Publishing Helm Charts

The DevOps team wants to

    a. Package the helm charts to an archive

    b. Create a repository in `GitHub Pages`

    c. Publish the helm charts to `ArtifactHub`

Learning Outcomes

After completing the lab, you will be able to understand

- Packaging helm chart

- Publishing to helm chart repository

- Difference between archives and repositories

- Different types of Helm repositories

Setting up GitHub Pages for storing Helm Charts

1. Create a new public repository in github with naming convention for the repo being `yourgituserid.github.io`

2. Create a new directory on your local machine pointing to the github repo

```
mkdir ~/workspace/yourgituserid.github.io
```

```
cd ~/workspace/yourgituserid.github.io
```

```
git clone https://github.com/yourgituserid/yourgituserid.github.io
```

NOTE

Replace yourgituserid with your github user name or id. This is not the same as your email address.

3. Copy the pages directory inside helm-charts to directory created in the above step

```
cp ~/workspace/helm-charts/pages ~/workspace/yourgituserid.github.io
cd ~/workspace/yourgituserid.github.io
```

4. Delete `index.yaml` and any compressed files, if you already have it

```
rm index.yaml
rm *.tgz
```

Package the helm charts to be published

1. Package the pages umbrella chart and create index file

```
helm package pages
helm repo index .
cat index.yaml
```

Publishing to ArtifactHub through Github Pages

1. You will need the `Github Pages` URL which acts as a server for the helm charts to be accessed from `artifacthub`

2. Go to github repo and select settings menu and then the Pages menu from the left navigation menu. You will see the message similar to `GitHub Pages is currently disabled. Select a source below to enable GitHub Pages for this repository.` Change the branch from `None` to `master` and click on `Save`. This will render the content using GitHub Pages. You will get the message similar to ` Your site is ready to be published at https://yourgithubuserid.github.io/

3. We now have to edit the `index.yaml` file and update the url to point to the published url. Ensure that it uses `https` instead of `http`

4. Push the changes to Git so that `ArtifactHub` can access it

```
git add .
git commit -m "Initial Commit"
git push -u origin master
```

5. Go to `artifacthub.io` and login using your `github` credentials.

6. Click on `Add a repository` and fill in the kind, name, displayname, url properties Let the `Kind` be `Helm Charts`, `Name` & `Display Name` be `pages` and the `URL` should be your published Github Pages URL similar to `https://yourgithubuserid.github.io`

Accessing/Installing the published charts from ArtifactHub

1. Configure Helm to use ArtifactHub repository

```
helm repo add artifacthub https://yourgithubuserid.github.io
```

```
helm repo list
helm repo update
```

2. Clean the earlier installation if already installed

```
helm uninstall pagesapp
```

3. Install the pages chart

```
helm search repo pages
helm install pagesapp artifacthub/pages -n [name-of-your-team]-dev
```

4. Test the pages application by performing CRUD operations using curl/postman. Refer Pages Curl Guide for testing.