

sesión 13

Container Orchestration Rosetta Stone

	unidad mínima	Gestor de disponibilidad controllers	expose services	webservices exterior
Swarm	contenedor	Docker Service		
K8S	pod	Replication Controller ReplicaSet DaemonSet StatefulSet	HostPort LoadBalancer	LoadBalancer Ingress

- controllers
 - Deployments = POD + ReplicaSet
 - Jobs = 1 sola ejecución
 - CronJob
- services
 - hostport : exponer en el host a través de un puerto
 - clusterIP : uso interno del cluster
 - loadbalancer :
 - externalname : definimos el mismo nombre en el servicio en diferentes namespaces, ex: oracle (dev/pre/pro)
- webservices (acceso exterior):
 - Loadbalancer
 - ingress : trabaja en kube-system, pero expone de cualquier namespace (podría usarse para hacer hablar PODs de diferentes namespaces)
 - nginx+ssl, traefik

lab

levantar docker swarm cluster, desplegar Portainer y ELK

[portainer.yaml](#)

```
version: '3.4'

services:
  portainer:
    image: portainer/portainer
    command: '-H "tcp://tasks.agent:9001" --tlsskipverify'
    ports:
      - ${PUBLIC_PORT}:9000
    networks:
      - proxy
      - portainer_agent
    volumes:
      - /var/run/docker.sock:/var/run/docker.sock
      - ${REMOTE_MOUNT}/${STACK_NAME}/portainer/data:/data
    deploy:
      mode: replicated
      replicas: 1
      labels:
```

```
    traefik.port: 9000
    traefik.frontend.rule: "Host:${FQDN}"
    traefik.docker.network: 'proxy'
  placement:
    constraints: [node.role == manager]
agent:
  image: portainer/agent
  environment:
    AGENT_CLUSTER_ADDR: tasks.agent
  volumes:
    - /var/run/docker.sock:/var/run/docker.sock
  ports:
    - target: 9001
      published: 9001
      protocol: tcp
      mode: host
  networks:
    - portainer_agent
  deploy:
    mode: global
    placement:
      constraints: [node.platform.os == linux]

networks:
  portainer_agent:
    external: true
  proxy:
    external: true
```

elk.yaml

```
# 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'
      LOGSPOUT: 'ignore'
    networks:
      - elasticsearch
    volumes:
      -
/srv/docker/stack/Cluster3/elasticsearch/data:/usr/share/elasticsearch/data
  deploy:
```

```
  replicas: 1

logstash:
  image: docker.elastic.co/logstash/logstash-oss:6.2.2
  volumes:
  -
/srv/docker/stack/Cluster3/logstash/config:/usr/share/logstash/pipeline
  depends_on:
  - elasticsearch
  networks:
  - elasticsearch
  - logstash
  environment:
  LOGSPOUT: 'ignore'
  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
  environment:
  LOGSPOUT: 'ignore'
  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'
  LOGSPOUT: 'ignore'
  deploy:
  replicas: 1
  labels:
  traefik.port: 5601
  traefik.frontend.rule: "Host:logs.local"
  traefik.docker.network: "proxy"

networks:
  default:
```

```
driver: 'overlay'  
logstash:  
  driver: 'overlay'  
elasticsearch:  
  driver: 'overlay'  
proxy:  
  external: true
```

var

```
REMOTE_BIND=/srv/docker/stack  
STACK_NAME=Cluster3  
LOGS_URL=logs.local
```

logstash.conf

```
input {  
  udp {  
    port => 5000  
    codec => json  
  }  
}  
  
filter {  
  if [docker][image] =~ /logstash/ {  
    drop { }  
  }  
}  
  
output {  
  elasticsearch { hosts => ["elasticsearch:9200"] }  
}
```

<https://logz.io/blog/logstash-grok/>

otros

- whitedisplay.com
- grok debugger
- vim
 - borrar líneas de comentarios y vacías:
 - junto: % g/^\(#\|\$\)/d
 - comentarios: % g/^\#/d
 - líneas vacías: % g/^\\$/d

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