

Downgrade Glibc

From Gentoo Linux Wiki

Under Development

This page is currently under development by: klandreth

It aims to provide you with: A safe and tested method of downgrading glibc from ACCEPT_KEYWORDS in make.conf

Concerns or Compliments? Please use the discussion page.

Introduction

Sometimes through over zealous unmasking of packages, sys-libs/glibc (<http://gentoo-portage.com/sys-libs/glibc>) can be upgraded to a version not compatible with other bits of software. A particular version of glibc might be needed for certain 3rd party or hardware vendor tools. It could also be for consistency across a fleet of servers so that binary packages are more compatible.

Warning: Downgrading glibc (<http://gentoo-portage.com/Search?search=glibc>) is a quick way to hose your system!! Do not attempt this unless you are confident the system can be easily re-installed.

Fail safe

For a fail safe, Modify package.use to enable **static** USE flag for packages sys-apps/busybox (<http://gentoo-portage.com/sys-apps/busybox>) and app-shells/bash (<http://gentoo-portage.com/app-shells/bash>) .

File: /etc/portage/package.use

```
sys-apps/busybox static -pam
app-shells/bash static
```

```
emerge --ask --verbose -1 app-shells/bash sys-apps/busybox
```

gentoolkit (<http://gentoo-portage.com/Search?search=gentoolkit>) should be installed as well for the quickpkg tool. Use it to *zip up* the current glibc installation

```
quickpkg glibc
```

The system should still be usable in the event that something goes horribly wrong.

2010.9.28 Note : app-shells/bash now don't have 'static' use.

Prepare the linker

This method is preferred as it doesn't require rebuilding ld.so.cache up-front and doesn't break the build environment.

- Mask all versions newer than the required version in **/etc/portage/package.mask** or just undo whatever it is that you were doing wrong.
- Get the target version of sys-libs/glibc (<http://gentoo-portage.com/sys-libs/glibc>) from Gentoo Binary Packages TinderBox (<http://tinderbox.dev.gentoo.org/html/>) or from a BINHOST.
- Uncompress the package into **/usr/local/glibc/**

```
mkdir /usr/local/glibc && tar xjvf glibc-2.8.tar.bz2 -C /usr/local/glibc/
```

- Add the following to your **/etc/make.conf** file

make.conf x86 system

File: /etc/make.conf

```
LDFLAGS="-L/usr/local/glibc/lib -L/usr/local/glibc/usr/lib $LDLAGS"  
CXXFLAGS="-I/usr/local/glibc/usr/include $CXXFLAGS"
```

make.conf amd64 system

File: /etc/make.conf

```
LDLAGS="-L/usr/local/glibc/lib64 -L/usr/local/glibc/usr/lib64 -L/usr/local/glibc/lib32 -L/usr/local/glibc/us  
CXXLAGS="-I/usr/local/glibc/usr/include $CXXLAGS"
```

Downgrade glibc

Warning: It is still safe up to this point, the next step is the point of no return!

Save your old `/usr/bin/automake` (perhaps you will need it in a step!)

Since Gentoo will halt when it detects you are downgrading glibc, you need to make portage think that it has not installed glibc yet:

```
rm -Rf /var/db/pkg/sys-libs/glibc*
```

- Verify that the correct version of glibc will be built: need for good installation `FEATURES="-sandbox"`

```
FEATURES="-sandbox" emerge -av sys-libs/glibc
```

- Re-emerge your system:

```
emerge --emptytree system
```

Note: It might take a few passes or manual rebuilds of certain packages if you had `ACCEPT_KEYWORDS` in your `/etc/make.conf`. In which case, use `emerge --resume` after you resolve any failures. Don't panic until you see the word **segmentation fault**.

- Remove or rename your `/usr/local/glibc` directory and remove the `LDFLAGS` and `CPPFLAGS` entries previously added to your `/etc/make.conf`.

```
env-update && source /etc/profile
```

- It is safe to reboot your system at this point if other tasks require it.
- Re-emerge your universe:

```
emerge --emptytree system; emerge --emptytree world
```

Authors

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Authors are people who have worked on this document and have made significant changes to its content. If you have edited this article and wish to add yourself to the authors list please read "Who are Authors".

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