Installing Docker CE on RedHat/CentOS/Fedora

Goal:

The goal of this project is to install Docker CE on a RHEL 7 or CentOS 7 system.

NOTE: RHEL 8, CentOS 8, Fedora 30, and Fedora 31 are not officially supported by Docker at this time. Instructions on how to install Docker on these distros has been included, but they may not work. I cannot provide advice or help beyond what's in this document for these unsupported distros. Once they become supported I will update this document and provide support for those installations.

Instructions:

Become the root User

Root privileges are required to install and remove software. If a root password is set on your system and you know it, use the `su` command to switch to the root user. Execute the following command and supply the root password when prompted:

```
su -
```

If `sudo` is configured on your system, use it to switch to the root user:

```
sudo -i
```

To confirm that you are currently the root user, execute the following command:

```
whoami
```

If anything other than "root" is returned, please try again until "root" is returned.

Remove Any Existing Versions of Docker

To ensure clean installation of Docker CE, remove older versions of Docker from your system to prevent potential issues:

```
yum remove -y docker docker-client docker-client-latest docker-common
yum remove -y docker-latest docker-latest-logrotate docker-logrotate
yum remove -y docker-engine
```

You can safely ignore any warnings or errors from the above commands. You will likely see warnings if no older versions of docker were installed on your system.

Add the Official Docker Repository

Add the repository with this command:

```
yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
```

If you get a "command not found error" and are using RHEL 7 and CentOS 7, run these commands:

```
yum install -y yum-utils
yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
```

NOTE: RHEL/CentOS 8 is not currently supported by Docker. (See note at the beginning of this document.)

If you get a "command not found error" and are using RHEL 8 or CentOS 8, run these commands:

```
yum install -y dnf-utils
yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
```

Install Docker CE

For RHEL 7 or CentOS 7, install the Docker Engine and its associated packages:

```
yum install -y docker-ce docker-ce-cli containerd.io
```

NOTE: RHEL/CentOS 8 is not currently supported by Docker. (See note at the beginning of this document.)

For RHEL 8 or CentOS 8, install the Docker Engine and its associated packages:

```
yum install -y --nobest docker-ce docker-ce-cli containerd.io
```

Enable the Docker Engine to start at boot:

```
systemctl enable docker
```

Start the docker engine.

```
systemctl start docker
```

Test the Installation

Check that the Docker client is available and working by running the following command:

```
docker version
```

If you are on a RHEL or CentOS system, the installation is complete. Congratulations on installing Docker!

Required Kernel commandline Option for Fedora 31 and Later

NOTE: THIS STEP ONLY APPLIES TO FEDORA VERSION 31 AND LATER.

NOTE: Fedora versions beyond Fedora 29 are not currently supported by Docker. (See note at the beginning of this document.)

WARNING: If the following steps are not followed exactly, your Fedora system could become unbootable. Again, this IS NOT SUPPORTED so proceed ONLY IF you feel comfortable with the following steps, comfortable with the risk, and are able to support yourself through this process.

Even though the `docker version` command will successfully execute on a Fedora 31 system, an additional step needs to be taken before containers can be started. Edit the `/etc/default/grub` file and add the following text to the end of the `GRUB_CMDLINE_LINUX` before the closing quotation mark. (Add a space after the existing text.)

```
 systemd.unified_cgroup_hierarchy=0
```

Here is an example of an original GRUB_CMDLINE_LINUX line in the /etc/default/grub file. (NOTE: This is unique on each system so you will see something different.)

```
GRUB_CMDLINE_LINUX="resume=UUID=921c0c54-795"
```

Here is the line after the required edit is made:

```
GRUB_CMDLINE_LINUX="resume=UUID=921c0c54-795 systemd.unified_cgroup_hierarchy=0"
```

Generate a new grub configuration file:

```
grub2-mkconfig
```

Reboot your system:

```
reboot
```

Now you should be able to run containers on the Fedora 31 system.