Subject: Problem: LTP linkat01 test fails on nfs directory (NFS v3)
Posted by gblond on Fri, 21 Sep 2007 10:16:33 GMT
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Hello.

Tested kernels: 2.6.18, 2.6.22, 2.6.23-rc2

Steps to reproduce: Suppose that we have mounted some directory from nfs v3 server with default options. Also we have the two directories in this mountpoint and each directory has hard linked file. Try to open those files and write to one and read from another. Data will not be equal. (Testcase: attached hardlink_test.c)

Analysis: Although these hard linked files have same nfs_fattr::fileid but have different nfs_fh fhandle. In this case nfs_find_actor() function (fs/nfs/inode.c) returns false during opening each file:

```
nfs_find_actor()
{
...
 if (nfs_compare_fh(NFS_FH(inode), fh))
  return 0;
...
}
```

Therefore for each of hard links new struct inode is allocated. It leads to cache aliasing.

Please explain why nfs_find_actor() function compares file handles?

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Thanks,
Vitaliy Gusev

File Attachments

1) hardlink_test.c, downloaded 334 times