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Subject: [PATCH 0/4] Devices accessibility control group (v2)  
Posted by [Pavel Emelianov](#) on Tue, 08 Jan 2008 09:02:50 GMT  
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The first version was posted long ago  
(<http://openvz.org/pipermail/devel/2007-September/007647.html>)  
and since then there are many (good I hope) changes:

- \* Added the block devices support :) It turned out to be a bit simpler than the char one (or I missed something significant);
- \* Now we can enable/disable not just individual devices, but the whole major with all its minors (see the TODO list beyond as well);
- \* Added the ability to restrict the read/write permissions to devices, not just visible/invisible state.

That is - the main features I wished to implement right after the v1 was sent. Some minor changes are:

- \* I merged the devices.char and devices.block files into one - devices.permissions;
- \* As the result of the change above - the strings passed to this file has changed. Now they are  
`[bc] <major>:{<minor>|*} [r-][w-]`  
E.g. `b 5:2 r-` will grant the read permissions to the block 5:2 device and `c 3:* -w` will grant the write-only access to all the character devices with the major 5.

However, there are some things to be done:

- \* Make the `/proc/devices` show relevant info depending on who is reading it. This seems to be easy to do, since I already have the support to dump similar info into the `devices.permissions` file, but I haven't tried to use this in `/proc/devices` yet;
- \* Add the support for devices ranges. I.e. someone might wish to tell smth like `b 5:[0-10] r-` to this subsystem. Currently this is not supported and I'm afraid that if we start support minor ranges we'll have smth similar to VMA-s or FLOCK-s ranges management in one more place in the kernel.
- \* One more question is - are there any other permissions to work with? E.g. in OpenVZ we have a separate bit for quota management, maybe we can invent some more...

Currently I didn't pay much attention to split this set well, so this will most likely won't work with `git-bisect`, but I

think this is OK for now. I will sure split it better when I send the v3 and further.

The set is prepared against the 2.6.24-rc5-mm1.

All this is minimally tested and seems to work. Hope to hear you comments, wishes and patches soon :)

To play with it - run a standard procedure:

```
# mount -t container none /cont/devs -o devices
# mkdir /cont/devs/0
# echo -n $$ > /cont/devs/0/tasks
```

and tune device permissions.

Thanks,  
Pavel

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

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