
Subject: Re: [Q] missing unused dentry in prune_dcache()?

Posted by [vaverin](#) on Fri, 27 Oct 2006 06:50:45 GMT

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Vasily Averin wrote:

> David Howells wrote:

>> Vasily Averin <vvvs@sw.ru> wrote:

>>>

>>> I've noticed one more minor issue in your patch: in

>>> shrink_dcache_for_umount_subtree() function you decrement

>>> dentry_stat.nr_dentry without dcache_lock.

>> How about the attached patch?

> I'm sorry, but your patch is wrong:

> you have mixed calculation of 2 variables:

> dentry_stat.nr_unused -- were correct, it was decremented under dcache_lock.

> dentry_stat.nr_dentry -- were incorrect, it was decremented without dcache_lock.

>

> You should correct dentry_stat.nr_dentry, but instead you broke calculation of

> dentry_stat.nr_unused.

>

> I've fixed this issue by following patch.

corrected version, extra space were removed

Thank you,

Vasily Averin

VFS: Fix an error in dentry_stat.nr_dentry counting

From: Vasily Averin <vvvs@sw.ru>

Fix an error in dentry_stat.nr_dentry counting in

shrink_dcache_for_umount_subtree() in which the count is modified without the dcache_lock held.

Signed-Off-By: Vasily Averin <vvvs@sw.ru>

--- linux-2.6.19-rc3/fs/dcache.c.nrdntr 2006-10-26 15:14:51.000000000 +0400

+++ linux-2.6.19-rc3/fs/dcache.c 2006-10-27 10:45:11.000000000 +0400

@@ -554,6 +554,7 @@ repeat:

static void shrink_dcache_for_umount_subtree(struct dentry *dentry)

{

struct dentry *parent;

+ unsigned detached = 0;

BUG_ON(!IS_ROOT(dentry));

@@ -618,7 +619,7 @@ static void shrink_dcache_for_umount_sub

```

    atomic_dec(&parent->d_count);

    list_del(&dentry->d_u.d_child);
-   dentry_stat.nr_dentry--; /* For d_free, below */
+   detached++;

    inode = dentry->d_inode;
    if (inode) {
@@ -636,7 +637,7 @@ static void shrink_dcache_for_umount_sub
    * otherwise we ascend to the parent and move to the
    * next sibling if there is one */
    if (!parent)
-   return;
+   goto out;

    dentry = parent;

@@ -645,6 +646,11 @@ static void shrink_dcache_for_umount_sub
    dentry = list_entry(dentry->d_subdirs.next,
        struct dentry, d_u.d_child);
    }
+out:
+ /* several dentries were freed, need to correct nr_dentry */
+ spin_lock(&dcache_lock);
+ dentry_stat.nr_dentry -= detached;
+ spin_unlock(&dcache_lock);
    }

    /*

```
