

OPERATING A CLUSTER

RUNNING CEPH WITH UPSTART

When deploying Ceph Cuttlefish and beyond with `ceph-deploy`, you may start and stop Ceph daemons or the entire cluster using the event-based **Upstart**. Upstart does not require you to define daemon instances in the Ceph configuration file (although, they are still required for `sysvinit` should you choose to use it).

To list the Ceph Upstart jobs and instances, execute:

```
sudo initctl list | grep ceph
```

See **initctl** for additional details.

STARTING A CLUSTER

To start the cluster, execute the following:

```
sudo start ceph-all
```

STOPPING A CLUSTER

To stop the cluster, execute the following:

```
sudo stop ceph-all
```

STARTING ALL DAEMONS BY TYPE

To start all daemons of a particular type, execute one of the following:

```
sudo start ceph-osd-all  
sudo start ceph-mon-all  
sudo start ceph-mds-all
```

STOPPING ALL DAEMONS BY TYPE

To stop all daemons of a particular type, execute one of the following:

```
sudo stop ceph-osd-all  
sudo stop ceph-mon-all  
sudo stop ceph-mds-all
```

STARTING A DAEMON

To start a specific daemon instance, execute one of the following:

```
sudo start ceph-osd id={id}  
sudo start ceph-mon id={hostname}  
sudo start ceph-mds id={hostname}
```

For example:

```
sudo start ceph-osd id=1
sudo start ceph-mon id=ceph-server
sudo start ceph-mds id=ceph-server
```

STOPPING A DAEMON

To stop a specific daemon instance, execute one of the following:

```
sudo stop ceph-osd id={id}
sudo stop ceph-mon id={hostname}
sudo stop ceph-mds id={hostname}
```

For example:

```
sudo stop ceph-osd id=1
sudo start ceph-mon id=ceph-server
sudo start ceph-mds id=ceph-server
```

RUNNING CEPH AS A SERVICE

When you deploy Ceph Argonaut or Bobtail with `mkcephfs`, use the service or traditional `sysvinit`.

The `ceph` service provides functionality to **start**, **restart**, and **stop** your Ceph cluster. Each time you execute ceph processes, you must specify at least one option and one command. You may also specify a daemon type or a daemon instance. For most newer Debian/Ubuntu distributions, you may use the following syntax:

```
sudo service ceph [options] [commands] [daemons]
```

For older distributions, you may wish to use the `/etc/init.d/ceph` path:

```
sudo /etc/init.d/ceph [options] [commands] [daemons]
```

The `ceph` service options include:

Option	Shortcut	Description
<code>--verbose</code>	<code>-v</code>	Use verbose logging.
<code>--valgrind</code>	N/A	(Dev and QA only) Use Valgrind debugging.
<code>--allhosts</code>	<code>-a</code>	Execute on all nodes in <code>ceph.conf</code> . Otherwise, it only executes on <code>localhost</code> .
<code>--restart</code>	N/A	Automatically restart daemon if it core dumps.
<code>--norestart</code>	N/A	Don't restart a daemon if it core dumps.
<code>--conf</code>	<code>-c</code>	Use an alternate configuration file.

The `ceph` service commands include:

Command	Description
<code>start</code>	Start the daemon(s).
<code>stop</code>	Stop the daemon(s).
<code>forcestop</code>	Force the daemon(s) to stop. Same as <code>kill -9</code>
<code>killall</code>	Kill all daemons of a particular type.
<code>cleanlogs</code>	Cleans out the log directory.
<code>cleanalllogs</code>	Cleans out everything in the log directory.

For subsystem operations, the `ceph` service can target specific daemon types by adding a particular daemon type for the `[daemons]` option. Daemon types include:

- `mon`
- `osd`
- `mds`

The ceph service's [daemons] setting may also target a specific instance.

To start a Ceph daemon on the local **Ceph Node**, use the following syntax:

```
sudo /etc/init.d/ceph start osd.0
```

To start a Ceph daemon on another node, use the following syntax:

```
sudo /etc/init.d/ceph -a start osd.0
```

Where osd.0 is the first OSD in the cluster.

STARTING A CLUSTER

To start your Ceph cluster, execute ceph with the start command. The usage may differ based upon your Linux distribution. For example, for most newer Debian/Ubuntu distributions, you may use the following syntax:

```
sudo service ceph [options] [start|restart] [daemonType|daemonID]
```

For older distributions, you may wish to use the /etc/init.d/ceph path:

```
sudo /etc/init.d/ceph [options] [start|restart] [daemonType|daemonID]
```

The following examples illustrates a typical use case:

```
sudo service ceph -a start  
sudo /etc/init.d/ceph -a start
```

Once you execute with -a (i.e., execute on all nodes), Ceph should begin operating. You may also specify a particular daemon instance to constrain the command to a single instance. To start a Ceph daemon on the local Ceph Node, use the following syntax:

```
sudo /etc/init.d/ceph start osd.0
```

To start a Ceph daemon on another node, use the following syntax:

```
sudo /etc/init.d/ceph -a start osd.0
```

STOPPING A CLUSTER

To stop your Ceph cluster, execute ceph with the stop command. The usage may differ based upon your Linux distribution. For example, for most newer Debian/Ubuntu distributions, you may use the following syntax:

```
sudo service ceph [options] stop [daemonType|daemonID]
```

For example:

```
sudo service ceph -a stop
```

For older distributions, you may wish to use the /etc/init.d/ceph path:

```
sudo /etc/init.d/ceph -a stop
```

Once you execute with `-a` (i.e., execute on all nodes), Ceph should shut down. You may also specify a particular daemon instance to constrain the command to a single instance. To stop a Ceph daemon on the local Ceph Node, use the following syntax:

```
sudo /etc/init.d/ceph stop osd.0
```

To stop a Ceph daemon on another node, use the following syntax:

```
sudo /etc/init.d/ceph -a stop osd.0
```