

pivot_root(8) - Linux man page

Name

`pivot_root` - change the root file system

Synopsis

pivot_root *new_root* put_old

Description

pivot_root moves the root file system of the current process to the directory *put_old* and makes *new_root* the new root file system.

Since **pivot_root(8)** simply calls **pivot_root(2)**, we refer to the man page of the latter for further details.

Note that, depending on the implementation of **pivot_root**, root and cwd of the caller may or may not change. The following is a sequence for invoking **pivot_root** that works in either case, assuming that **pivot_root** and **chroot** are in the current **PATH**:

```
cd new_root
pivot_root . put_old
exec chroot . command
```

Note that **chroot** must be available under the old root and under the new root, because **pivot_root** may or may not have implicitly changed the root directory of the shell.

Note that **exec chroot** changes the running executable, which is necessary if the old root directory should be unmounted afterwards. Also note that standard input, output, and error may still point to a device on the old root file system, keeping it busy. They can easily be changed when invoking **chroot** (see below; note the absence of leading slashes to make it work whether **pivot_root** has changed the shell's root or not).

Examples

Change the root file system to `/dev/hda1` from an interactive shell:

```
mount /dev/hda1 /new-root
cd /new-root
pivot_root . old-root
exec chroot . sh <dev/console >dev/console 2>&1
umount /old-root
```

Mount the new root file system over NFS from `10.0.0.1:/my_root` and run **init**:

```
ifconfig lo 127.0.0.1 up    # for portmap
# configure Ethernet or such
portmap    # for lockd (implicitly started by mount)
mount -o ro 10.0.0.1:/my_root /mnt
killall portmap    # portmap keeps old root busy
cd /mnt
pivot_root . old_root
exec chroot . sh -c 'umount /old_root; exec /sbin/init' \
    <dev/console >dev/console 2>&1
```

See Also

chroot(1), **mount(8)**, **pivot_root(2)**, **umount(8)**

Availability

The pivot_root command is part of the util-linux-ng package and is available from <ftp://ftp.kernel.org/pub/linux/utils/util-linux-ng/>.

Referenced By

[initrd](#)(4), [lxc.conf](#)(5)