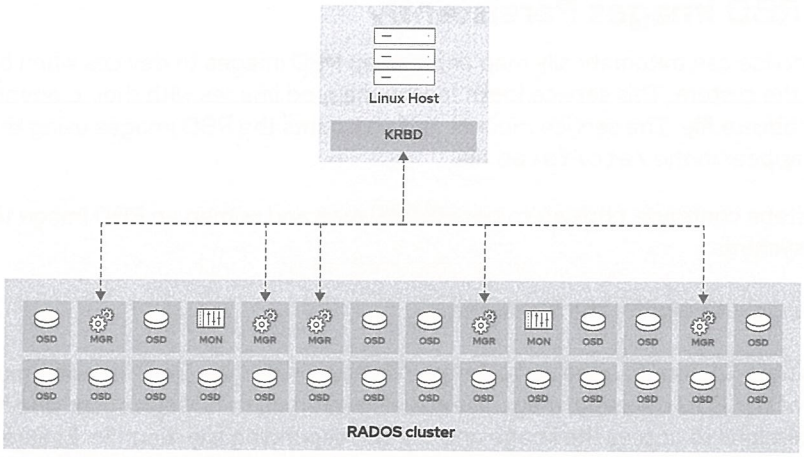

Figure 6.1: Kernel environment access

The `rbd device map` command uses the `krbd` kernel module to map an image. The `rbd map` command is an abbreviated form of the `rbd device map` command. The `rbd device unmap`, or `rbd unmap`, command uses the `krbd` kernel module to unmap a mapped image. The following example command maps the `test` RBD image in the `rbd` pool to the `/dev/rbd0` device on the `host` client machine:

```
[root@node ~]# rbd map rbd/test
/dev/rbd0
```

A Ceph client system can use the mapped block device, called `/dev/rbd0` in the example, like any other block device. You can format it with a file system, mount it, and unmount it.

> **Warning**
> Two clients can map the same RBD image as a block device at the same time. This can be useful for high availability clustering for standby servers, but Red Hat recommends attaching a block device to one client at a time when the block device contains a normal, single-mount file system. Mounting a RADOS block device that contains a normal file system, such as XFS, on two or more clients at the same time can cause file-system corruption and data loss.

The `rbd device list` command, abbreviated `rbd showmapped`, lists the RBD images mapped in the machine.

```
[root@node ~]# rbd showmapped
id  pool  namespace image  snap   device
0   rbd             test   -      /dev/rbd0
```

The `rbd device unmap` command, abbreviated `rbd unmap`, unmaps the RBD image from the client machine.

```
[root@node ~]# rbd unmap /dev/rbd0
```

The `rbd map` and `rbd unmap` commands require root privileges.