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How to install simultaneously Docker and Podman on RHEL 8/CentOS 8

Frederic Pesquet · [Follow](#)

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Want to install both Docker CE and Podman on your RHEL/CentOS 8 machine? Here is how to do it.

Install BOTH



+



on



Background and motivations

Red Hat provides Podman as an alternative to Docker, and you can easily install it on a RHEL/CentOS 8 machine following [those instructions](#).

Installing Docker-CE is still possible on a RHEL/CentOS 8 machine, but it is more tricky. You can find instructions to do so for example [here](#) (and an older article [here](#) for some background).

But what if you want to install both on the same machine?

I needed both, because some features related to manifests are not yet on par between podman and docker, and the command line options are sometimes slightly different. Running a mix of podman-centric and docker-centric scripts is easier if you have both tools on the same machine.

I found no instructions to do so on the internet, so I gave it a try.

What is the issue to install both?

Basically the issue is simple:

- Docker CE installation requires a package containerd.io, provided also by Docker team
- This containerd.io package from Docker includes runc (the lower level container execution engine)
- This runc conflicts with the RHEL/CentOS 8 native runc package that is needed by Podman and Skopeo.

This is being worked on by Docker team, but not fixed yet, see [this issue](#).

To workaround this, the trick is to install Docker containerd.io package manually, excluding the problematic runc, then install Docker CE.

Docker will then use the runc from the RHEL/CentOS 8 platform (which is the same in fact), and will not collide with any package needed by Podman, Skopeo, etc.

How To

1- Let's start by installing Podman:

```
sudo dnf install podman
```

2- Now check it works:

```
sudo podman run hello-world
```

3- We can now move to docker install. The first step is to install Docker CE repository, but disabled as we don't want it to collide with packages of RHEL/CentOS 8

```
sudo dnf config-manager --add-repo=https://download.docker.com/linux/centos/docker-ce.repo
sudo dnf config-manager --set-disabled docker-ce-stable
```

4- We will now install Docker containerd.io package to prepare docker install, but directly from RPM, and excluding runc:

```
sudo rpm --install --nodeps --replacefiles --excludepath=/usr/bin/runc
https://download.docker.com/linux/centos/8/x86_64/stable/Packages/containerd.io-1.4.9-3.1.el8.x86_64.rpm
```

Notice this is the last version at the moment I write this, you might want to browse [the current packages](#) to upgrade to a newer one if needed.

5- We can now install Docker CE, enabling its repo just for this command:

```
sudo dnf install --enablerepo=docker-ce-stable docker-ce
```

6- Docker is installed, we can now enable the service as usual:

```
sudo systemctl enable --now docker
```

you may need also to add your current user to 'docker' group to run docker without sudo, see [docker CE post installation instructions](#)

7- Docker is now running flawlessly:

```
sudo docker run hello-world
```

8- And we can check that podman still works, too:

```
sudo podman run hello-world
```

9- As we did not perturbate any system package and the docker CE repository is not enabled by default, the system can still be upgraded as usual, without packages conflicts. So you can run for example:

```
sudo dnf update
```

and it will work flawlessly.

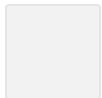
10- That's it!



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Written by Frederic Pesquet

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Responses (3)



What are your thoughts?

Respond



Antonio Abu Nassar

Oct 24, 2023



Thanks a lot for this! An additional step needed to be done on my RHEL 9.2 between steps 5 and 6 for the docker daemon to succeed to run: disabling iptables. Here's one way to do it:

1. Run `sudo systemctl edit docker` and type the following in the... [more](#)



1



1 reply

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JP Caparas

Nov 27, 2023



Thanks for the guide.

I should add that it might pay running these commands at the end:

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

```
$ newgrp docker
```

... to ensure that the active user has permissions to access the Docker socket, preventing errors like these:

...

permis... [more](#)



[Reply](#)



devops Alex

Mar 28, 2023



Thank you very much, really saving my time. For ppl using RHEL 8.7, plz install the latest version of containerd.io. Otherwise, it will still occur lots of dependency issues.



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