KUBERNETES SECRET FOR DOCKER REGISTRY

Cognitive Assistant for Networks (CAN) Release 5.5

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REVISION HISTORY

Version	Date	Change description	Created by	Updated by	Reviewed by
V 1.0	July, 2021	Initial Release	Hemanth/Umesh	Sandeep Singh	Chiranjib

avanseus

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1. Background

During the testing phase of any project, developers usually make several continuous updates to the base code as per the changing customer requirements. Developers need to deploy the latest updated build in the kubernetes cluster. This document targets to address the below scenarios:

1. Pushing images to the docker registry
2. Configuring secrets in the helm charts

This document assumes that the docker registry has already been created and now the required images have to be pushed to the existing docker registry and the same image name has to be used in the helm charts.

Refer to the docker image in the '**values.yaml**' file of the Helm charts. For the successful installation of the helm chart, configure secrets correctly inside the kubernetes cluster and in **values.yaml** file of the helm chart. After installation of the Helm chart, the intended image could be pulled from the designated docker repository.

2. Pushing Images to the Docker registry

Prerequisites:

You must know the docker registry details, such as:

- IP address or domain name where the registry has been created.
- Docker login credentials.

Note: If you haven't created the Docker registry, then please refer https://docs.docker.com/registry/ to install and configure the Docker registry. It is important to note that throughout this document we will refer to **avanseuscontainer.com.** This Docker registry will be used only by R & D team. The delivery team has to create their own Docker registry.

Follow the steps to push the images to the docker registry:

1. Login to the docker registry.

   $docker login avanseuscontainer.com

   Enter the password of the docker registry.

2. Create docker images.

   For further details, refer the docker images creation document.

   After all the images have been built, the images are ready to be pushed to the registry.

   Use the below command to see all the images:

   $sudo docker images

```
[ec2-user@ip-172-31-23-138 ~]$
[ec2-user@ip-172-31-23-138 ~]$ sudo docker images
REPOSITORY                                                  TAG       IMAGE ID       CREATED          SIZE
avanseuscontainer.com/vmware/5.0/predictioncontrollercppsimd   v1        f75fad6ca343   14 hours ago     448MB
predictioncontrollercppsimd                                 1         f75fad6ca343   14 hours ago     448MB
avanseuscontainer.com/vmware/5.0/predictioncontrollerboth   v1        305c9304d8f9   15 hours ago     672MB
predictioncontrollerboth                                    v1        305c9304d8f9   15 hours ago     672MB
avanseuscontainer.com/vmware/5.0/predictionworkerjava       v1        45d056f305a4   15 hours ago     660MB
predictionworkerjava                                        v1        45d056f305a4   15 hours ago     660MB
avanseuscontainer.com/vmware/5.0/predictioncontrollerboth   <none>    67d4f74054f2   3 days ago       672MB
avanseuscontainer.com/vmware/5.0/predictioncontrollerboth   <none>    0ca9d4355c00   4 days ago       672MB
avanseuscontainer.com/vmware/5.0/predictionworkerjava       <none>    126e3f552f98   4 days ago       660MB
```

3. Tag the built images. Use the below command to tag the built images:

```
$sudo docker tag <image_name>
avanseuscontainer.com/vmware/5.0/predictionworker:1
```

Example:

```
$sudo docker tag ldap:1 avanseuscontainer.com/vmware/5.0/predictionworker:1
```

4. Push the tagged images into the registry.

```
$sudo docker push avanseuscontainer.com/vmware/5.0/predictionworker:1
```

Follow the same steps to push all the Docker images to the Docker registry. All the Docker images have been pushed to the registry and are ready to be used.

3. Configuring Secrets in the Helm Charts

Prerequisites:

- Docker registry credentials
- Fully qualified domain name of our private docker registry.

For creating Kubernetes secrets, you should know the username and password of the docker registry.

Run the below command in the master node to create the secret:

```
kubectl create secret docker-registry <secret_name>
--docker-server=<your-registry-server> --docker-username=<your-name>
--docker-password=<your-pword> --docker-email=<your-email> -n avanseus-workspace
```

Where,

<your-registry-server> is your Private Docker Registry FQDN.

<your-name> is your Docker username.

<your-pword> is your Docker password.

<your-email> is your Docker email.

Example:

```
$ kubectl create secret docker-registry avanseuspullsecret
--docker-server=avanseusdockerhub.com --docker-username=dummyUserName
--docker-password=dummyPwd$0 --docker-email=abc.def@avanseus.com -n avanseus-workspace
```

Note: It is advised to use the secret name as "avanseuspullsecret" as the same name is referred inside values.yaml of Helm charts.