
Subject: [RFC][for -mm] memory controller enhancements for NUMA [1/10] record nid/zid on page_cgroup

Posted by [KAMEZAWA Hiroyuki](#) on Wed, 14 Nov 2007 08:41:31 GMT

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This patch adds nid/zoneid value to page cgroup.

This helps per-zone accounting for memory cgroup and reclaim routine.

Signed-off-by: KAMEZAWA Hiroyuki <kmaezawa.hiroyu@jp.fujitsu.com>

mm/memcontrol.c | 6 ++++++
1 file changed, 6 insertions(+)

Index: linux-2.6.24-rc2-mm1/mm/memcontrol.c

```
=====
--- linux-2.6.24-rc2-mm1.orig/mm/memcontrol.c
+++ linux-2.6.24-rc2-mm1/mm/memcontrol.c
@@ -131,6 +131,8 @@ struct page_cgroup {
    atomic_t ref_cnt; /* Helpful when pages move b/w */
    /* mapped and cached states */
    int flags;
+ short nid;
+ short zid;
};
#define PAGE_CGROUP_FLAG_CACHE (0x1) /* charged as cache */
#define PAGE_CGROUP_FLAG_ACTIVE (0x2) /* page is active in this cgroup */
@@ -216,6 +218,10 @@ void page_assign_page_cgroup(struct page
    VM_BUG_ON(!page_cgroup_locked(page));
    locked = (page->page_cgroup & PAGE_CGROUP_LOCK);
    page->page_cgroup = ((unsigned long)pc | locked);
+ if (pc) {
+ pc->nid = page_to_nid(page);
+ pc->zid = page_zonenum(page);
+ }
}

struct page_cgroup *page_get_page_cgroup(struct page *page)
```

Containers mailing list

Containers@lists.linux-foundation.org

<https://lists.linux-foundation.org/mailman/listinfo/containers>

Subject: Re: [RFC][for -mm] memory controller enhancements for NUMA [1/10] record nid/zid on page_cgroup

Posted by [KAMEZAWA Hiroyuki](#) on Wed, 14 Nov 2007 08:58:49 GMT

On Wed, 14 Nov 2007 17:41:31 +0900

KAMEZAWA Hiroyuki <kamezawa.hiroyu@jp.fujitsu.com> wrote:

> This patch adds nid/zoneid value to page cgroup.
> This helps per-zone accounting for memory cgroup and reclaim routine.
>
> Signed-off-by: KAMEZAWA Hiroyuki <kmaezawa.hiroyu@jp.fujitsu.com>
Sigh...
kamezawa.hiroyu@jp.fujitsu.com..

Sorry,
-Kame

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Subject: Re: [RFC][for -mm] memory controller enhancements for NUMA [1/10]
record nid/zid on page_cgroup

Posted by [yamamoto](#) on Wed, 14 Nov 2007 09:22:43 GMT

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> This patch adds nid/zoneid value to page cgroup.
> This helps per-zone accounting for memory cgroup and reclaim routine.
>
> Signed-off-by: KAMEZAWA Hiroyuki <kmaezawa.hiroyu@jp.fujitsu.com>
>
> mm/memcontrol.c | 6 ++++++
> 1 file changed, 6 insertions(+)
>
> Index: linux-2.6.24-rc2-mm1/mm/memcontrol.c
> =====
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> +++ linux-2.6.24-rc2-mm1/mm/memcontrol.c
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```
> VM_BUG_ON(!page_cgroup_locked(page));
> locked = (page->page_cgroup & PAGE_CGROUP_LOCK);
> page->page_cgroup = ((unsigned long)pc | locked);
> + if (pc) {
> +   pc->nid = page_to_nid(page);
> +   pc->zid = page_zonenum(page);
> + }
> }
>
> struct page_cgroup *page_get_page_cgroup(struct page *page)
```

are they worth to be cached?
can't you use page_zonenum(pc->page)?

YAMAMOTO Takashi

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<https://lists.linux-foundation.org/mailman/listinfo/containers>

Subject: Re: Re: [RFC][for -mm] memory controller enhancements for NUMA [1/10]
record nid/zid on page_cgroup
Posted by [KAMEZAWA Hiroyuki](#) on Wed, 14 Nov 2007 10:31:36 GMT
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```
>> Index: linux-2.6.24-rc2-mm1/mm/memcontrol.c
>> =====
>> --- linux-2.6.24-rc2-mm1.orig/mm/memcontrol.c
>> +++ linux-2.6.24-rc2-mm1/mm/memcontrol.c
>> @@ -131,6 +131,8 @@ struct page_cgroup {
>>   atomic_t ref_cnt; /* Helpful when pages move b/w */
>>   /* mapped and cached states */
>>   int flags;
>> + short nid;
>> + short zid;
```

>are they worth to be cached?
>can't you use page_zonenum(pc->page)?
>
Maybe I can. I'll drop this and see what the whole code looks like.

Thanks,
-Kame

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