

Grafana & prometheus with docker containers

>nano docker-compose.yml

```
gustavo@ubuntu2010: ~/grafana
GNU nano 5.2
version: "3.7"

volumes:
  grafana-data:
  prometheus-data:

services:
  grafana:
    image: grafana/grafana:8.0.6
    container_name: grafana
    restart: unless-stopped
    volumes:
      - grafana-data:/var/lib/grafana
    ports:
      - 3000:3000
```

```
gustavo@ubuntu2010: ~/grafana
GNU nano 5.2 docker-con

prometheus:
  image: prom/prometheus:v2.28.1
  container_name: prometheus
  restart: unless-stopped
  volumes:
    - ./prometheus.yml:/etc/prometheus/prometheus.yml
    - prometheus-data:/prometheus
  ports:
    - 9090:9090
  command:
    - '--config.file=/etc/prometheus/prometheus.yml'
    - '--storage.tsdb.path=/prometheus'
    - '--storage.tsdb.retention.time=1y'
    - '--web.enable-lifecycle'
```

```

gustavo@ubuntu2010: ~/grafana
GNU nano 5.2 doc
node_exporter:
  image: quay.io/prometheus/node-exporter:latest
  container_name: node_exporter
  restart: unless-stopped
  ports:
    - 9100:9100
  command:
    - '--path.rootfs=/host'
  pid: host
  volumes:
    - '/:/host:ro,rslave'

cadvisor:
  image: gcr.io/cadvisor/cadvisor:latest
  container_name: cadvisor
  restart: unless-stopped
  expose:
    - 8080
  volumes:
    - /:/rootfs:ro
    - /var/run:/var/run:rw
    - /sys:/sys:ro
    - /var/lib/docker:/var/lib/docker:ro

```

```

app_example:
  image: quay.io/brancz/prometheus-example-app:v0.3.0
  container_name: app_example
  restart: unless-stopped
  ports:
    - 80:8080

```

>nano prometheus.yml

```
gustavo@ubuntu2010: ~/grafana
GNU nano 5.2
global:
  scrape_interval: 15s
  evaluation_interval: 15s

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

  - job_name: 'cadvisor'
    static_configs:
      - targets: ['cadvisor:8080']

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

  - job_name: 'app_example'
    static_configs:
      - targets: ['app_example:8080']
```

>sudo docker-compose pull

```
gustavo@ubuntu2010:~/grafana$ gustavo@ubuntu2010:~/grafana$ sudo docker-compose pull
Pulling grafana          ... extracting (74.8%)
Pulling grafana          ... done
Pulling node_exporter    ... done
Pulling cadvisor         ... done
Pulling app_example      ... done
```

>sudo docker-compose up -d

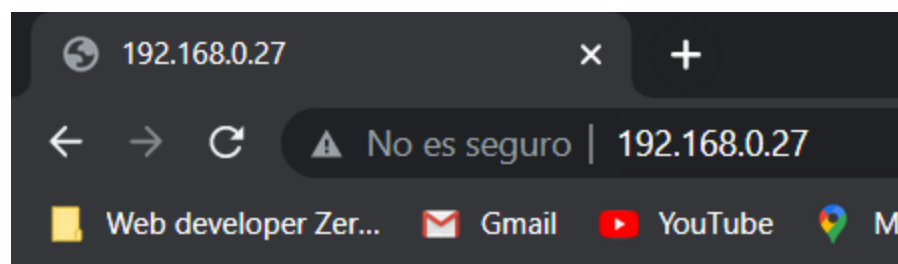
```
gustavo@ubuntu2010:~/grafana$ sudo docker-compose up -d
[sudo] password for gustavo:
Creating network "grafana_default" with the default driver
Creating volume "grafana_grafana-data" with default driver
Creating volume "grafana_prometheus-data" with default driver
Creating app_example    ... done
Creating prometheus     ... done
Creating node_exporter  ... done
Creating grafana        ... done
Creating cadvisor       ... done
```

>sudo docker ps

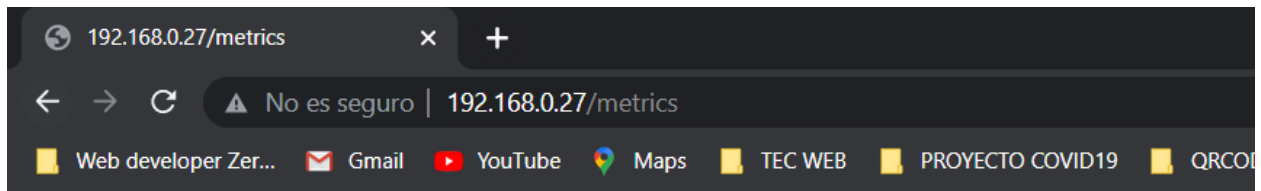
```
gustavo@ubuntu2010:~/grafana$ sudo docker ps
```

CONTAINER ID	IMAGE	PORTS	NAMES	COMMAND	CREATED	STATUS
67a507f1a83f	quay.io/prometheus/node-exporter:latest	0.0.0.0:9100->9100/tcp	node_exporter	"/bin/node_exporter ..."	5 minutes ago	Up 5 minu
8895b714f74c	grafana/grafana:8.0.6	0.0.0.0:3000->3000/tcp	grafana	"/run.sh"	5 minutes ago	Up 5 minu
89a97d62e535	gcr.io/cadvisor/cadvisor:latest	8080/tcp	cadvisor	"/usr/bin/cadvisor -..."	5 minutes ago	Up 5 minu
08909a77ba35	prom/prometheus:v2.28.1	0.0.0.0:9090->9090/tcp	prometheus	"/bin/prometheus --c..."	5 minutes ago	Up 5 minu
2b71e8504e53	quay.io/brancz/prometheus-example-app:v0.3.0	0.0.0.0:80->8080/tcp	app_example	"/bin/prometheus-exa..."	5 minutes ago	Up 5 minu

Results



Hello from example application.



```
# HELP http_request_duration_seconds Duration of all HTTP requests
# TYPE http_request_duration_seconds histogram
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.005"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.01"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.025"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.05"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.1"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.25"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="0.5"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="1"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="2.5"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="5"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="10"} 4
http_request_duration_seconds_bucket{code="200",handler="found",method="get",le="+Inf"} 4
http_request_duration_seconds_sum{code="200",handler="found",method="get"} 0.000849687
http_request_duration_seconds_count{code="200",handler="found",method="get"} 4
# HELP http_requests_total Count of all HTTP requests
# TYPE http_requests_total counter
http_requests_total{code="200",method="get"} 4
# HELP version Version information about this binary
# TYPE version gauge
version{version="v0.3.0"} 1
```

Prometheus Time Series Collectio x +

← → ↻ No es seguro | 192.168.0.27:9090/targets

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Targets

All Unhealthy Collapse All

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

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://app_example:8080/metrics	UP	instance="app_example:8080" job="app_example"	14.518s ago	1.388ms	

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

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://cadvisor:8080/metrics	UP	instance="cadvisor:8080" job="cadvisor"	14.781s ago	269.508ms	

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

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://node_exporter:9100/metrics	UP	instance="node_exporter:9100" job="node_exporter"	6.648s ago	27.720ms	

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

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
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```
192.168.0.27:9100/metrics x +
No es seguro | 192.168.0.27:9100/metrics
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# 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"} 6.5372e-05
go_gc_duration_seconds{quantile="0.25"} 0.000410616
go_gc_duration_seconds{quantile="0.5"} 0.000902703
go_gc_duration_seconds{quantile="0.75"} 0.001459438
go_gc_duration_seconds{quantile="1"} 0.004279611
go_gc_duration_seconds_sum 0.026588379
go_gc_duration_seconds_count 26
# 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="go1.17.3"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 3.981152e+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 5.9721424e+07
# 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 1.460647e+06
# HELP go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 463145
# HELP go_memstats_gc_cpu_fraction The fraction of this program's available CPU time used by the GC since the program started.
# TYPE go_memstats_gc_cpu_fraction gauge
go_memstats_gc_cpu_fraction 0.00014828549269027677
# 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 5.250536e+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 3.981152e+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 2.793472e+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 5.20192e+06
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 22484
# HELP go_memstats_heap_released_bytes Number of heap bytes released to OS.
# TYPE go_memstats_heap_released_bytes gauge
```