BUILD CEPH

You can get Ceph software by retrieving Ceph source code and building it yourself. To build Ceph, you need to set up a development environment, compile Ceph, and then either install in user space or build packages and install the packages.

BUILD PREREQUISITES

> **Tip:**   Check this section to see if there are specific prerequisites for your Linux/Unix distribution.

Before you can build Ceph source code, you need to install several libraries and tools:

```
./install-deps.sh
```

> **Note:**   Some distributions that support Google's memory profiler tool may use a different package name (e.g., `libgoogle-perftools4`).

BUILD CEPH

Ceph is built using cmake. To build Ceph, navigate to your cloned Ceph repository and execute the following:

```
cd ceph
./do_cmake.sh
cd build
make
```

Hyperthreading

You can use `make -j` to execute multiple jobs depending upon your system. For example, `make -j4` for a dual core processor may build faster.

See Installing a Build to install a build in user space.

BUILD CEPH PACKAGES

To build packages, you must clone the Ceph repository. You can create installation packages from the latest code using `dpkg-buildpackage` for Debian/Ubuntu or `rpmbuild` for the RPM Package Manager.

> **Tip:**   When building on a multi-core CPU, use the `-j` and the number of cores * 2. For example, use `-j4` for a dual-core processor to accelerate the build.

ADVANCED PACKAGE TOOL (APT)

To create `.deb` packages for Debian/Ubuntu, ensure that you have cloned the Ceph repository, installed the Build Prerequisites and installed `debhelper`:

```
sudo apt-get install debhelper
```

Once you have installed debhelper, you can build the packages:

```
sudo dpkg-buildpackage
```

For multi-processor CPUs use the `-j` option to accelerate the build.

RPM PACKAGE MANAGER

To create `.rpm` packages, ensure that you have cloned the Ceph repository, installed the Build Prerequisites and installed `rpm-build` and `rpmdevtools`:

```
yum install rpm-build rpmdevtools
```

Once you have installed the tools, setup an RPM compilation environment:

```
rpmdev-setuptree
```

Fetch the source tarball for the RPM compilation environment:

```
wget -P ~/rpmbuild/SOURCES/ https://download.ceph.com/tarballs/ceph-<versi
```

Or from the EU mirror:

```
wget -P ~/rpmbuild/SOURCES/ http://eu.ceph.com/tarballs/ceph-<version>.tar
```

Extract the specfile:

```
tar --strip-components=1 -C ~/rpmbuild/SPECS/ --no-anchored -xvjf ~/rpmbui
```

Build the RPM packages:

```
rpmbuild -ba ~/rpmbuild/SPECS/ceph.spec
```

For multi-processor CPUs use the -j option to accelerate the build.