Subject: Re: cleanup in workq and dst_destroy Posted by Daniel Lezcano on Mon, 19 Nov 2007 08:46:28 GMT View Forum Message <> Reply to Message

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Denis V. Lunev wrote:
> Daniel Lezcano wrote:
>> Hi all.
>>
>> while doing ipv6 namespace, we were faced to a problem with the loopback
>> and the dst destroy function.
>>
>> When the network namespace exits, the cleanup function is called by
>> schedule_work and this function will browse the net ops list to call the
>> different exit methods for the registered subsystems.
>>
>> The different subsystems will shutdown their resources and in particular
>> addrconf subsystem will ifdown the loopback. This function will call
>> rt6 ifdown
>> -> fib6 clean all
>> -> fib6 clean node
    -> fib6 clean tree
>>
     -> fib6 clean node
     -> fib6 del
>>
      -> fib6 del route
>>
       -> rt6_release
       ->dst free
>>
        -> __dst_free
>>
>> The dst free function will schedule delayed work the dst gc work
>> function.
>> The dst_gc_work will call dst_destroy and finally this one will call
>> dst->ops->destroy ops function which is ip6_dst_destroy.
>> The problem here is we have the workq blocked because we are running
>> inside the netns cleanup function. So the delayed work will not run
>> until we exits the cleanup function. But the loopback is still
>> referenced by the ip6 routes, the netdev unregister will loop
>> indefinitly => dead lock.
>>
>> By the way, this bug appears with ipv6 but it is perhaps pending with ipv4.
>> Benjamin as proposed to create a separate workq for the network
>> namespace, so in the worst case we have the unregister looping until the
>> ip6 route are shut downed. Is it an acceptable solution?
>>
>
> we are doing this staff in the special thread. There are a lot of
```

> difficult things to perform like synchronize_net & netdev_run_todo inside

The special thread? do you mean keventd_wq?

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