

## DESAFÍO 15 – Miriam Romitelli | HELM CHART & GITOPS

### HELM.

#### Creación:

```
mimi@mimi-Lenovo-V330-15IKB:~$ helm create helmchart15
WARNING: Kubernetes configuration file is group-readable. This is insecure. Location: /home/mimi/.kube/config
WARNING: Kubernetes configuration file is world-readable. This is insecure. Location: /home/mimi/.kube/config
Creating helmchart15
mimi@mimi-Lenovo-V330-15IKB:~$
```

```
mimi@mimi-Lenovo-V330-15IKB:~$ cd helmchart15/
mimi@mimi-Lenovo-V330-15IKB:~/helmchart15$ ls -l
total 16
drwxr-xr-x 2 mimi mimi 4096 jun  1 14:20 charts
-rw-r--r-- 1 mimi mimi 1147 jun  1 14:20 Chart.yaml
drwxr-xr-x 3 mimi mimi 4096 jun  1 14:20 templates
-rw-r--r-- 1 mimi mimi 2364 jun  1 14:20 values.yaml
```

*El archivo values.yaml = deployment.yaml (cambia nombre / mismo contenido)  
y en la carpeta templates se colocó el archivo my-app-config.yaml del desafío 14.*

#### Check de helmchart:

```
mimi@mimi-Lenovo-V330-15IKB:~/helmchart15$ helm lint
WARNING: Kubernetes configuration file is group-readable. This is insecure. Location: /home/mimi/.kube/config
WARNING: Kubernetes configuration file is world-readable. This is insecure. Location: /home/mimi/.kube/config
==> Linting .
[INFO] Chart.yaml: icon is recommended
1 chart(s) linted, 0 chart(s) failed
```

#### Creación del paquete HelmChart

```
mimi@mimi-Lenovo-V330-15IKB:~/helmchart15$ pwd
/home/mimi/helmchart15
mimi@mimi-Lenovo-V330-15IKB:~/helmchart15$ helm package /home/mimi/helmchart15
WARNING: Kubernetes configuration file is group-readable. This is insecure. Location: /home/mimi/.kube/config
WARNING: Kubernetes configuration file is world-readable. This is insecure. Location: /home/mimi/.kube/config
Successfully packaged chart and saved it to: /home/mimi/helmchart15/helmchart15-0.1.0.tgz
mimi@mimi-Lenovo-V330-15IKB:~/helmchart15$ ls -l
total 20
drwxr-xr-x 2 mimi mimi 4096 jun  1 14:20 charts
-rw-r--r-- 1 mimi mimi 1147 jun  1 14:20 Chart.yaml
-rw-rw-r-- 1 mimi mimi 1071 jun  1 14:37 helmchart15-0.1.0.tgz
drwxr-xr-x 3 mimi mimi 4096 jun  1 14:33 templates
-rw-r--r-- 1 root root 1733 jun  1 14:25 values.yaml
```

### ARGO:

#### Correr:

\$microk8s kubectl apply -n argocd -f

<https://raw.githubusercontent.com/argoproj/argo-cd/stable/manifests/install.yaml>

```
mimi@mimi-Lenovo-V330-15IKB:~$ microk8s kubectl get namespace
NAME          STATUS    AGE
argocd        Active    19d
```

```
mini@mimi-Lenovo-V330-15IK8:~$ microk8s kubectl get all -n argocd
```

NAME	READY	STATUS	RESTARTS	AGE
pod/argocd-application-controller-0	1/1	Running	0	60s
pod/argocd-applicationset-controller-7dc76d94b4-fsxxh	1/1	Running	0	62s
pod/argocd-dex-server-85f7d69f5f-kd6df	1/1	Running	0	62s
pod/argocd-notifications-controller-7ffccbf884-r5497	1/1	Running	0	61s
pod/argocd-redis-8564565c6b-ht46l	1/1	Running	0	62s
pod/argocd-repo-server-b9c7b5f85-jc9gl	1/1	Running	0	62s
pod/argocd-server-6587989799-6q6zv	1/1	Running	0	62s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/argocd-applicationset-controller	ClusterIP	10.152.183.125	<none>	7000/TCP,8080/TCP	19d
service/argocd-dex-server	ClusterIP	10.152.183.19	<none>	5556/TCP,5557/TCP,5558/TCP	19d
service/argocd-metrics	ClusterIP	10.152.183.74	<none>	8082/TCP	19d
service/argocd-notifications-controller-metrics	ClusterIP	10.152.183.129	<none>	9001/TCP	19d
service/argocd-redis	ClusterIP	10.152.183.45	<none>	6379/TCP	19d
service/argocd-repo-server	ClusterIP	10.152.183.109	<none>	8081/TCP,8084/TCP	19d
service/argocd-server	ClusterIP	10.152.183.212	<none>	80/TCP,443/TCP	19d
service/argocd-server-metrics	ClusterIP	10.152.183.216	<none>	8083/TCP	19d

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/argocd-applicationset-controller	1/1	1	1	19d
deployment.apps/argocd-dex-server	1/1	1	1	19d
deployment.apps/argocd-notifications-controller	1/1	1	1	19d
deployment.apps/argocd-redis	1/1	1	1	19d
deployment.apps/argocd-repo-server	1/1	1	1	19d
deployment.apps/argocd-server	1/1	1	1	19d

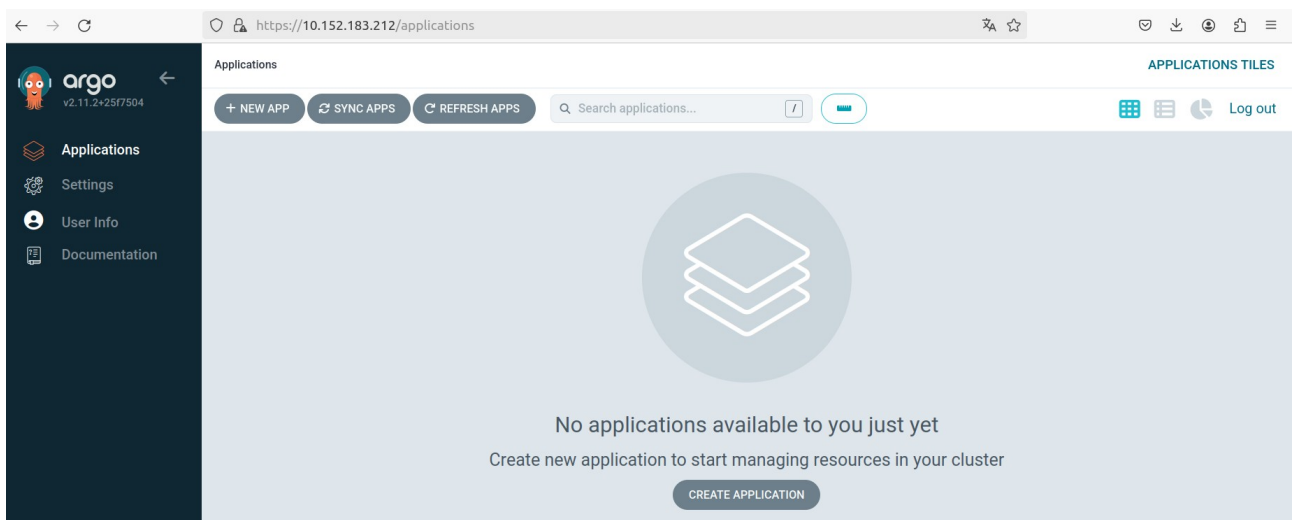
  

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/argocd-applicationset-controller-76874d846	0	0	0	19d
replicaset.apps/argocd-applicationset-controller-7dc76d94b4	1	1	1	62s
replicaset.apps/argocd-dex-server-7c44d486f7	0	0	0	19d
replicaset.apps/argocd-dex-server-85f7d69f5f	1	1	1	62s
replicaset.apps/argocd-notifications-controller-76d994668b	0	0	0	19d
replicaset.apps/argocd-notifications-controller-7ffccbf884	1	1	1	61s
replicaset.apps/argocd-redis-76748db5f4	0	0	0	19d
replicaset.apps/argocd-redis-8564565c6b	1	1	1	62s
replicaset.apps/argocd-repo-server-6c6658cc78	0	0	0	19d
replicaset.apps/argocd-repo-server-b9c7b5f85	1	1	1	62s
replicaset.apps/argocd-server-6587989799	1	1	1	62s
replicaset.apps/argocd-server-7459fd9f48	0	0	0	19d

NAME	READY	AGE
statefulset.apps/argocd-application-controller	1/1	19d

Se toma la IP del argocd-server para abrir en el navegador:



Creación de una APPS OF APPS, que apunte a la aplicación convertida en un Helm chart; con la siguiente configuración:

- Self healing, habilitado
- Autosync, habilitado.



Logueo aplicación cli Argo:



```
mimi@mimi-Lenovo-V330-15IK8:~/helmchart1$ argocd login 10.152.183.212
WARNING: server certificate had error: tls: failed to verify certificate: x509: cannot validate certificate for 10.152.183.212 because it doesn't contain any IP SANs.
Proceed insecurely (y/n)? y
Username: admin
Password:
'admin:login' logged in successfully
Context '10.152.183.212' updated
```




Creacion de la aplicación apps of apps desde argo cli

argocd app create demo-app --repo <https://github.com/mromitelli/Desafio15.git> --path . --dest-server <https://kubernetes.default.svc> --dest-namespace default

```
mimi@mimi-Lenovo-V330-15IK8:~/helmchart1$ argocd app create demo-app --repo https://github.com/mromitelli/Desafio15.git --path . --dest-server https://kubernetes.default.svc --dest-namespace default
application 'demo-app' created
```

 **demo-app** 

Project:	default
Labels:	
Status:	 Healthy  Synced
Reposit...	<a href="https://github.com/mromitelli/Desafio15.git">https://github.com/mromitelli/Desafio...</a>
Target R...	HEAD
Path:	.
Destinat...	in-cluster
Namesp...	default
Created ...	06/01/2024 17:50:00 (2 minutes ago)
Last Sy...	06/01/2024 17:50:31 (a minute ago)

 SYNC  REFRESH  DELETE

DETAILS

DIFF

SYNC

SYNC STATUS

HISTORY AND ROLLBACK

DELETE

REFRESH

Log out

APP HEALTH

Healthy

SYNC STATUS

Synced to HEAD (bf08ded)

Auto sync is not enabled.

Author: mromitelli <141377861+mromitelli@users.noreply.git...>

Comment: Create deployment.yaml

LAST SYNC

Sync OK to bf08ded

Succeeded a minute ago (Sat Jun 01 2024 17:50:31 GMT-0300)

Author: mromitelli <141377861+mromitelli@users.noreply.git...>

Comment: Create deployment.yaml

demo-app

check

my-app-config

web-service

web-deployment

web-service

web-service-tsx7m

web-deployment-79784765c

web-deployment-79784765c-...

web-deployment-79784765c-...

web-deployment-79784765c-...

Comprobación en consola:

```
mimi@mimi-Lenovo-V330-15IKB:~/helmchart15$ microk8s kubectl get all
NAME                                     READY   STATUS    RESTARTS   AGE
pod/web-deployment-79784765c-bgkv2      1/1     Running   0           2m6s
pod/web-deployment-79784765c-hfbqx      1/1     Running   0           2m6s
pod/web-deployment-79784765c-l42lx      1/1     Running   0           2m6s

NAME                                TYPE          CLUSTER-IP      EXTERNAL-IP   PORT(S)          AGE
service/kubernetes                  ClusterIP      10.152.183.1    <none>        443/TCP          20d
service/web-service                 NodePort       10.152.183.40   <none>        8083:30000/TCP   2m6s

NAME                                READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/web-deployment       3/3     3             3           2m6s

NAME                                DESIRED   CURRENT   READY   AGE
replicaset.apps/web-deployment-79784765c 3         3         3       2m6s
```

Crear una APPS OF APPS, que apunte a los archivos de manifiesto normales (sin Helm); con la siguiente configuración:

- Self healing, deshabilitado.
- Autosync, manual.

Creación; estado previo a sync manual:

sinhelm

Project: default

Labels:

Status: Missing OutOfSync

Reposit... https://github.com/mromitelli/Desafio...

Target R... HEAD

Path: .

Destinat... in-cluster

Namesp... default

Created ... 06/01/2024 17:59:33 (a few seconds ...)

SYNC

REFRESH

DELETE

Después de aplicar la sync:

https://10.152.183.212/applications/argocd/sinhelm?view=tree&resource=

Applications / Q sinhelm APPLICATION DETAILS TREE

DETAILS DIFF SYNC SYNC STATUS HISTORY AND ROLLBACK DELETE REFRESH

APP HEALTH **Healthy**

SYNC STATUS **Synced to HEAD (8bb0962)**

LAST SYNC **Sync OK to 8bb0962**

Auto sync is not enabled.  
Author: mromitelli <141377861+mromitelli@users.noreply.git...  
Comment: Add files via upload

Succeeded a few seconds ago (Sat Jun 01 2024 18:00:37 GMT-0300)  
Author: mromitelli <141377861+mromitelli@users.noreply.git...  
Comment: Add files via upload

The diagram shows the 'sinhelm' application tree. It includes components like 'check', 'my-app-config', 'web-service', 'web-deployment', 'web-service-gdmq4', and 'web-deployment-79784765c'. Each component has a sync status and a refresh icon. The 'web-deployment' component is highlighted with a red box.

Comprobación en consola:

```
mimi@mimi-Lenovo-V330-15IK8:~/helmchart15$ microk8s kubectl get all
NAME                                READY    STATUS    RESTARTS   AGE
pod/web-deployment-79784765c-jdbfb  1/1      Running   0           2m15s
pod/web-deployment-79784765c-lpx7j  1/1      Running   0           2m15s
pod/web-deployment-79784765c-x2qsm  1/1      Running   0           2m15s

NAME                                TYPE          CLUSTER-IP    EXTERNAL-IP  PORT(S)          AGE
service/kubernetes                  ClusterIP      10.152.183.1  <none>       443/TCP          20d
service/web-service                  NodePort       10.152.183.61 <none>       8083:30000/TCP   2m15s

NAME                                READY    UP-TO-DATE  AVAILABLE   AGE
deployment.apps/web-deployment      3/3      3            3           2m15s

NAME                                DESIRED    CURRENT    READY    AGE
replicaset.apps/web-deployment-79784765c  3          3          3       2m15s
mimi@mimi-Lenovo-V330-15IK8:~/helmchart15$
```

Repositorio Github: <https://github.com/mromitelli/Desafio15>