# OpenShift-Helm-Migration

During the migration from OpenShift templates to Helm charts you need to take care of some details. In the following a summary of our findings.

# Helm-Chart-Converter

The [ESTA-Helm-Chart-Converter](file:///C:\display\CLEW\OpenShift+Templates+to+Helm+Chart+Converter) is very useful for the heavy lifting but some details needs to be checked a/o modified by hand. The conversion in general is done like this:

» cd <path-to-project-to-migrate>/openshift

» <path-to-extracted-converter>/bin/esta-openshift-to-helm \

defaults/app.yaml \

<projektname> \

-dv defaults/config.list \

-sv <stage-1>=<stage-1>/config.list \

-sv <stage-2>=<stage-2>/config.list \

-sv <stage-n>=<stage-n>/config.list

So it might look like this:

 Quelle erweitern

» /mnt/c/devsbb/apps/esta-openshift-to-helm-0.2.4-SNAPSHOT/bin/esta-openshift-to-helm \

defaults/app.yaml \

playground \

-dv defaults/config.list \

-sv kihub-rt=kihub-rt/config.list \

-sv kihub-rt\_otc\_test\_07=kihub-rt\_otc\_test\_07/config.list \

-sv kihub-test=kihub-test/config.list \

-sv kihub-test\_otc\_test\_07=kihub-test\_otc\_test\_07/config.list \

-sv kihub-prod=kihub-prod/config.list \

-sv kihub-prod\_otc\_asterix=kihub-prod\_otc\_asterix/config.list

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Chart name: playground

default values: defaults/config.list

stage values: [kihub-rt=kihub-rt/config.list, kihub-rt\_otc\_test\_07=kihub-rt\_otc\_test\_07/config.list, kihub-test=kihub-test/config.list, kihub-test\_otc\_test\_07=kihub-test\_otc\_test\_07/config.list, kihub-prod=kihub-prod/config.list, kihub-prod\_otc\_asterix=kihub-prod\_otc\_asterix/config.list]

output directory: generated-charts

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Checking for properties file defaults/config.list

Not overriding value REPLICAS with current content 1 with new value 1 from defaults/config.list

Checking for properties file kihub-rt/config.list

Checking for properties file kihub-rt\_otc\_test\_07/config.list

Checking for properties file kihub-test/config.list

Checking for properties file kihub-test\_otc\_test\_07/config.list

Checking for properties file kihub-prod/config.list

Checking for properties file kihub-prod\_otc\_asterix/config.list

Converting Deployment template

Converting Route template

Converting Route template

Converting Route template

Converting Route template

Converting Route template

Converting Route template

Converting Route template

Converting Route template

Converting Route template

Dumping chart for playground to generated-charts/playground/Chart.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values-kihub-rt.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values-kihub-rt\_otc\_test\_07.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values-kihub-test.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values-kihub-test\_otc\_test\_07.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values-kihub-prod.yaml

Dumping values for generated-charts/playground to generated-charts/playground/values-kihub-prod\_otc\_asterix.yaml

Dumping #1 objects of kind Deployment to file 'generated-charts/playground/templates/Deployment.yaml'

Dumping #9 objects of kind Route to file 'generated-charts/playground/templates/Route.yaml'

Dumping #1 objects of kind Service to file 'generated-charts/playground/templates/Service.yaml'

Creating helper file 'generated-charts/playground/templates/\_helpers.tpl' with sample helper function

-----ATTENTION-----

Some properties have changed type in Helm

An example is the 'replicas' flag, which now has to be an unquoted int

Please check your values-files and any templates where the value is referenced

Appologies for the inconvenience

^^^^^ATTENTION^^^^^

After that the generated Helm charts needs to be moved to the proper location:

» mv generated-charts ../charts

Now some details needs to be fixed on the generated files:

* Replicas must be given as integer instead of string, so you need to remove the single quotes
* ~~Wrong version property key on the image tag must be fixed~~ fixed: [[CLEW-13271] OCP-Helm-Converter generiert falsches Image-Version-Property - Flow (sbb.ch)](https://flow.sbb.ch/browse/CLEW-13271)

# Migration of already existing Deployments

If an application is already deployed, it cannot be managed by Helm out of the box. In fact Helm requires some Labels and Annotations, which are missing if the application was deployed using another deployment approach (like using the traditional ESTA cloud pipeline). Because of this there are two approaches on how to go ahead:

a) Remove the app on OpenShift completely: DeploymentConfig, Service, Routes and ConfigMaps. After that the Helm based deployment is some kind of a "restart" of that app on OpenShift.

**or**

b) add Labels und Annotations manually to the DeploymentConfig, the Service, all Routes and ConfigMaps on the already existing application right on OpenShift:

* Label:

app.kubernetes.io/managed-by: Helm

* Annotations:
* meta.helm.sh/release-name: <application>

meta.helm.sh/release-namespace: <namespace>

* If you deploy using Helm now, you have the Helm Deployment parallel to the previous deployment, as the previous one is a so called "DeploymentConfig". This is a special OpenShift feature, which is not required/used anymore, so the DeploymentConfig can be removed afterwards.

As it is neccessary to remove the DeploymentConfig after the first Helm deployment, approach a) is suggested. But keep in mind that this approach includes a downtime of you application!