Using Umbrella Charts with epicapp

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Document Level Classification

200

- Introduction
- Creating an umbrella chart
 - Using already available charts
 - <u>Using local charts</u>
 - Getting epic-app chart into a local subchart
- Use epic-app name overwrites

Introduction

Umbrella charts are a way to handle <u>many dependencies</u> and are a good way to deploy monorepos or a set of services at once.

```
| + Awesome Service 1 Subchart

umbrella | + Awesome Service 2 Subchart

chart | + Awesome Service 3 Subchart

| + ...

L_
```

Creating an umbrella chart

There are two ways to create an umbrella chart, both require a Chart.yaml containing a dependency property.

Using already available charts

Wrapping already available helm charts into an umbrella chart is pretty straight forward. The charts just need to be referenced in the umbrella Chart.yaml with the desired version and the url to the helm repo where they reside.

Installing or pushing the umbrella chart will handle the rest.

Note: If a service was installed using an umbrella chart, it is not possible to install that service stand-alone (in the sense of replacement)

```
# Chart.yaml
apiVersion: v2
name: Awesome Name
description: "Awesome Service Umbrella"
type: application
```

```
version: 1.0.0
appVersion: 1.0.0-branch+1234

dependencies:
    - name: "Awesome Service 1"
    version: 1.0.1
    repository: "<URL_TO_HELM_REPOSITORY>"
    - name: "Awesome Service 2"
    version: 1.0.2
    repository: "<URL_TO_HELM_REPOSITORY>"
    - name: "Awesome Service 3"
    version: 2.5.0
    repository: "<URL_TO_HELM_REPOSITORY>" chart, it is not possible to
```

Using local charts

In some cases you want to use subcharts that don't exist in a repository. One example would be codefresh. If the helm repo is linked to codefresh each chart would show up in the UI as installable. Refering back to the note above, that is not possible for subcharts under an umbrella chart (It would be possible if they share the same release name but that would uninstall all other resources installed by the other subcharts). Therefore it makes no sense to push them to the repository in the first place.

So, instead of pushing the subcharts into the repository, we keep them in the chart folder of the umbrella chart once in folder named subcharts (could be any name) and once in the charts folder.

Note: Normally it should be enough to keep the subcharts in the subchart folder, and then helm puts them into the charts folder during the push or install step. Currently that happens kind of, but instead of copying the subchart's folder, helm creates an archive which then leads to an error in the install phase.

```
# Umbrella chart folder
.
...

| charts/
| havesome-Service-1
| charts/
| epic-app/
| values.yaml
| Chart.yaml
| Awesome-Service-2
| Awesome-Service-3
| subcharts/
| Awesome-Service-1
| Awesome-Service-2
| Lawesome-Service-3
Chart.yaml
```

With the subcharts in place, the Chart.yaml needs to point to them.

```
# Chart.yaml
apiVersion: v2
name: Awesome Name
description: "Awesome Service Umbrella"
type: application
version: 1.0.0
appVersion: 1.0.0-branch+1234

dependencies:
   - name: "Awesome Service 1"
   version: 1.0.1
   repository: "file://subcharts/Awesome-Service-1"
   - name: "Awesome Service 2"
   version: 1.0.2
```

```
repository: "file://subcharts/Awesome-Service-2"
```

- name: "Awesome Service 3"

version: 2.5.0

repository: "file://subcharts/Awesome-Service-3"

Getting epic-app chart into a local subchart

If your local subchart has a dependency on epic-app you would need to put it into a charts folder inside your subchart.

Therefore you need to download the chart, unpack it and put it there:

```
helm pull epic-app --version ~3.4.0 --repo https://charts.substrate.on.
mkdir charts
mv epic-app ./charts/
# for some reason helm creates a folder for the content as well as an erm -rf epic-app*
```

Use epic-app name overwrites

The resources names will be based on the release name which will lead to deploy errors with umbrella charts.

Therefore each subchart needs to make use of the override-properties for epic-app inside it's values.yaml:

values.yaml
epic-app:

fullnameOverride: "Awesome-Service-X"

nameOverride: "Awesome-Service-X"

instanceOverride: "Awesome-Service-X"

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