DevOps Essentials Assignment 2

1. Create an AWS EC2 instance.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
RedhatLinux	i-0ce8f2fdf15c7eea2	Running	t2.micro	-	No alarms	us-east-2c	ec2-52-14-157-1

2. sudo yum update

```
[ec2-user@ip-172-31-33-142 ~]$ sudo yum update
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.

Red Hat Update Infrastructure 3 Client Configuration Server 8                    13 kB/s | 2.1 kB     00:00
Red Hat Enterprise Linux 8 for x86_64 - AppStream from RHUI (RPMs)               17 kB/s | 2.8 kB     00:00
Red Hat Enterprise Linux 8 for x86_64 - AppStream from RHUI (RPMs)               30 MB/s |  32 MB     00:01
Red Hat Enterprise Linux 8 for x86_64 - BaseOS from RHUI (RPMs)                  12 kB/s | 2.4 kB     00:00
Red Hat Enterprise Linux 8 for x86_64 - BaseOS from RHUI (RPMs)                  25 MB/s |  35 MB     00:01
Dependencies resolved.
================================================================================
 Package                        Architecture  Version                                      Repository
================================================================================
Installing:
 kernel                         x86_64        4.18.0-305.12.1.el8_4                        rhel-8-baseos-rhui-rpms
 kernel-core                    x86_64        4.18.0-305.12.1.el8_4                        rhel-8-baseos-rhui-rpms
 kernel-modules                 x86_64        4.18.0-305.12.1.el8_4                        rhel-8-baseos-rhui-rpms
Upgrading:
 NetworkManager                 x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-adsl            x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-bluetooth       x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-cloud-setup     x86_64        1:1.30.0-10.el8_4                            rhel-8-appstream-rhui-rpms
 NetworkManager-config-server   noarch        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-libnm           x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-team            x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-tui             x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-wifi            x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 NetworkManager-wwan            x86_64        1:1.30.0-10.el8_4                            rhel-8-baseos-rhui-rpms
 bpftool                        x86_64        4.18.0-305.12.1.el8_4                        rhel-8-baseos-rhui-rpms
 buildah                        x86_64        1.21.4-1.module+el8.4.0+11989+6676f7ad       rhel-8-appstream-rhui-rpms
 cloud-init                     noarch        20.3-10.el8_4.5                              rhel-8-appstream-rhui-rpms
 conmon                         x86_64        2:2.0.29-1.module+el8.4.0+11822+6cc1e7d7     rhel-8-appstream-rhui-rpms
 container-selinux              noarch        2:2.164.1-1.module+el8.4.0+11870+8b6f7018    rhel-8-appstream-rhui-rpms
 containernetworking-plugins    x86_64        0.9.1-1.module+el8.4.0+11822+6cc1e7d7        rhel-8-appstream-rhui-rpms
 containers-common              x86_64        1:1.3.1-5.module+el8.4.0+11990+22932769      rhel-8-appstream-rhui-rpms
 criu                           x86_64        3.15-1.module+el8.4.0+11822+6cc1e7d7         rhel-8-appstream-rhui-rpms
 crun                           x86_64        0.20.1-1.module+el8.4.0+11822+6cc1e7d7       rhel-8-appstream-rhui-rpms
 dhcp-client                    x86_64        12:4.3.6-44.el8_4.1                          rhel-8-baseos-rhui-rpms
 dhcp-common                    noarch        12:4.3.6-44.el8_4.1                          rhel-8-baseos-rhui-rpms
 dhcp-libs                      x86_64        12:4.3.6-44.el8_4.1                          rhel-8-baseos-rhui-rpms
```

3. sudo yum install docker

```
[ec2-user@ip-172-31-33-142 ~]$ sudo yum install docker
warning: rpmdb: BDB2053 Freeing read locks for locker 0x16f: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x170: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x171: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x172: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x173: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x174: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x175: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x176: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x177: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x178: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x179: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x17a: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x17b: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x17c: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x17d: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x17e: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x17f: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x180: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x181: 2292/140474308938624
warning: rpmdb: BDB2053 Freeing read locks for locker 0x182: 2292/140474308938624
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.

Last metadata expiration check: 0:04:00 ago on Sun 15 Aug 2021 03:22:03 PM UTC.
Dependencies resolved.
================================================================================
 Package             Architecture  Version                                  Repository                    Size
================================================================================
Installing:
 podman-docker       noarch        3.2.3-0.10.module+el8.4.0+11989+6676f7ad rhel-8-appstream-rhui-rpms    40 k
Upgrading:
 podman              x86_64        3.2.3-0.10.module+el8.4.0+11989+6676f7ad rhel-8-appstream-rhui-rpms    12 M
 podman-catatonit    x86_64        3.2.3-0.10.module+el8.4.0+11989+6676f7ad rhel-8-appstream-rhui-rpms   325 k

Transaction Summary
================================================================================
Install  1 Package
Upgrade  2 Packages

Total size: 13 M
Total download size: 40 k
Is this ok [y/N]: y
Downloading Packages:
[SKIPPED] podman-catatonit-3.2.3-0.10.module+el8.4.0+11989+6676f7ad.x86_64.rpm: Already downloaded
[SKIPPED] podman-3.2.3-0.10.module+el8.4.0+11989+6676f7ad.x86_64.rpm: Already downloaded
(3/3): podman-docker-3.2.3-0.10.module+el8.4.0+11989+6676f7ad.noarch.rpm     315 kB/s |  40 kB     00:00
```

4. docker –version

```
[ec2-user@ip-172-31-33-142 ~]$ docker --version
Emulate Docker CLI using podman. Create /etc/containers/nodocker to quiet msg.
podman version 3.2.3
[ec2-user@ip-172-31-33-142 ~]$
```

5. service docker start

```
[ec2-user@ip-172-31-44-91 ~]$ sudo service docker start
Redirecting to /bin/systemctl start docker.service
[ec2-user@ip-172-31-44-91 ~]$
```

6. service docker status

```
[root@ip-172-31-44-91 ec2-user]# service docker status
Redirecting to /bin/systemctl status docker.service
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2021-08-15 15:53:52 UTC; 18min ago
```

7. docker run hello-world

```
[root@ip-172-31-44-91 ec2-user]# docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
b8dfde127a29: Pull complete
Digest: sha256:0fe98d7debd9049c50b597ef1f85b7c1e8cc81f59c8d623fcb2250e8bec85b38
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.
```

8. docker run -it ubuntu bash

```
[root@ip-172-31-44-91 ec2-user]# docker run -it ubuntu bash
Unable to find image 'ubuntu:latest' locally
latest: Pulling from library/ubuntu
16ec32c2132b: Pull complete
Digest: sha256:82becede498899ec668628e7cb0ad87b6e1c371cb8a1e597d83a47fac21d6af3
Status: Downloaded newer image for ubuntu:latest



oot@3a8b27afd009: /root@3a8b27afd009:/#
oot@3a8b27afd009: /root@3a8b27afd009:/#
oot@3a8b27afd009: /root@3a8b27afd009:/#
oot@3a8b27afd009: /root@3a8b27afd009:/#
```

9. docker volume create

```
[root@ip-172-31-44-91 ec2-user]# docker volume create
ba9e210f463bd90e24be47df119d68f7199f41ede8c4a7b28e5fd4d6ae6d012a
```

10. docker volume ls

```
[root@ip-172-31-44-91 ec2-user]# docker volume ls
DRIVER    VOLUME NAME
local     a2b4dd9705cbe0586f4ae8fde6666d811b5a6534fe37404450a4d928b5bbfa20
local     ba9e210f463bd90e24be47df119d68f7199f41ede8c4a7b28e5fd4d6ae6d012a
[root@ip-172-31-44-91 ec2-user]#
```

11. docker volume inspect [volume_id]

```
[root@ip-172-31-44-91 ec2-user]# docker volume inspect ba9e210f463bd90e24be47df119d68f7199f41ede8c4a7b28e5fd4d6ae6d012a
[
    {
        "CreatedAt": "2021-08-15T16:21:06Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/ba9e210f463bd90e24be47df119d68f7199f41ede8c4a7b28e5fd4d6ae6d012a/_data",
        "Name": "ba9e210f463bd90e24be47df119d68f7199f41ede8c4a7b28e5fd4d6ae6d012a",
        "Options": {},
        "Scope": "local"
    }
]
```

12. docker volume rm [volume_id]

```
[root@ip-172-31-44-91 ec2-user]# docker volume rm a2b4dd9705cbe0586f4ae8fde6666d811b5a6534fe37404450a4d928b5bbfa20
a2b4dd9705cbe0586f4ae8fde6666d811b5a6534fe37404450a4d928b5bbfa20
[root@ip-172-31-44-91 ec2-user]#
```

13. service docker stop

```
[root@ip-172-31-44-91 ec2-user]# service docker stop
Redirecting to /bin/systemctl stop docker.service
```

14. docker

```
Management Commands:
  builder     Manage builds
  config      Manage Docker configs
  container   Manage containers
  context     Manage contexts
  image       Manage images
  manifest    Manage Docker image manifests and manifest lists
  network     Manage networks
  node        Manage Swarm nodes
  plugin      Manage plugins
  secret      Manage Docker secrets
  service     Manage services
  stack       Manage Docker stacks
  swarm       Manage Swarm
  system      Manage Docker
  trust       Manage trust on Docker images
  volume      Manage volumes

Commands:
  attach      Attach local standard input, output, and error streams to a running container
  build       Build an image from a Dockerfile
  commit      Create a new image from a container's changes
  cp          Copy files/folders between a container and the local filesystem
  create      Create a new container
  diff        Inspect changes to files or directories on a container's filesystem
  events      Get real time events from the server
  exec        Run a command in a running container
  export      Export a container's filesystem as a tar archive
  history     Show the history of an image
  images      List images
  import      Import the contents from a tarball to create a filesystem image
  info        Display system-wide information
  inspect     Return low-level information on Docker objects
```