

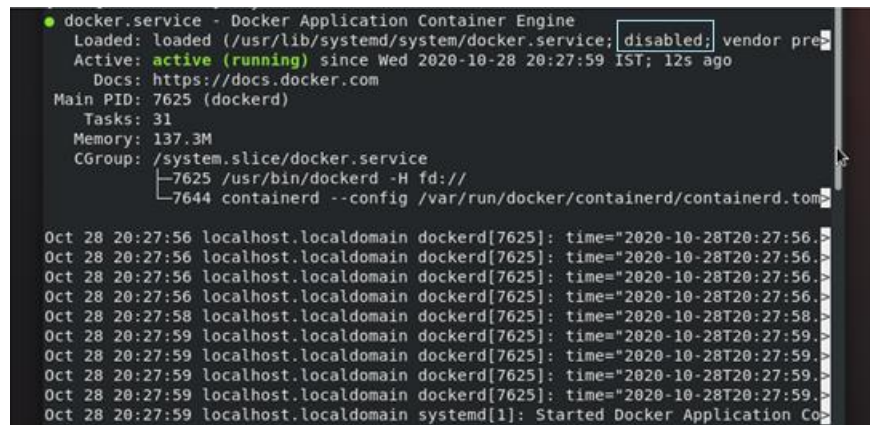
Docker Introduction:

1. Enable docker

Once you install docker, it becomes very tedious to start docker and check its status everytime you boot your system. Today, we shall learn how to enable docker so that it is activated everytime you login to the system.

To start the docker service: `systemctl start docker`

To check the status of docker: `systemctl status docker`



```
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: enabled)
   Active: active (running) since Wed 2020-10-28 20:27:59 IST; 12s ago
     Docs: https://docs.docker.com
    Main PID: 7625 (dockerd)
      Tasks: 31
     Memory: 137.3M
    CGroup: /system.slice/docker.service
            └─7625 /usr/bin/dockerd -H fd://
              └─7644 containerd --config /var/run/docker/containerd/containerd.toml

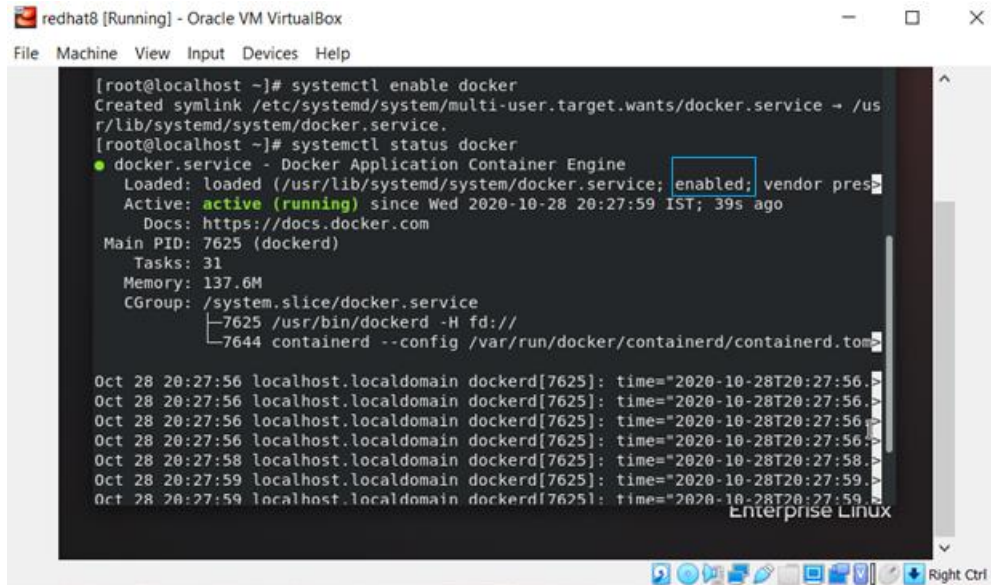
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.000000000Z" level=info msg="Starting up"
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.000000000Z" level=info msg="API listen on /var/run/docker.sock"
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:58 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:58.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:59.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:59.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:59.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:59.000000000Z" level=info msg="Listening for connections on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain systemd[1]: Started Docker Application Container Engine.
```

When you run the status command, you will see the screen as shown in the image. The blue box shows that the service is disabled. This means, when you reboot the system, the docker service will stop. You will have to use the `systemctl start docker` command to start it whenever you boot.

To get rid of this monotonous process, we can use a simple command.

Command to enable the docker service: `systemctl enable docker`.

Once you run this command, the similar screen will appear. But, at the place of disabled, you will find enabled. This means that the service is now enabled and you don't have to start the service everytime you boot your device.



```
[root@localhost ~]# systemctl enable docker
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/system/docker.service.
[root@localhost ~]# systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2020-10-28 20:27:59 IST; 39s ago
     Docs: https://docs.docker.com
   Main PID: 7625 (dockerd)
    Tasks: 31
   Memory: 137.6M
    CGroup: /system.slice/docker.service
            └─7625 /usr/bin/dockerd -H fd://
              └─7644 containerd --config /var/run/docker/containerd/containerd.toml

Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.275121900Z" level=info msg="Starting dockerd"
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.275121900Z" level=info msg="API listen on /var/run/docker.sock"
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.275121900Z" level=info msg="Listening for events on /var/run/docker.sock"
Oct 28 20:27:56 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:56.275121900Z" level=info msg="Listening for events on /var/run/docker.sock"
Oct 28 20:27:58 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:58.275121900Z" level=info msg="Listening for events on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:59.275121900Z" level=info msg="Listening for events on /var/run/docker.sock"
Oct 28 20:27:59 localhost.localdomain dockerd[7625]: time="2020-10-28T20:27:59.275121900Z" level=info msg="Listening for events on /var/run/docker.sock"
Enterprise Linux
```

2. Launching OS

Command `docker run -it --name sk_os centos:7`

Explaining the above command:

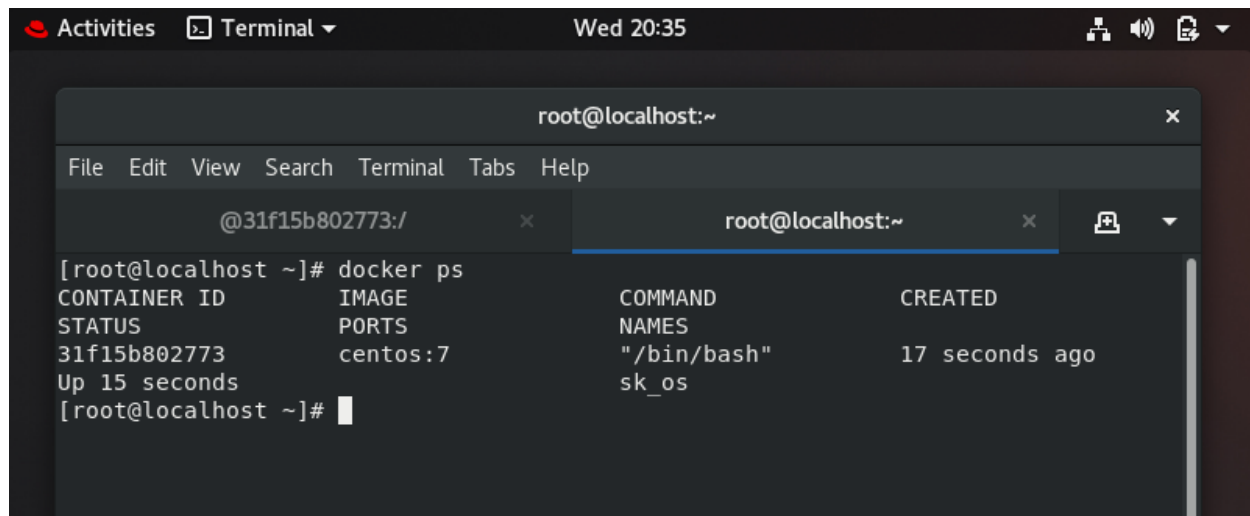
- `docker run` states that we want to run docker.
- `-it` can also be written as `-i -t`. `i` stands for interact and `t` for terminal. Basically, it lets you interact with the OS and provides a terminal to you.
- `--name sk_os`. This is a temporary part of the command. If we don't assign name to the OS that we are launching, docker assigns a default name to it.
- `centos:7` This basically stands for OSNAME:VERSION
- So, the command can also be : `docker run -i -t ubuntu:14.04`
- This command will provide a random name to the os

```
[root@localhost ~]# docker run -it --name sk_os centos:7
[root@31f15b802773 /]#
```

Launching new os with name `sk_os`

3. Checking the launched OS

Open a new tab and run command `docker ps`. This command will show you all the OS that is active on your system via docker. Right now, on the screen we can see that a centos of version 7, named `sk_os`, having a certain container id has been created around 17 seconds ago.



The image shows a terminal window titled "root@localhost:~" with a menu bar (File, Edit, View, Search, Terminal, Tabs, Help). Two tabs are open: "@31f15b802773:/" and "root@localhost:~". The active tab shows the output of the command `docker ps`, which lists a single container with ID 31f15b802773, image centos:7, command `"/bin/bash"`, and name `sk_os`. The container has been running for 17 seconds.

```
[root@localhost ~]# docker ps
CONTAINER ID   IMAGE      COMMAND                  CREATED
STATUS        PORTS     NAMES
31f15b802773   centos:7   "/bin/bash"             17 seconds ago
Up 15 seconds   sk_os
[root@localhost ~]#
```

Check on the other tab to see sk_os running.