

---

Subject: [RFC][-mm] [2/2] Simple stats for memory resource controller  
Posted by [Balaji Rao](#) on Sat, 05 Apr 2008 18:10:02 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

This patch implements trivial statistics for the memory resource controller.

Signed-off-by: Balaji Rao <[balajirao@gmail.com](mailto:balajirao@gmail.com)>

CC: Balbir Singh <[balbir@linux.vnet.ibm.com](mailto:balbir@linux.vnet.ibm.com)>

CC: Dhaval Giani <[dhaval@linux.vnet.ibm.com](mailto:dhaval@linux.vnet.ibm.com)>

```
diff --git a/mm/memcontrol.c b/mm/memcontrol.c
index a860765..ca98b21 100644
--- a/mm/memcontrol.c
+++ b/mm/memcontrol.c
@@ -47,6 +47,8 @@ enum mem_cgroup_stat_index {
 */
MEM_CGROUP_STAT_CACHE, /* # of pages charged as cache */
MEM_CGROUP_STAT_RSS, /* # of pages charged as rss */
+ MEM_CGROUP_STAT_PGPGIN_COUNT, /* # of pages paged in */
+ MEM_CGROUP_STAT_PGPGOUT_COUNT, /* # of pages paged out */

MEM_CGROUP_STAT_NSTATS,
};
@@ -198,6 +200,13 @@ static void mem_cgroup_charge_statistics(struct mem_cgroup *mem,
int flags,
    __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_CACHE, val);
    else
        __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_RSS, val);
+
+ if (charge)
+     __mem_cgroup_stat_add_safe(stat,
+     MEM_CGROUP_STAT_PGPGIN_COUNT, 1);
+ else
+     __mem_cgroup_stat_add_safe(stat,
+     MEM_CGROUP_STAT_PGPGOUT_COUNT, 1);
}

static struct mem_cgroup_per_zone *
@@ -897,6 +906,8 @@ static const struct mem_cgroup_stat_desc {
} mem_cgroup_stat_desc[] = {
    [MEM_CGROUP_STAT_CACHE] = { "cache", PAGE_SIZE, },
    [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
+   [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
+   [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
};

static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
```

--  
regards,  
Balaji Rao  
Dept. of Mechanical Engineering,  
National Institute of Technology Karnataka, India

---

Containers mailing list  
Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>

---

---

Subject: Re: [RFC][mm] [2/2] Simple stats for memory resource controller  
Posted by [Balbir Singh](#) on Sun, 06 Apr 2008 06:23:37 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Balaji Rao wrote:

> This patch implements trivial statistics for the memory resource controller.  
>  
> Signed-off-by: Balaji Rao <balajirao@gmail.com>  
> CC: Balbir Singh <balbir@linux.vnet.ibm.com>  
> CC: Dhaval Giani <dhaval@linux.vnet.ibm.com>  
>  
> diff --git a/mm/memcontrol.c b/mm/memcontrol.c  
> index a860765..ca98b21 100644  
> --- a/mm/memcontrol.c  
> +++ b/mm/memcontrol.c  
> @@ -47,6 +47,8 @@ enum mem\_cgroup\_stat\_index {  
> \*/  
> MEM\_CGROUP\_STAT\_CACHE, /\* # of pages charged as cache \*/  
> MEM\_CGROUP\_STAT\_RSS, /\* # of pages charged as rss \*/  
> + MEM\_CGROUP\_STAT\_PGPGIN\_COUNT, /\* # of pages paged in \*/  
> + MEM\_CGROUP\_STAT\_PGPGOUT\_COUNT, /\* # of pages paged out \*/  
>  
> MEM\_CGROUP\_STAT\_NSTATS,  
> };  
> @@ -198,6 +200,13 @@ static void mem\_cgroup\_charge\_statistics(struct mem\_cgroup \*mem,  
int flags,  
> \_\_mem\_cgroup\_stat\_add\_safe(stat, MEM\_CGROUP\_STAT\_CACHE, val);  
> else  
> \_\_mem\_cgroup\_stat\_add\_safe(stat, MEM\_CGROUP\_STAT\_RSS, val);  
> +  
> + if (charge)  
> + \_\_mem\_cgroup\_stat\_add\_safe(stat,  
> + MEM\_CGROUP\_STAT\_PGPGIN\_COUNT, 1);  
> + else  
> + \_\_mem\_cgroup\_stat\_add\_safe(stat,  
> + MEM\_CGROUP\_STAT\_PGPGOUT\_COUNT, 1);  
> }

```

>
> static struct mem_cgroup_per_zone *
> @@ -897,6 +906,8 @@ static const struct mem_cgroup_stat_desc {
> } mem_cgroup_stat_desc[] = {
>     [MEM_CGROUP_STAT_CACHE] = { "cache", PAGE_SIZE, },
>     [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
> + [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
> + [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
> };
>
> static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
>

```

Looks good to me. I wonder if pgpin/pggout per second will be a useful metric, to see how fast things are changing within the cgroup.

Acked-by: Balbir Singh <balbir@linux.vnet.ibm.com>

Let me test this patch right away.

--  
 Warm Regards,  
 Balbir Singh  
 Linux Technology Center  
 IBM, ISTL

---

Containers mailing list  
 Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>

---



---

**Subject: Re: [RFC][-mm] [2/2] Simple stats for memory resource controller**  
**Posted by [Balbir Singh](#) on Mon, 14 Apr 2008 14:39:48 GMT**

[View Forum Message](#) <> [Reply to Message](#)

---

Balaji Rao wrote:

```

> This patch implements trivial statistics for the memory resource controller.
>
> Signed-off-by: Balaji Rao <balajirao@gmail.com>
> CC: Balbir Singh <balbir@linux.vnet.ibm.com>
> CC: Dhaval Giani <dhaval@linux.vnet.ibm.com>
>
> diff --git a/mm/memcontrol.c b/mm/memcontrol.c
> index a860765..ca98b21 100644
> --- a/mm/memcontrol.c
> +++ b/mm/memcontrol.c
> @@ -47,6 +47,8 @@ enum mem_cgroup_stat_index {
>   */

```

```

> MEM_CGROUP_STAT_CACHE, /* # of pages charged as cache */
> MEM_CGROUP_STAT_RSS, /* # of pages charged as rss */
> + MEM_CGROUP_STAT_PGPGIN_COUNT, /* # of pages paged in */
> + MEM_CGROUP_STAT_PGPGOUT_COUNT, /* # of pages paged out */
>
> MEM_CGROUP_STAT_NSTATS,
> };
> @@ -198,6 +200,13 @@ static void mem_cgroup_charge_statistics(struct mem_cgroup *mem,
int flags,
>     __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_CACHE, val);
>     else
>     __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_RSS, val);
> +
> + if (charge)
> + __mem_cgroup_stat_add_safe(stat,
> +   MEM_CGROUP_STAT_PGPGIN_COUNT, 1);
> + else
> + __mem_cgroup_stat_add_safe(stat,
> +   MEM_CGROUP_STAT_PGPGOUT_COUNT, 1);
> }
>
> static struct mem_cgroup_per_zone *
> @@ -897,6 +906,8 @@ static const struct mem_cgroup_stat_desc {
> } mem_cgroup_stat_desc[] = {
> [MEM_CGROUP_STAT_CACHE] = { "cache", PAGE_SIZE, },
> [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
> + [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
> + [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
> };
>
> static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
>
```

Acked-by: Balbir Singh <balbir@linux.vnet.ibm.com>

Hi, Andrew,

Could you please include these statistics in -mm.

Balbir

--  
Warm Regards,  
Balbir Singh  
Linux Technology Center  
IBM, ISTL

Subject: Re: [RFC][‐mm] [2/2] Simple stats for memory resource controller  
Posted by [Balbir Singh](#) on Mon, 14 Apr 2008 14:40:52 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Balbir Singh wrote:  
> Balaji Rao wrote:  
>> This patch implements trivial statistics for the memory resource controller.  
>>  
>> Signed-off-by: Balaji Rao <balajirao@gmail.com>  
>> CC: Balbir Singh <balbir@linux.vnet.ibm.com>  
>> CC: Dhaval Giani <dhaval@linux.vnet.ibm.com>  
>>  
>> diff --git a/mm/memcontrol.c b/mm/memcontrol.c  
>> index a860765..ca98b21 100644  
>> --- a/mm/memcontrol.c  
>> +++ b/mm/memcontrol.c  
>> @@ -47,6 +47,8 @@ enum mem\_cgroup\_stat\_index {  
>> /\*  
>> MEM\_CGROUP\_STAT\_CACHE, /\* # of pages charged as cache \*/  
>> MEM\_CGROUP\_STAT\_RSS, /\* # of pages charged as rss \*/  
>> + MEM\_CGROUP\_STAT\_PGPGIN\_COUNT, /\* # of pages paged in \*/  
>> + MEM\_CGROUP\_STAT\_PGPAYOUT\_COUNT, /\* # of pages paged out \*/  
>>  
>> MEM\_CGROUP\_STAT\_NSTATS,  
>> };  
>> @@ -198,6 +200,13 @@ static void mem\_cgroup\_charge\_statistics(struct mem\_cgroup \*mem, int flags,  
>> \_\_mem\_cgroup\_stat\_add\_safe(stat, MEM\_CGROUP\_STAT\_CACHE, val);  
>> else  
>> \_\_mem\_cgroup\_stat\_add\_safe(stat, MEM\_CGROUP\_STAT\_RSS, val);  
>> +  
>> + if (charge)  
>> + \_\_mem\_cgroup\_stat\_add\_safe(stat,  
>> + MEM\_CGROUP\_STAT\_PGPGIN\_COUNT, 1);  
>> + else  
>> + \_\_mem\_cgroup\_stat\_add\_safe(stat,  
>> + MEM\_CGROUP\_STAT\_PGPAYOUT\_COUNT, 1);  
>> }  
>>  
>> static struct mem\_cgroup\_per\_zone \*  
>> @@ -897,6 +906,8 @@ static const struct mem\_cgroup\_stat\_desc {  
>> } mem\_cgroup\_stat\_desc[] = {  
>> [MEM\_CGROUP\_STAT\_CACHE] = { "cache", PAGE\_SIZE, },

```
>> [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
>> + [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
>> + [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
>> };
>>
>> static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
>>
>
> Acked-by: Balbir Singh <balbir@linux.vnet.ibm.com>
>
> Hi, Andrew,
>
> Could you please include these statistics in -mm.
>
> Balbir
>
>
```

Andrew,

This should have been addressed to you in the first place. Resending.

--  
Warm Regards,  
Balbir Singh  
Linux Technology Center  
IBM, ISTL

---

Containers mailing list  
Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>

---

---

Subject: Re: [RFC][-mm] [2/2] Simple stats for memory resource controller  
Posted by [Balaji Rao](#) on Mon, 28 Apr 2008 16:00:29 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

On Monday 14 April 2008 08:09:48 pm Balbir Singh wrote:

> Balaji Rao wrote:  
> > This patch implements trivial statistics for the memory resource controller.  
> >  
> > Signed-off-by: Balaji Rao <balajirao@gmail.com>  
> > CC: Balbir Singh <balbir@linux.vnet.ibm.com>  
> > CC: Dhaval Giani <dhaval@linux.vnet.ibm.com>  
> >  
> > diff --git a/mm/memcontrol.c b/mm/memcontrol.c  
> > index a860765..ca98b21 100644  
> > --- a/mm/memcontrol.c

```

> > +++ b/mm/memcontrol.c
> > @@ -47,6 +47,8 @@ enum mem_cgroup_stat_index {
> >   */
> >   MEM_CGROUP_STAT_CACHE, /* # of pages charged as cache */
> >   MEM_CGROUP_STAT_RSS, /* # of pages charged as rss */
> > + MEM_CGROUP_STAT_PGPGIN_COUNT, /* # of pages paged in */
> > + MEM_CGROUP_STAT_PGPGOUT_COUNT, /* # of pages paged out */
> >
> >   MEM_CGROUP_STAT_NSTATS,
> > };
> > @@ -198,6 +200,13 @@ static void mem_cgroup_charge_statistics(struct mem_cgroup
*> mem, int flags,
> >   __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_CACHE, val);
> >   else
> >     __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_RSS, val);
> > +
> > + if (charge)
> > + __mem_cgroup_stat_add_safe(stat,
> > +   MEM_CGROUP_STAT_PGPGIN_COUNT, 1);
> > + else
> > + __mem_cgroup_stat_add_safe(stat,
> > +   MEM_CGROUP_STAT_PGPGOUT_COUNT, 1);
> > }
> >
> > static struct mem_cgroup_per_zone *
> > @@ -897,6 +906,8 @@ static const struct mem_cgroup_stat_desc {
> > } mem_cgroup_stat_desc[] = {
> >   [MEM_CGROUP_STAT_CACHE] = { "cache", PAGE_SIZE, },
> >   [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
> > + [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
> > + [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
> > };
> >
> > static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
> >
>
> Acked-by: Balbir Singh <balbir@linux.vnet.ibm.com>
>
> Hi, Andrew,
>
> Could you please include these statistics in -mm.
>
> Balbir
>
>
Hi Andrew,
```

Now that Balbir Singh has ACKed it, could you please include it in -mm ?

--

Warm Regards,

Balaji Rao  
Dept. of Mechanical Engineering  
NITK

---

Containers mailing list  
Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>

---

---

Subject: Re: [RFC][‐mm] [2/2] Simple stats for memory resource controller  
Posted by [akpm](#) on Mon, 28 Apr 2008 16:40:26 GMT

[View Forum Message](#) <=> [Reply to Message](#)

---

On Mon, 28 Apr 2008 21:30:29 +0530 Balaji Rao <balajirao@gmail.com> wrote:

```
> On Monday 14 April 2008 08:09:48 pm Balbir Singh wrote:  
> > Balaji Rao wrote:  
> > > This patch implements trivial statistics for the memory resource controller.  
> > >  
> > > Signed-off-by: Balaji Rao <balajirao@gmail.com>  
> > > CC: Balbir Singh <balbir@linux.vnet.ibm.com>  
> > > CC: Dhaval Giani <dhaval@linux.vnet.ibm.com>  
> > >  
> > > diff --git a/mm/memcontrol.c b/mm/memcontrol.c  
> > > index a860765..ca98b21 100644  
> > > --- a/mm/memcontrol.c  
> > > +++ b/mm/memcontrol.c  
> > > @@ -47,6 +47,8 @@ enum mem_cgroup_stat_index {  
> > > */  
> > > MEM_CGROUP_STAT_CACHE, /* # of pages charged as cache */  
> > > MEM_CGROUP_STAT_RSS, /* # of pages charged as rss */  
> > > + MEM_CGROUP_STAT_PGPIN_COUNT, /* # of pages paged in */  
> > > + MEM_CGROUP_STAT_PGPAYOUT_COUNT, /* # of pages paged out */  
> > >  
> > > MEM_CGROUP_STAT_NSTATS,  
> > > };  
> > > @@ -198,6 +200,13 @@ static void mem_cgroup_charge_statistics(struct mem_cgroup *mem, int flags,  
> > >     __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_CACHE, val);  
> > >     else  
> > >     __mem_cgroup_stat_add_safe(stat, MEM_CGROUP_STAT_RSS, val);  
> > > +  
> > > + if (charge)  
> > > +     __mem_cgroup_stat_add_safe(stat,
```

```

>>>+ MEM_CGROUP_STAT_PGPGIN_COUNT, 1);
>>>+ else
>>>+ __mem_cgroup_stat_add_safe(stat,
>>>+ MEM_CGROUP_STAT_PGPGOUT_COUNT, 1);
>>> }
>>>
>>> static struct mem_cgroup_per_zone *
>>> @@ -897,6 +906,8 @@ static const struct mem_cgroup_stat_desc {
>>> } mem_cgroup_stat_desc[] = {
>>> [MEM_CGROUP_STAT_CACHE] = { "cache", PAGE_SIZE, },
>>> [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
>>>+ [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
>>>+ [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
>>> };
>>>
>>> static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
>>>
>>
>> Acked-by: Balbir Singh <balbir@linux.vnet.ibm.com>
>>
>> Hi, Andrew,
>>
>> Could you please include these statistics in -mm.
>>
>> Balbir
>>
>>
>> Hi Andrew,
>
> Now that Balbir Singh has ACKed it, could you please include it in -mm ?

<looks>
```

I guess we can add this one, sure. But [patch 1/2] needs work.

- The local\_irq\_save()-around-for\_each\_possible\_cpu() locking doesn't make sense.
- indenting is busted in account\_user\_time() and account\_system\_time()
- The use of for\_each\_possible\_cpu() can be grossly inefficient. It would be preferred to use for\_each\_possible\_cpu() and add a cpu-hotplug notifier.
- The proposed newly-added userspace interfaces are undocumented
- The changelogs don't explain why we might want this feature in Linux.

- Generally: there are a heck of a lot of different ways of accounting for things in core kernel and it's really sad to see yet another one being added.

Actually, [patch 2/2] adds new kernel->user interfaces and doesn't document them. But afaict the existing memcggroup stats are secret too.

---

Containers mailing list  
Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>

---

---

Subject: Re: [RFC][mm] [2/2] Simple stats for memory resource controller  
Posted by [Balbir Singh](#) on Mon, 28 Apr 2008 18:03:05 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Andrew Morton wrote:

> On Mon, 28 Apr 2008 21:30:29 +0530 Balaji Rao <balajirao@gmail.com> wrote:

>

>> On Monday 14 April 2008 08:09:48 pm Balbir Singh wrote:

>>> Balaji Rao wrote:

>>>> This patch implements trivial statistics for the memory resource controller.

>>>

>>>> Signed-off-by: Balaji Rao <balajirao@gmail.com>

>>>> CC: Balbir Singh <balbir@linux.vnet.ibm.com>

>>>> CC: Dhaval Giani <dhaval@linux.vnet.ibm.com>

>>>

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

>>>> index a860765..ca98b21 100644

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

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

>>>> @@ -47,6 +47,8 @@ enum mem\_cgroup\_stat\_index {

>>>> \*/

>>>> MEM\_CGROUP\_STAT\_CACHE, /\* # of pages charged as cache \*/

>>>> MEM\_CGROUP\_STAT\_RSS, /\* # of pages charged as rss \*/

>>>> + MEM\_CGROUP\_STAT\_PGPGIN\_COUNT, /\* # of pages paged in \*/

>>>> + MEM\_CGROUP\_STAT\_PPGOUT\_COUNT, /\* # of pages paged out \*/

>>>

>>>> MEM\_CGROUP\_STAT\_NSTATS,

>>>> };

>>>> @@ -198,6 +200,13 @@ static void mem\_cgroup\_charge\_statistics(struct mem\_cgroup \*mem, int flags,

>>>> \_\_mem\_cgroup\_stat\_add\_safe(stat, MEM\_CGROUP\_STAT\_CACHE, val);

>>>> else

>>>> \_\_mem\_cgroup\_stat\_add\_safe(stat, MEM\_CGROUP\_STAT\_RSS, val);

>>>> +

```

>>> + if (charge)
>>> + __mem_cgroup_stat_add_safe(stat,
>>> + MEM_CGROUP_STAT_PGPGIN_COUNT, 1);
>>> + else
>>> + __mem_cgroup_stat_add_safe(stat,
>>> + MEM_CGROUP_STAT_PGPGOUT_COUNT, 1);
>>> }
>>>
>>> static struct mem_cgroup_per_zone *
>>> @@ -897,6 +906,8 @@ static const struct mem_cgroup_stat_desc {
>>> } mem_cgroup_stat_desc[] = {
>>> [MEM_CGROUP_STAT_CACHE] = { "cache", PAGE_SIZE, },
>>> [MEM_CGROUP_STAT_RSS] = { "rss", PAGE_SIZE, },
>>> + [MEM_CGROUP_STAT_PGPGIN_COUNT] = {"pgpgin", 1, },
>>> + [MEM_CGROUP_STAT_PGPGOUT_COUNT] = {"pgpgout", 1, },
>>> };
>>>
>>> static int mem_control_stat_show(struct cgroup *cont, struct cftype *cft,
>>>
>> Acked-by: Balbir Singh <balbir@linux.vnet.ibm.com>
>>
>> Hi, Andrew,
>>
>> Could you please include these statistics in -mm.
>>
>> Balbir
>>
>>
>> Hi Andrew,
>>
>> Now that Balbir Singh has ACKed it, could you please include it in -mm ?
>
> <looks>
>
> I guess we can add this one, sure. But [patch 1/2] needs work.
>
> - The local_irq_save()-around-for_each_possible_cpu() locking doesn't
> make sense.
>

```

Yes, that needs re-work. Peter Zijlstra had detailed review comments for the patch

```

> - indenting is busted in account_user_time() and account_system_time()
>
> - The use of for_each_possible_cpu() can be grossly inefficient. It
> would be preferred to use for_each_possible_cpu() and add a cpu-hotplug
> notifier.
>
```

> - The proposed newly-added userspace interfaces are undocumented

>

Yes, we need more documentation

> - The changelogs don't explain why we might want this feature in Linux.

>

We need more accurate utime/stime per cgroup. Summing them in user space is insufficient, since tasks can move across groups and what we have is accumulated time per task.

> - Generally: there are a heck of a lot of different ways of accounting

> for things in core kernel and it's really sad to see yet another one

> being added.

>

We thought of summing up stuff in user space, we've look harder. The plan is to finally send all the data using cgroupstats.

>

> Actually, [patch 2/2] adds new kerent->user interfaces and doesn't document

> them. But afact the existing memcg stats are secret too.

>

The statistics was added as a part of git commit

d52aa412d43827033a8e2ce4415ef6e8f8d53635. I'll go ahead and try to document them. These patches piggy back on the statistics patches and add pagein/pageout counts, which is a useful statistic for the memory controller.

--

Warm Regards,

Balbir Singh

Linux Technology Center

IBM, ISTL

---

Containers mailing list

Containers@lists.linux-foundation.org

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

---

---

Subject: Re: [RFC][mm] [2/2] Simple stats for memory resource controller

Posted by [KAMEZAWA Hiroyuki](#) on Tue, 29 Apr 2008 05:39:29 GMT

---

[View Forum Message](#) <> [Reply to Message](#)

---

On Mon, 28 Apr 2008 23:33:05 +0530

Balbir Singh <balbir@linux.vnet.ibm.com> wrote:

> The statistics was added as a part of git commit  
> d52aa412d43827033a8e2ce4415ef6e8f8d53635. I'll go ahead and try to document  
> them. These patches piggy back on the statistics patches and add pagein/pageout  
> counts, which is a useful statistic for the memory controller.

>

I'm sorry for lack of documentation.

BTW, when you adds documentation on this pagein/pageout, please make it clear

1. pagein means a new page is newly accounted to this cgroup, doesn't mean a page is read from disk.
2. pageout means a page is dropped from this cgroup, doesn't mean a page is written into disk.

So, pagein/pageout is a bit ambiguous. I'm happy if you find better names.

Thanks,

-Kame

---

Containers mailing list

Containers@lists.linux-foundation.org

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

---