

# ARTH Task 7.2



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## Configuring Apache Webserver and Python3 interpreter over Docker Container



### WEB SERVER IN DOCKER

**First :** Installing Docker in Redhat Linux

**Second:** Check if the Docker is installed properly and then download some images

```
[root@MiWiFi-R3L-srv ~]# docker version
Client: Docker Engine - Community
Version:      20.10.5
API version:  1.41
Go version:   go1.13.15
Git commit:   55c4c88
Built:        Tue Mar  2 20:33:55 2021
OS/Arch:      linux/amd64
Context:      default
Experimental: true

Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
[root@MiWiFi-R3L-srv ~]# docker pull ubuntu:14.04
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
[root@MiWiFi-R3L-srv ~]# docker pull ubuntu:14.04
Cannot connect to the Docker daemon at unix:///var/run/docker.sock. Is the docker daemon running?
[root@MiWiFi-R3L-srv ~]# systemctl start docker
[root@MiWiFi-R3L-srv ~]# docker pull ubuntu:14.04
14.04: Pulling from library/ubuntu
2e6e20c8e2e6: Pull complete
95201152d9ff: Pull complete
5f63a3b65493: Pull complete
Digest: sha256:63fce984528cec8714c365919882f8fb64c8a3edf23fdfa0b218a2756125456f
Status: Downloaded newer image for ubuntu:14.04
docker.io/library/ubuntu:14.04
```

Check docker version and Downloading Ubuntu image

```
[root@MiWiFi-R3L-srv ~]# docker pull centos:latest
latest: Pulling from library/centos
7a0437f04f83: Pull complete
Digest: sha256:5528e8b1b1719d34604c87e11dcd1c0a20bedf46e83b5632cdeac91b8c04efc1
Status: Downloaded newer image for centos:latest
docker.io/library/centos:latest
[root@MiWiFi-R3L-srv ~]# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
centos         latest    300e315adb2f   3 months ago   209MB
ubuntu         14.04    df043b4f0cf1   5 months ago   197MB
```

Downloading Centos Image

Next Use any image to launch a container with the name **webos**

**For example :** Here I use the centos image.

```
[root@MiWi-Fi-R3L-srv ~]# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
centos        latest    300e315adb2f   3 months ago   209MB
ubuntu       14.04    df043b4f0cf1   5 months ago   197MB
[root@MiWi-Fi-R3L-srv ~]# docker run -it webos:v1 centos:latest
docker: invalid reference format: repository name must be lowercase.
See 'docker run --help'.
[root@MiWi-Fi-R3L-srv ~]# docker run -it webos:v1 centos:latest
Unable to find image 'webos:v1' locally
docker: Error response from daemon: pull access denied for webos, repository does not exist or may require 'docker login'.
See 'docker run --help'.
[root@MiWi-Fi-R3L-srv ~]# docker run -it --name webos centos:latest
[root@fcef23d29dd1 /]# yum repolist
Failed to set locale, defaulting to C.UTF-8
repo id                                repo name
appstream                              CentOS Linux 8 - AppStream
baseos                                 CentOS Linux 8 - BaseOS
extras                                 CentOS Linux 8 - Extras
[root@fcef23d29dd1 /]# yum install httpd -y
Failed to set locale, defaulting to C.UTF-8
CentOS Linux 8 - AppStream
CentOS Linux 8 - BaseOS
CentOS Linux 8 - Extras
Dependencies resolved.
=====
Package                                Architecture      Version            Reposi
=====
Installing:
httpd                                  x86_64            2.4.37-30.module_el8.3.0+561+97fdbbcc  appstr
Installing dependencies:
apr                                    x86_64            1.6.3-11.el8      appstr
apr-util                              x86_64            1.6.1-6.el8       appstr
brotli                                x86_64            1.0.6-2.el8       baseos
centos-logos-httpd                    noarch            80.5-2.el8        baseos
httpd-filesystem                       noarch            2.4.37-30.module_el8.3.0+561+97fdbbcc  appstr
```

Using centos a container named **webos** is launched and then install the apache webserver over the container using the command :

**yum install httpd -y** and launch the server using **systemctl start httpd**

Then install net-tools to check the port in which the **Apache Webserver** will run.

```
[root@fcef23d29dd1 html]# yum install net-tools -y
Failed to set locale, defaulting to C.UTF-8
Last metadata expiration check: 0:03:13 ago on Fri Mar 12 13:49:19 2021.
Dependencies resolved.
=====
Package                                Architecture          Version                Repository
=====
Installing:
net-tools                               x86_64                2.0-0.52.20160912git.el8    baseos
=====
Transaction Summary
=====
Install 1 Package

Total download size: 322 k
Installed size: 942 k
Downloading Packages:
net-tools-2.0-0.52.20160912git.el8.x86_64.rpm                    53
-----
Total                                                                27
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :
  Installing     : net-tools-2.0-0.52.20160912git.el8.x86_64
```

Finally go to the httpd main directory : **/var/www/html/**

and i create a file named **index.html** and add some text in it

```
[root@fcef23d29dd1 ~]# cd /var/www/html/
[root@fcef23d29dd1 html]# gedit index.html
bash: gedit: command not found
[root@fcef23d29dd1 html]# vi index.html
[root@fcef23d29dd1 html]# cat index.html
Hello This is Rahul Banik conducting Test on Docker OS
[root@fcef23d29dd1 html]#
```



```
[root@239eadd8588e /]# yum install python3
Failed to set locale, defaulting to C.UTF-8
CentOS Linux 8 - AppStream
CentOS Linux 8 - BaseOS
CentOS Linux 8 - Extras
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
Installing: python36	x86_64	3.6.8-2.module_el8.3.0+562+e162826a	appstream	19 k
Installing dependencies:				
platform-python-pip	noarch	9.0.3-18.el8	baseos	1.7 M
python3-pip	noarch	9.0.3-18.el8	appstream	20 k
python3-setuptools	noarch	39.2.0-6.el8	baseos	163 k
Enabling module streams:				
python36		3.6		

```
Transaction Summary
=====
Install 4 Packages

Total download size: 1.9 M
Installed size: 7.6 M
Is this ok [y/N]: y
Downloading Packages:
```

Start python3 interpreter using command : python3

```
[root@239eadd8588e /]# python3
Python 3.6.8 (default, Aug 24 2020, 17:57:11)
[GCC 8.3.1 20191121 (Red Hat 8.3.1-5)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> print("Hello World")
Hello World
>>>
```