

Lab 11. Building Custom Images

Objectives:

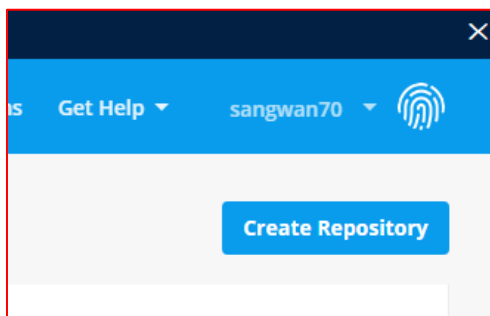
- Sign up at Docker Hub
- Pull, Change, Build and Push an image to Docker Hub

Pre-requisite

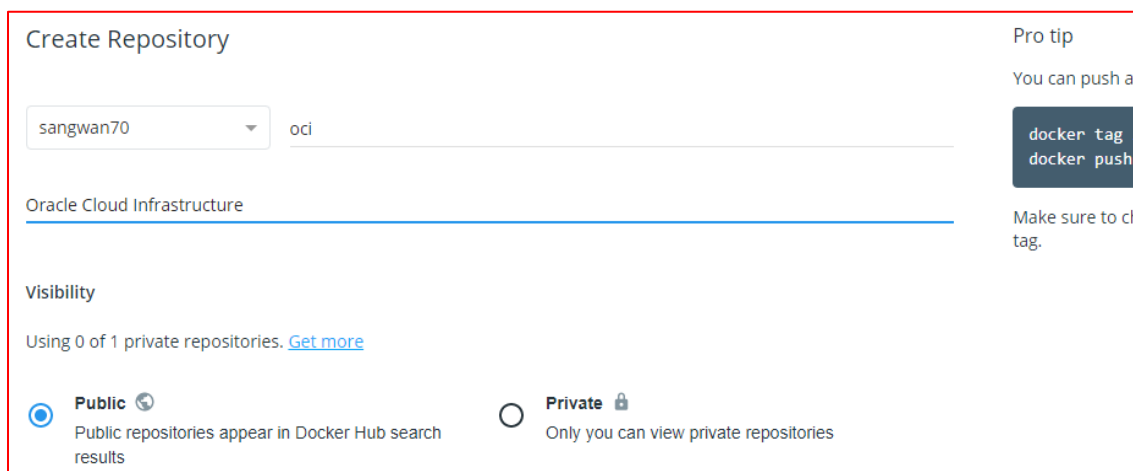
- Local Oracle Linux VM with root access.
- Docker-Engine pre-installed.

Sequence 1. Sign up at Docker Hub.

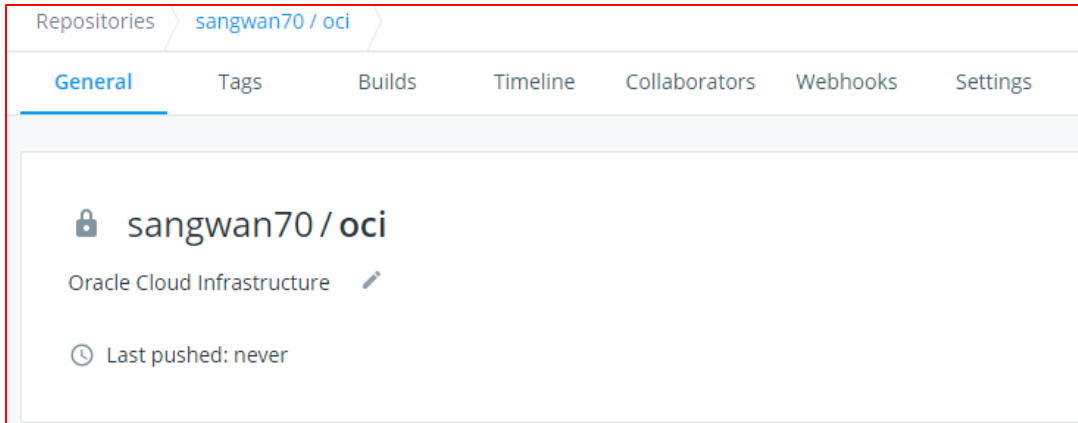
1. Visit <https://hub.docker.com> and create an account.
2. Create your first repository by clicking on Create a Repository on the Docker Hub welcome page:



3. Name it <your-username>/oci as shown below. Select Private:

A screenshot of the 'Create Repository' form on Docker Hub. The form has a title 'Create Repository' at the top. Below it, there is a dropdown menu showing 'sangwan70' and a text input field containing 'oci'. Underneath, the text 'Oracle Cloud Infrastructure' is displayed. A section titled 'Visibility' shows 'Using 0 of 1 private repositories. [Get more](#)'. At the bottom, there are two radio buttons: 'Public' (selected) and 'Private'. The 'Public' option is accompanied by a globe icon and the text 'Public repositories appear in Docker Hub search results'. The 'Private' option is accompanied by a lock icon and the text 'Only you can view private repositories'. On the right side of the form, there is a 'Pro tip' section with the text 'You can push a' and a code block containing 'docker tag' and 'docker push'. Below this, it says 'Make sure to ch' and 'tag.'.

4. You've created your first repo. You should see:



Sequence 2. Pull, Change, Build and Push an image to Docker Hub

1. Open the terminal and sign in to Docker Hub on your computer by running docker login.

```
# docker login -u <your User Name>
```

```
[root@server ~]# docker login -u sangwan70
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
[root@server ~]#
```

2. Pull the busybox image on your system

```
# docker pull busybox
```

```
[root@server ~]# docker pull busybox
Using default tag: latest
Trying to pull repository docker.io/library/busybox ...
latest: Pulling from docker.io/library/busybox
91f30d776fb2: Pull complete
Digest: sha256:9ddee63a712cea977267342e8750ecbc60d3aab25f04ceacfa795e6fce341793
Status: Downloaded newer image for busybox:latest
[root@server ~]#
```

3. Start by creating a Dockerfile to specify your application as shown below:

```
# cat > Dockerfile <<EOF
```

```
FROM busybox
```

```
CMD echo "Hello world! This is my first Docker image. The
SkillPedia"
```

```
EOF
```

```
[root@server ~]# cat > Dockerfile <<EOF
> FROM busybox
> CMD echo "Hello world! This is my first Docker image. The SkillPedia"
> EOF
[root@server ~]# █
```

4. Now Run the following command to build your docker image

```
# docker build -t <your_username>/oci:mytag .
```

```
[root@server ~]# docker build -t sangwan70/oci:mytag .
Sending build context to Docker daemon 148.6MB
Step 1/2 : FROM busybox
--> c7c37e472d31
Step 2/2 : CMD echo "Hello world! This is my first Docker image. The SkillPedia"
--> Running in 6a6b9d252f08
Removing intermediate container 6a6b9d252f08
--> fec6d2d237a
Successfully built fec6d2d237a
Successfully tagged sangwan70/oci:mytag
[root@server ~]# █
```

5. Test your docker image locally by running

```
# docker run <your_username>/oci:mytag
```

```
[root@server ~]# docker run sangwan70/oci:mytag
Hello world! This is my first Docker image. The SkillPedia
[root@server ~]# █
```

6. Tag your Docker image to push to Docker Hub.

```
# docker tag hello-world <your_username>/oci:mytag
```

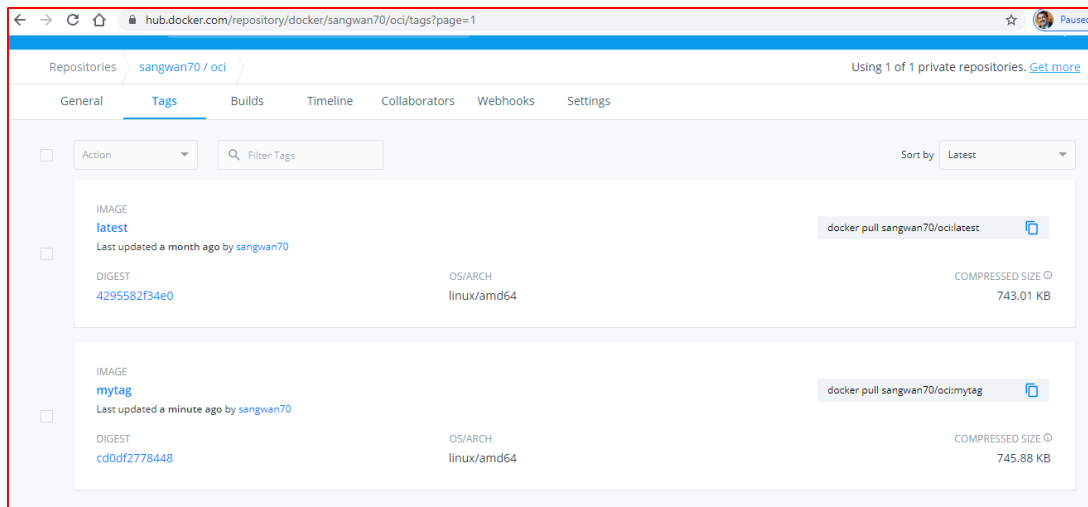
7. Run the following command to to push your Docker image to Docker Hub.

```
# docker push <your_username>/oci:mytag
```

8. You should see output similar to:

```
[root@server ~]# docker push sangwan70/oci:mytag
The push refers to repository [docker.io/sangwan70/oci]
50761fe126b6: Mounted from library/busybox
mytag: digest: sha256:cd0df2778448405bbf1e38ef8b8e66dc8948be3ef3e23798df2ff6e5173b2041 size: 527
[root@server ~]#
```

9. And in Docker Hub, your repository should have a new latest tag available under Tags:



Resources:

Managing Docker Images

<https://www.theskillpedia.com/managing-docker-images-openshift-tutorial/>

<https://www.youtube.com/watch?v=335j8HTxMVU>