

Hello All,

This is my new take for the memcg kmem accounting.
At this point, I consider the series pretty mature - although of course, bugs are always there...

As a disclaimer, however, I must say that the slub code is much more stressed by me, since I know it better. If you have no more objections to the concepts presented, the remaining edges can probably be polished in a rc cycle, at the maintainers discretion, of course.

Otherwise, I'll be happy to address any concerns of yours.

Since last submission:

- * memcgs can be properly removed.
- * We are not charging based on current->mm->owner instead of current
- * kmem_large allocations for slub got some fixes, specially for the free case
- * A cache that is registered can be properly removed (common module case) even if it spans memcg children. Slab had some code for that, now it works well with both
- * A new mechanism for skipping allocations is proposed (patch posted separately already). Now instead of having kmalloc_no_account, we mark a region as non-accountable for memcg.

I should point out again that most, if not all, of the code in the caches are wrapped in static_key areas, meaning they will be completely patched out until the first limit is set.

I also put a lot of effort, as you will all see, in the proper separation of the patches, so the review process is made as easy as the complexity of the work allows to.

Frederic Weisbecker (1):

cgroups: ability to stop res charge propagation on bounded ancestor

Glauber Costa (24):

slab: dup name string

slub: fix slab_state for slub

memcg: Always free struct memcg through schedule_work()

slub: always get the cache from its page in kfree

slab: rename gfpflags to allocflags

slab: use obj_size field of struct kmem_cache when not debugging

memcg: change defines to an enum

res_counter: don't force return value checking in
 res_counter_charge_nofail
 kmem slab accounting basic infrastructure
 slab/slub: struct memcg_params
 slub: consider a memcg parameter in kmem_create_cache
 slab: pass memcg parameter to kmem_cache_create
 slub: create duplicate cache
 slab: create duplicate cache
 memcg: kmem controller charge/uncharge infrastructure
 skip memcg kmem allocations in specified code regions
 slub: charge allocation to a memcg
 slab: per-memcg accounting of slab caches
 memcg: disable kmem code when not in use.
 memcg: destroy memcg caches
 memcg/slub: shrink dead caches
 slub: create slabinfo file for memcg
 slub: track all children of a kmem cache
 Documentation: add documentation for slab tracker for memcg

Suleiman Souhlal (4):

memcg: Make it possible to use the stock for more than one page.
 memcg: Reclaim when more than one page needed.
 memcg: Track all the memcg children of a kmem_cache.
 memcg: Per-memcg memory.kmem.slabinfo file.

Documentation/cgroups/memory.txt		33 ++
Documentation/cgroups/resource_counter.txt		18 +-
include/linux/memcontrol.h		88 ++++
include/linux/res_counter.h		23 +-
include/linux/sched.h		1 +
include/linux/slab.h		29 +
include/linux/slab_def.h		72 +++-
include/linux/slub_def.h		51 ++-
init/Kconfig		2 +-
kernel/res_counter.c		13 +-
mm/memcontrol.c		773 ++++++
mm/slab.c		394 ++++++
mm/slub.c		298 ++++++

13 files changed, 1658 insertions(+), 137 deletions(-)

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1.7.7.6