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Subject: Re: [PATCH v2 11/11] protect architectures where `THREAD_SIZE >= PAGE_SIZE` against fork bombs

Posted by [Glauber Costa](#) on Tue, 21 Aug 2012 09:40:45 GMT

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On 08/21/2012 01:35 PM, Michal Hocko wrote:

> On Thu 09-08-12 17:01:19, Glauber Costa wrote:

>> Because those architectures will draw their stacks directly from the

>> page allocator, rather than the slab cache, we can directly pass

>> `__GFP_KMEMCG` flag, and issue the corresponding `free_pages`.

>>

>> This code path is taken when the architecture doesn't define

>> `CONFIG_ARCH_THREAD_INFO_ALLOCATOR` (only ia64 seems to), and has

>> `THREAD_SIZE >= PAGE_SIZE`. Luckily, most - if not all - of the remaining

>> architectures fall in this category.

>

> quick `git grep "define *THREAD_SIZE\>" arch` says that there is no such

> architecture.

>

>> This will guarantee that every stack page is accounted to the memcg the

>> process currently lives on, and will have the allocations to fail if

>> they go over limit.

>>

>> For the time being, I am defining a new variant of `THREADINFO_GFP`, not

>> to mess with the other path. Once the slab is also tracked by memcg, we

>> can get rid of that flag.

>>

>> Tested to successfully protect against `:(){ :|& };`:

>

> I guess there were no other tasks in the same group (except for the

> parent shell), right?

Yes.

> I am asking because this should trigger memcg-oom

> but that one will usually pick up something else than the fork bomb

> which would have a small memory footprint. But that needs to be handled

> on the oom level obviously.

>

Sure, but keep in mind that the main protection is against tasks `*not*`

in this memcg.

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