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Subject: Re: [PATCH][usercr]: Ghost tasks must be detached  
Posted by [Oren Laadan](#) on Sat, 05 Feb 2011 18:55:23 GMT  
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Suka,

This patch - and the corresponding kernel patch - are wrong (I should have noticed it in the review!). It turns out that ghost (and dead) tasks are `_not_` auto-reaped anymore.

There are only two way for tasks to be auto-reaped: one is if their parent explicitly says so in its sighand information (but then it applies to all children). The other way is if they have `->exit_signal==-1`. From userspace this happens only when cloning with `CLONE_THREAD`. Using `0xFF` for the `@flags` argument to `clone()` syscall instead results in `->exit_signal = 255 ...`

The original motivation for this patch was:

> The downside of marking the task detached in `do_ghost_task()` is that  
> with current/older kernels container-init does not wait for detached  
> tasks. See:  
>  
> <http://lkml.org/lkml/2010/6/16/272>  
> <http://lkml.org/lkml/2010/7/12/213>  
>  
> This can lead to a kernel crash if the container-init pre-deceases a  
> ghost task.

Is this still a problem in 2.6.37 ?

Oren.

On 01/10/2011 08:51 PM, Oren Laadan wrote:

>  
> Applied to user-cr.  
>  
> Thanks,  
>  
> Oren.  
>  
> On 12/10/2010 10:35 PM, Sukadev Bhattiprolu wrote:  
>>  
>> From: Sukadev Bhattiprolu <[sukadev@linux.vnet.ibm.com](mailto:sukadev@linux.vnet.ibm.com)>  
>> Date: Fri, 10 Dec 2010 19:23:58 -0800  
>> Subject: [PATCH 1/1] Ghost tasks must be detached  
>>

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>> Ghost processes are created only to help restore orphaned sessions/pgrps.
>> As such once the session/pgrp is created the ghost must not send another
>> SIGCHLD to the parent but exit silently. So create such tasks as
>> "detached".
>>
>> See also:
>>
>> https://lists.linux-foundation.org/pipermail/containers/2010-December/026076.html
>>
>> Signed-off-by: Sukadev Bhattiprolu <sukadev@linux.vnet.ibm.com>
>> ---
>> restart.c | 7 +++++++
>> 1 files changed, 7 insertions(+), 0 deletions(-)
>>
>> diff --git a/restart.c b/restart.c
>> index 9fb5e9f..d7ba26b 100644
>> --- a/restart.c
>> +++ b/restart.c
>> @@ -1744,6 +1744,13 @@ static pid_t ckpt_fork_child(struct ckpt_ctx *ctx, struct task *child)
>>  flags |= CLONE_THREAD | CLONE_SIGHAND | CLONE_VM;
>>  else if (child->flags & TASK_SIBLING)
>>  flags |= CLONE_PARENT;
>> + else if (child->flags & (TASK_GHOST|TASK_DEAD)) {
>> + /*
>> +  * Ghosts must vanish silently (without signalling parent)
>> +  * when they are done.
>> +  */
>> + flags = 0xFF;
>> + }
>>
>>  memset(&clone_args, 0, sizeof(clone_args));
>>  clone_args.nr_pids = 1;
>
> Containers mailing list
> Containers@lists.linux-foundation.org
> https://lists.linux-foundation.org/mailman/listinfo/containers
>

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