Subject: Re: [PATCH v4 07/25] memcg: Reclaim when more than one page needed.
Posted by Glauber Costa on Mon, 25 Jun 2012 14:04:08 GMT

On 06/25/2012 05:13 PM, Glauber Costa wrote:
>
>>>>> +
>>>>>   ret = mem_cgroup_reclaim(mem_over_limit, gfp_mask, flags);
>>>>>   if (mem_cgroup_margin(mem_over_limit) >= nr_pages)
>>>>>   return CHARGE_RETRY;
>>>>> @@ -2234,8 +2235,10 @@ static int mem_cgroup_do_charge(struct
>>>>> mem_cgroup *memcg, gfp_t gfp_mask,
>>>>>   * unlikely to succeed so close to the limit, and we fall back
>>>>>   * to regular pages anyway in case of failure.
>>>>>   */
>>>>> -   if (nr_pages == 1 && ret)
>>>>> +   if (nr_pages <= (1 << PAGE_ALLOC_COSTLY_ORDER) && ret) {
>>>>> +   cond_resched();
>>>>>   return CHARGE_RETRY;
>>>>> +   }
>>>>
>>>> What prevents us from looping for unbounded amount of time here?
>>>> Maybe you need to consider the number of reclaimed pages here.
>>>
>>> Why would we even loop here? It will just return CHARGE_RETRY, it is
>>> up to the caller to decide whether or not it will retry.
>>
>> Yes, but the test was original to prevent oom when we managed to reclaim
>> something. And something might be enough for a single page but now you
>> have high order allocations so we can retry without any success.
>>
>
> So,
>
> Most of the kmem allocations are likely to be quite small as well. For
> the slab, we're dealing with the order of 2-3 pages, and for other
> allocations that may happen, like stack, they will be in the order of 2
> pages as well.
>
> So one thing I could do here, is define a threshold, say, 3, and only
> retry for that very low threshold, instead of following COSTLY_ORDER.
> I don't expect two or three pages to be much less likely to be freed
> than a single page.
>
> I am fine with ripping of the cond_resched as well.
>
> Let me know if you would be okay with that.

>
>

For the record, here's the patch I would propose.

At this point, I think it would be nice to Suleiman to say if he is
still okay with the changes.

File Attachments
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1) 0001-memcg-Reclaim-when-more-than-one-page-needed.patch,
downloaded 615 times