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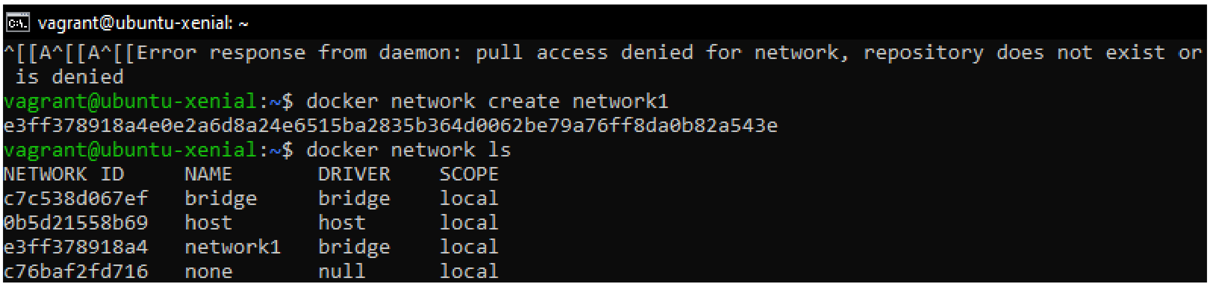
Cse-DevOps b1

EXPERIMENT-3

Aim- To create Docker network and attach it with Containers for connectivity.

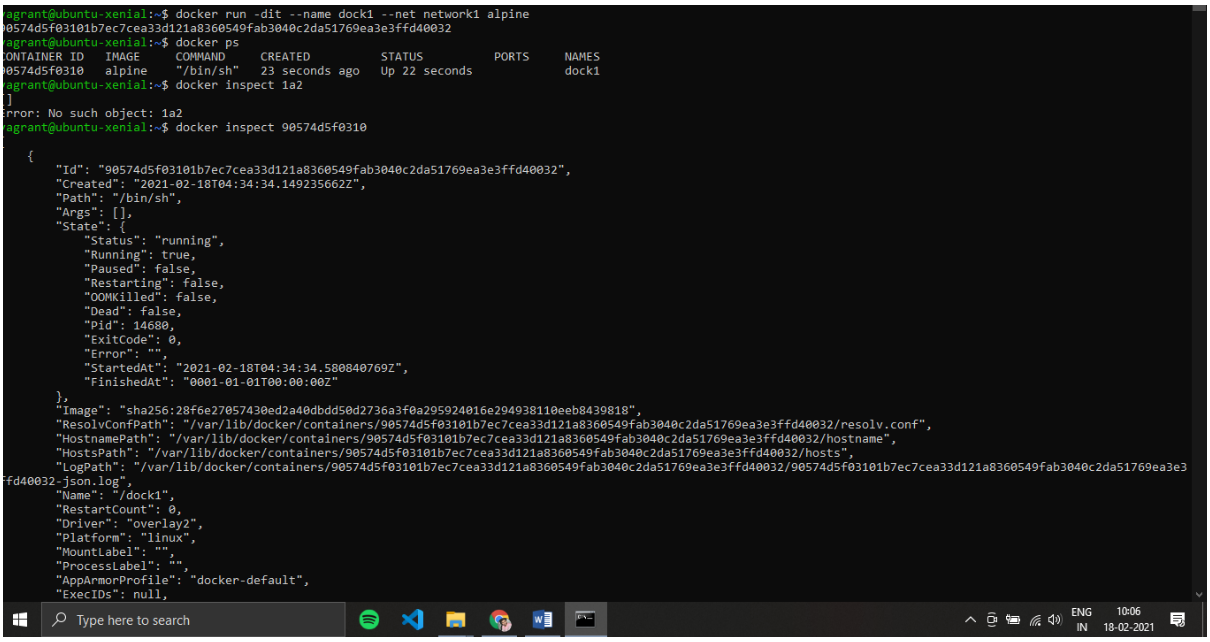
To create your own network use command **docker network create <network-name>**. To see all the existed network use command **docker network ls**.



vagrant@ubuntu-xenial: ~

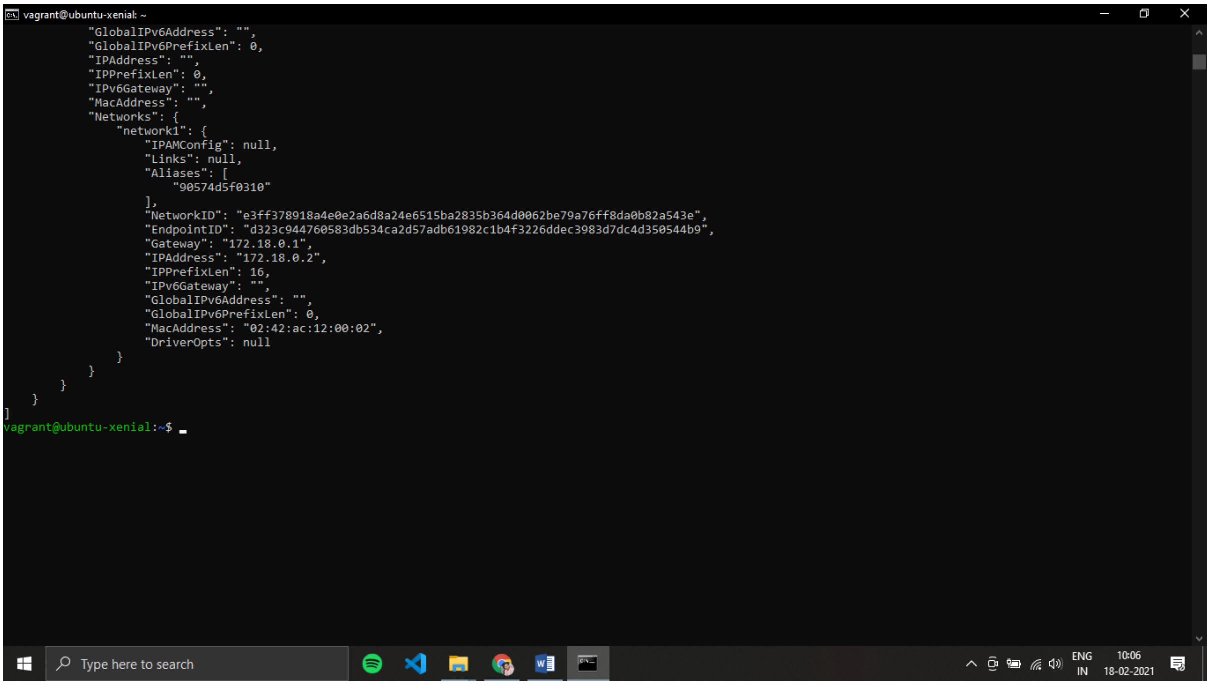
```
^[[A^[[A^[[Error response from daemon: pull access denied for network, repository does not exist or
 is denied
vagrant@ubuntu-xenial:~$ docker network create network1
e3ff378918a4e0e2a6d8a24e6515ba2835b364d0062be79a76ff8da0b82a543e
vagrant@ubuntu-xenial:~$ docker network ls
NETWORK ID     NAME       DRIVER    SCOPE
c7c538d067ef   bridge     bridge    local
0b5d21558b69   host       host      local
e3ff378918a4   network1   bridge    local
c76baf2fd716   none       null      local
```

To launch a container inside a network use option **--net=<network-name>** while launching a container.



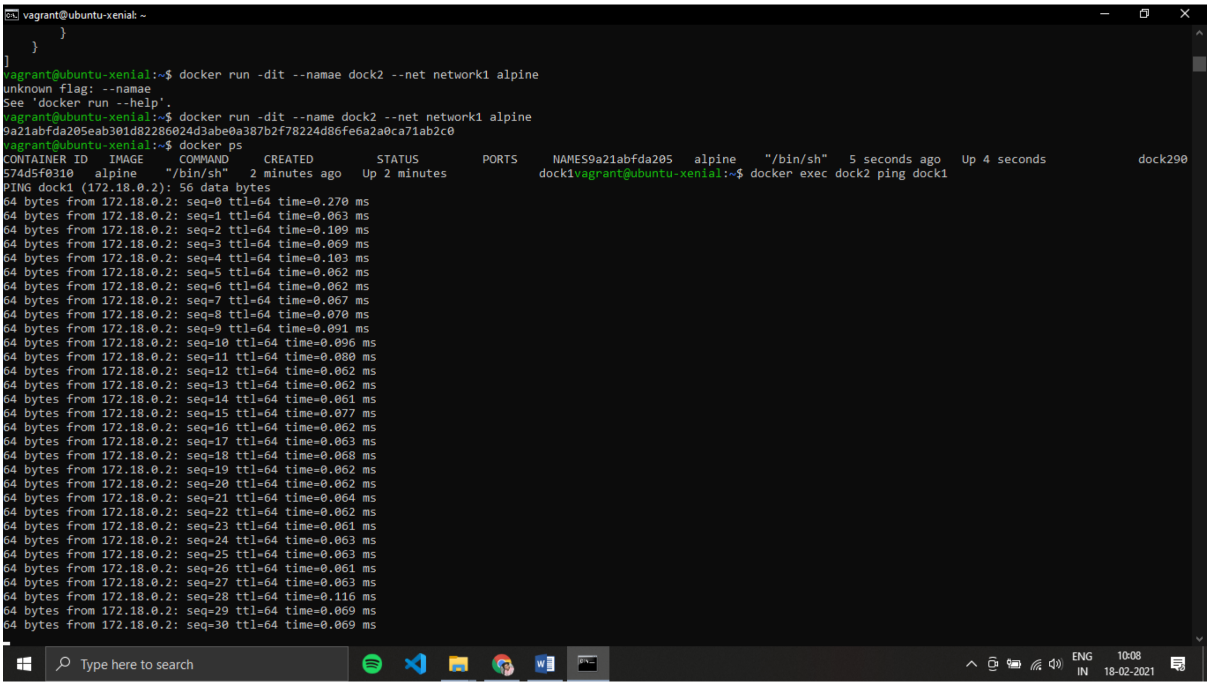
```
agrant@ubuntu-xenial:~$ docker run -dit --name dock1 --net network1 alpine
0574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3ffd40032
agrant@ubuntu-xenial:~$ docker ps
ONTAINER ID   IMAGE     COMMAND     CREATED          STATUS          PORTS     NAMES
0574d5f0310   alpine    "/bin/sh"   23 seconds ago   Up 22 seconds             dock1
agrant@ubuntu-xenial:~$ docker inspect 1a2
]
rror: No such object: 1a2
agrant@ubuntu-xenial:~$ docker inspect 90574d5f0310

    {
        "Id": "90574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3ffd40032",
        "Created": "2021-02-18T04:34:34.149235662Z",
        "Path": "/bin/sh",
        "Args": [],
        "State": {
            "Status": "running",
            "Running": true,
            "Paused": false,
            "Restarting": false,
            "OOMKilled": false,
            "Dead": false,
            "Pid": 14680,
            "ExitCode": 0,
            "Error": "",
            "StartedAt": "2021-02-18T04:34:34.580840769Z",
            "FinishedAt": "0001-01-01T00:00:00Z"
        },
        "Image": "sha256:28f6e27057430ed2a40dbdd50d2736a3f0a295924016e294938110eeb8439818",
        "ResolvConfPath": "/var/lib/docker/containers/90574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3ffd40032/resolv.conf",
        "HostnamePath": "/var/lib/docker/containers/90574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3ffd40032/hostname",
        "HostsPath": "/var/lib/docker/containers/90574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3ffd40032/hosts",
        "LogPath": "/var/lib/docker/containers/90574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3ffd40032/90574d5f03101b7ec7cea33d121a8360549fab3040c2da51769ea3e3
fd40032-json.log",
        "Name": "/dock1",
        "RestartCount": 0,
        "Driver": "overlay2",
        "Platform": "linux",
        "MountLabel": "",
        "ProcessLabel": "",
        "AppArmorProfile": "docker-default",
        "ExecIDs": null,
```



```
            "GlobalIPv6Address": "",
            "GlobalIPv6PrefixLen": 0,
            "IPAddress": "",
            "IPPrefixLen": 0,
            "IPv6Gateway": "",
            "MacAddress": "",
            "Networks": {
                "network1": {
                    "IPAMConfig": null,
                    "Links": null,
                    "Aliases": [
                        "90574d5f0310"
                    ],
                    "NetworkID": "e3ff378918a4e0e2a6d8a24e6515ba2835b364d0062be79a76ff8da0b82a543e",
                    "EndpointID": "d323c944760583db534ca2d57adb61982c1b4f3226ddec3983d7dc4d350544b9",
                    "Gateway": "172.18.0.1",
                    "IPAddress": "172.18.0.2",
                    "IPPrefixLen": 16,
                    "IPv6Gateway": "",
                    "GlobalIPv6Address": "",
                    "GlobalIPv6PrefixLen": 0,
                    "MacAddress": "02:42:ac:12:00:02",
                    "DriverOpts": null
                }
            }
        }
    }
]
vagrant@ubuntu-xenial:~$ _
```

To see the network details of the container and check if it is inside the specified network use command **docker inspect**.



```
        }
    }
]
vagrant@ubuntu-xenial:~$ docker run -dit --namae dock2 --net network1 alpine
unknown flag: --namae
See 'docker run --help'.
vagrant@ubuntu-xenial:~$ docker run -dit --name dock2 --net network1 alpine
9a21abfda205eab301d82286024d3abe0a387b2f78224d86fe6a2a0ca71ab2c0
vagrant@ubuntu-xenial:~$ docker ps
CONTAINER ID   IMAGE     COMMAND     CREATED         STATUS         PORTS     NAMES9a21abfda205   alpine    "/bin/sh"   5 seconds ago   Up 4 seconds             dock290
574d5f0310   alpine    "/bin/sh"   2 minutes ago   Up 2 minutes             dock1vagrant@ubuntu-xenial:~$ docker exec dock2 ping dock1
PING dock1 (172.18.0.2): 56 data bytes
64 bytes from 172.18.0.2: seq=0 ttl=64 time=0.270 ms
64 bytes from 172.18.0.2: seq=1 ttl=64 time=0.063 ms
64 bytes from 172.18.0.2: seq=2 ttl=64 time=0.109 ms
64 bytes from 172.18.0.2: seq=3 ttl=64 time=0.069 ms
64 bytes from 172.18.0.2: seq=4 ttl=64 time=0.103 ms
64 bytes from 172.18.0.2: seq=5 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=6 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=7 ttl=64 time=0.067 ms
64 bytes from 172.18.0.2: seq=8 ttl=64 time=0.070 ms
64 bytes from 172.18.0.2: seq=9 ttl=64 time=0.091 ms
64 bytes from 172.18.0.2: seq=10 ttl=64 time=0.096 ms
64 bytes from 172.18.0.2: seq=11 ttl=64 time=0.080 ms
64 bytes from 172.18.0.2: seq=12 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=13 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=14 ttl=64 time=0.061 ms
64 bytes from 172.18.0.2: seq=15 ttl=64 time=0.077 ms
64 bytes from 172.18.0.2: seq=16 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=17 ttl=64 time=0.063 ms
64 bytes from 172.18.0.2: seq=18 ttl=64 time=0.068 ms
64 bytes from 172.18.0.2: seq=19 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=20 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=21 ttl=64 time=0.064 ms
64 bytes from 172.18.0.2: seq=22 ttl=64 time=0.062 ms
64 bytes from 172.18.0.2: seq=23 ttl=64 time=0.061 ms
64 bytes from 172.18.0.2: seq=24 ttl=64 time=0.063 ms
64 bytes from 172.18.0.2: seq=25 ttl=64 time=0.063 ms
64 bytes from 172.18.0.2: seq=26 ttl=64 time=0.061 ms
64 bytes from 172.18.0.2: seq=27 ttl=64 time=0.063 ms
64 bytes from 172.18.0.2: seq=28 ttl=64 time=0.116 ms
64 bytes from 172.18.0.2: seq=29 ttl=64 time=0.069 ms
64 bytes from 172.18.0.2: seq=30 ttl=64 time=0.069 ms
```