
Subject: Re: problem with ZONE_MOVABLE.

Posted by [Balbir Singh](#) on Thu, 13 Sep 2007 15:53:30 GMT

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Mel Gorman wrote:

> On (13/09/07 19:07), KAMEZAWA Hiroyuki didst pronounce:

>> Hi,

>>

>> While I'm playing with memory controller of 2.6.23-rc4-mm1, I met following.

>>

>> ==

>> [root@drpq test-2.6.23-rc4-mm1]# echo \$\$ > /opt/mem_control/group_1/tasks

>> [root@drpq test-2.6.23-rc4-mm1]# cat /opt/mem_control/group_1/memory.limit

>> 32768

>> [root@drpq test-2.6.23-rc4-mm1]# cat /opt/mem_control/group_1/memory.usage

>> 286

>> // Memory is limited to 512 GiB. try "dd" 1GiB (page size is 16KB)

>>

>> [root@drpq test-2.6.23-rc4-mm1]# dd if=/dev/zero of=/tmp/tmpfile bs=1024 count=1048576

>> Killed

>> [root@drpq test-2.6.23-rc4-mm1]# ls

>> Killed

>> //above are caused by OOM.

>> [root@drpq test-2.6.23-rc4-mm1]# cat /opt/mem_control/group_1/memory.usage

>> 32763

>> [root@drpq test-2.6.23-rc4-mm1]# cat /opt/mem_control/group_1/memory.limit

>> 32768

>> // fully filled by page cache. no reclaim run.

>> ==

>>

>> The reason this happens is because I used kernelcore= boot option, i.e

>> ZONE_MOVABLE. Seems try_to_free_mem_container_pages() ignores ZONE_MOVABLE.

>>

>> Quick fix is attached, but Mel's one-zonelist-pernode patch may change this.

>> I'll continue to watch.

>>

>

> You are right on both counts. This is a valid fix but

> one-zonelist-pernode overwrites it. Specifically the code in question

> with one-zonelist will look like;

>

> for_each_online_node(node) {

> zonelist = &NODE_DATA(node)->node_zonelist;

> if (do_try_to_free_pages(zonelist, sc.gfp_mask, &sc))

> return 1;

> }

>

> We should be careful that this problem does not get forgotten about if

> one-zonelist gets delayed for a long period of time. Have the fix at the
> end of the container patchset where it can be easily dropped if
> one-zonelist is merged.
>
> Thanks

Yes, I second that. So, we should get KAMEZAWA's fix in.

--

Warm Regards,
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