You must authorize the client to access the CephFS file system, by using the `ceph fs authorize` command:

```
[ceph: root@server /]# ceph fs authorize fs-name client-name path permissions
```

With the `ceph fs authorize` command, you can provide fine-grained access control for different users and folders in the CephFS file system. You can set different options for folders in a CephFS file system:

- `r`: Read access to the specified folder. Read access is also granted to the subfolders, if no other restriction is specified.
- `w`: Write access to the specified folder. Write access is also granted to the subfolders, if no other restriction is specified.
- `p`: Clients require the `p` option in addition to `r` and `w` capabilities to use layouts or quotas.
- `s`: Clients require the `s` option in addition to `r` and `w` capabilities to create snapshots.

This example allows one user to read the root folder, and also provides read, write, and snapshot permissions to the `/directory` folder.

```
[ceph: root@server /]# ceph fs authorize mycephfs client.user / r /directory rws
```

By default, the CephFS FUSE client mounts the root directory (`/`) of the accessed file system. You can mount a specific directory with the `ceph-fuse -r` *`directory`* command.

Note

When you try to mount a specific directory, this operation fails if the directory does not exist in the CephFS volume.

When more than one CephFS file system is configured, the CephFS FUSE client mounts the default CephFS file system. To use a different file system, use the `--client_fs` option.

To persistently mount your CephFS file system by using the FUSE client, you can add the following entry to the `/etc/fstab` file:

```
host-name:_port_ mount-point fuse.ceph
 ceph.id=myuser,ceph.client_mountpoint=mountpoint,_netdev 0 0
```

Use the `umount` command to unmount the file system:

```
[root@node ~]# umount mount-point
```

Mounting CephFS with the Kernel Client

When using the CephFS kernel client, use the following command to mount the file system:

```
[root@node ~]# mount -t ceph [device]:[path] [mount-point] \
-o [key-value] [other-options]
```

You must authorize the client to access the CephFS file system, with the `ceph fs authorize` command. Extract the client key with the `ceph auth get` command, and then copy the key to the `/etc/ceph` folder on the client host.