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Subject: [PATCH v2] cgroup: prefer [kv]zalloc[\_node] over [kv]malloc+memset in memory controller code.

Posted by [Jesper Juhl](#) on Thu, 04 Nov 2010 20:17:27 GMT

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Hi,

In mem\_cgroup\_alloc() we currently do either kmalloc() or vmalloc() then followed by memset() to zero the memory. This can be more efficiently achieved by using kzalloc() and vzalloc().

There's also one situation where we can use kzalloc\_node() - this is what's new in this version of the patch.

The original patch was:

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Here's version 2. I'd appreciate it if someone could merge it, but I don't know who that someone would be.

Signed-off-by: Jesper Juhl <jj@chaosbits.net>

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memcontrol.c | 9 +++++++-

1 file changed, 3 insertions(+), 6 deletions(-)

```
diff --git a/mm/memcontrol.c b/mm/memcontrol.c
index 9a99cfa..4f4e676 100644
--- a/mm/memcontrol.c
+++ b/mm/memcontrol.c
@@ -4169,13 +4169,11 @@ static int alloc_mem_cgroup_per_zone_info(struct mem_cgroup
 *mem, int node)
 */
if (!node_state(node, N_NORMAL_MEMORY))
    tmp = -1;
- pn = kmalloc_node(sizeof(*pn), GFP_KERNEL, tmp);
+ pn = kzalloc_node(sizeof(*pn), GFP_KERNEL, tmp);
if (!pn)
    return 1;

    mem->info.nodeinfo[node] = pn;
- memset(pn, 0, sizeof(*pn));
-
    for (zone = 0; zone < MAX_NR_ZONES; zone++) {
        mz = &pn->zoneinfo[zone];
```

```
for_each_lru(l)
@@ -4199,14 +4197,13 @@ static struct mem_cgroup *mem_cgroup_alloc(void)

/* Can be very big if MAX_NUMNODES is very big */
if (size < PAGE_SIZE)
- mem = kmalloc(size, GFP_KERNEL);
+ mem = kzalloc(size, GFP_KERNEL);
else
- mem = vmalloc(size);
+ mem = vzalloc(size);

if (!mem)
return NULL;

- memset(mem, 0, size);
mem->stat = alloc_percpu(struct mem_cgroup_stat_cpu);
if (!mem->stat) {
if (size < PAGE_SIZE)
```

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Don't top-post http://www.catb.org/~esr/jargon/html/T/top-post.html

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