- Search for the hexadecimal ID in the RADOS object list. A large file might return multiple objects.

```
[ceph: root@server /]# rados -p cephfs_data ls | grep 10000000000
10000000000.00000000
```

- Retrieve the mapping information for the returned objects.

```
[ceph: root@server /]# ceph osd map cephfs_data 10000000000.00000000
osdmap e95 pool 'cephfs_data' (3) object '10000000000.00000000' -> pg 3.f0b56f30
 (3.30) -> up ([1,2], p1) acting ([1,2], p1)
```

Interpret this output as saying that the `e95` map epoch of the OSD map for the `cephfs_data` pool (ID 3) maps the `10000000000.00000000` object to placement group 3.30, which is on OSD 1 and OSD 2, and OSD 1 is primary. If the OSDs in `up` and `acting` status are not the same, then it implies that the cluster is rebalancing or has another issue.

Controlling the RADOS Layout of Files

The RADOS layout controls how files are mapped to objects. These settings are stored in virtual extended attributes (xattrs) in CephFS. You can adjust settings to control the size of the used objects and where they are stored.

Layout attributes are initially set on the directory at the top of the CephFS file system. You can manually set layout attributes on other directories or files. When you create a file, it inherits layout attributes from its parent directory. If layout attributes are not set in its parent directory, then the closest ancestor directory with layout attributes is used.

The layout attributes for a file, such as these examples, use the `ceph.file.layout` prefix.

File Layout Attributes

Attribute name	Description
`ceph.file.layout.pool`	The pool where Ceph stores the file's data objects (normally `cephfs_data`).
`ceph.file.layout.stripe_unit`	The size (in bytes) of a block of data that is used in the RAID 0 distribution of a file.
`ceph.file.layout.stripe_count`	The number of consecutive stripe units that constitute a RAID 0 "stripe" of file data.
`ceph.file.layout.object_size`	File data is split into RADOS objects of this size in bytes (4194304 bytes, or 4 MiB, by default).
`ceph.file.layout.pool_namespace`	The namespace that is used, if any.

The `ceph.dir.layout` prefix identifies the layout attributes for a directory.