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From: Greg KH <greg@kroah.com>
To: linux-hotplug-devel@lists.sourceforge.net, linux-kernel@vger.kernel.org
Subject: HOWTO use udev to manage /dev

Here's a small document that I've added to the udev tarball that explains how I managed to get udev to manage my /dev tree on a Red Hat Fedora based machine. All you Gentoo developers can just laugh as it's already integrated into your distro.

Any users of other distros, feel free to send me updates to this to show how to do it for yours. Any distro maintainers, feel free to just integrate udev into your system so this kind of tweaking isn't necessary :)

thanks,

greg k-

HOWTO use udev to manage /dev

This document describes one way to get udev working on a Fedora-development machine to manage /dev. This procedure may be used to get udev to manage /dev on other distros, if you modify some of the steps.

This will only work if you use a 2.6 based kernel, preferably the most recent one. This does not prevent your machine from using a 2.4 kernel, if you boot into one, udev will not run and your old /dev will be present with no changes needed.

NOTE NOTE NOTE NOTE NOTE NOTE NOTE

This is completely unsupported. Attempting to do this may cause your machine to be unable to boot properly. USE AT YOUR OWN RISK. Always have a rescue disk or CD handy to allow you to fix up any errors that may occur.

NOTE NOTE NOTE NOTE NOTE NOTE NOTE

- Build and install udev as specified in the README that comes with udev. I recommend using the following build options to get the smallest possible binaries:
 make USE_KLIBC=true USE_LOG=false DEBUG=false
- disable udev from the boot process by running:
 chkconfig udev off
or
 chkconfig --del udev
as root.
- place the start_udev script somewhere that is accessible by your initscripts. I placed it into /etc/rc.d with the following command:
 copy extras/start_udev /etc/rc.d/
- modify the rc.sysinit script to call the start_udev script as one of the first things that it does, but after /proc and /sys are mounted.
I did this with the latest Fedora startup scripts with the patch at the end of this file.
- make sure the /etc/udev/udev.conf file lists the udev_root as /dev. It should contain the following line in order to work properly.
 udev_root="/dev/"
- reboot into a 2.6 kernel and watch udev create all of the initial device nodes in /dev

If anyone has any problems with this, please let me, and the linux-hotplug-devel@lists.sourceforge.net mailing list know.

A big thanks go out to the Gentoo developers for showing me that this is possible to do.

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Patch to modify rc.sysinit to call udev at the beginning of the boot process:

```
--- /etc/rc.sysinit.orig      2004-02-17 11:45:17.000000000 -0800
+++ /etc/rc.sysinit          2004-02-17 13:28:33.000000000 -0800
@@ -32,6 +32,9 @@

 . /etc/init.d/functions

+# start udev to populate /dev
+/etc/rc.d/start_udev
+
 if [ "$HOSTTYPE" != "s390" -a "$HOSTTYPE" != "s390x" ]; then
     last=0
     for i in `LC_ALL=C grep '^[0-9].*respawn:/sbin/mingetty' /etc/
 inittab | sed 's/^. * tty\([0-9][0-9]*\).*\/\1/g'`; do
```