

# Docker on vpsAdminOS

We support latest version of Docker on our [vpsAdminOS](#) servers.

Please keep in mind there is no compatibility with latest version on [OpenVZ](#).

## Installation

First of all we need to enable **Docker** and **FUSE** feature in VPS overview on [vpsAdmin](#). If you cant see these features, you are **not** running on [vpsAdminOS](#) and therefore need to [create one](#)

As there are not everytime latest packages in distribution repos, we recommend to instead use the docker.com ones. Installation of these can be done easily on:

- [Ubuntu 18.04 LTS](#)
- [Fedora 28](#)
- [Debian 9](#)

Other distributions are not tested, but there is big chance they will be totally fine. Feel free to modify this page afterwise.

### Ubuntu 18.04 LTS

```
apt-get -y update
apt-get -y install apt-transport-https ca-certificates curl software-properties-common
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | apt-key add -
add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu bionic stable"
apt-get -y update
apt-get -y install docker-ce
```

### Fedora 33

The upstream version of docker *moby-engine* can be installed directly from Fedora repositories:

```
dnf install -y moby-engine
```

It's necessary to configure the *dockerd* daemon to run with `cgroupdriver=cgroupfs`, otherwise you encounter the following problem:

```
$ docker run hello-world
docker: Error response from daemon: OCI runtime create failed: cgroup v2 not enabled on this host, can't use systemd (rootless) as cgroups manager: unknown.
```

To configure the cgroup driver one needs to override the *ExecStart* for `docker.service`:

```
$ systemctl edit docker
ExecStart=/usr/bin/dockerd \
    --host=fd:// \
    --exec-opt native.cgroupdriver=cgroupfs \
    $OPTIONS
```

## General stuff

Checking that docker is running smoothly:

```
systemctl status docker.service

● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: e
   Active: active (running) since Sun 2020-02-23 14:55:22 UTC; 9s ago
     Docs: https://docs.docker.com
    Main PID: 2893 (dockerd)
      Tasks: 30
     CGroup: /system.slice/docker.service
            └─2893 /usr/bin/dockerd -H fd:// --
containerd=/run/containerd/contain
```

If service “`docker.service`” will not get up, its probably this (already fixed) [bug in containerd](#). To solve this bug we can replace `/sbin/modprobe`, or modify `containerd.service` with changes of value `ExecStartPre`.

```
mv /sbin/modprobe /sbin/modprobe.old && ln -s /bin/true /sbin/modprobe
```

Now we can try `docker run hello-world`:

```
docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.
[...]
```

Test of networking can be done with:

```
docker run -it alpine ping -c 3 vpsfree.cz
```

## Docker-in-Docker

Docker-in-Docker does not work by itself, because Docker is trying to connect `/sys/kernel/security`, which is not accessible in VPS because of kernel restriction. BUT there is one-line hack for this, with volume in bind-mount:

```
docker run -v /sys/kernel/security:/sys/kernel/security ...
```

## Something not working?

If any command result prints *permission denied* most likely its not enabled in AppArmor profile. We can fix this, but we really need to know way how to reproduce it and know your VPS ID. Come by to [IRC #vpsfree](#) / [#vpsadminos](#) or mail us on support.

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