ExportYaml

Friday, January 7, 2022 12:30 PM

kubectl export yaml OR How to generate YAML for deployed kubernetes resources

1. This is my Kubernetes cluster setup -

1. I have already setup my Kubernetes cluster with 1 master and 2 Worker nodes alongwith one `helloworld` deployment.
2. **Deployment** : `deployment.apps/hellworldexample-helloworld`
3. **Service** : `service/hellworldexample-helloworld`

Here are complete details of my current cluster

BASH

```
kubectl get all
```

BASH

```
NAME                                            READY   STATUS    RESTARTS   AGE
pod/myreleasename-helloworld-7c4dd5588-wc6js    1/1     Running   1          8d

NAME                                TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)   AGE
service/kubernetes                  ClusterIP   10.233.0.1     <none>        443/TCP   13d
service/myreleasename-helloworld    ClusterIP   10.233.58.70   <none>        80/TCP    8d

NAME                                        READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/myreleasename-helloworld    1/1     1            1           8d

NAME                                                  DESIRED   CURRENT   READY   AGE
replicaset.apps/myreleasename-helloworld-7c4dd5588    1         1         1       8d
```

2. Let's generate the YAML for the "service"

Use the following `kubectl` command to get the YAML of service running with the name of `myrelease name-helloworld` inside your kubernetes cluster.

```bash
kubectl get service hellworldexample-helloworld -n default -o yaml > service.yaml
```

Few points to notice -

1. The above `kubectl` command will generate the `YAML` and will save into `service.yaml`
2. Output of the `service.yaml` is long, so I thought of not mentioning it in the post
3. Please do substitute the `service-name` in the above command as per your need.

2.1 How to generate the YAML for all the service resources inside the kubernetes cluster

If you are looking to generate single YAML for all the service resources inside the Kubernetes cluster then you need to use the following `kubectl` command

```bash
kubectl get service --all-namespaces -o yaml  > all-service.yaml
```

Few points to notice -

1. The above `kubectl` command will generate the `YAML` and will save into `all-service.yaml`
2. Output of the `all-service.yaml` is really long, so I thought of not mentioning in the post

3. Let's generate the YAML for "deployment"

To get the YAML for the deployment is also pretty much the same as we have seen in the previous point for service.

Here is the command for generating the YAML for the deployment -

```bash
kubectl get deployment myreleasename-helloworld -n default -o yaml > deployment.yaml
```

Few points to notice -

1. The above `kubectl` command will generate the `YAML` and will save into `deployment.yaml`
2. Output of the `deployment.yaml` is long, so I thought of not mentioning it in the post
3. Please do substitute the `deployment-name` in the above command as per your need.

3.1 How to generate the YAML for all the deployed resources inside the kubernetes cluster

If you are looking to generate a single YAML for all the deployed resources inside the Kubernetes cluster then you need to use the following `kubectl` command

```bash
kubectl get deploy --all-namespaces -o yaml  > all-deployment.yaml
```

Few points to notice -

1. The above `kubectl` command will generate the `YAML` and will save into `all-deployment.yaml`
2. Output of the `all-deployment.yaml` is long, so I thought of not mentioning in the post

4. Bash/shell script way to generate the YAML files for a complete existing cluster

Now in the previous point 2 and point 3 we have seen how to generate the YAML of `service` and `deployment`.

But is there a way to generate all the YAML files for the complete existing Kubernetes cluster?

The answer is ***YES*** : - You can use the following shell script to achieve that -

1. Create a bash file for example `generate-yaml.sh` and save the following script into it -

```bash
for n in $(kubectl get -o=name pvc,configmap,serviceaccount,secret,ingress,service,deployment,statefulse
do
    mkdir -p $(dirname $n)
    kubectl get -o=yaml $n > $n.yaml
done
```

2. After saving the file use the following command to execute the `bash script`

```bash
. generate-yaml.sh
```

for n in $(kubectl get -o=name pvc,configmap,serviceaccount,secret,ingress,service,deployment,statefulset,hpa,job,cronjob)
do
  mkdir -p $(dirname $n)
  kubectl get -o=yaml $n > $n.yaml
done

Ref : https://jhooq.com/get-yaml-for-deployed-kubernetes-resources/