Side Car With Openshift

Draft

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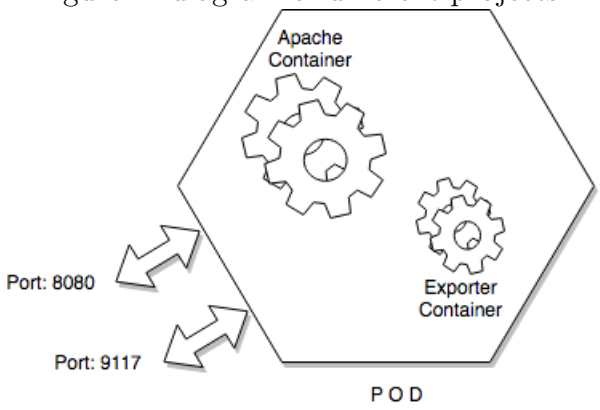
1 The Project

1.1 schema

Figure 1: diagram of different projects



A sidecar architecture is based on 2 containers, the main application and its addon. The objectif concists to have only one process per container. In our case, the main application is the apache server and the addon is the exporter-apache. The containers share the same memory space, the same network stack, easily to deploy and manage the access from exporter-apache to apache server.

1.2 Status On Apache

status.conf

```
<Location /server-status>
SetHandler server-status
Order deny,allow
Allow from all
</Location> ExtendedStatus On>
```

and *Dockerfile*

```
FROM ubuntu:latest
USER root
...
RUN a2enmod status
COPY status.conf /etc/apache2/mods-enabled/
EXPOSE 8080
USER 1001
CMD ["/usr/sbin/apache2ctl", "-DFOREGROUND"]
```

1.3 Secret Access

We firstly define our *secret file*. If the access is based on a login/password.

```
apiVersion: v1
kind: Secret
metadata:
name: github-secret
namespace: sidecar
type: kubernetes.io/basic-auth
data:
username: c3Bpa2U=
password: dmFsZW50aW5l
```

username and *password* are defined with the command

```
$ echo -n 'spike' | base64
c3Bpa2U=
$ echo -n 'valentine' | base64
dmFsZW50aW5l
```

and we run

```
  $ oc create -f gitlab-secret.yaml
```

or if we use a *ssh key*,we generate the *key*, create the secret, and link the secret to the right project

```
  $ ssh-keygen -C "openshift-source-builder/repo@github" \
  -f repo-at-github -N ''
  $ oc secrets new-sshauth repo-at-github \
  --ssh-privatekey=repo-at-github
$ oc secrets link builder repo-at-github
```

When we create a new application based on this repository, it desn't work. We have to set the new *build*

```
$ oc set build-secret --source bc/mysite repo-at-github
```

1.4 New Project

Firstly, we create a new project

```
  $ oc new-project sidecar \
  --display-name='Side Car Project' \
  --description='Side Car Project'
```

1.5 New Build

To obtain our image, we firstly

```
$ oc new-build http://192.168.0.8:8880/spike/faye.git \
--name faye
```

But to resolve the issue based on the credential, we'll attribute the *login/password* defined before and retstart the build process.

```
$ oc set build-secret --source bc/faye github-secret
$ oc start-build faye
```

or directly

```
$  oc new-build http://192.168.0.8:8880/spike/faye.git \
--source-secret github-secret
--name faye
```

1.6 New Application

It's time to create our application

```
$ oc new-app faye \
--name fayeapp
$ oc status
$ oc expose service faye
$ oc get pod
$ oc get all name --selector app=cdnselect
```

2 The Side Car

2.1 Export

We firstly export our *project*.

```
$ oc get --export is,bc,dc,svc -o yaml > export.yaml
```

2.2 ImageStream

We delete *resourceVersion, selfLink and uid.* In status, we keep dockerImageRepository (set to "")

2.3 BuildConfig

We delete *resourceVersion, selfLink and uid.* We delete in spec.triggers.imageChange *lastTriggeredImageID*

2.4 DeploymentConfig

We replace spec.template.spec.containers.image by *faye* in the first container
We add in spec.template.spec.container

```
- name: apache-exporter
image: previousnext/apache-exporter
command: [ "apache_exporter", \
"-scrape_uri", \
"http://127.0.0.1:8080/server-status/?auto" ]
ports:
- containerPort: 9117
```

2.5 Service

We delete *resourceVersion, selfLink and uid.*
We add in spec.ports

```
- name: 9117-tcp
port: 9117
```

```
  protocol: TCP
  targetPort: 9117
```