

Module-3: Docker – I Assignment - 1

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Course Offered: -Advanced Cloud Computing and Devops

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You have been asked to:

- Pull ubuntu container
- Run this container, and map port 80 on the local
- Install apache2 on this container
- Check if you are able to access the apache page on your browser

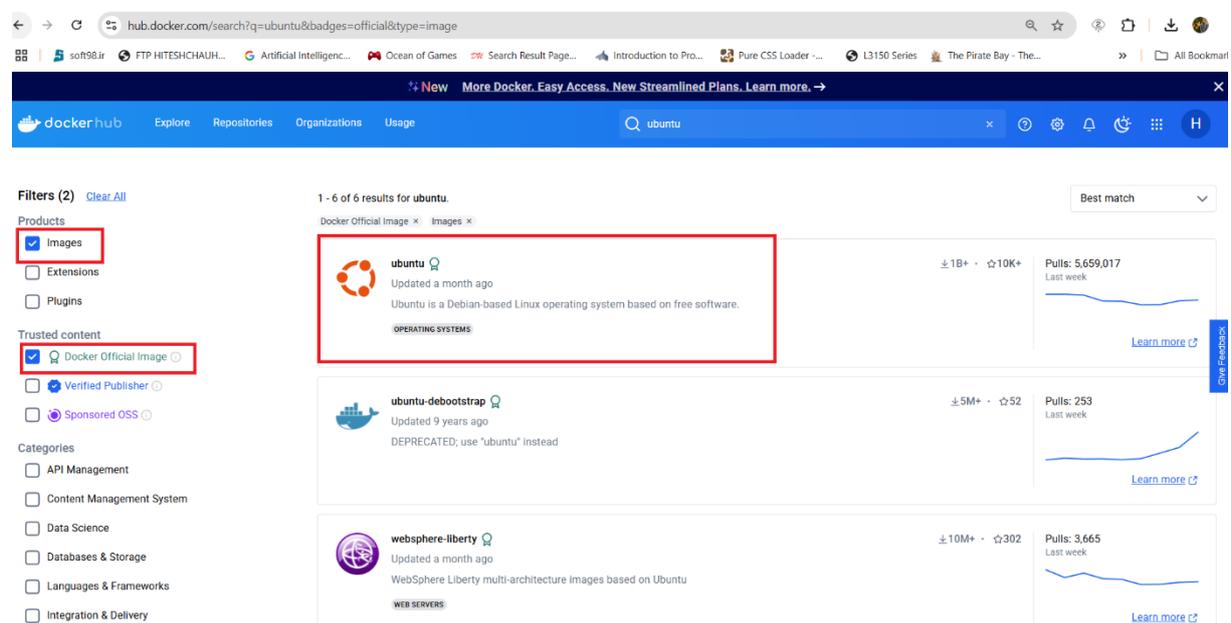
Pull ubuntu container

Step 01 Pull ubuntu Container

First Go To <https://hub.docker.com>

And search ubuntu

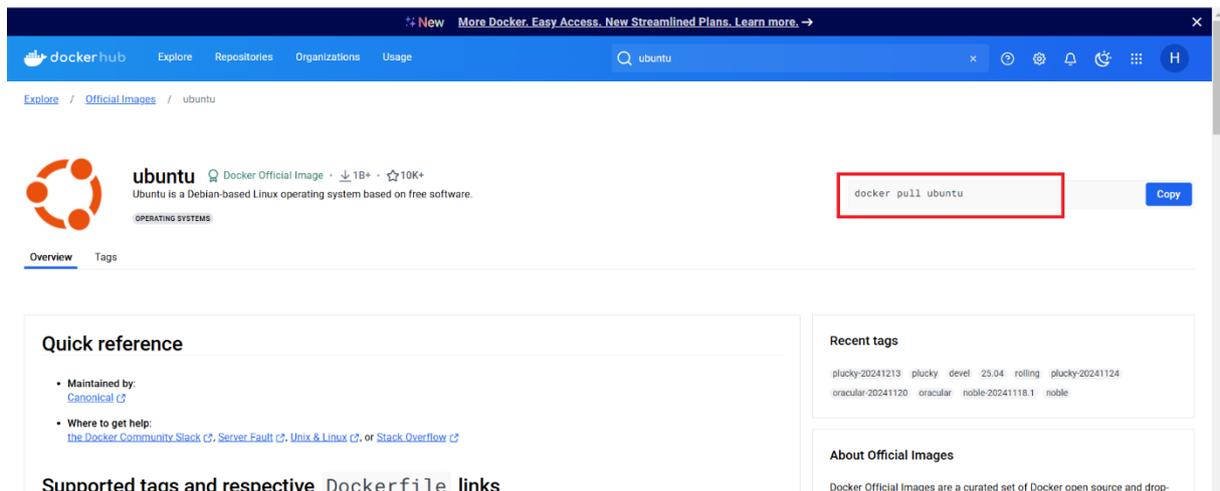
Click Images And Trusted Content Check the Docker Official Image then after search ubuntu.you see the the ubuntu docker official image



The screenshot shows the Docker Hub search results for 'ubuntu'. The search bar at the top contains 'ubuntu'. On the left, the 'Filters' section is expanded to show 'Images' and 'Docker Official Image' selected. The main content area displays three search results:

- ubuntu**: Updated a month ago. Ubuntu is a Debian-based Linux operating system based on free software. OPERATING SYSTEMS. ±1B+ · ☆10K+ · Pulls: 5,659,017 Last week. [Learn more](#)
- ubuntu-debootstrap**: Updated 9 years ago. DEPRECATED; use 'ubuntu' instead. ±5M+ · ☆52 · Pulls: 253 Last week. [Learn more](#)
- websphere-liberty**: Updated a month ago. WebSphere Liberty multi-architecture images based on Ubuntu. WEB SERVERS. ±10M+ · ☆302 · Pulls: 3,665 Last week. [Learn more](#)

After Click the ubuntu image click the image and copy the docker pull ubuntu command



Then This command paste in to linux where you installed the docker

```
root@DESKTOP-VOHL7L3: /home
root@DESKTOP-VOHL7L3:/home# docker pull ubuntu
```

After paste the command you will see the image status.

NOTE:If Ubuntu Image is already there you will see this below screenshot,if not there so docker will pull the image.

```
root@DESKTOP-VOHL7L3: /home
root@DESKTOP-VOHL7L3:/home# docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
Digest: sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
Status: Image is up to date for ubuntu:latest
docker.io/library/ubuntu:latest
```

After Pull the ubuntu image.now run this below command

2. Run this container and map port 80 on the local

sudo docker run -itd -p 80:80 ubuntu

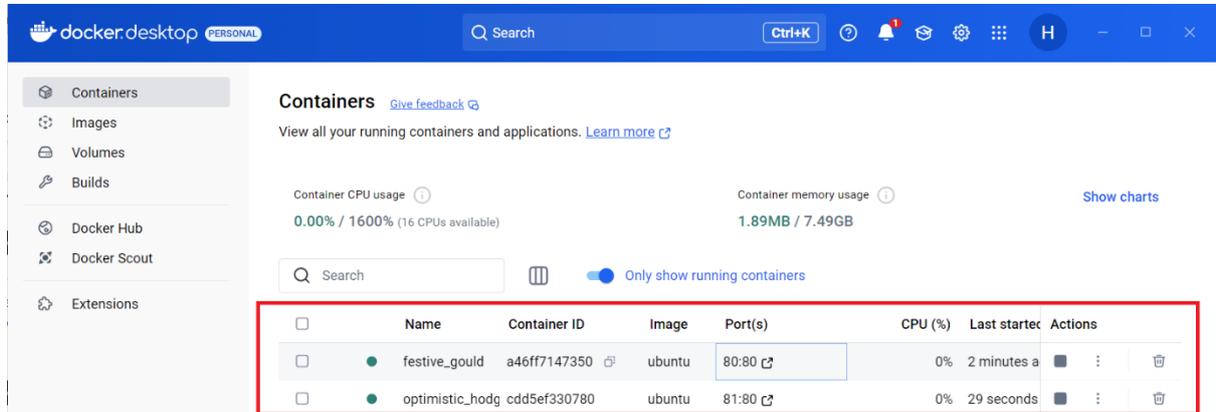
```
root@DESKTOP-VOHL7L3:/home# sudo docker run -itd -p 80:80 ubuntu
a46ff7147350bba3996f575b9173d916fb31e8e1ae2c442d0dab857e29fbd12a
root@DESKTOP-VOHL7L3:/home#
```

After Run this command You will see the container id.you can see the container of this command

docker ps -a

```
root@DESKTOP-VOHL7L3:/home# docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                NAMES
a46ff7147350   ubuntu   "/bin/bash"             36 seconds ago Up 36 seconds  0.0.0.0:80->80/tcp   festive_gould
186673d5e717   ubuntu   "/bin/bash"             25 minutes ago Created                            xenodochial_noether
root@DESKTOP-VOHL7L3:/home#
```

You will see also on docker desktop and image will see here also.



Then you need to take the container access

In This case either you will go with container id or container name.

Command is

sudo docker exec -it cdd5ef330780 bash

```
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                NAMES
cdd5ef330780   ubuntu   "/bin/bash"             About a minute ago Up About a minute  0.0.0.0:81->80/tcp   optimistic_hodgkin
a46ff7147350   ubuntu   "/bin/bash"             3 minutes ago  Up 3 minutes    0.0.0.0:80->80/tcp   festive_gould
root@DESKTOP-VOHL7L3:/home# sudo docker exec -it cdd5ef330780 bash
root@cdd5ef330780:/#
```

After run this command you will go inside the container

Then run this command

apt update

```
root@DESKTOP-VOHL7L3:/home# sudo docker exec -it cdd5ef330780 bash
root@cdd5ef330780:/# apt update
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:3 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [1035 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [724 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [15.5 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [740 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble/main amd64 Packages [1808 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [19.3 MB]
31% [10 Packages 381 kB/19.3 MB 2%]
```

After use this command

This command use for install the apache in ubuntu container

apt install apache2 -y

```
root@cdd5ef330780:/# apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  adduser apache2-bin apache2-data apache2-utils ca-certificates krb5-locales libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap
  libaprutil1t64 libbrotli1 libcurl4t64 libexpat1 libgdbm-compat4t64 libgdbm6t64 libgssapi-krb5-2 libicu74 libjansson4 libk5crypto3
  libkeyutils1 libkrb5-3 libkrb5support0 libldap-common libldap2 liblua5.4-0 libnghttp2-14 libperl5.38t64 libpsl5t64 librtmp1
  libsasl2-2 libsasl2-modules libsasl2-modules-db libsasl2-modules-gssapi-mit libsasl2-modules-gssapi-heimdal libsasl2-modules-ldap
  libsasl2-modules-otp libsasl2-modules-sql perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make
  publicsuffix ssl-cert
Suggested packages:
  liblocale-gettext-perl cron quota ecryptfs-utils apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser ufw
  gdbm-l10n krb5-doc krb5-user libsasl2-modules-gssapi-mit | libsasl2-modules-gssapi-heimdal libsasl2-modules-ldap
  libsasl2-modules-otp libsasl2-modules-sql perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make
  libtap-harness-archive-perl
The following NEW packages will be installed:
  adduser apache2 apache2-bin apache2-data apache2-utils ca-certificates krb5-locales libapr1t64 libaprutil1-dbd-sqlite3
  libaprutil1-ldap libaprutil1t64 libbrotli1 libcurl4t64 libexpat1 libgdbm-compat4t64 libgdbm6t64 libgssapi-krb5-2 libicu74
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
invoke-rc.d: could not determine current runlevel
invoke-rc.d: policy-rc.d denied execution of start.
Processing triggers for libc-bin (2.39-0ubuntu8.3) ...#####.
Processing triggers for ca-certificates (20240203) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
root@cdd5ef330780:/#
```

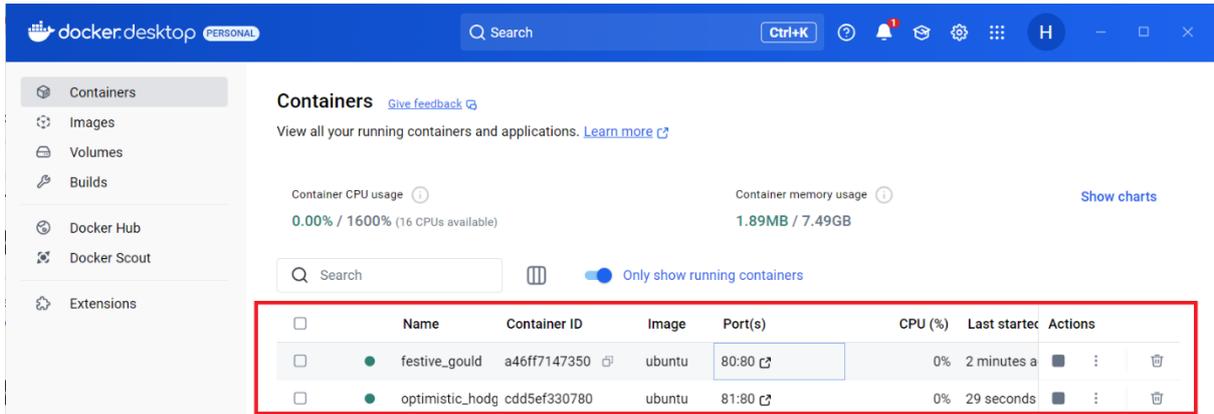
After install the apache2 we need to check the service of apache

So command is

service apache2 status

```
root@cdd5ef330780:/# service apache2 status
* apache2 is not running
root@cdd5ef330780:/#
```

```
root@cdd5ef330780:/# service apache2 start
* Starting Apache httpd web server apache2
*
root@cdd5ef330780:/#
```



Open the Web browser port no 81:80 so you will the below apache by default page.

