
Subject: Re: [PATCH v4 10/14] memcg: use static branches when code not in use
Posted by [Glauber Costa](#) on Fri, 12 Oct 2012 07:47:53 GMT

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On 10/11/2012 05:40 PM, Michal Hocko wrote:

> On Mon 08-10-12 14:06:16, Glauber Costa wrote:

>> We can use static branches to patch the code in or out when not used.

>>

>> Because the _ACTIVE bit on kmem_accounted is only set after the
>> increment is done, we guarantee that the root memcg will always be
>> selected for kmem charges until all call sites are patched (see
>> memcg_kmem_enabled). This guarantees that no mischarges are applied.

>>

>> static branch decrement happens when the last reference count from the
>> kmem accounting in memcg dies. This will only happen when the charges
>> drop down to 0.

>>

>> When that happen, we need to disable the static branch only on those
>> memcgs that enabled it. To achieve this, we would be forced to
>> complicate the code by keeping track of which memcgs were the ones
>> that actually enabled limits, and which ones got it from its parents.

>>

>> It is a lot simpler just to do static_key_slow_inc() on every child
>> that is accounted.

>>

>> [v4: adapted this patch to the changes in kmem_accounted]

>>

>> Signed-off-by: Glauber Costa <glommer@parallels.com>

>> CC: Kamezawa Hiroyuki <kamezawa.hiroyu@jp.fujitsu.com>

>> CC: Christoph Lameter <cl@linux.com>

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>

> Looks reasonable to me

> Acked-by: Michal Hocko <mhocko@suse.cz>

>

> Just a little nit.

>

> [...]

>

>> diff --git a/mm/memcontrol.c b/mm/memcontrol.c

>> index 634c7b5..724a08b 100644

>> --- a/mm/memcontrol.c

>> +++ b/mm/memcontrol.c

>> @@ -344,11 +344,15 @@ struct mem_cgroup {

>> /* internal only representation about the status of kmem accounting. */

```
>> enum {
>> KMEM_ACCOUNTED_ACTIVE = 0, /* accounted by this cgroup itself */
>> + KMEM_ACCOUNTED_ACTIVATED, /* static key enabled. */
>> KMEM_ACCOUNTED_DEAD, /* dead memcg, pending kmem charges */
>> };
>>
>> /* first bit */
>> #define KMEM_ACCOUNTED_MASK 0x1
>> +/*
>> + * first two bits. We account when limit is on, but only after
>> + * call sites are patched
>> + */
>> +#define KMEM_ACCOUNTED_MASK 0x3
>
> The names are long but why not use KMEM_ACCOUNTED_ACTIVE*
> #define KMEM_ACCOUNTED_MASK 1<<KMEM_ACCOUNTED_ACTIVE |
> 1<<KMEM_ACCOUNTED_ACTIVATED
>
Because the names are long! =)
```
