

Bootstrapping under 632#

Set up your kit#

Before building packages from source under QNX, it's recommended you download and install the [QNX Utility Package for pkgsrc](#) containing fixes and omissions to our kit this entire exercise has uncovered.

```
# cd /
```

```
# tar -xzvUf /tmp/pkgsrc_qnxutil-0.14.tar.gz
```

Archive contents at time of writing:#

- usr/bin/patch
 - The shipped one doesn't do anything. PR 21085.
- usr/qnx632/target/qnx6/x86/usr/lib/libtermcap.a
usr/qnx632/target/qnx6/x86/usr/lib/libtermcapS.a
 - tgetent() can pull out terminal definition for ansi rather than qansi. PR 45283.
 - tcsh can tickle this one.
- usr/bin/expr
 - regular expression matching done with the ':' operator must be anchored to the beginning of the string. PR 49169.
 - libtool can tickle this one.
 - work buffer for ':' operator is too small. PR 50882.
 - configure scripts can tickle this one.
 - didn't honour POSIX end of option '--' delimiter. PR 52242.
 - lang/php5 configure script tickled this one.
- bin/uname
 - trailing space if multiple options are passed or -a specified is not POSIX. PR 44076.
- usr/bin/comm
 - comm is needed for POSIX conformance. PR 19760.
 - perl needs this one.
- usr/bin/ftp
 - This is the latest one from our next scheduled networking release and adds http support which pkgsrc likes to have.
- bin/pwd
 - Lack of terminating newline if stdout isn't a tty isn't POSIX. PR 44519.
- usr/bin/tr
 - '\|', '\a', '\b', '\f', '\n', '\r', '\t', '\v' should be supported as POSIX escape sequences. PR 24740.
- bin/ksh
 - This is a weird one. libtool-1.5.24 consistently caused ksh to fault while building ncurses. Wasn't really able to debug it but recompiling the HEAD ksh seemed to remedy it so maybe something fixed along the way?
- usr/bin/rpcgen
 - rpcgen is looking for qcc at "/usr/bin/qcc", this is no longer true. In the past, the workaround is to "ln -sf \$(QNX_TARGET)/x86/usr/bin/qcc /usr/bin/qcc". The PR48650 is opened against this. The rpcgen is fixed so it will look into PATH for "qcc".

- `usr/qnx632/target/qnx6/usr/include/stdlib.h`
 - The `devel/gettext-asnprintf` package tickled an issue where `stdlib.h` wouldn't declare `malloc()` and friends in a C++ environment depending on order of inclusion. PR 51606.
- `<poll.h>`
 - A link to `<sys/poll.h>`
 - This is the header actually specified by POSIX and various packages are looking for it rather than `<sys/poll.h>` which we ship. PR 29467.
- `<sys/platform.h>`
 - Don't default `__STDC_VERSION__=199901L` with later gcc. PR 51798.
- `<unistd.h>`
 - Allow compilation when no posix standard defined. PR 24822.
- `<stdio.h>`
 - Don't double prototype `fseeko()` and friends when `_FILE_OFFSET_BITS=64`. PR 27983.

Optionally update your `procnto#`

- This is **probably** not needed. The building of groff passes a lot of args via its environment. There was a case where processes with a large PATH would not inherit their environment correctly (PR 44407). So depending on where you check it out to, the build of groff may show issues.

Set up your environment#

- Add `/usr/pkg/bin:/usr/pkg/sbin` to your PATH
- Add `/usr/pkg/lib` to your `CS_LIBPATH`
 - I have the following in my `/etc/rc.d/rc.local`
`setconf CS_LIBPATH $(getconf CS_LIBPATH):/usr/pkg/lib`
- Your default compiler will be used. 3.3.5 works much better.

```
# qcc -V 3.3.5,gcc_ntox86 -set-default
```

- 4.2.1 might be better still? Someone try it out :)

Bootstrap#

- Download `pkgsrc` with QNX diffs. Familiarize yourself with the [repository layout](#):
 - The 'vendor' and 'HEAD_640' branches are used for 640 work.
 - The 'HEAD_632' branch contains the last update to the `pkgsrc` snapshot with diffs for QNX 632.
- Note: this is a subversion repository. If you've registered with the Foundry27 site, the above link should present a sample checkout command. For example, to check out the entire repository:

```
# svn checkout --username <username> http://community.qnx.com/svn/repos/pkgsrc
```

- However, each branch is fairly large. To check out only the `HEAD_632` branch:

```
# svn checkout --username <username> http://community.qnx.com/svn/repos/pkgsrc/HEAD_632
```

- Once that's done you should be ready to bootstrap:

```
# cd pkgsrc/bootstrap
```

```
# ./bootstrap
```

Set up the resulting `/usr/pkg/etc/mk.conf`<#>

- We've taken the route of trying to leverage gcc for future cross platform support so add the following line:
PKGSRC_COMPILER=gcc
- You'll probably want globally disable x11 support for now. To do so add the following line:
PKG_DEFAULT_OPTIONS+= -x11
Alternatively you can disable it on a per package basis as per the following example:

```
# cd textproc/groff
```

```
# bmake PKG_OPTIONS.groff=-x11
```

Try your first package<#>

```
# cd misc/figlet
```

```
# bmake install
```

```
# pkg_info
```