

Publishing Helm Charts

The DevOps team wants to

- a. Package the helm charts to an archive
- b. Create a repository using [ChartMuseum](#)
- c. Publish the helm charts to [ChartMuseum](#)
- d. Add dependencies to the parent & child charts in the umbrella chart

Learning Outcomes

After completing the lab, you will be able to understand

- Packaging helm chart
- Publishing to helm chart repository
- Defining dependencies
- Tags and conditions

Refactoring the directory structure

1. We need to move the charts to be archived

```
cd ~/workspace/helm-charts
helm package pages
helm repo index .
cat index.yaml
```



Install ChartMuseum

1. ChartMuseum is an open-source **Helm Chart Repository server**. We will install the **ChartMuseum** locally. However, this can also be accomplished for a production environment with additional configurations.

```
curl -LO https://s3.amazonaws.com/chartmuseum/release/latest/bin/linux/amd64/chartmuseum
chmod u+x chartmuseum
sudo mv chartmuseum /usr/local/bin
```



```
mkdir ~/helm
mkdir ~/helm/repo
chartmuseum --storage="local" --storage-local-rootdir=/home/student/helm/repo
```



Publish

1. Let's publish the chart archives to the ChartMuseum repository server

```
cp *.tgz ~/helm/repo
curl http://localhost:8080/api/charts | jq .
```



Fetching the published charts from ChartMuseum

1. Configure Helm to use ChartMuseum repository

```
helm repo add chartmuseum http://localhost:8080
helm repo list
helm repo update
helm search repo chartmuseum/
```



2. Create a new directory and Chart.yaml to test the published chart

```
mkdir ~/workspace/helm-charts/pages-package
cd ~/workspace/helm-charts/pages-package
touch Chart.yaml
```



pages-package/Chart.yaml

```
apiVersion: v2
name: pages
description: A Helm chart for Pages Application
type: application
version: 1.0.0
appVersion: "1.0"
dependencies:
  - name: pages
    version: 1.0.0
    repository: http://localhost:8080
```



3. Downloading published charts from the repo

```
helm dependency update pages
ls
helm dependency list pages
helm dependency build pages
```

