

Open-Source Software Practice

Week 5 Assignment

Lecture Contents: Docker

Task Description

The purpose of this assignment is to set up an environment for a container that will be used in the Open-Source Software Practice class. This environment must meet the following requirements:

1. Linux OS
2. Git installed
3. Python3 installed
4. bind mount

Therefore, you need to create a container that satisfies the above conditions and demonstrate it.

Tips & specifications

- Linux OS
 - Use image based on '**ubuntu**' (for our case, 'ubuntu' or 'ossp' images).
- Git & Python installation & check
 - '**apt-get install -y git python3**' will install git and python3.
 - '**git --version**' and '**python3 --version**' prints the version of git and python3 if they are successfully installed.
- Bind mount
 - '**docker inspect --format="{{ .HostConfig.Binds }}" <container_name>**' prints path of mounted directory of the specified container.
 - The format is as following: '**[<host_dir_path>:<container_dir_path>]**'
 - Be sure to run that command in **host system**.

Submission

You need to capture the output of the following commands executed on the host system and submit the screenshots:

'''

```
docker exec <container_name> cat /etc/os-release
```

```
docker exec <container_name> git --version
```

```
docker exec <container_name> python3 --version
```

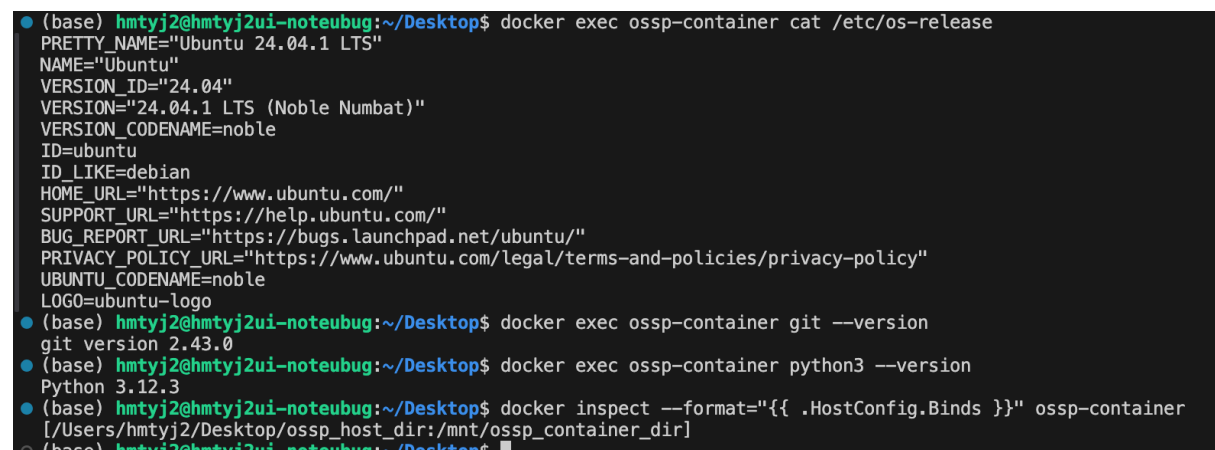
```
docker inspect --format="{{ .HostConfig.Binds }}" <container_name>
```

'''

(These commands check the container's OS, git version, python version, and mount directory, respectively)

(You can find more on docker exec at <https://docs.docker.com/reference/cli/docker/container/exec/>)

Example



```
● (base) hmtyj2@hmtyj2ui-noteubug:~/Desktop$ docker exec ossp-container cat /etc/os-release
PRETTY_NAME="Ubuntu 24.04.1 LTS"
NAME="Ubuntu"
VERSION_ID="24.04"
VERSION="24.04.1 LTS (Noble Numbat)"
VERSION_CODENAME=noble
ID=ubuntu
ID_LIKE=debian
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
UBUNTU_CODENAME=noble
LOGO=ubuntu-logo
● (base) hmtyj2@hmtyj2ui-noteubug:~/Desktop$ docker exec ossp-container git --version
git version 2.43.0
● (base) hmtyj2@hmtyj2ui-noteubug:~/Desktop$ docker exec ossp-container python3 --version
Python 3.12.3
● (base) hmtyj2@hmtyj2ui-noteubug:~/Desktop$ docker inspect --format="{{ .HostConfig.Binds }}" ossp-container
[/Users/hmtyj2/Desktop/oss_host_dir:/mnt/oss_container_dir]
```

1. Be sure to run those commands on host system.
2. The container name does not have to be "ossp-container"; you can use a different name, but you must implement the above requirements in a single container.
3. The mount directory path can also be different from the example provided.

Evaluation

1. Submit your screenshot at iCampus.

2. TA will grade the outputs on screenshot and check whether the requirements are satisfied.

Due date

24/10/2 23:59