

Tutorial Prometheus and Grafana

Create a docker-compose file with Prometheus, Grafana and Node-exporter.

Create a docker-[compose.yml](#) to create a container for Grafana, Prometheus and Node-Exporter.

```
version: "3.8"

volumes:
  grafana-data:
  prometheus-data:

services:
  grafana:
    image: grafana/grafana:latest
    ... etc

  prometheus:
    image: prom/prometheus:latest
    ... etc

  node_exporter:
    image: quay.io/prometheus/node-exporter:latest
    ... etc
```

Create a [prometheus.yml](#) with the configurations to connect with Node-Exporter.

```
global:
  scrape_interval: 15s
  evaluation_interval: 15s

scrape_configs:
  - job_name: 'prometheus'
    static_configs:
      - targets: ['prometheus:9090']

  - job_name: 'node_exporter'
    static_configs:
      - targets: ['node_exporter:9100']
```

Run [docker-compose up --build -d](#) to run the [docker-compose.yml](#) configurations

```
liox@DESKTOP-SG1FBT8:~/jalasoft/jalasoft-bootcamp/devOps_1/JalaUniversity_DevOps/docker-compose$ docker-compose up -d
[+] Running 3/0
 # Container prometheus      Running
 # Container node_exporter    Running
 # Container grafana          Running
```

Verify the containers [docker-compose ps](#)

```
liox@DESKTOP-SG1FBT8:~/jalasoft/jalasoft-bootcamp/devOps_1/JalaUniversity_DevOps/docker-compose$ docker-compose ps
NAME                COMMAND                  SERVICE           STATUS           PORTS
grafana             "/run.sh"               grafana           running          0.0.0.0:3000->3000/tcp
node_exporter       "/bin/node_exporter -"  node_exporter     running          0.0.0.0:9100->9100/tcp
prometheus          "/bin/prometheus --c-"  prometheus        running          0.0.0.0:9090->9090/tcp
```

Go to <http://localhost:9100/metrics> to see node-exporter metrics

```
localhost:9100/metrics x Prometheus Time Series Collection and Node Exporter Full - Dashboards -
localhost:9100/metrics

# 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"} 2e-05
go_gc_duration_seconds{quantile="0.25"} 3.68e-05
go_gc_duration_seconds{quantile="0.5"} 3.91e-05
go_gc_duration_seconds{quantile="0.75"} 4.38e-05
go_gc_duration_seconds{quantile="1"} 4.44e-05
go_gc_duration_seconds_sum 0.0002624
go_gc_duration_seconds_count 7
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 8
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.19.3"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 2.65084e+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 1.4250632e+07
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
```

Go to <http://localhost:9090> to see Prometheus targets and make a query.

localhost:9100/metricsPrometheus Time Series Collection and Node Exporter Full - Dashboards -

localhost:9090/targets?search=

PrometheusAlertsGraphStatus *Help

Targets

AllUnhealthyCollapse All

Filter by endpoint or labels

node_exporter (1/1 up)View

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://node_exporter:9100/metrics	UP	instance="node_exporter:9100"job="node_exporter"	11.573s ago	23.424ms	

prometheus (1/1 up)View

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://prometheus:9090/metrics	UP	instance="prometheus:9090"job="prometheus"	2.38s ago	5.523ms	

node_memory_MemAvailable_bytes/1024/1024/1024

Table

Graph

<

Evaluation time

>

{instance="node_exporter:9100",job="node_exporter"}



Go to Grafana on <http://localhost:3000>.

Add a data source and import a dashboard to see the data.

HTTP

URL	http://prometheus:9090
Allowed cookies	New tag (enter key to add) Add
Timeout	Timeout in seconds

