

Instructions for Running GemOS Docker Instance

1 Installation

Install docker in your system. You may refer to below links for information on setting up docker.

- UBUNTU: <https://docs.docker.com/engine/install/ubuntu/>
- MAC: <https://docs.docker.com/docker-for-mac/install/>
- Windows: <https://docs.docker.com/docker-for-windows/install/>

2 Download Docker Image

Download GemOS docker image:

<https://cse.iitk.ac.in/users/deba/cs330/cs330-gemos.tar.gz>

3 Steps to Create the Docker Container on Unix/Linux

Run these commands in terminal, use `sudo` in Linux machines.

```
$docker import cs330-gemos.tar.gz
$docker image ls //It will show the newly created image get its ID say <image-id>
$docker image tag <image-id> cs330
$docker run -it -p 2020:22 <image-id> /bin/bash // This should take you to a shell
```

In another terminal, type the following command (and exit the shell)

```
$docker ps //note down container ID using command "docker ps" (say <container-id>)
$docker container rename <container-id> NameYouWantToUse
```

4 Using the Docker Container

Run these commands in terminal.

```
$docker start NameYouWantToUse // Starts the container
$ssh -p 2020 osws@localhost // should take you to ssh prompt... use password 'cs330'
$docker stop NameYouWantToUSE //Stops the container
```

You can check `docker --help` for more docker commands.

5 Executing GemOS

Start the container and login,

After login, run in Docker container terminal

```
$ cd gem5;
$./run.sh /home/osws/gemOS/src/gemOS.kernel
```

Open another terminal and ssh to the container, then run below command.

```
$telnet localhost 3456 // will show you the gemOS console
```