Subject: Re: [Q] missing unused dentry in prune_dcache()?
Posted by vaverin on Fri, 27 Oct 2006 08:05:54 GMT
View Forum Message <> Reply to Message

David Howells wrote:
> Vasily Averin <vvs@sw.ru> wrote:
>
>> Therefore I've removed break of cycle and insert this dentry to head of the
>> list. Theoretically it can lead to the second using of the same dentry,
>> however I do not think that it is a big problem.
>
> Hmmm... Or maybe it could be a problem. If whenever we find the dentry we
> stick it back on the head of the list, this could be a problem as we're
> traversing the list from tail to head.

I still do not think that it could be a problem:
count argument of prune_dcache is 128 if prune_dcache is called from shrink_dcache_memory() function and even lesser if prune_dcache is called from shrink_dcache_parent() function. I think usually the size of unused_dentry list (nr_usnused) is much greater and may be compared with these values only in case of very hard memory shortage. From my point of view it is very rare situation and I even not sure that it can really happen at all.

However even if this situation will happen I do not see here any seriously troubles: Yes, we will try to free the same dentries, much probably without success again, but why it is bad in case of hard memory shortage?

If my arguments are not convincing, I can protect second use of the same dentry: we can compare counter of the skipped dentries with nr_unused value.

And what the alternatives we have?
1) We can move this dentry to end of list? But it is bad because it will prevent shrink_dcache_memory().
2) we can move these dentries into some temporal list, and insert it back to unused_list later? But it is bad because of we can be rescheduled and drop dcache_lock and may confuse someone who will assume that these dentries are in unused_list.

Therefore I believe that my patch is optimal solution.

Thank you,
Vasily Averin