## Subject: [PATCH v4 00/19] slab accounting for memcg Posted by Glauber Costa on Fri, 12 Oct 2012 13:40:54 GMT

View Forum Message <> Reply to Message

This is a followup to the previous kmem series. I divided them logically so it gets easier for reviewers. But I believe they are ready to be merged together (although we can do a two-pass merge if people would prefer)

Throwaway git tree found at:

git://git.kernel.org/pub/scm/linux/kernel/git/glommer/memcg. git kmemcg-slab

I've bundled the following important changes since last submission:

- \* no more messing with the cache name after destruction: aggregated figures are shown in /proc/slabinfo.
- \* memory.kmem.slabinfo file with memog-specific cache information during its lifespan.
- \* full slub attribute propagation.
- \* reusing the standard workqueue mechanism.
- \* cache-side indexing, instead of memcg-side indexing. The memcg css\_id serves as an index, and we don't need extra indexes for that.
- \* struct memcg cache params no longer bundled in struct kmem cache: We now will have only a pointer in the struct, allowing memory consumption when disable to fall down ever further.

Patches need to be adjusted to cope with those changes, but other than that, look the same - just a lot simpler.

I also put quite some effort to overcome my writing disability and get some decent changelogs in place.

For a detailed explanation about this whole effort, please refer to my previous post (https://lkml.org/lkml/2012/10/8/119)

## \*\*\* BLURB HERE \*\*\*

Glauber Costa (19):

slab: Ignore internal flags in cache creation move slabinfo processing to slab common.c move print\_slabinfo\_header to slab\_common.c sl[au]b: process slabinfo\_show in common code slab: don't preemptively remove element from list in cache destroy slab/slub: struct memcg\_params consider a memcg parameter in kmem\_create\_cache Allocate memory for memog caches whenever a new memog appears

memcg: infrastructure to match an allocation to the right cache

memcg: skip memcg kmem allocations in specified code regions

```
sl[au]b: always get the cache from its page in kfree sl[au]b: Allocate objects from memcg cache memcg: destroy memcg caches memcg/sl[au]b Track all the memcg children of a kmem_cache. memcg/sl[au]b: shrink dead caches Aggregate memcg cache values in slabinfo slab: propagate tunables values slub: slub-specific propagation changes. Add slab-specific documentation about the kmem controller
```

```
Documentation/cgroups/memory.txt | 7 +
include/linux/memcontrol.h
                        | 88 +++++
include/linux/sched.h
                      | 1+
include/linux/slab.h
                     | 47 +++
include/linux/slab_def.h
                       | 3+
include/linux/slub_def.h
                       | 19 +-
                   | 2 +-
init/Kconfig
mm/memcontrol.c
                       mm/slab.c
                    | 210 +++++-----
mm/slab.h
                    | 157 +++++++
                        | 224 +++++++++++
mm/slab common.c
mm/slub.c
                    | 193 ++++++
12 files changed, 1311 insertions(+), 239 deletions(-)
```

1.7.11.4