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ubuntu@ip-172-31-1-96:~$ cat docker.sh
#!/bin/bash

# Update system packages
sudo apt-get update -y
sudo apt-get upgrade -y

# Install dependencies
sudo apt-get install -y ca-certificates curl gnupg lsb-release

# Create keyrings directory
sudo mkdir -p /etc/apt/keyrings

# Add Docker's official GPG key
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg
sudo chmod a+r /etc/apt/keyrings/docker.gpg

# Add Docker repository
echo \
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg] https://download.docker.com/linux/ubuntu \
$(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

# Update package index
sudo apt-get update -y

# Install Docker
sudo apt-get install -y docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin

# Start and enable Docker
sudo systemctl start docker
sudo systemctl enable docker

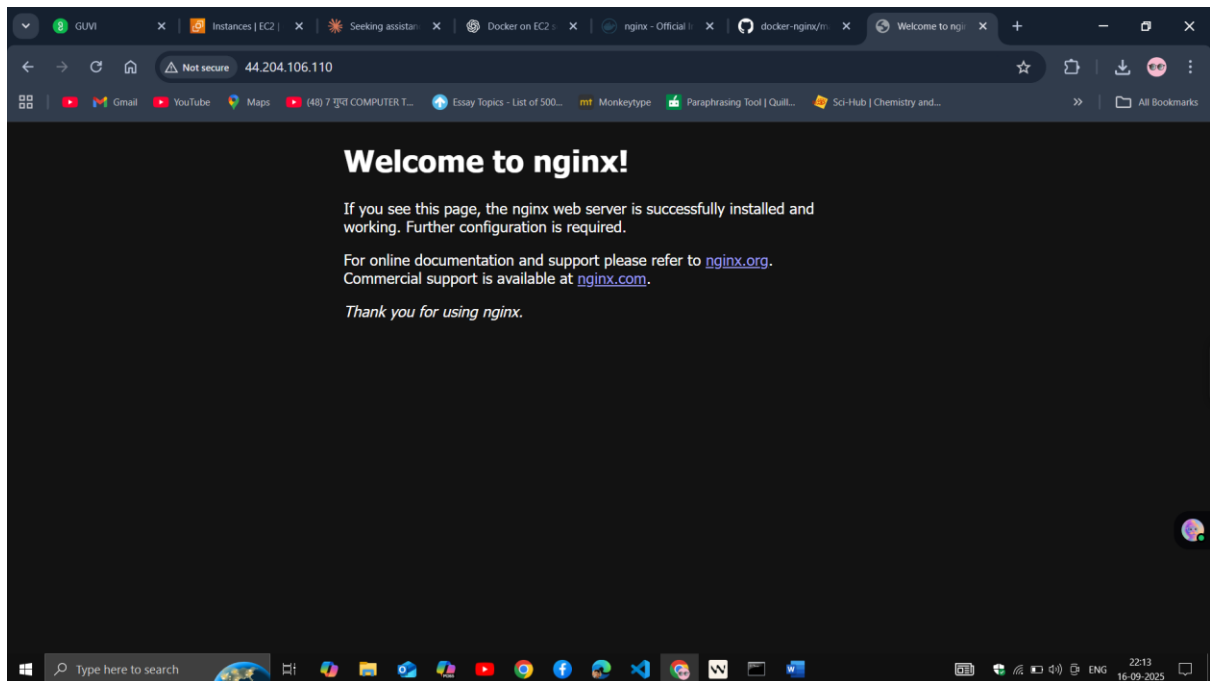
# Add current user to docker group
sudo usermod -aG docker $USER

# Verification
docker --version
docker run hello-world

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ubuntu@ip-172-31-1-96:~$ docker --version
Docker version 28.4.0, build d8eb465
ubuntu@ip-172-31-1-96:~$
```

```
root@ip-172-31-1-96:/home/ubuntu# docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
51e4222c6bfd81f28cb1f6b12fefa355e9708d8a08db5bc3f516945450e3fa
root@ip-172-31-1-96:/home/ubuntu# docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
51e4222c6bfd81f28cb1f6b12fefa355e9708d8a08db5bc3f516945450e3fa
root@ip-172-31-1-96:/home/ubuntu#
```



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root@ip-172-31-1-96:/home/ubuntu
root@ip-172-31-1-96:/home/ubuntu# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
root@ip-172-31-1-96:/home/ubuntu# docker run -d --name mynginx -p 80:80 nginx
51e4222c6bfdd01f28cb1f6b12fefa355e9708d8a08db5bc3f516945458e5fa
root@ip-172-31-1-96:/home/ubuntu# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
51e4222c6bfdd   nginx     "/docker-entrypoint..."  8 seconds ago   Up 7 seconds   0.0.0.0:80->80/tcp, [::]:80->80/tcp   mynginx
root@ip-172-31-1-96:/home/ubuntu# docker stop mynginx
mynginx
root@ip-172-31-1-96:/home/ubuntu# docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
51e4222c6bfdd   nginx     "/docker-entrypoint..."  4 minutes ago   Exited (0) 10 seconds ago           mynginx
root@ip-172-31-1-96:/home/ubuntu# docker rm mynginx
mynginx
root@ip-172-31-1-96:/home/ubuntu# docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
root@ip-172-31-1-96:/home/ubuntu#
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root@ip-172-31-1-96:/home/ubuntu
root@ip-172-31-1-96:/home/ubuntu# docker volume create myvolumeabhi
myvolumeabhi
root@ip-172-31-1-96:/home/ubuntu# docker run -d --name nginx-vol -v myvolume:/usr/share/nginx/html -p 8081:80 nginx
5d7d9313e493eebdc0113a8ca938a5c33881ce7cf463959b87e816322e57528
root@ip-172-31-1-96:/home/ubuntu# docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
5d7d9313e493   nginx     "/docker-entrypoint..."  14 seconds ago   Up 13 seconds   0.0.0.0:8081->80/tcp, [::]:8081->80/tcp   nginx-vol
root@ip-172-31-1-96:/home/ubuntu# docker volume ls
DRIVER    VOLUME NAME
local     myvolume
local     myvolumeabhi
root@ip-172-31-1-96:/home/ubuntu#
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root@ip-172-31-1-96:/home/ubuntu
Run 'docker run --help' for more information
root@ip-172-31-1-96:/home/ubuntu# docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
08264ef4b672   nginx     "/docker-entrypoint..."  2 minutes ago   Created             appl
5d7d9313e493   nginx     "/docker-entrypoint..."  4 minutes ago   Up 4 minutes        0.0.0.0:8081->80/tcp, [::]:8081->80/tcp   nginx-vol
root@ip-172-31-1-96:/home/ubuntu# docker volume ls
DRIVER      VOLUME NAME
local       myvolume
local       myvolumeabhi
root@ip-172-31-1-96:/home/ubuntu# docker network ls
NETWORK ID    NAME        DRIVER    SCOPE
c9a27baa1f4d   bridge     bridge    local
0cca300417e0   host       host      local
860b08227386   mynetworkabhi bridge    local
1f6f55813aae   none       null      local
root@ip-172-31-1-96:/home/ubuntu# docker run -d --name app2 --network mynetworkabhi nginx
bf3bc7bf35096338439af6bd2ac5a3ae13ee0155661fc380076966c1f13b486dd
root@ip-172-31-1-96:/home/ubuntu# docker network inspect mynetworkabhi
[
  {
    "Name": "mynetworkabhi",
    "Id": "860b082273865d71c4025d9a5d011b962b46d198ec9eb11bab3fcb10f63bbb",
    "Created": "2025-09-16T16:50:17.251860103Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv4": true,
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": {},
      "Config": [
        {
          "Subnet": "172.18.0.0/16",
          "Gateway": "172.18.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": [
      {
        "bf3bc7bf35096338439af6bd2ac5a3ae13ee0155661fc380076966c1f13b486dd": {
          "Name": "app2",
          "EndpointID": "00196981df640ca33e66f3433d0ae98359b3f67a99b1c2566787c3b3e1eaa0ab",
          "MacAddress": "60:07:22:94:9e:4e",
          "IPv4Address": "172.18.0.2/16",
          "IPv6Address": ""
        }
      }
    ],
    "Options": {}
  }
]
```