DevOps Essentials

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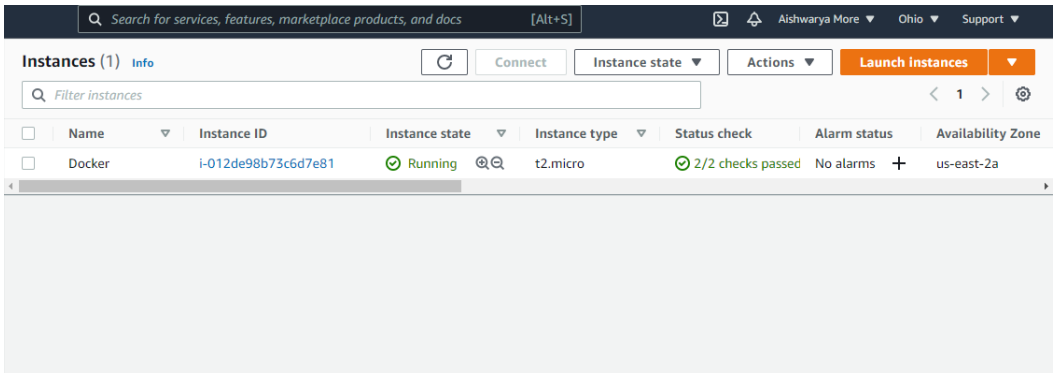
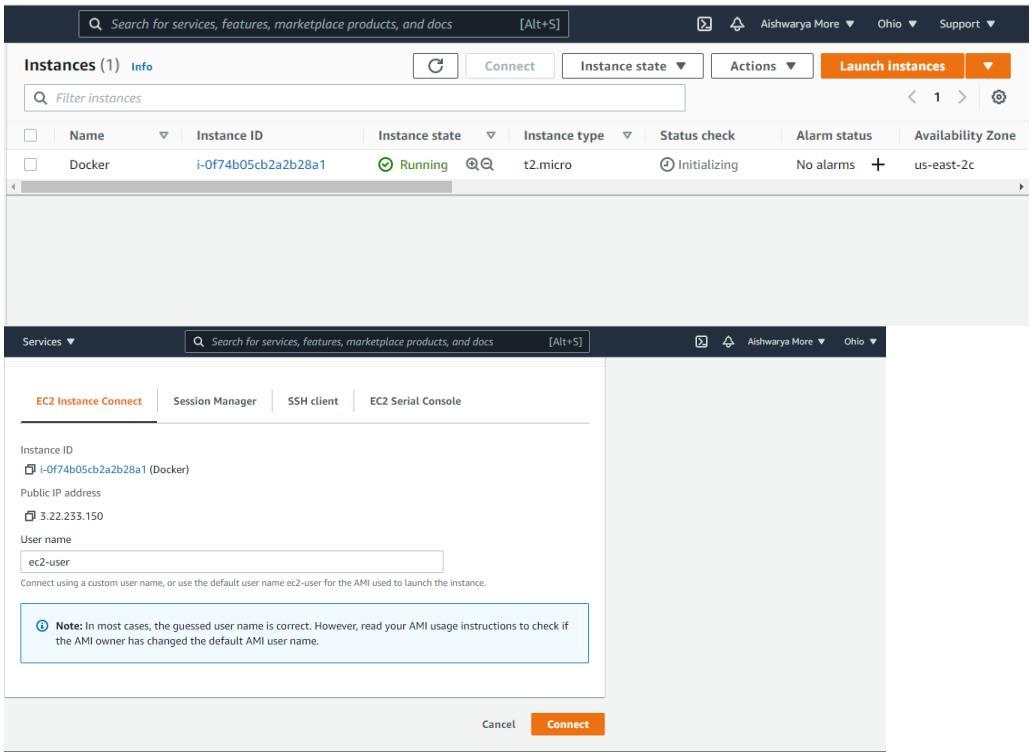
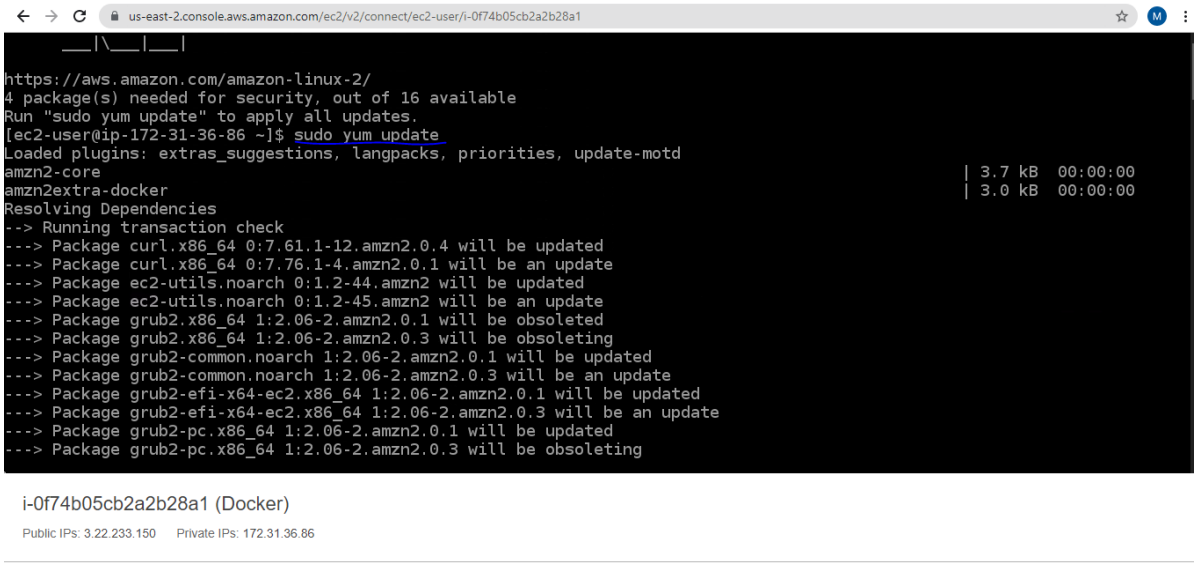
Assignment2 - Working with Docker

1. Create an AWS EC2 instance

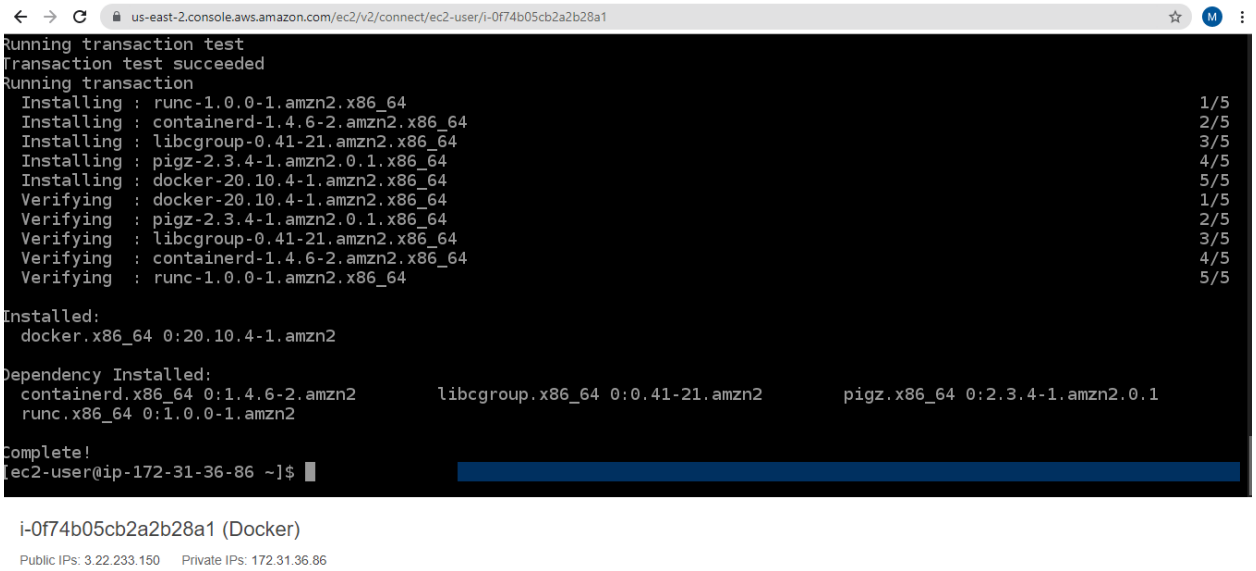




2. Sudo yum update



3. Sudo yum install docker



4. docker

```
[ec2-user@ip-172-31-36-86 ~]$ 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:
```

i-0f74b05cb2a2b28a1 (Docker)

Public IPs: 3.22.233.150 Private IPs: 172.31.36.86

5. docker --version

```
[ec2-user@ip-172-31-36-86 ~]$ docker --version
Docker version 20.10.4, build d3cb89e
[ec2-user@ip-172-31-36-86 ~]$
```

i-0f74b05cb2a2b28a1 (Docker)

Public IPs: 3.22.233.150 Private IPs: 172.31.36.86

6. service docker start

```
[ec2-user@ip-172-31-36-86 ~]$ sudo service docker start
Redirecting to /bin/systemctl start docker.service
[ec2-user@ip-172-31-36-86 ~]$
```

7. service docker stop

```
[ec2-user@ip-172-31-36-86 ~]$ sudo service docker stop
Redirecting to /bin/systemctl stop docker.service
Warning: Stopping docker.service, but it can still be activated by:
  docker.socket
[ec2-user@ip-172-31-36-86 ~]$
```

8. service docker status

```
[ec2-user@ip-172-31-36-86 ~]$ 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: inactive (dead) since Tue 2021-08-17 12:07:15 UTC; 9s ago
     Docs: https://docs.docker.com
     Docs: https://docs.docker.com
     Docs: https://docs.docker.com
  Process: 13657 ExecStartPre=/usr/libexec/docker/docker-setup-runtimes.sh (code=exited, status=0/SUCCESS)
  Process: 13647 ExecStartPre=/bin/mkdir -p /run/docker (code=exited, status=0/SUCCESS)
 Main PID: 13670 (code=exited, status=0/SUCCESS)

Aug 17 12:06:51 ip-172-31-36-86.us-east-2.compute.internal dockerd[13670]: time="2021-08-17T12:06:51.432910534Z" leve...s"
Aug 17 12:06:51 ip-172-31-36-86.us-east-2.compute.internal dockerd[13670]: time="2021-08-17T12:06:51.468134208Z" leve...."
Aug 17 12:06:51 ip-172-31-36-86.us-east-2.compute.internal dockerd[13670]: time="2021-08-17T12:06:51.482062174Z" leve....4
Aug 17 12:06:51 ip-172-31-36-86.us-east-2.compute.internal dockerd[13670]: time="2021-08-17T12:06:51.482655774Z" leve...n"
Aug 17 12:06:51 ip-172-31-36-86.us-east-2.compute.internal systemd[1]: Started Docker Application Container Engine.
Aug 17 12:06:51 ip-172-31-36-86.us-east-2.compute.internal dockerd[13670]: time="2021-08-17T12:06:51.501388368Z" leve...k"
Aug 17 12:07:15 ip-172-31-36-86.us-east-2.compute.internal systemd[1]: Stopping Docker Application Container Engine...
Aug 17 12:07:15 ip-172-31-36-86.us-east-2.compute.internal dockerd[13670]: time="2021-08-17T12:07:15.946724777Z" leve..."
```

i-0f74b05cb2a2b28a1 (Docker)

Public IPs: 3.22.233.150 Private IPs: 172.31.36.86

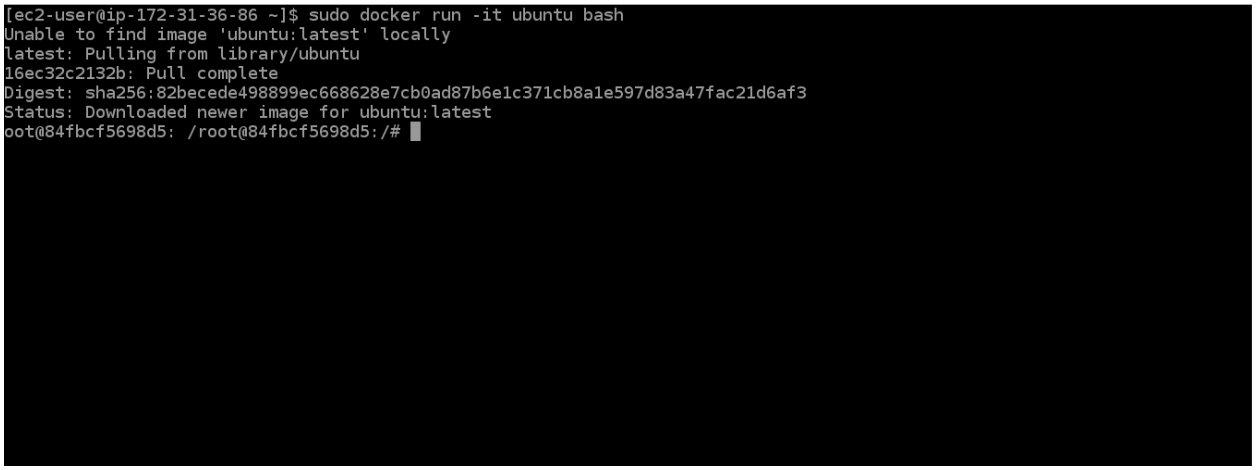
9. sudo docker run hello-world

```
[ec2-user@ip-172-31-36-86 ~]$ sudo 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.
```

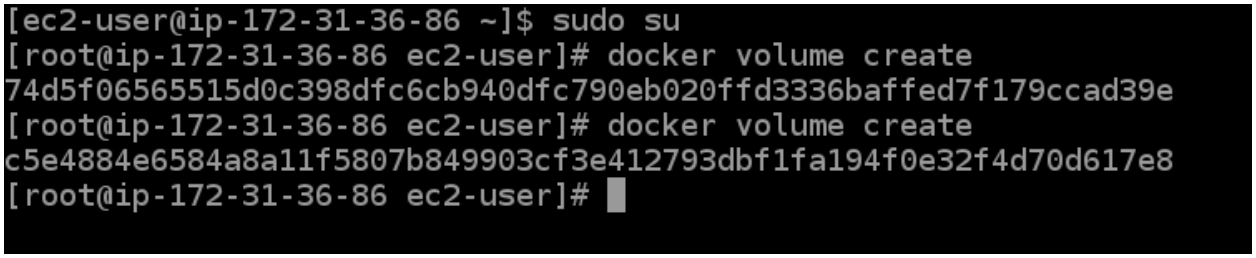
i-0f74b05cb2a2b28a1 (Docker)

Public IPs: 3.22.233.150 Private IPs: 172.31.36.86

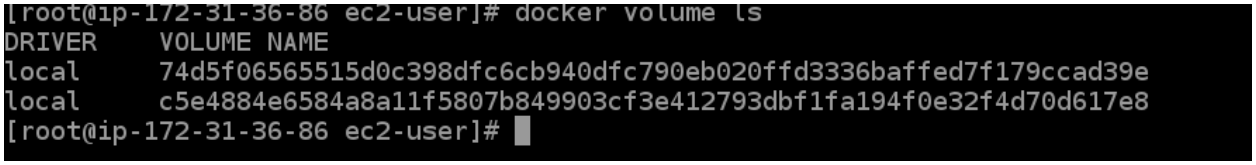
10. docker run –it ubuntu bash



11. docker volume create



12. docker volume ls



13. docker volume inspect <volume Id>

```
[root@ip-172-31-36-86 ec2-user]# docker volume ls
DRIVER    VOLUME NAME
local     74d5f06565515d0c398dfc6cb940dfc790eb020ffd3336baffed7f179ccad39e
local     c5e4884e6584a8a11f5807b849903cf3e412793dbf1fa194f0e32f4d70d617e8
[root@ip-172-31-36-86 ec2-user]# docker volume inspect 74d5f06565515d0c398dfc6cb940dfc790eb020ffd3336baffed7f179ccad39e
[
    {
        "CreatedAt": "2021-08-17T12:28:43Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/74d5f06565515d0c398dfc6cb940dfc790eb020ffd3336baffed7f179ccad39e/_data",
        "Name": "74d5f06565515d0c398dfc6cb940dfc790eb020ffd3336baffed7f179ccad39e",
        "Options": {},
        "Scope": "local"
    }
]
[root@ip-172-31-36-86 ec2-user]#
```

14. docker volume rm <volume Id>

```
[root@ip-172-31-36-86 ec2-user]# docker volume rm 74d5f06565515d0c398dfc6cb940dfc790eb020ffd3336baffed7f179ccad39e
74d5f06565515d0c398dfc6cb940dfc790eb020ffd3336baffed7f179ccad39e
[root@ip-172-31-36-86 ec2-user]# docker volume ls
DRIVER    VOLUME NAME
local     c5e4884e6584a8a11f5807b849903cf3e412793dbf1fa194f0e32f4d70d617e8
[root@ip-172-31-36-86 ec2-user]#
```

15. service docker stop

```
[root@ip-172-31-36-86 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
[root@ip-172-31-36-86 ec2-user]#
```