
Subject: [PATCH][for -mm] per-zone and reclaim enhancements for memory controller take 3 [7/10] calculate the

Posted by [KAMEZAWA Hiroyuki](#) on Tue, 27 Nov 2007 03:06:25 GMT

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Define function for calculating the number of scan target on each Zone/LRU.

Changelog V1->V2.

- fixed types of variable.

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```
include/linux/memcontrol.h | 15 ++++++
mm/memcontrol.c             | 33 ++++++
2 files changed, 48 insertions(+)
```

Index: linux-2.6.24-rc3-mm1/include/linux/memcontrol.h

```
=====
--- linux-2.6.24-rc3-mm1.orig/include/linux/memcontrol.h 2007-11-27 11:22:14.000000000 +0900
+++ linux-2.6.24-rc3-mm1/include/linux/memcontrol.h 2007-11-27 11:22:51.000000000 +0900
@@ -73,6 +73,10 @@
extern void mem_cgroup_record_reclaim_priority(struct mem_cgroup *mem,
        int priority);

+extern long mem_cgroup_calc_reclaim_active(struct mem_cgroup *mem,
+ struct zone *zone, int priority);
+extern long mem_cgroup_calc_reclaim_inactive(struct mem_cgroup *mem,
+ struct zone *zone, int priority);

#else /* CONFIG_CGROUP_MEM_CONT */
static inline void mm_init_cgroup(struct mm_struct *mm,
@@ -173,6 +177,17 @@
    return 0;
}

+static inline long mem_cgroup_calc_reclaim_active(struct mem_cgroup *mem,
+ struct zone *zone, int priority)
+{
+ return 0;
+}
+
+static inline long mem_cgroup_calc_reclaim_inactive(struct mem_cgroup *mem,
+ struct zone *zone, int priority)
+{
+ return 0;
+}
#endif /* CONFIG_CGROUP_MEM_CONT */
```

```
#endif /* _LINUX_MEMCONTROL_H */
```

Index: linux-2.6.24-rc3-mm1/mm/memcontrol.c

```
=====
--- linux-2.6.24-rc3-mm1.orig/mm/memcontrol.c 2007-11-27 11:22:14.000000000 +0900
```

```
+++ linux-2.6.24-rc3-mm1/mm/memcontrol.c 2007-11-27 11:24:04.000000000 +0900
```

```
@@ -472,6 +472,39 @@
```

```
    mem->prev_priority = priority;
```

```
}
```

```
+/*
```

```
+ * Calculate # of pages to be scanned in this priority/zone.
```

```
+ * See also vmscan.c
```

```
+ *
```

```
+ * priority starts from "DEF_PRIORITY" and decremented in each loop.
```

```
+ * (see include/linux/mmzone.h)
```

```
+ */
```

```
+
```

```
+long mem_cgroup_calc_reclaim_active(struct mem_cgroup *mem,
```

```
+    struct zone *zone, int priority)
```

```
+{
```

```
+    long nr_active;
```

```
+    int nid = zone->zone_pgdat->node_id;
```

```
+    int zid = zone_idx(zone);
```

```
+    struct mem_cgroup_per_zone *mz = mem_cgroup_zoneinfo(mem, nid, zid);
```

```
+
```

```
+    nr_active = MEM_CGROUP_ZSTAT(mz, MEM_CGROUP_ZSTAT_ACTIVE);
```

```
+    return (nr_active >> priority);
```

```
+}
```

```
+
```

```
+long mem_cgroup_calc_reclaim_inactive(struct mem_cgroup *mem,
```

```
+    struct zone *zone, int priority)
```

```
+{
```

```
+    long nr_inactive;
```

```
+    int nid = zone->zone_pgdat->node_id;
```

```
+    int zid = zone_idx(zone);
```

```
+    struct mem_cgroup_per_zone *mz = mem_cgroup_zoneinfo(mem, nid, zid);
```

```
+
```

```
+    nr_inactive = MEM_CGROUP_ZSTAT(mz, MEM_CGROUP_ZSTAT_INACTIVE);
```

```
+
```

```
+    return (nr_inactive >> priority);
```

```
+}
```

```
+
```

```
    unsigned long mem_cgroup_isolate_pages(unsigned long nr_to_scan,
```

```
        struct list_head *dst,
```

```
        unsigned long *scanned, int order,
```

Containers mailing list

