

# Sesión 4 : swarm (ELK+TIG)

## resumen

```
docker ps
docker ps -f name=ep_devops_mysql.1
docker ps -f name=ep_devops_mysql.1 -q
docker exec -ti $(docker ps -f name=ep_devops_mysql.1 -q ) /bin/bash
docker logs $(docker ps -f name=ep_devops_mysql.1 -q )
docker logs -f $(docker ps -f name=ep_devops_mysql.1 -q )
```

/via: <https://lpic-devops.pad.floss.cat/p/docker-troubleshooting>

## TIG (Telegraf+Influxdb+Grafana)

- crear base de datos en influxdb: `curl -i -XPOST http://localhost:8086/query -data-urlencode «q=CREATE DATABASE telegraf`
- borrar base de datos: `curl -i -XPOST http://localhost:8086/query -data-urlencode «q=DROP DATABASE telegraf`
- retencion\_policy a XX días para que purge los días y no se limite a X entradas
- importar dashboards: <https://grafana.com/dashboards>

## Grafana

- dashboards:
  - visión cluster
  - visión stack y servicios
  - contenedores
- paneles: exportar JSON
- plugin: Diagram (pinta un servicio y estados según valores de métrica)

## edición panel

- los elementos que se meten en 1 row se pueden repetir, en función de las variables
- ```
$host = show tag values with key = "host"
$stack = show tag values with key = "com.docker.stack.namespace"
$service = show tag values with key = "com.docker.swarm.service.name" WHERE
"com.docker.stack.namespace" =~ /^$stack/
$container = show tag values with key = "container_name" WHERE "host" =~
/^$host$/ AND "com.docker.stack.namespace" =~ /^$stack/ AND
"com.docker.swarm.service.name" =~ /^$service/
```

## prometheus

- = Grafana + Alertas (aunque Grafana ahora ya si)
- node exporter : telegraf

- prometheus: base datos + alertas
  - <https://stefanprodan.com/2016/a-monitoring-solution-for-docker-hosts-containers-and-containerized-services/>

## ELK

swarm-ELK.yml

```
#      Docker Stack to deploy ELK + Logspout
#      Based on .....
#      Updated by: Kenneth Peiruza, kenneth@floss.cat
#      Sun Mar  4 13:15:47 CET 2018
#
#      cluster.name: 'docker-cluster'
#      bootstrap.memory_lock: 'true'
version: '3.4'

services:
  elasticsearch:
    image: docker.elastic.co/elasticsearch/elasticsearch-oss:6.2.2
    environment:
      ES_JAVA_OPTS: '-Xms768m -Xmx768m'
    networks:
      - elasticsearch
    volumes:
      -
${REMOTE_BIND}/${STACK_NAME}/elasticsearch/data:/usr/share/elasticsearch/data
    deploy:
      replicas: 1

  logstash:
    image: docker.elastic.co/logstash/logstash-oss:6.2.2
    volumes:
      -
${REMOTE_BIND}/${STACK_NAME}/logstash/config:/usr/share/logstash/pipeline/
    depends_on:
      - elasticsearch
    networks:
      - elasticsearch
      - logstash
    deploy:
      replicas: 1

  logspout:
    image: bekt/logspout-logstash
    environment:
      ROUTE_URI: 'logstash://logstash:5000'
    volumes:
      - /var/run/docker.sock:/var/run/docker.sock
    depends_on:
      - logstash
    networks:
      - logstash
    deploy:
```

```

    mode: global
    restart_policy:
      condition: on-failure
      delay: 30s

    kibana:
      image: docker.elastic.co/kibana/kibana-oss:6.2.2
      ports:
        - 5601:5601
      depends_on:
        - elasticsearch
      networks:
        - elasticsearch
        - proxy
      environment:
        ELASTICSEARCH_URL: 'http://elasticsearch:9200'
      deploy:
        replicas: 1
        labels:
          traefik.port: 5601
          traefik.frontend.rule: "Host:${LOGS_URL}"
          traefik.docker.network: "proxy"

    networks:
      default:
        driver: 'overlay'
      logstash:
        driver: 'overlay'
      elasticsearch:
        driver: 'overlay'
      proxy:
        external: true

```

#### logstash.conf

```

input {
  udp {
    port => 5000
    codec => json
  }
}

filter {
  if [docker][image] =~ /logstash/ {
    drop { }
  }
}

output {
  elasticsearch { hosts => ["elasticsearch:9200"] }
}

```

+ info:

- Filtros Logstash: <https://www.elastic.co/guide/en/logstash/current/config-examples.html>
- Filtros grok: <https://logz.io/blog/logstash-grok/>

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