

Install docker

This is a simple guide on how to install docker on a raspberry pi

[Make sure you have sudo access to the PI!!]

To install docker itself i recommend using the

[documentation from docker](#) the documentation has a convenience script seen bellow

```
curl -fsSL https://get.docker.com -o get-docker.sh
sudo sh ./get-docker.sh
```

Then you need to allow your user to use docker commands without sudo

```
sudo usermod -aG docker $USER
```

Then you can either reboot or reload you server with the command bellow

```
newgrp docker
```

Example containers and configuration

In my favorite way to do docker compose files is a structure like this

/docker/[Projectname]/compose.yml

so we create the docker directory, allow the user to read and write in the directory and also creating a symbolic link to the directory in the home directory

```
sudo mkdir /docker
sudo chown $USER:$USER /docker
sudo ln -s /docker
```

Breakdown of the commands

- ``sudo mkdir /docker``: Creates a new directory called ``docker`` in the root directory. (Root directory is ``/``)
- ``sudo chown $USER:$USER /docker``: Changes the ownership of the ``/docker`` directory to the current user, allowing read and write access.

- ``sudo ln -s /docker``: Creates a symbolic link to the ``/docker`` directory in the current user's home directory, making it easier to access.

Other important commands

- ``docker compose up -d``: Starts the Docker containers defined in the ``compose.yml`` file in detached mode, allowing them to run in the background. The ``-d`` flag stands for "detached mode".
- ``docker compose down``: Stops and removes the containers defined in the ``compose.yml`` file, cleaning up resources.

Creating a pihole installation

> This is just a excerpt from the [pihole documentation](https://docs.pi-hole.net/)

following the structure we make a new directory in /docker

```
mkdir /docker/pihole
cd /docker/pihole
nano compose.yml
```

then copy the pihole example compose file from below

```
# More info at https://github.com/pi-hole/docker-pi-hole/ and https://docs.pi-hole.net/
services:
  pihole:
    container_name: pihole
    image: pihole/pihole:latest
    ports:
      # DNS ports
      - "53:53/tcp"
      - "53:53/udp"
      # WEB GUI
      - "80:80/tcp"
      - "443:443/tcp"
      # DHCP
      - "67:67/udp"
    environment:
      TZ: 'Europe/Oslo'
      FTLCONF_webserver_api_password: '(change me)'
      FTLCONF_dns_listeningMode: 'all'
    volumes:
      - './etc-pihole:/etc/pihole'
```

```
cap_add:
  - NET_ADMIN
  - SYS_TIME
  - SYS_NICE
restart: unless-stopped
```

Save and exit and now we are ready to start pihole with this will create a configuration directory

```
docker compose up -d
```

Creating a Minecraft Server

> This is just a excerpt from the [itzg docker minecraft server documentation](#)

folowing the structure we make a new directory in /docker

```
mkdir /docker/minecraft
cd /docker/minecraft
nano compose.yml
```

then copy the pihole example compose file from below

```
services:
  mc:
    image: itzg/minecraft-server
    tty: true
    stdin_open: true
    ports:
      - "25565:25565"
    environment:
      EULA: "TRUE"
    volumes:
      # attach the relative directory 'data' to the container's /data path
      - ./data:/data
```

Save and exit and now we are ready to start pihole with this will create a configuration directory

```
docker compose up -d
```

And then you can access your minecraft server with the ip specified by the command

```
ip a
```

Specificaly this ip address

```
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether bc:24:11:53:e0:3f brd ff:ff:ff:ff:ff:ff
    altname enp0s18
    inet 10.11.10.10/24 metric 100 brd 10.11.10.255 scope global dynamic eth0
        valid_lft 4697sec preferred_lft 4697sec
    inet6 fe80::be24:11ff:fe53:e03f/64 scope link
        valid_lft forever preferred_lft forever
```

Revision #2

Created 2025-11-19 12:03:03 UTC by olikol

Updated 2025-11-19 12:17:39 UTC by olikol