

# Openshift

## Introduction to the Side Car

Spike Spiegel

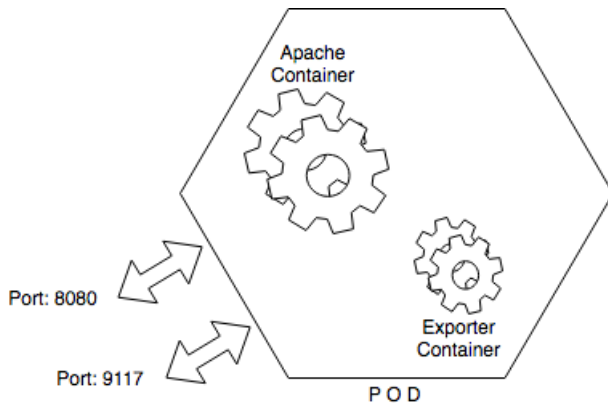
Cowboy Bebop

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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 will be copied in the `/etc/apache2/mods-enabled/` directory.



# Dockerfile

The *Dockerfile* include 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 coded with this method and we load the new *secret*

```
$ echo -n 'spike' | base64
c3Bpa2U=
$ echo -n 'valentine' | base64
dmFsZW50YW5l
$ 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 fayeapp
$ oc status
$ oc expose service faye
$ oc get pod
$ oc get all name --selector app=cdnselect
```



# Export

We export the new application to have a base for the next process  
The final application will be based on the 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

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

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



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



## We add in spec.ports

```
spec:
  clusterIP: 172.30.7.204
  ports:
    - name: 8080-tcp
      port: 8080
      protocol: TCP
      targetPort: 8080
    - 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
```

Et voila...