Subject: Re: [-mm PATCH 4/7] Memory controller memory accounting
Posted by Vaidyanathan Srinivas on Thu, 05 Jul 2007 18:46:04 GMT
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Balbir Singh wrote:
> Add the accounting hooks. The accounting is carried out for RSS and Page
> Cache (unmapped) pages. There is now a common limit and accounting for both.
> The RSS accounting is accounted at page_add_*_rmap() and page_remove_rmap()
> time. Page cache is accounted at add_to_page_cache(),
> __delete_from_page_cache(). Swap cache is also accounted for.
>
> Each page's meta_page is protected with a bit in page flags, this makes
> handling of race conditions involving simultaneous mappings of a page easier.
> A reference count is kept in the meta_page to deal with cases where a page
> might be unmapped from the RSS of all tasks, but still lives in the page
> cache.
>
> Signed-off-by: Balbir Singh <balbir@linux.vnet.ibm.com>
> ---
>
> fs/exec.c | 1
> include/linux/memcontrol.h | 11 +++
> include/linux/page-flags.h | 3 +
> mm/filemap.c | 8 ++
> mm/memcontrol.c | 132 ++-
> mm/memory.c | 22 +++++++
> mm/migrate.c | 6 ++
> mm/page_alloc.c | 3 +
> mm/rmap.c | 2
> mm/swap_state.c | 8 ++
> mm/swapfile.c | 40 ++++++++------
> 11 files changed, 218 insertions(+), 18 deletions(-)
>

[snip]

> diff -puN mm/migrate.c~mem-control-accounting mm/migrate.c
> --- linux-2.6.22-rc6/mm/migrate.c~mem-control-accounting 2007-07-04 15:05:27.000000000
> -0700
> +++ linux-2.6.22-rc6-balbir/mm/migrate.c 2007-07-04 15:05:27.000000000 -0700
> @@ -28,6 +28,7 @@
> #include <linux/mempolicy.h>
> #include <linux/vmalloc.h>
> #include <linux/security.h>
> +#include <linux/memcontrol.h>
>
> #include "internal.h"
>

> @@ -157,6 +158,11 @@ static void remove_migration_pte(struct
>   return;
>   }
>
> + if (mem_container_charge(page, mm)) {

Minor correction. The above line should be

if (mem_container_charge(new, mm)) {

to avoid compilation error.

--Vaidy

[snip]

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