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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

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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 */
```

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<https://lists.linux-foundation.org/mailman/listinfo/containers>

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