
Subject: [PATCH] block layer: ioprio_best function fix
Posted by [Anonymous Coward](#) on Thu, 12 Oct 2006 12:13:30 GMT
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Currently ioprio_best function first checks wethere aioprio or bioprio equals IOPRIO_CLASS_NONE (ioprio_valid() macros does that) and if it is so it returns bioprio/aioprio appropriately. Thus the next four lines, that set aclass/bclass to IOPRIO_CLASS_BE, if aclass/bclass == IOPRIO_CLASS_NONE, are never executed.

The second problem: if aioprio from class IOPRIO_CLASS_NONE and bioprio from class IOPRIO_CLASS_IDLE are passed to ioprio_best function, it will return IOPRIO_CLASS_IDLE. It means that during __make_request we can merge two requests and set the priority of merged request to IDLE, while one of the initial requests originates from a process with NONE (default) priority. So we can get a situation when a process with default ioprio will experience IO starvation, while there is no process from real-time class in the system.

Just removing ioprio_valid check should correct situation.

Signed-off-by: Vasily Tarasov <vtaras@openvz.org>

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--- linux-2.6.18/fs/ioprio.c.orig 2006-09-20 07:42:06.000000000 +0400

+++ linux-2.6.18/fs/ioprio.c 2006-10-12 14:52:36.000000000 +0400

@@ -145,11 +145,6 @@ int ioprio_best(unsigned short aprio, un
 unsigned short aclass = IOPRIO_PRIO_CLASS(aprio);
 unsigned short bclass = IOPRIO_PRIO_CLASS(bprio);

- if (!ioprio_valid(aprio))
- return bprio;
- if (!ioprio_valid(bprio))
- return aprio;
-

if (aclass == IOPRIO_CLASS_NONE)
 aclass = IOPRIO_CLASS_BE;
if (bclass == IOPRIO_CLASS_NONE)
