

# General: How do I install OrangeFS?

These instructions are tested on Bright 7.3 Centos7u3 for the head node and the compute nodes. The head node is the storage server.

- **Install the dependencies.**

```
[root@mg-73-centos73-ofs ~]# yum install libattr-devel db4-devel
```

- **Download the source code.**

```
[root@mg-73-centos73-ofs ~]# wget https://s3.amazonaws.com/download.orangefs.org/current/source/orangefs-2.9.6.tar.gz
[root@mg-73-centos73-ofs ~]# tar xzf orangefs-2.9.6.tar.gz
```

- **Build OrangeFS**

```
[root@mg-73-centos73-ofs ~]# cd orangefs-2.9.6
[root@mg-73-centos73-ofs orangefs-2.9.6]# ./configure --prefix=/opt/orangefs --with-kernel=/lib/modules/`uname -r`/build
[root@mg-73-centos73-ofs orangefs-2.9.6]# make
[root@mg-73-centos73-ofs orangefs-2.9.6]# make install
```

- **Compile and install the kernel module.**

```
[root@mg-73-centos73-ofs orangefs-2.9.6]# make kmod
[root@mg-73-centos73-ofs orangefs-2.9.6]# make kmod_prefix=/opt/orangefs kmod_install
```

- **Generate the server configuration.**

```
[root@mg-73-centos73-ofs orangefs-2.9.6]# /opt/orangefs/bin/pvfs2-genconfig /opt/orangefs/etc/orangefs-server.conf
```

- **Starting the services.**

```
[root@mg-73-centos73-ofs orangefs-2.9.6]# /opt/orangefs/sbin/pvfs2-server -f -a master /opt/orangefs/etc/orangefs-server.conf
[root@mg-73-centos73-ofs orangefs-2.9.6]# /opt/orangefs/sbin/pvfs2-server -a master /opt/orangefs/etc/orangefs-server.conf
```

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- **Configure the software images.**
  - **Create pvfs2tab inside the client's image and copy the binaries to the image.**

```
[root@mg-73-centos73-ofs orangesfs-2.9.6]# echo "" | grep "Alias" | awk '{ print $3 }' | head -n1 | mnt/orangefs pvfs2 defaults.noauto 0 0 >> /cm/images/default-image/etc/pvfs2tab
```

```
[root@mg-73-centos73-ofs orangesfs-2.9.6]# cp -r /opt/orangefs /cm/images/default-image/opt/
```

```
[root@mg-73-centos73-ofs orangesfs-2.9.6]# mkdir /cm/images/default-image/mnt/orangefs
```

- **Exclude kernel kernel-headers kernel-devel from updates in yum.conf on the head node and inside the image.**
- **Edit rc.local inside the software images of the clients by adding the following lines.**

```
/usr/sbin/inssmod `find /opt/orangefs -name pvfs2.ko`  
/opt/orangefs/sbin/pvfs2-client -p /opt/orangefs/sbin/pvfs2-client-core  
/usr/bin/mount -t pvfs2 tcp://master:3334/orangefs /mnt/orangefs
```

- **Reboot the nodes and wait until they come up.**
- **Make sure that the OrangeFS is mounted correctly.**

```
[root@mg-73-centos73-ofs orangesfs-2.9.6]# pdsh -g category=default mount | grep orange
```

```
node001: tcp://master:3334/orangefs on /mnt/orangefs type pvfs2 (rw,relatime)
```

```
node002: tcp://master:3334/orangefs on /mnt/orangefs type pvfs2 (rw,relatime)
```

```
node003: tcp://master:3334/orangefs on /mnt/orangefs type pvfs2 (rw,relatime)
```

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