

Root partitions not detected at boot time

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2008-05/msg01299.html>

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Hello,

The problem I reported in <http://marc.info/?l=linux-kernel&m=120804001406787&w=2> still persists at 2.6.25.1. (sorry for the repeated messages there; that was my mail client's fault).

In my previous bug repor, I was using raid1; now, I am using raid5, as follows.

I have three partitions /dev/sda2, /dev/sdb2 and /dev/sdc2 marked as raid autodetect (FD). They are assembled as a partitionable raid 5 array, and my root is in /dev/md_d0p1. With a 2.6.24.2 kernel with sata, ext3 and raid5 compiled in (I don't use initrd), the system boots fine. In fact, the raid array and partitions are detected as show with dmesg:

```
md: Autodetecting RAID arrays.
md: Scanned 3 and added 3 devices.
md: autorun ...
md: considering sdc2 ...
md: adding sdc2 ...
md: adding sdb2 ...
md: adding sda2 ...
md: created md_d0
md: bind<sda2>
md: bind<sdb2>
md: bind<sdc2>
md: running: <sdc2><sdb2><sda2>
raid5: device sdc2 operational as raid disk 2
raid5: device sdb2 operational as raid disk 1
raid5: device sda2 operational as raid disk 0
raid5: allocated 3226kB for md_d0
raid5: raid level 5 set md_d0 active with 3 out of 3 devices, algorithm 2
RAID5 conf printout:
--- rd:3 wd:3
disk 0, o:1, dev:sda2
disk 1, o:1, dev:sdb2
disk 2, o:1, dev:sdc2
md: ... autorun DONE.
```

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```
md_d0: p1 p2 p3 p4 < p5 p6 p7 >
```

The last line shows my raid partitions are detected.

However, when I try kernel 2.6.25.1, again with sata, ext3 and raid5 compiled in and no initrd, the kernel does not recognize the raid partitions at boot time, nonetheless the array is detected. The output of dmesg is the same until:

```
raid5: allocated 3224kB for md_d0
raid5: raid level 5 set md_d0 active with 3 out of 3 devices, algorithm 2
RAID5 conf printout:
--- rd:3 wd:3
disk 0, o:1, dev:sda2
disk 1, o:1, dev:sdb2
disk 2, o:1, dev:sd2c
md: ... autorun DONE.
VFS: Cannot open root device "md_d0p1" or unknown-block(0,0)
Please append a correct "root=" boot option; here are the available partitions:
0800 312571224 sda driver:sd
0801 96358 sda1
0802 312472282 sda2
0810 312571224 sdb driver:sd
0811 96358 sdb1
0812 312472282 sdb2
0820 312571224 sdc driver:sd
0821 96358 sdc1
0822 312472282 sdc2
fe00 624944384 md_d0 (driver?)
Kernel panic - not syncing: VFS: Unable to mount root fs on unknown-block(0,0)
```