

Subject: [RFC][PATCH] memory controller per zone patches take 2 [5/10] calculate active/inactive balance for

Posted by [KAMEZAWA Hiroyuki](#) on Fri, 16 Nov 2007 10:21:49 GMT

[View Forum Message](#) <> [Reply to Message](#)

Define function for determining active/inactive balance in memory

cgroup.

* just use res.usage as total value and assumes total = active + inactive.

* and yes, we can use mem_cgroup_get_all_zonestat(mem, MEM_CGROUP_ZSTAT_ACTIVE)

Signed-off-by: KAMEZAWA Hiroyuki <kamezawa.hiroyu@jp.fujitsu.com>

include/linux/memcontrol.h | 8 +++++++
mm/memcontrol.c | 16 ++++++++
2 files changed, 24 insertions(+)

Index: linux-2.6.24-rc2-mm1/mm/memcontrol.c

```
=====
--- linux-2.6.24-rc2-mm1.orig/mm/memcontrol.c
+++ linux-2.6.24-rc2-mm1/mm/memcontrol.c
@@ -435,6 +435,22 @@ int mem_cgroup_calc_mapped_ratio(struct
    rss = mem_cgroup_read_stat(&mem->stat, MEM_CGROUP_STAT_RSS);
    return (rss * 100) / total;
}
+/*
+ * Uses mem_cgroup's imbalance instead of zone's lru imbalance.
+ * This will be used for determining whether page out routine try to free
+ * mapped pages or not.
+ */
+int mem_cgroup_reclaim_imbalance(struct mem_cgroup *mem)
+{
+ s64 total, active, inactive;
+
+ /* usage is recorded in bytes */
+ total = mem->res.usage >> PAGE_SHIFT;
+ inactive = mem_cgroup_get_all_zonestat(mem, MEM_CGROUP_ZSTAT_INACTIVE);
+ active = total - inactive;
+
+ return active / (inactive + 1);
+}
```

```
unsigned long mem_cgroup_isolate_pages(unsigned long nr_to_scan,
    struct list_head *dst,
```

Index: linux-2.6.24-rc2-mm1/include/linux/memcontrol.h

```
=====
--- linux-2.6.24-rc2-mm1.orig/include/linux/memcontrol.h
+++ linux-2.6.24-rc2-mm1/include/linux/memcontrol.h
@@ -65,6 +65,8 @@ extern void mem_cgroup_page_migration(st
```

```

* For memory reclaim.
*/
extern int mem_cgroup_calc_mapped_ratio(struct mem_cgroup *mem);
+extern int mem_cgroup_reclaim_imbalance(struct mem_cgroup *mem);
+

#else /* CONFIG_CGROUP_MEM_CONT */
@@ -142,6 +144,12 @@ static inline int mem_cgroup_calc_mapped
{
    return 0;
}
+
+static inline int mem_cgroup_reclaim_imbalance(struct mem_cgroup *mem)
+{
+    return 0;
+}
+
#endif /* CONFIG_CGROUP_MEM_CONT */

#endif /* _LINUX_MEMCONTROL_H */

```

Containers mailing list
Containers@lists.linux-foundation.org
<https://lists.linux-foundation.org/mailman/listinfo/containers>
