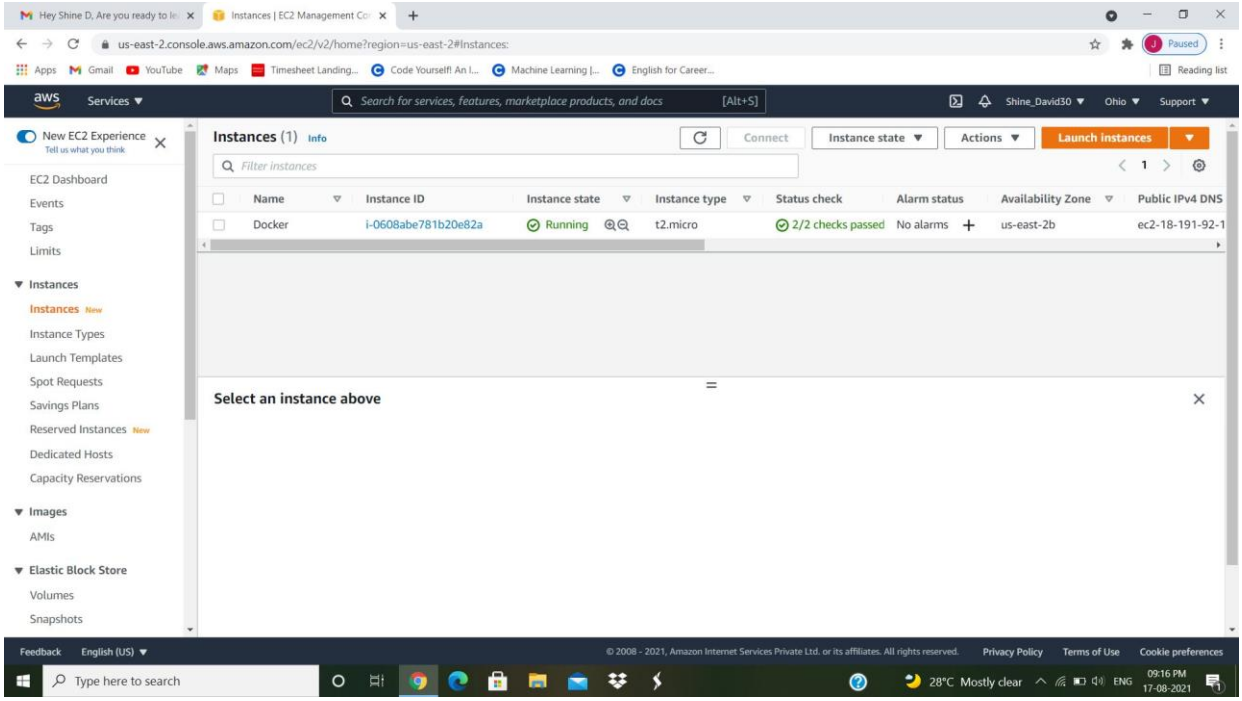
1. create an AWS EC2 instance



2. sudo yum update

```
[ec2-user@ip-172-31-28-32 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core                                                               | 3.7 kB  00:00:00
Resolving Dependencies
--> Running transaction check
---> Package curl.x86_64 0:7.61.1-12.amzn2.0.4 will be updated
---> Package curl.x86_64 0:7.76.1-4.amzn2.0.1 will be an update
---> Package ec2-utils.noarch 0:1.2-44.amzn2 will be updated
---> Package ec2-utils.noarch 0:1.2-45.amzn2 will be an update
---> Package grub2.x86_64 1:2.06-2.amzn2.0.1 will be obsoleted
---> Package grub2.x86_64 1:2.06-2.amzn2.0.3 will be obsoleting
---> Package grub2-common.noarch 1:2.06-2.amzn2.0.1 will be updated
---> Package grub2-common.noarch 1:2.06-2.amzn2.0.3 will be an update
---> Package grub2-efi-x64-ec2.x86_64 1:2.06-2.amzn2.0.1 will be updated
---> Package grub2-efi-x64-ec2.x86_64 1:2.06-2.amzn2.0.3 will be an update
---> Package grub2-pc.x86_64 1:2.06-2.amzn2.0.1 will be updated
---> Package grub2-pc.x86_64 1:2.06-2.amzn2.0.3 will be obsoleting
---> Package grub2-pc-modules.noarch 1:2.06-2.amzn2.0.1 will be updated
---> Package grub2-pc-modules.noarch 1:2.06-2.amzn2.0.3 will be an update
---> Package grub2-tools.x86_64 1:2.06-2.amzn2.0.1 will be obsoleted
---> Package grub2-tools.x86_64 1:2.06-2.amzn2.0.3 will be obsoleting
---> Package grub2-tools-efi.x86_64 1:2.06-2.amzn2.0.3 will be obsoleting
---> Package grub2-tools-extra.x86_64 1:2.06-2.amzn2.0.3 will be obsoleting
---> Package grub2-tools-minimal.x86_64 1:2.06-2.amzn2.0.1 will be updated
```

3. sudo yum install docker

```
[ec2-user@ip-172-31-28-32 ~]$ sudo yum install docker
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
---> Package docker.x86_64 0:20.10.4-1.amzn2 will be installed
--> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.4-1.amzn2.x86_64
--> Processing Dependency: libcgroup >= 0.40.rc1-5.15 for package: docker-20.10.4-1.amzn2.x86_64
--> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.4-1.amzn2.x86_64
--> Processing Dependency: pigz for package: docker-20.10.4-1.amzn2.x86_64
--> Running transaction check
---> Package containerd.x86_64 0:1.4.6-2.amzn2 will be installed
---> Package libcgroup.x86_64 0:0.41-21.amzn2 will be installed
---> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
---> Package runc.x86_64 0:1.0.0-1.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================================================
 Package                     Arch                 Version                    Repository                   Size
================================================================================================================
Installing:
 docker                      x86_64               20.10.4-1.amzn2            amzn2extra-docker            32 M
Installing for dependencies:
 containerd                  x86_64               1.4.6-2.amzn2              amzn2extra-docker            24 M
 libcgroup                   x86_64               0.41-21.amzn2              amzn2-core                   66 k
 pigz                        x86_64               2.3.4-1.amzn2.0.1          amzn2-core                   81 k
 runc                        x86_64               1.0.0-1.amzn2              amzn2extra-docker           3.3 M

Transaction Summary
================================================================================================================
```

4. docker

```
[ec2-user@ip-172-31-28-32 ~]$ docker

Usage:  docker [OPTIONS] COMMAND

A self-sufficient runtime for containers

Options:
      --config string      Location of client config files (default "/home/ec2-user/.docker")
  -c, --context string     Name of the context to use to connect to the daemon (overrides DOCKER_HOST env var and default context set with "docker
                           context use")
  -D, --debug              Enable debug mode
  -H, --host list          Daemon socket(s) to connect to
  -l, --log-level string   Set the logging level ("debug"|"info"|"warn"|"error"|"fatal") (default "info")
      --tls                Use TLS; implied by --tlsverify
      --tlscacert string   Trust certs signed only by this CA (default "/home/ec2-user/.docker/ca.pem")
      --tlscert string     Path to TLS certificate file (default "/home/ec2-user/.docker/cert.pem")
      --tlskey string      Path to TLS key file (default "/home/ec2-user/.docker/key.pem")
      --tlsverify          Use TLS and verify the remote
  -v, --version            Print version information and quit

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
```

5. docker –version

```
[ec2-user@ip-172-31-28-32 ~]$ docker --version
Docker version 20.10.4, build d3cb89e
```

6. service docker start

```
[ec2-user@ip-172-31-28-32 ~]$ sudo service docker start
Redirecting to /bin/systemctl start docker.service
```

7. service docker status

```
[ec2-user@ip-172-31-28-32 ~]$ sudo 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 Tue 2021-08-17 15:10:56 UTC; 15s ago
     Docs: https://docs.docker.com
  Process: 9418 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)
  Process: 9408 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
 Main PID: 9426 (dockerd)
    Tasks: 7
   Memory: 37.6M
   CGroup: /system.slice/docker.service
           └─9426 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock --default-ulimit nofile=1024:4096

Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.353706126Z" level=info msg="scheme \"unix\" not r...e=grpc
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.353989041Z" level=info msg="ccResolverWrapper: se...e=grpc
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.354259421Z" level=info msg="ClientConn switching ...e=grpc
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.402466708Z" level=info msg="Loading containers: start."
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.565220066Z" level=info msg="Default bridge (docke...dress"
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.622349681Z" level=info msg="Loading containers: done."
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.640081453Z" level=info msg="Docker daemon" commit...0.10.4
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.640593166Z" level=info msg="Daemon has completed ...ation"
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal systemd[1]: Started Docker Application Container Engine.
Aug 17 15:10:56 ip-172-31-28-32.us-east-2.compute.internal dockerd[9426]: time="2021-08-17T15:10:56.666718516Z" level=info msg="API listen on /run/do....sock"
Hint: Some lines were ellipsized, use -l to show in full.
```

8. service docker stop

```
[root@ip-172-31-28-32 ec2-user]# service docker stop
Redirecting to /bin/systemctl stop docker.service
Warning: Stopping docker.service, but it can still be activated by:
  docker.socket
```

9. docker run hello-world

```
[root@ip-172-31-28-32 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.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
 $ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
 https://hub.docker.com/

For more examples and ideas, visit:
 https://docs.docker.com/get-started/
```

10.Docker run -it ubuntu bash

```
[root@ip-172-31-28-32 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@6d5d2d671415: /root@6d5d2d671415:/# exit
exit
[root@ip-172-31-28-32 ec2-user]# docker info
Client:
 Context:    default
 Debug Mode: false

Server:
 Containers: 2
  Running: 0
  Paused: 0
  Stopped: 2
 Images: 2
 Server Version: 20.10.4
 Storage Driver: overlay2
  Backing Filesystem: xfs
  Supports d_type: true
  Native Overlay Diff: true
 Logging Driver: json-file
 Cgroup Driver: cgroupfs
 Cgroup Version: 1
 Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk syslog
```

11. Docker volume create

```
[root@ip-172-31-28-32 ec2-user]# docker volume create
ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf
```

12. docker volume inspect

```
[root@ip-172-31-28-32 ec2-user]# docker volume inspect ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf
[
    {
        "CreatedAt": "2021-08-17T15:24:08Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf/_data",
        "Name": "ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf",
        "Options": {},
        "Scope": "local"
    }
]
```

13. docker volume rm vol-id

```
[root@ip-172-31-28-32 ec2-user]# docker volume rm ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf
ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf
```

14. docker volume ls

```
[root@ip-172-31-28-32 ec2-user]# docker volume ls
DRIVER    VOLUME NAME
local     4d149ef5bcec9455cb6365070f13dd98aeadf63330aea14ca56072dfe93c3017
local     ddd446fa6952ba641f1c4c960e0df32610129d6dadb84eb772756619006b95cf
```

15. service docker stop

```
[root@ip-172-31-28-32 ec2-user]# service docker stop
Redirecting to /bin/systemctl stop docker.service
Warning: Stopping docker.service, but it can still be activated by:
  docker.socket
```

16. sudo yum remove docker

```
[ec2-user@ip-172-31-28-32 ~]$ sudo yum remove docker
oaded plugins: extras_suggestions, langpacks, priorities, update-motd
esolving Dependencies
-> Running transaction check
--> Package docker.x86_64 0:20.10.4-1.amzn2 will be erased
-> Finished Dependency Resolution
amzn2-core/2/x86_64                                                                                          | 3.7 kB  00:00:00

ependencies Resolved

================================================================================================================================
 Package                      Arch                         Version                          Repository                      Size
================================================================================================================================
Removing:
 docker                       x86_64                       20.10.4-1.amzn2                  @amzn2extra-docker             136 M

ransaction Summary
================================================================================================================================
emove  1 Package

nstalled size: 136 M
s this ok [y/N]: y
ownloading packages:
unning transaction check
unning transaction test
ransaction test succeeded
unning transaction
  Erasing    : docker-20.10.4-1.amzn2.x86_64                                                                                 1/1
  Verifying  : docker-20.10.4-1.amzn2.x86_64                                                                                 1/1

emoved:
  docker.x86_64 0:20.10.4-1.amzn2
```