

# Install Docker on CentOS

## Requirements and Recommendations

Before installing Docker on CentOS, review the general requirements and recommendations for running Docker on DC/OS and the following CentOS-specific recommendations:

- Use the Docker yum repository to install Docker on CentOS. The yum repository makes it easy to upgrade and automatically manages dependency installation.
- Prefer the OverlayFS storage driver. OverlayFS avoids known issues with `devicemapper` in `loop-lvm` mode and allows containers to use docker-in-docker, if they want.
- Use CentOS 7.2 or greater. OverlayFS support was improved in 7.2 to fix a bug with XFS.
- Format node storage as XFS with the `ftype=1` option. As of CentOS 7.2, “only XFS is currently supported for use as a lower layer file system”.

```
mkfs -t xfs -n ftype=1 /dev/sdc1
```

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## Installation Procedure

Follow the Docker CentOS-specific installation instructions.

## Example: Installing Docker with OverlayFS

The following instructions demonstrate how to use Docker with OverlayFS on CentOS 7.

1. Upgrade CentOS to 7.4:

```
sudo yum upgrade --assumeyes --tolerant
sudo yum update --assumeyes
```

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2. Verify that the kernel is at least 3.10:

```
uname -r
3.10.0-327.10.1.el7.x86_64
```

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3. Enable OverlayFS:

```
sudo tee /etc/modules-load.d/overlay.conf <<='EOF'
overlay
EOF
```

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4. Reboot to reload kernel modules:

```
reboot
```

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5. Verify that OverlayFS is enabled:

```
lsmod | grep overlay
overlay
```

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6. Configure yum to use the Docker yum repo:

```
sudo tee /etc/yum.repos.d/docker.repo <<- 'EOF'
[dockerrepo]
name=Docker Repository
baseurl=https://yum.dockerproject.org/repo/main/centos/$releasever/
enabled=1
gpgcheck=1
gpgkey=https://yum.dockerproject.org/gpg
EOF
```

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7. Configure systemd to run the Docker Daemon with OverlayFS:

```
sudo mkdir -p /etc/systemd/system/docker.service.d && sudo tee /etc/systemd/system/docker.service.d/override.conf <<- EOF
[Service]
ExecStart=
ExecStart=/usr/bin/dockerd --storage-driver=overlay
EOF
```

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8. Install the Docker engine, daemon, and service.

```
sudo yum install -y docker-engine-1.13.1 docker-engine-selinux-1.13.1
sudo systemctl start docker
sudo systemctl enable docker
```

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When the process completes, you should see:

```
Complete!
Created symlink from /etc/systemd/system/multi-user.target.wants/docker.service to /usr/lib/systemd/system/docker.service.
```

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9. Test that Docker is properly installed:

```
sudo docker ps
```

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For more generic Docker requirements, see System Requirements: Docker.