

# CREATE A CEPH FILESYSTEM

## CREATING POOLS

A Ceph filesystem requires at least two RADOS pools, one for data and one for metadata. When configuring these pools, you might consider:

- Using a higher replication level for the metadata pool, as any data loss in this pool can render the whole filesystem inaccessible.
- Using lower-latency storage such as SSDs for the metadata pool, as this will directly affect the observed latency of filesystem operations on clients.

Refer to [Pools](#) to learn more about managing pools. For example, to create two pools with default settings for use with a filesystem, you might run the following commands:

```
$ ceph osd pool create cephfs_data <pg_num>
$ ceph osd pool create cephfs_metadata <pg_num>
```

## CREATING A FILESYSTEM

Once the pools are created, you may enable the filesystem using the `fs new` command:

```
$ ceph fs new <fs_name> <metadata> <data>
```

For example:

```
$ ceph fs new cephfs cephfs_metadata cephfs_data
$ ceph fs ls
name: cephfs, metadata pool: cephfs_metadata, data pools: [cephfs_data ]
```

Once a filesystem has been created, your MDS(s) will be able to enter an *active* state. For example, in a single MDS system:

```
$ ceph mds stat
e5: 1/1/1 up {0=a=up:active}
```

Once the filesystem is created and the MDS is active, you are ready to mount the filesystem. If you have created more than one filesystem, you will choose which to use when mounting.

- [Mount CephFS](#)
- [Mount CephFS as FUSE](#)

## USING ERASURE CODED POOLS WITH CEPHFS

You may use Erasure Coded pools as CephFS data pools as long as they have overwrites enabled, which is done as follows:

```
ceph osd pool set my_ec_pool allow_ec_overwrites true
```

Note that EC overwrites are only supported when using OSDs with the BlueStore backend.

You may not use Erasure Coded pools as CephFS metadata pools, because CephFS metadata is stored using RADOS *OMAP* data structures, which EC pools cannot store.