

Solución Taller 2:

Se crea un docker compose con las redes, volúmenes y ambientes de Frontend, Backend, Base de datos y un proxy reverso/balanceador usando traefik. El archivo se encuentra en taller2/docker-compose.yml

```
xander@pcxander:~/Documentos/microservicios/taller2$ docker-compose up -d
WARNING: Some services (backend) use the 'deploy' key, which will be ignored. Compose does not support 'deploy' configuration - use `docker stack
loy to a swarm.
Creating network "taller2_net_primary" with the default driver
Creating network "taller2_net_secondary" with the default driver
Creating taller2_proxy_1 ... done
Creating taller2_database_1 ... done
Creating taller2_backend_1 ... done
Creating taller2_frontend_1 ... done
```

Se revisa la configuración de los servicios administrados por traefik. En este momento solo se cuenta con una instancia de cada ambiente expuesto (Frontend y Backend)

localhost:8080/dashboard/

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docker

4 FRONTENDS

front-end-host-api-backend-localhost-1

Main Details

Route Rule

Host: api-backend.localhost

Entry Points [http](#) [https](#)

Backend [backend-api-backend](#)

front-end-host-app-frontend-localhost-0

Main Details

Route Rule

Host: app-frontend.localhost

Entry Points [http](#) [https](#)

Backend [backend-app-frontend](#)

front-end-host-eloquent-zhukovsky-localhost-3

Main Details

Route Rule

Host: eloquent-zhukovsky.localhost

Entry Points [http](#) [https](#)

Backend [backend-eloquent-zhukovsky](#)

front-end-host-proxy-taller2-localhost-2

Main Details

Route Rule

Host: proxy-taller2.localhost

4 BACKENDS

backend-api-backend

Main Details

Server	Weight
http://172.19.0.3:8080	1

backend-app-frontend

Main Details

Server	Weight
http://172.19.0.4:9090	1

backend-eloquent-zhukovsky

Main Details

Server	Weight
http://172.17.0.2:9000	1

backend-proxy-taller2

Main Details

Server	Weight
http://172.18.0.2:80	1

Se revisa que la aplicación front esté desplegando y se pueda ver usando la url balanceada.

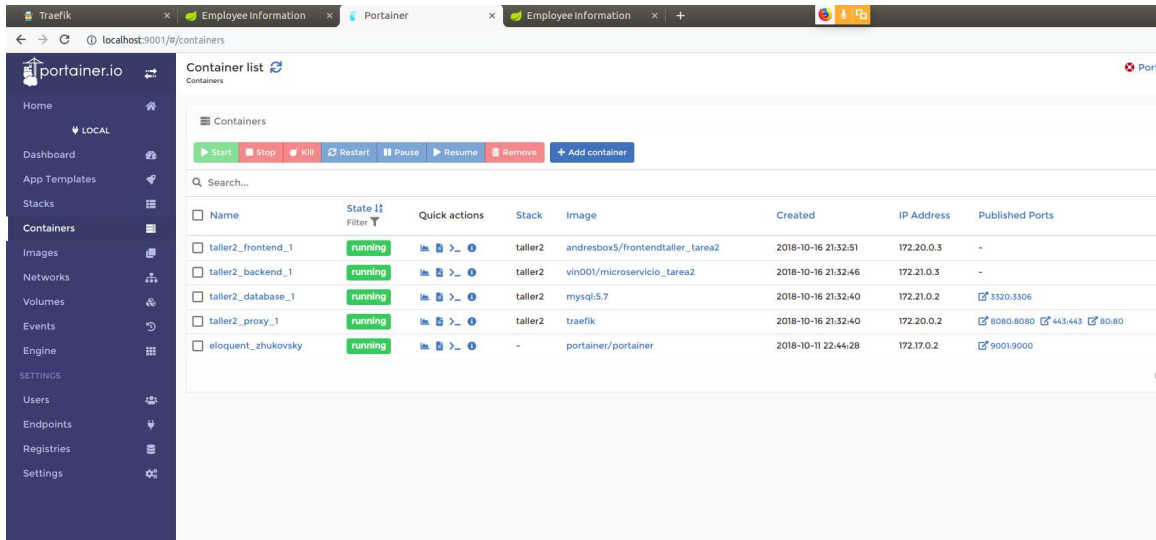
Product Information

Name	<input type="text"/>
Price	<input type="text"/>
<input type="button" value="Create Product"/>	

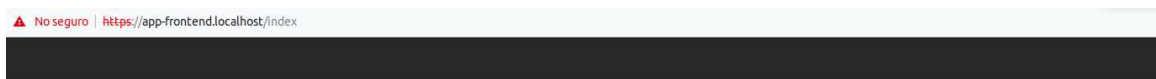
List of products

Id	Name	Price
1	Frijol	2000
2	Limon	6000
3	Mango	4000
4	Sandia	1000
5	Papaya	2222
6	Toronja	5555
7	Zanahoria	3333
8	Zanahoria	3333
9	Zanahoria	3333
10	Zanahoria	3333
11	Zanahoria	3333
12	Zanahoria	3333
13	Zanahoria	3333
14	Zanahoria	3333
15	Zanahoria	3333

Usamos una aplicación que permite ver en UI lo que tiene Docker. En este caso estamos viendo la lista de los contenedores. Esta aplicación se consigue en el siguiente link: <https://hub.docker.com/r/portainer/portainer/>



Revisamos que se tenga acceso por el puerto seguro usando el protocolo HTTPS. Por ser un certificado autofirmado el navegador lo muestra como inseguro, pero esto solo aplica para la validación del certificado, la conexión usa exitosamente el protocolo seguro.



Product Information

Name	<input type="text"/>
Price	<input type="text"/>
<input type="button" value="Create Product"/>	

List of products

Id	Name	Price
1	Frijol	2000
2	Limon	6000
3	Mango	4000
4	Sandia	1000
5	Papaya	2222
6	Toronja	5555

localhost:8080/dashboard/

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Filter by name or id ...

docker

3 FRONTENDS

frontend-Host-app-frontend-localhost-0

Main Details

Route Rule

Host:app-frontend.localhost

Entry Points http https

Backend backend-app-frontend

frontend-Host-eloquent-zhukovsky-localhost-2

Main Details

Route Rule

Host:eloquent-zhukovsky.localhost

Entry Points http https

Backend backend-eloquent-zhukovsky

frontend-Host-proxy-taller2-localhost-1

Main Details

Route Rule

Host:proxy.taller2.localhost

Entry Points http https

Backend backend-proxy-taller2

3 BACKENDS

backend-app-frontend

Main Details

Server	Weight
http://172.23.0.4:9090	1

backend-eloquent-zhukovsky

Main Details

Server	Weight
http://172.17.0.2:9000	1

backend-proxy-taller2

Main Details

Server	Weight
http://172.22.0.2:80	1

Escalamos los ambientes de frontend y backend aumentando sus servicios.

```
xander@pcxander:~/Documentos/microservicios/taller2$ docker-compose scale backend=2
WARNING: Some services (backend) use the 'deploy' key, which will be ignored. Compose does not support 'deploy' configuration - use 'docker stack
py to a swarm.
WARNING: The scale command is deprecated. Use the up command with the --scale flag instead.
Starting taller2 backend 1 ... done
Creating taller2 backend 2 ... done
xander@pcxander:~/Documentos/microservicios/taller2$ docker-compose scale frontend=3
WARNING: Some services (backend) use the 'deploy' key, which will be ignored. Compose does not support 'deploy' configuration - use 'docker stack
py to a swarm.
WARNING: The scale command is deprecated. Use the up command with the --scale flag instead.
Starting taller2 frontend 1 ... done
Creating taller2 frontend 2 ... done
Creating taller2 frontend 3 ... done
```

localhost:8080/dashboard/

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Filter by name or id ...

docker

4 FRONTENDS

front-end-host-api-backend-localhost-2

Main

Details

Route Rule

Host: api-backend.localhost

Entry Points

http https

Backend

backend-api-backend

front-end-host-app-frontend-localhost-0

Main

Details

Route Rule

Host: app-frontend.localhost

Entry Points

http https

Backend

backend-app-frontend

front-end-host-eloquent-zhukovsky-localhost-6

Main

Details

Route Rule

Host: eloquent-zhukovsky.localhost

Entry Points

http https

Backend

backend-eloquent-zhukovsky

front-end-host-proxy-taller2-localhost-5

Main

Details

4 BACKENDS

backend-api-backend

Main

Details

Server

Weight

http://172.29.0.3:8080 1

http://172.29.0.5:8080 1

backend-app-frontend

Main

Details

Server

Weight

http://172.28.0.3:9090 1

http://172.28.0.4:9090 1

http://172.28.0.5:9090 1

backend-eloquent-zhukovsky

Main

Details

Server

Weight

http://172.17.0.2:9000 1

backend-proxy-taller2

Main

Details

Server

Weight

http://172.28.0.2:80 1

localhost:9001/#/containers

portainer.io

Container list

Containers

Start Stop Kill Restart Pause Resume Remove + Add container

Search...

Name	State	Quick actions	Stack	Image	Created	IP Address	Published Ports
taller2_frontend_3	running	Stop Kill Restart Pause Resume Remove	taller2	andresbox5/frontendtaller_tarea2	2018-10-16 21:51:02	172.28.0.5	-
taller2_frontend_2	running	Stop Kill Restart Pause Resume Remove	taller2	andresbox5/frontendtaller_tarea2	2018-10-16 21:51:02	172.28.0.4	-
taller2_backend_2	running	Stop Kill Restart Pause Resume Remove	taller2	vin001/microservicio_tarea2	2018-10-16 21:50:54	172.29.0.5	-
taller2_frontend_1	running	Stop Kill Restart Pause Resume Remove	taller2	andresbox5/frontendtaller_tarea2	2018-10-16 21:49:13	172.28.0.3	-
taller2_backend_1	running	Stop Kill Restart Pause Resume Remove	taller2	vin001/microservicio_tarea2	2018-10-16 21:49:08	172.29.0.3	-
taller2_database_1	running	Stop Kill Restart Pause Resume Remove	taller2	mysql:5.7	2018-10-16 21:49:01	172.29.0.2	3320:3306
taller2_proxy_1	running	Stop Kill Restart Pause Resume Remove	taller2	traefik	2018-10-16 21:49:01	172.28.0.2	443:443 80:80 8080:8080
eloquent_zhukovsky	running	Stop Kill Restart Pause Resume Remove	-	portainer/portainer	2018-10-11 22:44:28	172.17.0.2	9001:9000

Agregamos al docker compose los servicios de ELK.

```
xander@pcxander: ~/Documentos/micros
Archivo Editar Ver Buscar Terminal Ayuda
xander@pcxander:~/Documentos/microservicios/taller2/docker-elk$ docker-compose up -d
ERROR: In file './docker-compose.yml', network 'net ter elk' must be a mapping not an array.
xander@pcxander:~/Documentos/microservicios/taller2/docker-elk$ docker-compose up -d
Creating network "docker-elk_net_primary" with the default driver
Creating network "docker-elk_net_secondary" with the default driver
Creating docker-elk_elasticsearch_1 ... done
Creating docker-elk_logstash_1 ... done
Creating docker-elk_kibana_1 ... done
xander@pcxander:~/Documentos/microservicios/taller2/docker-elk$
```

```
xander@pcxander:~/Documentos/microservicios/taller2$ docker-compose up -d
WARNING: Some services (backend) use the 'deploy' key, which will be ignored. Compose does not support 'deploy' configuration - use 'docker stack
by to a swarm.
Building elasticsearch
Step 1/2 : ARG ELK_VERSION
Step 2/2 : FROM docker.elastic.co/elasticsearch/elasticsearch-oss:${ELK_VERSION}
--> a13ec2fa6275
Successfully built a13ec2fa6275
Successfully tagged taller2_elasticsearch:latest
WARNING: Image for service elasticsearch was built because it did not already exist. To rebuild this image you must use 'docker-compose build' or 'dock
up --build'.
Building logstash
Step 1/2 : ARG ELK_VERSION
Step 2/2 : FROM docker.elastic.co/logstash/logstash-oss:${ELK_VERSION}
--> 15e297c65be6
Successfully built 15e297c65be6
Successfully tagged taller2_logstash:latest
WARNING: Image for service logstash was built because it did not already exist. To rebuild this image you must use 'docker-compose build' or 'dock
--build'.
Building kibana
Step 1/2 : ARG ELK_VERSION
Step 2/2 : FROM docker.elastic.co/kibana/kibana-oss:${ELK_VERSION}
--> c8986fcd3caa
Successfully built c8986fcd3caa
Successfully tagged taller2_kibana:latest
WARNING: Image for service kibana was built because it did not already exist. To rebuild this image you must use 'docker-compose build' or 'dock
uild'.
Creating taller2_proxy_1 ... done
Creating taller2_database_1 ... done
Creating taller2_elasticsearch_1 ... done
Creating taller2_backend_1 ... done
Creating taller2_kibana_1 ... done
Creating taller2_logstash_1 ... done
Creating taller2_frontend_1 ... done
xander@pcxander:~/Documentos/microservicios/taller2$
```

← → ↺

localhost:9001/#/containers

portainer.io

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App Templates

Stacks

Containers

Images

Networks

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SETTINGS

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Container list

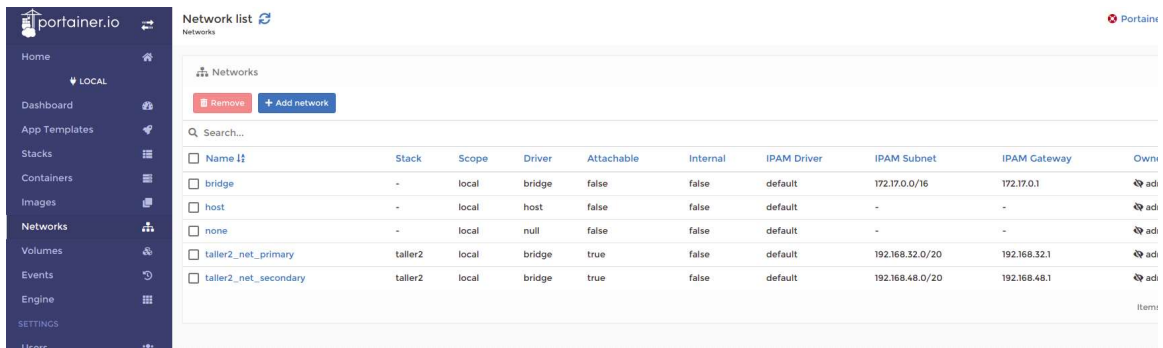
Containers

Containers

Start Stop Kill Restart Pause Resume Remove Add container

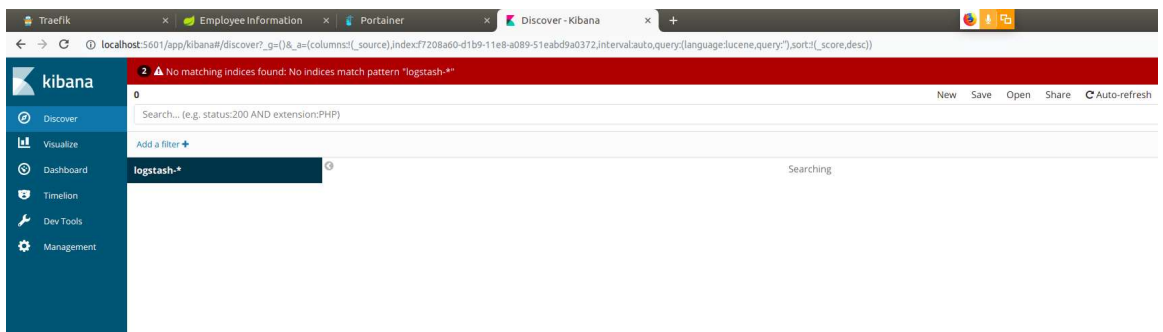
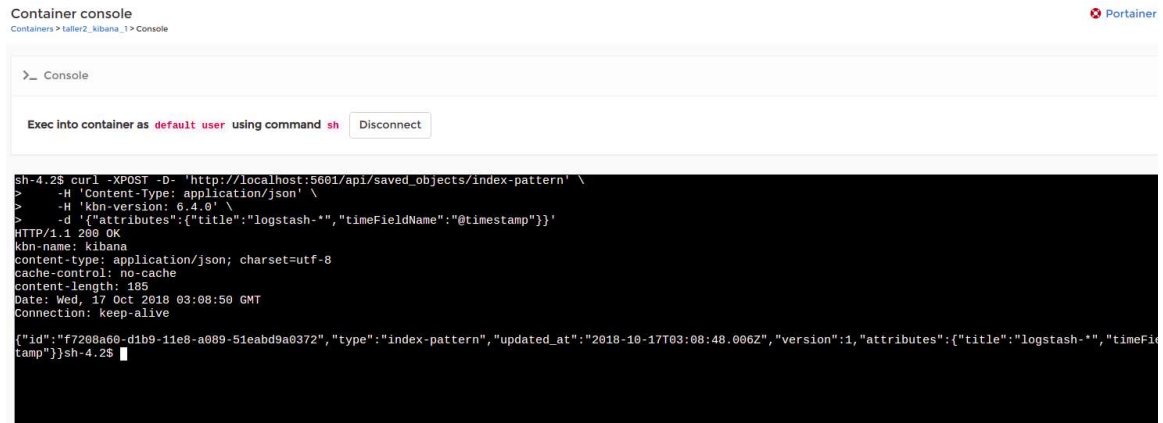
Search...

Name	State	Quick actions	Stack	Image	Created	IP Address	Published Ports
taller2_frontend_1	running	🔍 ⏏ ⏮ ⏭	taller2	andresbox5/frontendtaller_tarea2	2018-10-16 22:05:31	192.168.32.6	-
taller2_kibana_1	running	🔍 ⏏ ⏮ ⏭	taller2	taller2_kibana	2018-10-16 22:05:29	192.168.32.4	5601:5601
taller2_logstash_1	running	🔍 ⏏ ⏮ ⏭	taller2	taller2_logstash	2018-10-16 22:05:29	192.168.32.5	5000:5000 9600:9600
taller2_backend_1	running	🔍 ⏏ ⏮ ⏭	taller2	vin001/microservicio_tarea2	2018-10-16 22:05:24	192.168.48.4	-
taller2_database_1	running	🔍 ⏏ ⏮ ⏭	taller2	mysql:5.7	2018-10-16 22:05:18	192.168.48.2	3302:3306
taller2_elasticsearch_1	running	🔍 ⏏ ⏮ ⏭	taller2	taller2_elasticsearch	2018-10-16 22:05:18	192.168.32.3	9300:9300 9200:9200
taller2_proxy_1	running	🔍 ⏏ ⏮ ⏭	taller2	traefik	2018-10-16 22:05:18	192.168.32.2	443:443 80:80 8080:8080
eloquent_zhukovsky	running	🔍 ⏏ ⏮ ⏭	-	portainer/portainer	2018-10-11 22:44:28	172.17.0.2	9001:9000



Usando la consola del aplicativo container, lanzamos una prueba de log.

****Aún no logramos configurar correctamente el tema de ELK pero ya podemos ver los servicios atentos.**



← → ↻ localhost:5601/app/kibana#/management/kibana/indices/f7208a60-d1b9-11e8-a089-51eabd9a0372?_g=()&_a=(tabindexedFields)

2 ⚠ No matching indices found: No indices match pattern "logstash-*"

Management / Kibana

Index Patterns Saved Objects Advanced Settings

[+ Create Index Pattern](#)

★ logstash-*

Time Filter field name: @timestamp

This page lists every field in the **logstash-*** index and the field's associated core type as recorded by Elasticsearch. To change a field type, use the Elasticsearch [Mapping API](#) ⁶

Fields (0)

Scripted fields (0)

Source filters (0)

Q Filter

Name	Type	Format	Searchable	Aggregatable
No items found				

Rows per page: 10 ▾

← → ↻ localhost:5601/app/kibana#/discover?_g=()&_a=(columns:(source),index:e4190f90-d1ba-11e8-a089-51eabd9a0372,interval:auto,query:(language:luce,query:""),sort:(f_score,desc))

2 ⚠ No matching indices found: No indices match pattern "logstash-*"

4 hits

[Add a filter](#)

kibana

Selected fields: 7 **_source**

Available fields:

- t _id
- t _index
- # _score
- t _type
- t config.buildNum
- t config.defaultIndex
- t index-pattern.fields
- t index-pattern.timeFieldName
- t index-pattern.title
- t type
- updated_at

October 16th 2018, 22:00:40.567 - October 16th 2018, 22:15:40.567 — **Auto**

updated_at per 30 seconds

Time	_source
October 16th 2018, 22:08:48.006	<pre>type: index-pattern updated_at: October 16th 2018, 22:08:48.006 index-pattern.title: logstash-* index-pattern.timeFieldName: @timestamp:f7208a60-d1b9-11e8-a089-51eabd9a0372 _type: doc _index: .kibana _score: 2</pre>
October 16th 2018, 22:10:22.417	<pre>type: config updated_at: October 16th 2018, 22:10:22.417 config.buildNum: 17929 config.defaultIndex: f7208a60-d1b9-11e8-a089-51eabd9a0372 _type: doc _index: .kibana _score: 2</pre>
October 16th 2018, 22:13:54.245	<pre>type: index-pattern updated_at: October 16th 2018, 22:13:54.245 index-pattern.title: logstash-* index-pattern.timeFieldName: @timestamp:ada8e750-d1ba-11e8-a089-51eabd9a0372 _type: doc _index: .kibana _score: 2</pre>
October 16th 2018, 22:15:26.858	<pre>type: index-pattern updated_at: October 16th 2018, 22:15:26.858 index-pattern.title: .kibana index-pattern.timeFieldName: update pattern.fields: [{"name":"_id","type":"string","count":0,"scripted":false,"searchable":true,"aggregatable":true,"readFromDocValues": x","type":"string","count":0,"scripted":false,"searchable":true,"aggregatable":true,"readFromDocValues":false},{"name":"_score","typ scripted":false,"searchable":false,"aggregatable":false,"readFromDocValues":false},{"name":"_source","type":"_source","count":0,"scri e":false,"aggregatable":false,"readFromDocValues":false},{"name":"_type","type":"string","count":0,"scripted":false,"searchable":tru</pre>