Subject: Re: Problem: LTP linkat01 test fails on nfs directory (NFS v3)
Posted by gblond on Fri, 21 Sep 2007 14:39:35 GMT
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On the Friday 21 September 2007 16:37 Trond Myklebust, wrote:
> On Fri, 2007-09-21 at 13:13 +0400, Vitaliy Gusev wrote:
> > 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)
>
> Please retry after re-exporting the filesystem using the highly
> recommended "no_subtree_check" option. The default subtree_check option
> is broken: it changes the filehandle of the file upon a cross-directory
> rename() of that file.

Ok, problem goes out. Default option depends on nfs-utils release.

> >
> > Please explain why nfs_find_actor() function compares file handles?
>
> 'cos this is the only way to know that two files are the same. fileid is
> not always supported by servers: it is an optional NFSv4 attribute, and

>From RFC3010 (NFSv4) section 2.4.1 :
  "For example, if paths /a/b/c and /a/d/c refer to the same file, the
server SHOULD return the same filehandle for both path names traversals".

For NFSv4 problem should not be shown.

> on NFSv3, most non-posix filesystems will fake it using something like
> iunique().
>
> Comparing filehandles allows you to be certain that two files are the
> same if the filehandles are equal. If they are not equal, then that does
> not guarantee that the files are different, but then how else are you
> going to determine it?
>

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Thanks,
Vitaliy Gusev