Directory Layout Attributes

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

The `getfattr` command displays the layout attributes for a file or directory:

```
[ceph: root@server /]# getfattr -n ceph.file.layout file-path
# file: file-path
ceph.file.layout="stripe_unit=4194304 stripe_count=1 object_size=4194304
 pool=cephfs_data"
[ceph: root@server /]# getfattr -n ceph.dir.layout directory-path
# file : directory-path
ceph.dir.layout="stripe_unit=4194304 stripe_count=1 object_size=4194304
 pool=cephfs_data"
```

The `setfattr` command modifies the layout attributes:

```
[ceph: root@server /]# setfattr -n ceph.file.layout.attribute -v value file
[ceph: root@server /]# setfattr -n ceph.dir.layout.attribute -v value directory
```

Important

Layout attributes are set when data is initially saved to a file. If the parent directory's layout attributes change after the file is created, then the file's layout attributes do not change. Additionally, a file's layout attributes can be changed only if it is empty.

Usage and Statistics

You can use virtual extended attributes for information about CephFS file system use. The `getfattr` command, when used with the `ceph` attribute namespace on a directory, returns a list of recursive statistics for that directory.