
Subject: [PATCH 01/23] slub: don't create a copy of the name string in
kmem_cache_create

Posted by [Glauber Costa](#) on Fri, 20 Apr 2012 21:57:09 GMT

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When creating a cache, slub keeps a copy of the cache name through
strdup. The slab however, doesn't do that. This means that everyone
registering caches have to keep a copy themselves anyway, since code
needs to work on all allocators.

Having slab create a copy of it as well may very well be the right
thing to do: but at this point, the callers are already there

My motivation for it comes from the kmem slab cache controller for
memcg. Because we create duplicate caches, having a more consistent
behavior here really helps.

I am sending the patch, however, more to probe on your opinion about
it. If you guys agree, but don't want to merge it - since it is not
fixing anything, nor improving any situation etc, I am more than happy
to carry it in my series until it gets merged (fingers crossed).

Signed-off-by: Glauber Costa <glommer@parallels.com>

CC: Christoph Lameter <cl@linux.com>

CC: Pekka Enberg <penberg@cs.helsinki.fi>

mm/slub.c | 14 ++-----

1 files changed, 2 insertions(+), 12 deletions(-)

diff --git a/mm/slub.c b/mm/slub.c

index ffe13fd..af8cee9 100644

--- a/mm/slub.c

+++ b/mm/slub.c

@@ -3925,7 +3925,6 @@ struct kmem_cache *kmem_cache_create(const char *name, size_t
size,

size_t align, unsigned long flags, void (*ctor)(void *))

{

struct kmem_cache *s;

- char *n;

if (WARN_ON(!name))

return NULL;

@@ -3949,26 +3948,20 @@ struct kmem_cache *kmem_cache_create(const char *name, size_t
size,

return s;

}

- n = kstrdup(name, GFP_KERNEL);

```

- if (!n)
- goto err;
-
s = kmalloc(kmem_size, GFP_KERNEL);
if (s) {
- if (kmem_cache_open(s, n,
+ if (kmem_cache_open(s, name,
    size, align, flags, ctor)) {
    list_add(&s->list, &slab_caches);
    up_write(&slub_lock);
    if (sysfs_slab_add(s)) {
        down_write(&slub_lock);
        list_del(&s->list);
-    kfree(n);
    kfree(s);
    goto err;
    }
    return s;
}
- kfree(n);
kfree(s);
}
err:
@@ -5212,7 +5205,6 @@ static void kmem_cache_release(struct kobject *kobj)
{
    struct kmem_cache *s = to_slab(kobj);

- kfree(s->name);
kfree(s);
}

@@ -5318,11 +5310,9 @@ static int sysfs_slab_add(struct kmem_cache *s)
    return err;
}
kobject_uevent(&s->kobj, KOBJ_ADD);
- if (!unmergeable) {
+ if (!unmergeable)
    /* Setup first alias */
    sysfs_slab_alias(s, s->name);
- kfree(name);
- }
    return 0;
}

--
1.7.7.6

```
