Openshift

Introduction to the Side Car

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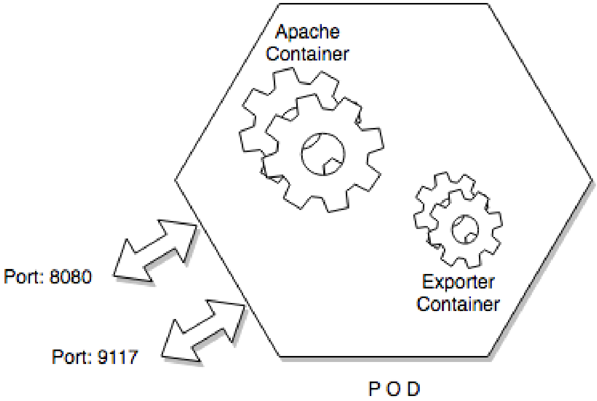
Schema

Figure: schema of a Side Car



Apache status

Module to enable the output statistic of *Apache*.

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

Figure: status.conf

This module has to be copied in the */etc/apache2/mods-enabled/* directory.

Dockerfile

The *Dockerfile* includes the copy of the *Apache* module
Important to add the switching between *root* and *1001* user

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

Figure: Dockerfile

Secret Access

And because the credential of *GITLAB*

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

Figure: gitlab-secret.yaml

Secret Access

The *username* and *password* are encoded to Base64 format. Finally we load the new *secret*

```
$ echo -n 'spike' | base64
c3Bpa2U=
$ echo -n 'valentine' | base64
dmFsZW50aW5l
$ oc create -f gitlab-secret.yaml
```

New Project

It's time to create our new project *sidecar*, similar to a namespace

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

New Build

We build our new image *faye*, linked to the new secret and we restart the build process

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

New Build more friendly

A other solution concists to build the new image with a same command line

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

New Application

It's time to create our application based on the new image *faye*

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

Export

We export the new application to have a substrat for the next process
The final application will be based on this modified export.

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

Item To Modify

4 parts will be modified to adapted to our application

- ImageStream
- BuildConfig
- DeploymentConfig
- Service

ImageStream

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

```
status:
dockerImageRepository: ""
```

BuildConfig

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

```
triggers:
- github:
    secret: -sFpqvH1ZtjwSybAZkRI
  type: GitHub
- generic:
  secret: CSGghgKGL2kTVIr8l5Nc
  type: Generic
- type: ConfigChange
- imageChange:
  type: ImageChange
```

DeploymentConfig

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

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

Service

We add in spec.ports

```
spec:
  ...
  - name: 9117-tcp
    port: 9117
    protocol: TCP
    targetPort: 9117
```

The port related to our *exporter apache*

Finally

Finally we create our new application from this *yaml* file

```
$ oc create -f export.yaml
$ oc get svc
```

The last command list different services built by our application (8080 and 9117)
Et voila...