create the CephFS file system, and deploy the MDS daemons, or use the `ceph fs volume create` command, which does all these steps automatically. The first option gives the system administrator more control over the process, but with more steps than the simpler `ceph fs volume create` command.

Creating CephFS with the Volume Method

Use `ceph fs volume` to directly create the CephFS volume. This command creates pools that are associated to the CephFS, creates the CephFS volume, and also starts the MDS service on the hosts.

```
[ceph: root@server /]# ceph fs volume create fs-name \
--placement="number-of-hosts list-of-hosts"
```

Creating CephFS with Placement Specification

For more control over the deploying process, manually create the pools that are associated to the CephFS, start the MDS service on the hosts, and create the CephFS file system.

Creating the Data and Metadata Pools

A CephFS file system requires at least two pools, one to store CephFS data, and another to store CephFS metadata. The default names for these two pools are `cephfs_data` and `cephfs_metadata`. To create a CephFS file system, first create the two pools.

```
[ceph: root@server /]# ceph osd pool create cephfs_data
[ceph: root@server /]# ceph osd pool create cephfs_metadata
```

This example creates two pools with standard parameters. Because the metadata pool stores file location information, consider a higher replication level for this pool to avoid data errors that render your data inaccessible.

By default, Ceph uses replicated data pools. However, erasure-coded data pools are now also supported for CephFS file systems. Create an erasure-coded pool with the `ceph osd pool` command:

```
[ceph: root@server /]# ceph osd pool create pool-name erasure
```

Creating CephFS and Deploying MDS service

When the data and metadata pools are available, use the `ceph fs new` command to create the file system, as follows:

```
[ceph: root@server /]# ceph fs new fs-name metadata-pool data-pool
```

To add an existing erasure pool as a data pool in your CephFS file system, use `ceph fs add_data_pool`.

```
[ceph: root@server /]# ceph fs add_data_pool fs-name data-pool
```

You can then deploy the MDS service:

```
[ceph: root@server /]# ceph orch apply mds fs-name \
--placement="number-of-hosts list-of-hosts"
```