.0.linux-amd64/
prometheus-2.35.0.linux-amd64/consoles/
prometheus-2.35.0.linux-amd64/consoles/index.html.example
prometheus-2.35.0.linux-amd64/consoles/node-cpu.html
prometheus-2.35.0.linux-amd64/consoles/node-disk.html
prometheus-2.35.0.linux-amd64/consoles/node-overview.html
prometheus-2.35.0.linux-amd64/consoles/node.html
prometheus-2.35.0.linux-amd64/consoles/prometheus-overview.html
prometheus-2.35.0.linux-amd64/consoles/prometheus.html
prometheus-2.35.0.linux-amd64/console_libraries/
prometheus-2.35.0.linux-amd64/console_libraries/menu.lib
prometheus-2.35.0.linux-amd64/console_libraries/prom.lib
prometheus-2.35.0.linux-amd64/prometheus.yml
prometheus-2.35.0.linux-amd64/LICENSE
prometheus-2.35.0.linux-amd64/NOTICE
prometheus-2.35.0.linux-amd64/prometheus
prometheus-2.35.0.linux-amd64/promtool
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp$
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp$ cd prometheus-2.35.0.linux-amd64
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp/prometheus-2.35.0.linux-amd64$
hp@hp-HP-ElliteBook-Folio-9470m:~/tmp/prometheus-2.35.0.linux-amd64$ ls
console_libraries  consoles  LICENSE  NOTICE  prometheus  prometheus.yml  promtool
```

```

hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo mv console* /etc/prometheus
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo mv prometheus.yml /etc/prometheus
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo chown -R prometheus:prometheus /etc/prometheus
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo mv prometheus /usr/local/bin/
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo mv promtool /usr/local/bin/
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo chown prometheus:prometheus /usr/local/bin/prometheus
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo chown prometheus:prometheus /usr/local/bin/promtool
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Thu 2023-07-20 21:17:20 EEST; 22h ago
 TriggeredBy: ● docker.socket
    Docs: https://docs.docker.com
   Main PID: 1691 (dockerd)
     Tasks: 20
    Memory: 121.4M
    CGroup: /system.slice/docker.service
            └─1691 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

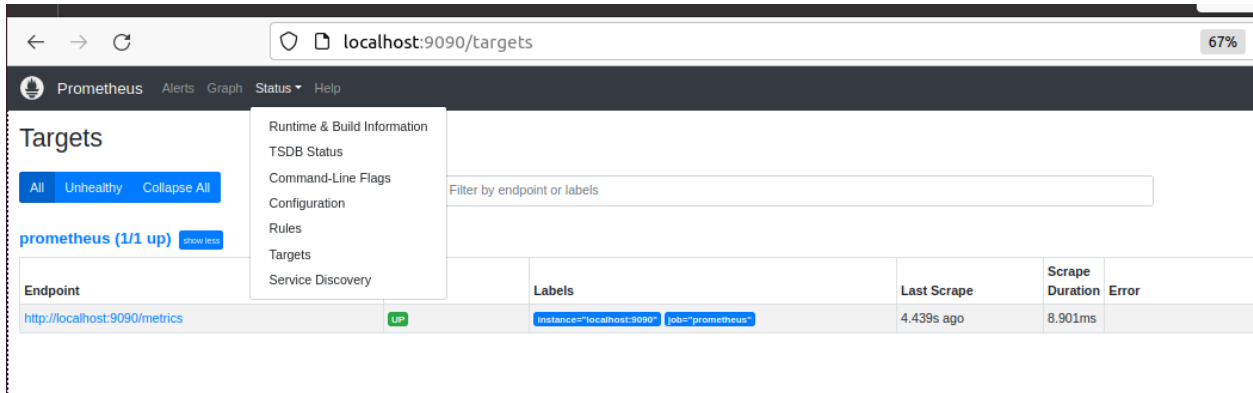
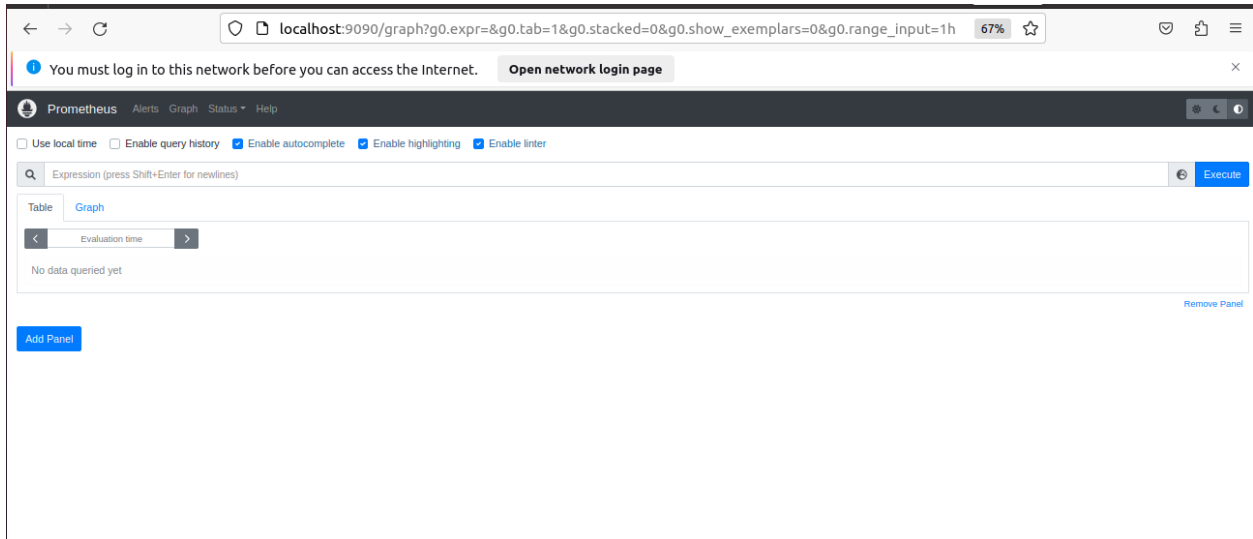
21:17:19 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:19.257337544+03:00" level=info msg="Starting up"
21:17:19 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:19.267637437+03:00" level=info msg="detected 127.0.0.53 name"
21:17:19 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:19.551187308+03:00" level=info msg="[graphdriver] using pri"
21:17:19 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:19.840705436+03:00" level=info msg="Loading containers: sta"
21:17:20 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:20.584461065+03:00" level=info msg="Default bridge (docker0"
21:17:20 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:20.641995001+03:00" level=info msg="Loading containers: don"
21:17:20 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:20.724170358+03:00" level=info msg="Docker daemon" commit=6"
21:17:20 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:20.724802481+03:00" level=info msg="Daemon has completed in"
21:17:20 20 بيل hp-HP-EliteBook-Folio-9470m dockerd[1691]: time="2023-07-20T21:17:20.904162312+03:00" level=info msg="API listen on /run/dock"
21:17:20 20 بيل hp-HP-EliteBook-Folio-9470m systemd[1]: Started Docker Application Container Engine.

hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo vi /etc/systemd/system/prometheus.service
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl status prometheus
● prometheus.service - Prometheus
   Loaded: loaded (/etc/systemd/system/prometheus.service; disabled; vendor preset: enabled)
   Active: inactive (dead)
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl daemon-reload
Active: inactive (dead)
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl daemon-reload
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl start prometheus
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl status prometheus
● prometheus.service - Prometheus
   Loaded: loaded (/etc/systemd/system/prometheus.service; disabled; vendor preset: enabled)
   Active: active (running) since Fri 2023-07-21 20:06:38 EEST; 14s ago
   Main PID: 10089 (prometheus)
     Tasks: 9 (limit: 9265)
    Memory: 16.4M
    CGroup: /system.slice/prometheus.service
            └─10089 /usr/local/bin/prometheus --config.file /etc/prometheus/prometheus.yml --storage.tsdb.path /var/lib/prometheus/ --web.co

20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.001Z caller=head.go:493 level=info component=tsdb msg="S"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.001Z caller=head.go:536 level=info component=tsdb msg="S"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.001Z caller=head.go:542 level=info component=tsdb msg="S"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.002Z caller=head.go:613 level=info component=tsdb msg="S"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.002Z caller=head.go:619 level=info component=tsdb msg="S"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.004Z caller=main.go:978 level=info fs_type=EXT4_SUPER_M"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.004Z caller=main.go:981 level=info msg="TSDB started"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.004Z caller=main.go:1162 level=info msg="Loading config"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.004Z caller=main.go:1199 level=info msg="Completed load"
20:06:39 21 بيل hp-HP-EliteBook-Folio-9470m prometheus[10089]: ts=2023-07-21T17:06:39.004Z caller=main.go:930 level=info msg="Server is ready"

hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$ sudo systemctl enable prometheus
Created symlink /etc/systemd/system/multi-user.target.wants/prometheus.service → /etc/systemd/system/prometheus.service.
hp@hp-HP-EliteBook-Folio-9470m:/tmp/prometheus-2.35.0.linux-and64$

```



5-add any new target to prometheus.yaml file and apply any query on it using promql language

1) Install node exporter

```
hp@hp-HP-EliteBook-Folio-9470m: /tmp$ cd node_exporter-1.3.1.linux-amd64
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ ls
LICENSE  node_exporter  NOTICE
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ sudo mv node_exporter /usr/local/bin/
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ sudo chown node_exporter:node_exporter /usr/local/bin/node_exporter
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ sudo vi /etc/systemd/system/node_exporter.service
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ sudo systemctl daemon-reload
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ sudo systemctl start node_exporter
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ sudo systemctl status node_exporter
● node_exporter.service - Node Exporter
   Loaded: loaded (/etc/systemd/system/node_exporter.service; disabled; vendor preset: enabled)
   Active: active (running) since Fri 2023-07-21 22:21:14 EEST; 24ms ago
     Main PID: 11290 (node_exporter)
        Tasks: 5 (limit: 9265)
       Memory: 2.6M
          CGroup: /system.slice/node_exporter.service
                  └─11290 /usr/local/bin/node_exporter

22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=node_exporter.go:115 level=info collector=
22:21:14 21  hp-HP-EliteBook-Folio-9470m node_exporter[11290]: ts=2023-07-21T19:21:14.592Z caller=tlscfg.go:195 level=info msg="TLS is
hp@hp-HP-EliteBook-Folio-9470m: /tmp/node_exporter-1.3.1.linux-amd64$ cd
hp@hp-HP-EliteBook-Folio-9470m: ~$ sudo vi /etc/prometheus/prometheus.yml
hp@hp-HP-EliteBook-Folio-9470m: ~$ sudo systemctl restart prometheus
```

```
hp@hp-HP-EliteBook-Folio-9470m: ~$ sudo useradd --no-create-home --shell /bin/false node_exporter
[sudo] password for hp:
hp@hp-HP-EliteBook-Folio-9470m: ~$ cd /tmp/
hp@hp-HP-EliteBook-Folio-9470m: /tmp$
hp@hp-HP-EliteBook-Folio-9470m: /tmp$ wget https://github.com/prometheus/node_exporter/releases/download/v1.3.1/node_exporter-1.3.1.linux-amd64
.tar.gz
--2023-07-21 22:17:17-- https://github.com/prometheus/node_exporter/releases/download/v1.3.1/node_exporter-1.3.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 140.82.121.4
Connecting to github.com (github.com)|140.82.121.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/7c60f6f9-7b41-446c-be81-a6c24a9d0383?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20230721%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20230721T191532Z&X-Amz-Expires=300&X-Amz-Signature=2925d1228c1b50412d1d7648cb0cb50366ce2eaf2832b2a3c6406e7eabec2315&X-Amz-SignedHeaders=host&actor_id=0&key_id=0&repo_id=9524057&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.3.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2023-07-21 22:17:20-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/7c60f6f9-7b41-446c-be81-a6c24a9d0383?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWNJYAX4CSVEH53A%2F20230721%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20230721T191532Z&X-Amz-Expires=300&X-Amz-Signature=2925d1228c1b50412d1d7648cb0cb50366ce2eaf2832b2a3c6406e7eabec2315&X-Amz-SignedHeaders=host&actor_id=0&key_id=0&repo_id=9524057&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.3.1.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.109.133, 185.199.111.133, 185.199.110.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.109.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 9033415 (8.6M) [application/octet-stream]
Saving to: 'node_exporter-1.3.1.linux-amd64.tar.gz'

node_exporter-1.3.1.linux-amd64.tar 100%[=====>] 8.61M 1.07MB/s in 36s

2023-07-21 22:17:58 (248 KB/s) - 'node_exporter-1.3.1.linux-amd64.tar.gz' saved [9033415/9033415]

hp@hp-HP-EliteBook-Folio-9470m: /tmp$ tar -xvf node_exporter-1.3.1.linux-amd64.tar.gz
node_exporter-1.3.1.linux-amd64/
node_exporter-1.3.1.linux-amd64/LICENSE
node_exporter-1.3.1.linux-amd64/NOTICE
node_exporter-1.3.1.linux-amd64/node_exporter
```

```
hp@hp-HP-EliteBook-Folio-9470m: ~$ sudo systemctl status prometheus
● prometheus.service - Prometheus
   Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2023-07-21 22:27:37 EEST; 5s ago
     Main PID: 11379 (prometheus)
        Tasks: 10 (limit: 9265)
       Memory: 18.5M
          CGroup: /system.slice/prometheus.service
                  └─11379 /usr/local/bin/prometheus --config.file /etc/prometheus/prometheus.yml --storage.tsdb.path /var/lib/prometheus/ --web.co

22:27:37 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:37.914Z caller=head.go:536 level=info component=tsdb msg="
22:27:37 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:37.914Z caller=head.go:542 level=info component=tsdb msg="
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.046Z caller=head.go:613 level=info component=tsdb msg="
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.047Z caller=head.go:613 level=info component=tsdb msg="
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.047Z caller=head.go:619 level=info component=tsdb msg="
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.049Z caller=main.go:978 level=info fs_type=EXT4_SUPER_M
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.049Z caller=main.go:981 level=info msg="TSDB started"
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.049Z caller=main.go:1162 level=info msg="Loading config
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.050Z caller=main.go:1199 level=info msg="Completed load
22:27:38 21  hp-HP-EliteBook-Folio-9470m prometheus[11379]: ts=2023-07-21T19:27:38.050Z caller=main.go:930 level=info msg="Server is ready"
lines 1-19/19 (END)
```

## 2) Prometheus.yml file

- Sudo vi /etc/prometheus/prometheus.yml
- Add target
- Then restart

```
# 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: "linux server"

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

- job_name: "cadvisor"

  static_configs:
    - targets: ["localhost:8080"]

-- INSERT --
```

localhost:9090/targets#pool-linux server 67%

Prometheus Alerts Graph Status Help

### Targets

All Unhealthy Collapse All

linux server (1/1 up) [show less](#)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
<a href="http://localhost:9100/metrics">http://localhost:9100/metrics</a>	UP	instance="localhost:9100" job="linux server"	34.14s ago	79.498ms	

prometheus (1/1 up) [show less](#)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
<a href="http://localhost:9090/metrics">http://localhost:9090/metrics</a>	UP	instance="localhost:9090" job="prometheus"	22.608s ago	10.080ms	

### 3) Query

