The first thing is to créate the prometheus yml file

```
byran@byran-VirtualBox:~/tarea/prometheus-grafana/prometheus$ cat prometheus.yml

global:
   scrape_interval: 15s
   scrape_timeout: 10s
   evaluation interval: 15s
alerting:
   alertmanagers:
   - static_configs:
     - targets: []
     scheme: http
     timeout: 10s
     api_version: v1
scrape_configs:
- job_name: prometheus
  honor_timestamps: true
  scrape_interval: 15s
  scrape_timeout: 10s
  metrics_path: /metrics
  scheme: http
  static_configs:
  - targets:
    - localhost:9090
```

Then créate the data source for grafana

```
byran@byran-VirtualBox:~/tarea/prometheus-grafana/grafana$ cat datasource.yml
apiVersion: 1
datasources:
- name: Prometheus
  type: Prometheus
  url: http://localhost:9090
  isDefault: true
  access: proxy
  editable: true
```

Then créate the Docker compose file

```
byran@byran-VirtualBox:~/tarea$ cat docker-compose.yml
version: "3.7"

services:
  prometheus:
    image: prom/prometheus:latest
    volumes:
            - /prometheus-grafana/prometheus/prometheus.yml:/etc/prometheus/prometheus.yml
    ports:
      - 9090:9090
  grafana:
    image: grafana/grafana:latest
    volumes:
             - /prometheus-grafana/grafana/ini:/etc/grafana/grafana.ini
             - /prometheus-grafana/grafana/datasource.yml:/etc/grafana/provisionin/datasou
rces/datasource.yaml
    ports:

      - 3000:3000
    links:
             - prometheus
  node-exporter:
    image: prom/node-exporter:latest
    container_name: monitoring_node_exporter
    restart: unless-stopped
    expose:
      - 9100
```

Then run the Docker-container

```
byran@byran-VirtualBox:~/tarea$ sudo docker-compose up -d
Creating network "tarea_default" with the default driver
Pulling prometheus (prom/prometheus:latest)...
latest: Pulling from prom/prometheus
```

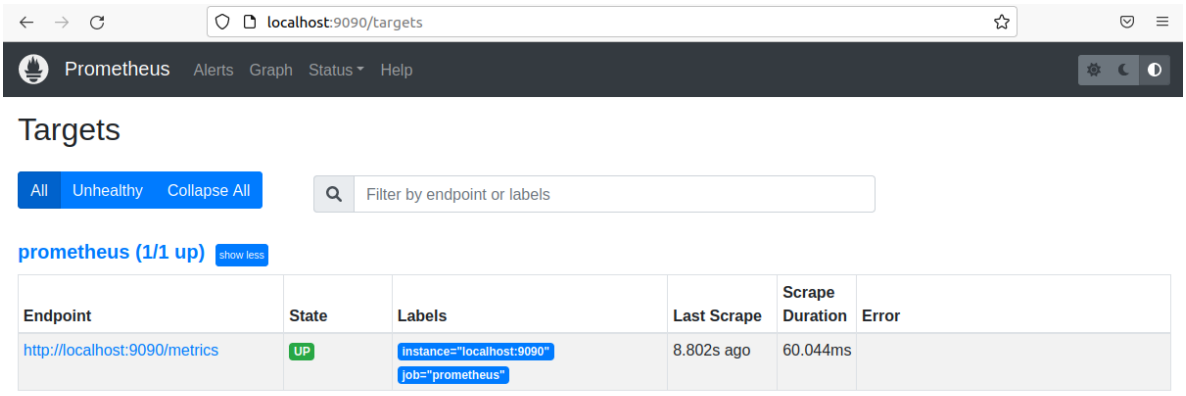
```
926e17151ee8: Pull complete
Digest: sha256:42d3e6bc186572245aded5a0be381012adba6d89355fa9486dd81b0c634695b5
Status: Downloaded newer image for grafana/grafana:latest
Pulling node-exporter (prom/node-exporter:latest)...
latest: Pulling from prom/node-exporter
aa2a8d90b84c: Pull complete
b45d31ee2d7f: Pull complete
b5db1e299295: Pull complete
Digest: sha256:f2269e73124dd0f60a7d19a2ce1264d33d08a985aed0ee6b0b89d0be470592cd
Status: Downloaded newer image for prom/node-exporter:latest
Creating monitoring_node_exporter ... done
```

In the grafana file you need put your grafana usenarname, and your grafana password (admin, admin for default).

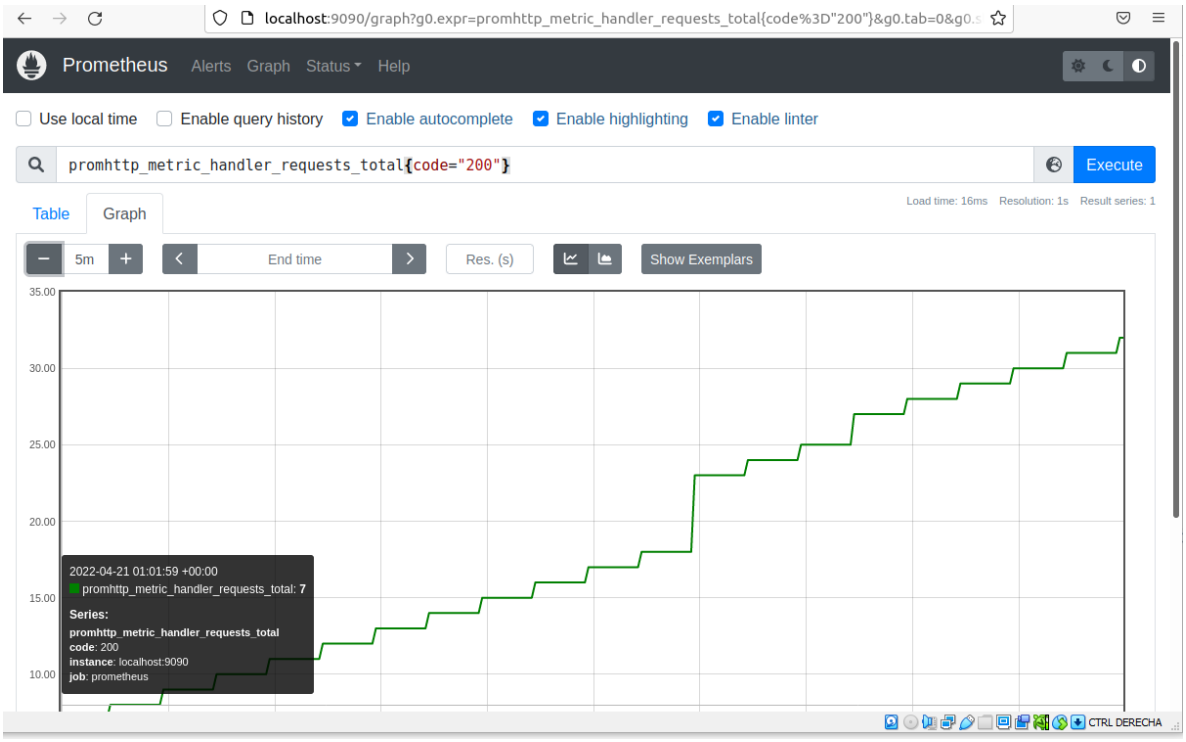
After the instalation of prometheus the next thing to do is run prometheus

```
ts=2022-04-21T01:00:06.049Z caller=main.go:488 level=info msg="No time or size retention was set so using the default t
ime retention" duration=15d
ts=2022-04-21T01:00:06.049Z caller=main.go:525 level=info msg="Starting Prometheus" version="(version=2.35.0-rc0, branc
h=HEAD, revision=5b73e518260d8bab36ebb1c0d0a5826eba8fc0a0)"
ts=2022-04-21T01:00:06.049Z caller=main.go:530 level=info build_context="(go=go1.18, user=root@0b5bef750ef2, date=20220
408-13:26:09)"
ts=2022-04-21T01:00:06.050Z caller=main.go:531 level=info host_details="(Linux 5.13.0-40-generic #45~20.04.1-Ubuntu SMP
 Mon Apr 4 09:38:31 UTC 2022 x86_64 byran-VirtualBox (none))"
ts=2022-04-21T01:00:06.050Z caller=main.go:532 level=info fd_limits="(soft=1024, hard=1048576)"
ts=2022-04-21T01:00:06.050Z caller=main.go:533 level=info vm_limits="(soft=unlimited, hard=unlimited)"
ts=2022-04-21T01:00:06.052Z caller=web.go:541 level=info component=web msg="Start listening for connections" address=0.
0.0.0:9090
ts=2022-04-21T01:00:06.052Z caller=main.go:957 level=info msg="Starting TSDB ..."
ts=2022-04-21T01:00:06.100Z caller=head.go:493 level=info component=tsdb msg="Replaying on-disk memory mappable chunks
if any"
ts=2022-04-21T01:00:06.100Z caller=head.go:536 level=info component=tsdb msg="On-disk memory mappable chunks replay com
pleted" duration=82.723µs
ts=2022-04-21T01:00:06.100Z caller=head.go:542 level=info component=tsdb msg="Replaying WAL, this may take a while"
ts=2022-04-21T01:00:06.175Z caller=tls_config.go:195 level=info component=web msg="TLS is disabled." http2=false
ts=2022-04-21T01:00:06.176Z caller=head.go:613 level=info component=tsdb msg="WAL segment loaded" segment=0 maxSegment=
0
ts=2022-04-21T01:00:06.176Z caller=head.go:619 level=info component=tsdb msg="WAL replay completed" checkpoint_replay_d
uration=24.361µs wal_replay_duration=75.032636ms total_replay_duration=75.200142ms
ts=2022-04-21T01:00:06.176Z caller=main.go:978 level=info fs_type=EXT4_SUPER_MAGIC
ts=2022-04-21T01:00:06.176Z caller=main.go:981 level=info msg="TSDB started"
ts=2022-04-21T01:00:06.176Z caller=main.go:1162 level=info msg="Loading configuration file" filename=prometheus.yml
```

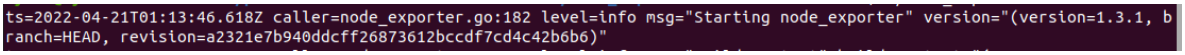
As we can see, the prometheus server is up and running in port: 9090

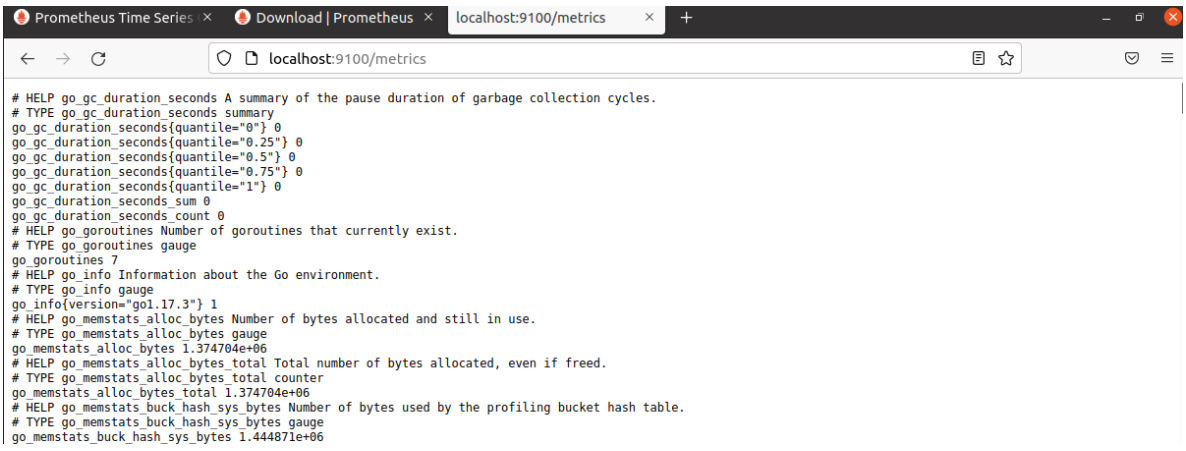


Lets check a graph with the request



And we can see that node-exporter is up and running

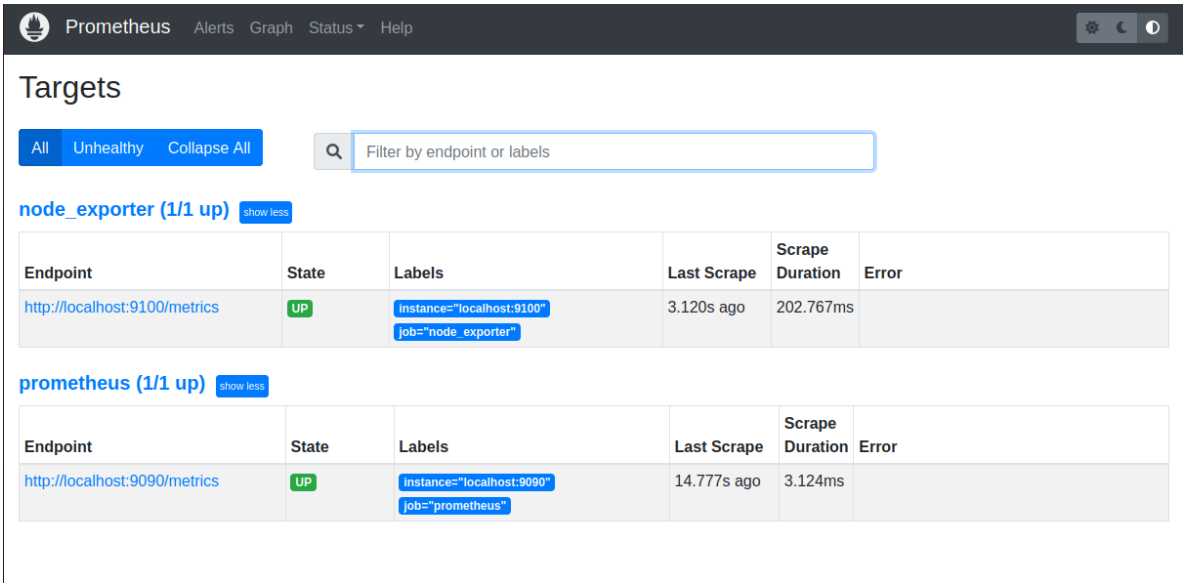




Changing the prometheus.yml file

```
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_config:
  - job_name: "prometheus"
    static_configs:
      - targets: ["localhost:9090"]
   - job_name: 'node_exporter'
     static_configs:
     - targets: ["localhost:9100"]
```

Then refresh prometheus page to check if node_exporter is up and running



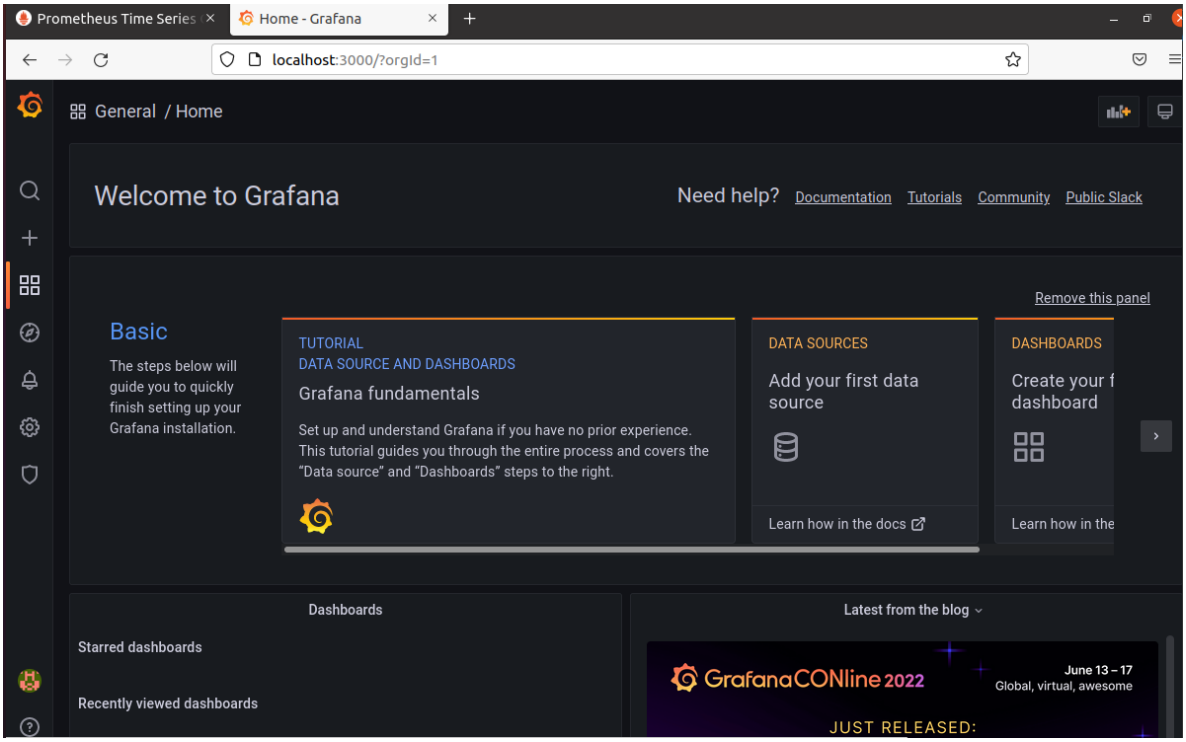
The next thing to do is install grafana

```
byran@byran-VirtualBox:~/prometheus-2.35.0-rc0.linux-amd64$ wget https://dl.grafana.com/enterprise/release/grafana-enterprise-8.5.0.linux-amd64.tar.gz
--2022-04-21 09:06:44--  https://dl.grafana.com/enterprise/release/grafana-enterprise-8.5.0.linux-amd64.tar.gz
Resolviendo dl.grafana.com (dl.grafana.com)... 151.101.206.217, 2a04:4e42:30::729
Conectando con dl.grafana.com (dl.grafana.com)[151.101.206.217]:443... conectado.
Petición HTTP enviada, esperando respuesta... 200 OK
Longitud: 87630471 (84M) [application/x-tar]
Guardando como: “grafana-enterprise-8.5.0.linux-amd64.tar.gz”

grafana-enterprise- 100%[===================>]  83,57M  2,55MB/s    en 31s

2022-04-21 09:07:17 (2,70 MB/s) - “grafana-enterprise-8.5.0.linux-amd64.tar.gz” guardado [87630471/87630471]

byran@byran-VirtualBox:~/prometheus-2.35.0-rc0.linux-amd64$
```

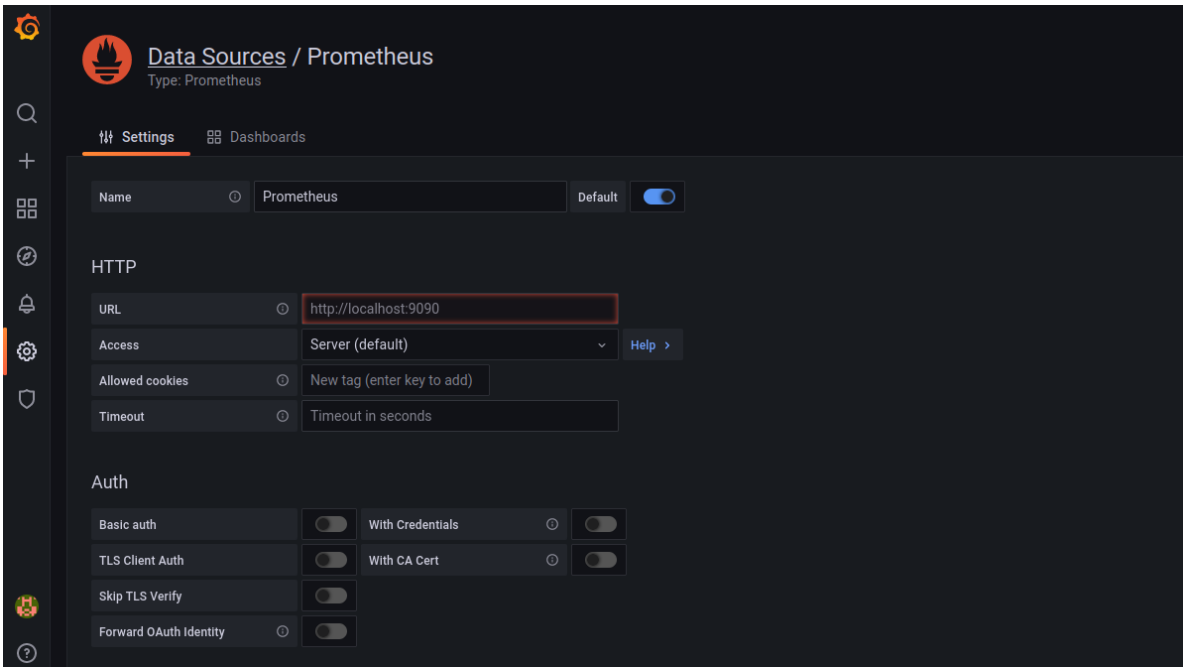
Once the installation its complete, its time to run grafana

```
byran@byran-VirtualBox:~/prometheus-2.35.0-rc0.linux-amd64$ cd grafana-8.5.0/
byran@byran-VirtualBox:~/prometheus-2.35.0-rc0.linux-amd64/grafana-8.5.0$ ls
bin  conf  LICENSE  NOTICE.md  plugins-bundled  public  README.md  scripts  VERSION
byran@byran-VirtualBox:~/prometheus-2.35.0-rc0.linux-amd64/grafana-8.5.0$ ./bin/grafana-server
INFO [04-21|09:09:30] Starting Grafana                         logger=settings version=8.5.0 commit=6134
e3cf3 branch=HEAD compiled=2022-04-21T06:36:58-0400
INFO [04-21|09:09:30] Config loaded from                       logger=settings file=/home/byran/promethe
us-2.35.0-rc0.linux-amd64/grafana-8.5.0/conf/defaults.ini
INFO [04-21|09:09:30] Path Home                                logger=settings path=/home/byran/promethe
us-2.35.0-rc0.linux-amd64/grafana-8.5.0
INFO [04-21|09:09:30] Path Data                                logger=settings path=/home/byran/promethe
us-2.35.0-rc0.linux-amd64/grafana-8.5.0/data
INFO [04-21|09:09:30] Path Logs                                logger=settings path=/home/byran/promethe
us-2.35.0-rc0.linux-amd64/grafana-8.5.0/data/log
INFO [04-21|09:09:30] Path Plugins                             logger=settings path=/home/byran/promethe
us-2.35.0-rc0.linux-amd64/grafana-8.5.0/data/plugins
INFO [04-21|09:09:30] Path Provisioning                        logger=settings path=/home/byran/promethe
us-2.35.0-rc0.linux-amd64/grafana-8.5.0/conf/provisioning
INFO [04-21|09:09:30] App mode production                      logger=settings
INFO [04-21|09:09:31] Connecting to DB                         logger=sqlstore dbtype=sqlite3
INFO [04-21|09:09:31] Creating SQLite database file            logger=sqlstore path=/home/byran/promethe
```

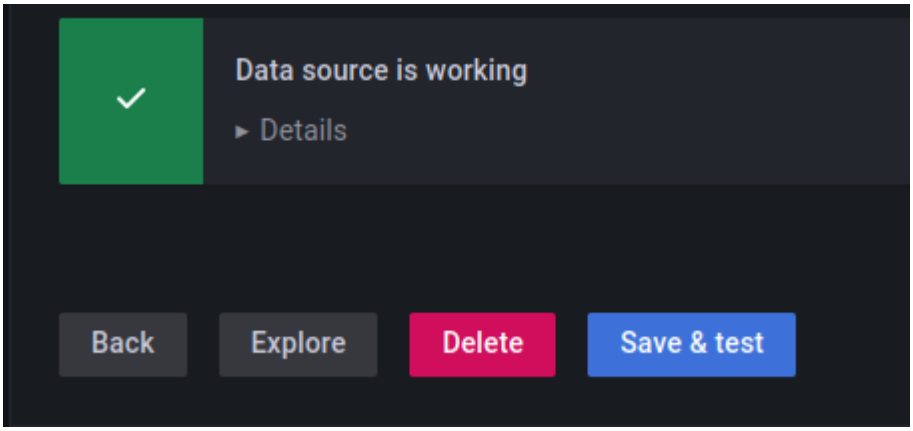
Check the localhost:300



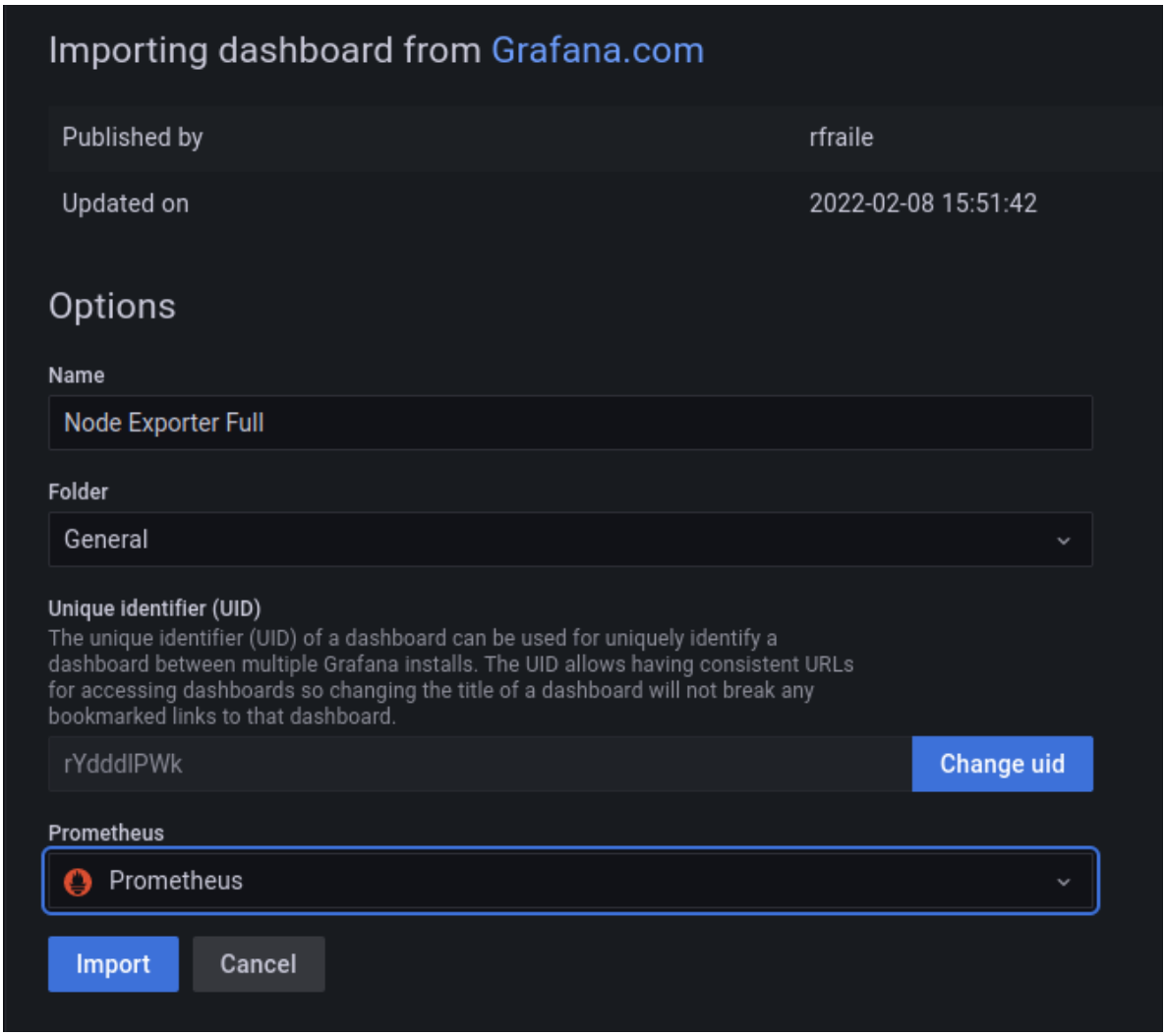
Create database for prometheus



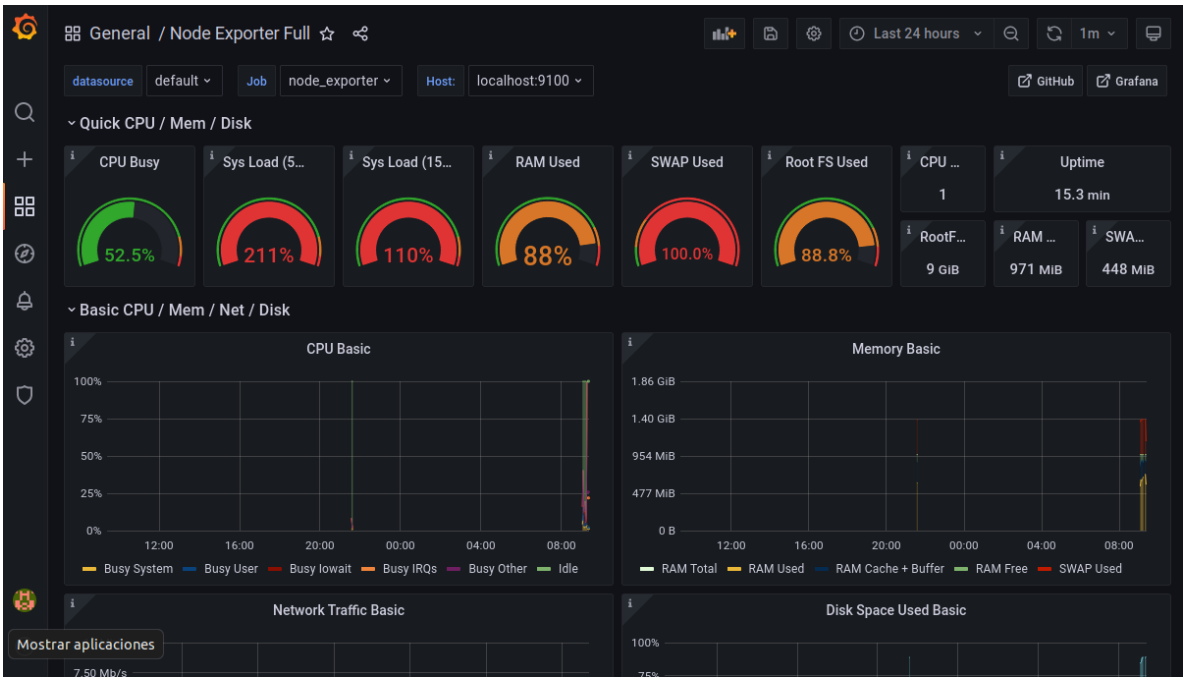
Now we can see that the connection is completed



Test the connection



And finally check the graph


General / Node Exporter Full
Last 24 hours
1m
datasource
default
Job
node_exporter
Host:
localhost:9100
GitHub
Grafana
Quick CPU / Mem / Disk
CPU Busy
52.5%
Sys Load (5...
211%
Sys Load (15...
110%
RAM Used
88%
SWAP Used
100.0%
Root FS Used
88.8%
CPU ...
1
Uptime
15.3 min
RootF...
9 GiB
RAM ...
971 MiB
SWA...
448 MiB
Basic CPU / Mem / Net / Disk
CPU Basic
100%
75%
50%
25%
0%
12:00
16:00
20:00
00:00
04:00
08:00
Busy System
Busy User
Busy Iowait
Busy IRQs
Busy Other
Idle
Memory Basic
1.86 GiB
1.40 GiB
954 MiB
477 MiB
0 B
RAM Total
RAM Used
RAM Cache + Buffer
RAM Free
SWAP Used
Network Traffic Basic
7.50 Mb/s
Disk Space Used Basic
100%
Mostrar aplicaciones


General / Node Exporter Full
Last 5 minutes
1m
2022-04-21 09:20:28
to
2022-04-21 09:25:28
Local browser time
datasource
default
Job
node_exporter
Host:
localhost:9100
GitHub
Grafana
Quick CPU / Mem / Disk
CPU Busy
23.5%
Sys Load (5...
127%
Sys Load (15...
64%
RAM Used
79%
SWAP Used
92.7%
Root FS Used
89.1%
CPU ...
1
Uptime
5.6 min
RootF...
9 GiB
RAM ...
971 MiB
SWA...
448 MiB
Basic CPU / Mem / Net / Disk
CPU Basic
100%
75%
50%
25%
0%
09:21
09:22
09:23
09:24
09:25
Busy System
Busy User
Busy Iowait
Busy IRQs
Busy Other
Idle
Memory Basic
1.86 GiB
1.40 GiB
954 MiB
477 MiB
0 B
RAM Total
RAM Used
RAM Cache + Buffer
RAM Free
SWAP Used
Network Traffic Basic
Disk Space Used Basic
100%
Mostrar aplicaciones