

MKCEPHFS – CREATE A CEPH FILE SYSTEM

SYNOPSIS

```
mkcephfs -c ceph.conf [ -mkfs ] [ -a, --all-hosts [ -k /path/to/admin.keyring ] ]
```

DESCRIPTION

mkcephfs is used to create an empty Ceph file system, possibly spanning multiple hosts. The *ceph.conf* file describes the composition of the entire Ceph cluster, including which hosts are participating, which daemons run where, and which paths are used to store file system data or metadata.

The **mkcephfs** tool can be used in two ways. If **-a** is used, it will use *ssh* and *scp* to connect to remote hosts on your behalf and do the setup of the entire cluster. This is the easiest solution, but can also be inconvenient (if you don't have *ssh* to connect without prompting for passwords) or slow (if you have a large cluster).

Alternatively, you can run each setup phase manually. First, you need to prepare a monmap that will be shared by each node:

```
# prepare
master# mkdir /tmp/foo
master# mkcephfs -c /etc/ceph/ceph.conf \
  --prepare-monmap -d /tmp/foo
```

Share the */tmp/foo* directory with other nodes in whatever way is convenient for you. On each OSD and MDS node:

```
osdnode# mkcephfs --init-local-daemons osd -d /tmp/foo
mdsnode# mkcephfs --init-local-daemons mds -d /tmp/foo
```

Collect the contents of the */tmp/foo* directories back onto a single node, and then:

```
master# mkcephfs --prepare-mon -d /tmp/foo
```

Finally, distribute */tmp/foo* to all monitor nodes and, on each of those nodes:

```
monnode# mkcephfs --init-local-daemons mon -d /tmp/foo
```

OPTIONS

-a, --allhosts

Performs the necessary initialization steps on all hosts in the cluster, executing commands via *SSH*.

-c *ceph.conf*, **--conf**=*ceph.conf*

Use the given *conf* file instead of the default */etc/ceph/ceph.conf*.

-k */path/to/keyring*

When **-a** is used, we can specify a location to copy the *client.admin* keyring, which is used to administer the cluster. The default is */etc/ceph/keyring* (or whatever is specified in the config file).

--mkfs

Create and mount the file systems specified in the *ceph.conf* for OSD data storage using *mkfs.\$type*. The *devs* option in *ceph.conf* must specify the device(s) and the *osd mkfs type* option must specify the file system type (normally one of *btrfs*, *xfs*, or *ext4*).

--no-copy-conf

By default, **mkcephfs** with **-a** will copy the new configuration to */etc/ceph/ceph.conf* on each node in the cluster. This option disables that behavior.

SUBCOMMANDS

The sub-commands performed during cluster setup can be run individually with

--prepare-monmap -d dir -c ceph.conf

Create an initial monmap with a random fsid/uuid and store it and the ceph.conf in dir.

--init-local-daemons type -d dir

Initialize any daemons of type type on the local host using the monmap in dir. For types osd and mds, the resulting authentication keys will be placed in dir. For type mon, the initial data files generated by --prepare-mon (below) are expected in dir.

--prepare-mon -d dir

Prepare the initial monitor data based on the monmap, OSD, and MDS authentication keys collected in dir, and put the result in dir.

AVAILABILITY

mkcephfs is part of the Ceph distributed file system. Please refer to the Ceph documentation at <http://ceph.com/docs> for more information.

SEE ALSO

[ceph\(8\)](#), [monmaptool\(8\)](#), [osdmactool\(8\)](#), [crushtool\(8\)](#)