#? Gentoo Prefix

C90 #f-14a

— #####

1.

####

2. Gentoo Prefix#######



Ubuntu: \$sudo apt install build-essential

CentOS: \$sudo yum install gcc

```
user $ wget http://dev.gentoo.org/~heroxbd/bootstrap-rap.sh
user $ chmod 755 bootstrap-rap.sh
user $ ./bootstrap-rap.sh
       .vir.
                                            d$b
                              .d$$b.
                                       d$$$$$$$$$$ .d$$b.
    .d$$$$$b.
                  .cd$$b.
                                                                  .d$$b.
    $$$$( )$$$b d$$$()$$$.
                             d$$$$$$b Q$$$$$$P$$P.$$$$$b. .$$$$$$b.
    Q$$$$$$$$$$$$$$$$$$$P'' d$$$PQ$$$$b.
                                                   .$$$P' `$$$ .$$$P' `$$$
                                           $$$$.
                                                   $$$$b..d$$$ $$$b..d$$$
      "$$$$$$P Q$$$$$$b d$$$P
                                   Q$$$$b $$$$b
                 "$$$$$$$ Q$$$
     d$$$$$P"
                                    Q$$$$
                                           $$$$$
                                                    `Q$$$$$$P
                                                               `Q$$$$$$P
    $$$$$$$P
                   * 11 II II II II
                            11.11
                                      11.11
                                                     "Q$$$P"
                                                                 "Q$$$P"
                                           Q$$$P
                                            11 11 11
    `Q$$P"
             Welcome to the Gentoo Prefix interactive installer!
    I will attempt to install Gentoo Prefix on your system. To do so, I'll
    ask you some questions first.
                                     After that, you'll have to practise
    patience as your computer and I try to figure out a way to get a lot of
    software packages compiled.
                                    If everything goes according to plan,
    you'll end up with what we call "a Prefix install", but by that time,
    I'll tell you more.
Do you want me to start off now? [Yn]
```

```
I'm going to check for some variables in your environment now:
    it appears ASFLAGS is not set :)
    it appears CFLAGS is not set :)
    it appears CPPFLAGS is not set :)
    it appears CXFLAGS is not set :)
    it appears DYLD_LIBRARY_PATH is not set :)
    it appears GREP_OPTIONS is not set :)
    it appears LDFLAGS is not set :)
    it appears LD_LIBRARY_PATH is not set :)
    it appears PERL_MM_OPT is not set :)
    it appears PKG_CONFIG_PATH is not set :)
    it appears PYTHONPATH is not set :)
    it appears ROOT is not set :)
```

I'm excited! Seems we can finally do something productive now.

Ok, I'm going to do a little bit of guesswork here. Thing is, your machine appears to be identified by CHOST=x86_64-pc-linux-gnu.

Great! You appear to have a compiler in your PATH

I did my utmost best, and found that you have 4 cpu cores. If this looks wrong to you, you can happily ignore me. Based on the number of cores you have, I came up with the idea of parallelising compilation work where possible with 3 parallel make threads. If you have no clue what this means, you should go with my excellent default I've chosen below, really!

How many parallel make jobs do you want? [3]

Each and every Prefix has a home. That is, a place where everything is supposed to be in. That place must be fully writable by you (duh), but should also be able to hold some fair amount of data and preferably be reasonably fast. In terms of space, I advise something around 2GiB (it's less if you're lucky). I suggest a reasonably fast place because we're going to compile a lot, and that generates a fair bit of IO. If some networked filesystem like NFS is the only option for you, then you're just going to have to wait a fair bit longer. This place which is your Prefix' home, is often referred to by a variable called EPREFIX.

What do you want EPREFIX to be? [/home/user/gentoo]

```
OK! I'm going to give it a try, this is what I have collected sofar:

EPREFIX=/home/user/gentoo

CHOST=x86_64-pc-linux-gnu

PATH=/home/user/gentoo/usr/bin:/home/user/gentoo/bin:/home/user/gentoo/tmp/usr/bin:/home/user/gentoo/tmp/bin:/usr/bin:/bin

MAKEOPTS=-j3
```

I'm now going to make an awful lot of noise going through a sequence of

stages to make your box as groovy as I am myself, setting up your Prefix. In short, I'm going to run stage1, stage2, stage3, followed by emerge -e system. If any of these stages fail, both you and me are in deep trouble. So let's hope that doesn't happen.

Type here what you want to wish me [luck]

#Huh? You're not serious, are you?

3. Gentoo Prefix##

Woah! Everything just worked! Now YOU should run /home/user/gentoo/startprefix and enjoy! Thanks for using me, it was a pleasure to work with you.

#######startprefix.sh########

user \$./gentoo/startprefix.sh

\$ emerge -av s1

\$ s1

```
$ which sl
/home/user/gentoo/usr/bin/sl
```

\$ which ls

Gentoo Prefix############OS#########

```
$ which apt
/usr/bin/apt
```

4.

4.1. Synchronize with the RAP repository

```
user $emerge dev-vcs/git # needed for sync
...
The following USE changes are necessary to proceed:
(see "package.use" in the portage(5) man page for more details)
# required by dev-scheme/guile-2.0.12-r1::gentoo
# required by sys-devel/autogen-5.18.10::gentoo
# required by net-libs/gnutls-3.4.14::gentoo[tools]
# required by app-crypt/gnupg-2.1.14-r1::gentoo[gnutls]
# required by dev-vcs/git-2.9.2::gentoo[gpg]
# required by dev-vcs/git (argument)
>=dev-libs/boehm-gc-7.4.2 threads
```

/home/user/gentoo/etc/portage/package.use

```
$ emerge -av dev-vcs/git
...
Would you like to add these changes to your config files? [Yes/No] y
```

```
$ dispatch-conf
```

##git###########

```
$ emerge dev-vcs/git
```

- * The complete build log is located at '/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/temp/build.log'.
- * The ebuild environment file is located at '/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/temp/environment'.
- * Working directory: '/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/work/guile-2.0.12'
- * S: '/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/work/guile-2.0.12'
- >>> Failed to emerge dev-scheme/guile-2.0.12-r1, Log file:
- >>> '/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/temp/build.log'

mv: cannot stat '/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/image//usr/lib64/libguile-*-gdb.scm': No such file or directory

mv "\${D}"/usr/\$(get_libdir)/libguile-*-gdb.scm "\${D}"/usr/share/gdb/auto-load/
\$(get_libdir) || die;

/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/image/

/home/user/gentoo/var/tmp/portage/dev-scheme/guile-2.0.12-r1/image/home/user/gentoo/usr/lib64/libguile-*-gdb.scm

#1 VARIABLES

D = \${PORTAGE_TMPDIR}/portage/\${CATEGORY}/\${PF}/image/

Contains the path to the temporary install directory. Every write operation that does not involve the helper tools and functions (found below) should be prefixed with \${D}. Beginning with EAPI 3, the offset prefix often needs to be taken into account here, for which the variable \${ED} is provided (see below). Do not modify this variable.

ED = \${PORTAGE_TMPDIR}/portage/\${CATEGORY}/\${PF}/image/\${EPREFIX}/

Beginning with EAPI 3, contains the path "\${D%/}\${EPREFIX}/" for convenience purposes. For EAPI values prior to EAPI 3 which do not support ED, helpers use D where they would otherwise use ED. Do not modify this variable.

/home/user/gentoo/usr/portage/dev-scheme/guile/guile-2.0.12-r1.ebuild


```
mv "${ED}"/usr/$(get_libdir)/libguile-*-gdb.scm "${ED}"/usr/share/gdb/auto-load/$(get_libdir) || die
```

```
$ ebuild /home/user/gentoo/usr/portage/dev-scheme/guile/guile-2.0.12-r1.ebuild
digest
>>> Creating Manifest for /home/user/gentoo/usr/portage/dev-scheme/guile
```

```
$ emerge dev-vcs/git
* Messages for package dev-vcs/git-2.9.2:
* These additional scripts need some dependencies:
  git-quiltimport : dev-util/quilt
  git-instaweb
          : || ( www-servers/lighttpd www-servers/apache www-servers/
nginx )
>>> Auto-cleaning packages...
>>> No outdated packages were found on your system.
```

####

```
user $[ -d ${EPREFIX}/usr/portage-stage/.git ] || rm -rf ${EPREFIX}/usr/portage-
stage
```

###\${EPREFIX}#Manual Install#############################\${EPREFIX}#############

```
/home/user/gentoo/usr/portage-stage/.git
```

```
user $ rm -rf /home/user/gentoo/usr/portage-stage
```

```
user $emaint sync -r rap
```

###Synchronize with the RAP repository########

4.2. Compile Inside Memory

4.3. Add an en_US.UTF-8 locale

```
$ nano /home/user/gentoo/etc/locale.gen
```

```
en_US.UTF-8 UTF-8
ja_JP.UTF-8 UTF-8
```

###########locale-gen#########

###locale###########

4.4. Use a nearby mirror

http://ftp.jaist.ac.jp/pub/Linux/Gentoo/

5

###

##Gentoo Prefix########DTI#ServersMan###VPS##########################467#(##)###

6 ###·mikutter#####

##mikutter#########make.conf#######

\$ nano /home/user/gentoo/etc/portage/make.conf

RUBY_TARGETS="ruby21"

USF="unicode nls x"

\$ emerge -av mikutter

```
>>> Completed installing alsa-utils-1.1.2 into /home/user/gentoo/var/tmp/portage/
media-sound/alsa-utils-1.1.2/image/
 * Final size of build directory: 6712 KiB
 * Final size of installed tree: 2372 KiB
 * QA Notice: the following files are outside of the prefix:
 * /var
 * /var/lib
 * /var/lib/alsa
 * /lib
 * /lib/udev
 * /lib/udev/rules.d
 * /lib/udev/rules.d/90-alsa-restore.rules
 * ERROR: media-sound/alsa-utils-1.1.2::gentoo failed:
     Aborting due to QA concerns: there are files installed outside the prefix
 * call stack:
     misc-functions.sh, line 603: Called install_qa_check
     misc-functions.sh, line 217: Called source 'install_symlink_html_docs'
 *
              O5prefix, line 114: Called install_qa_check_prefix
 *
              O5prefix, line 27: Called die
 * The specific snippet of code:
                        die "Aborting due to QA concerns: there are files installed
 outside the prefix"
 * If you need support, post the output of `emerge --info '=media-sound/alsa-
utils-1.1.2::gentoo'`,
 * the complete build log and the output of `emerge -pqv '=media-sound/alsa-
utils-1.1.2::gentoo'`.
 * The complete build log is located at '/home/user/gentoo/var/tmp/portage/media-
sound/alsa-utils-1.1.2/temp/build.log'.
 * The ebuild environment file is located at '/home/user/gentoo/var/tmp/portage/
media-sound/alsa-utils-1.1.2/temp/environment'.
 * Working directory: '/home/user/gentoo/var/tmp/portage/media-sound/alsa-
utils-1.1.2/image/home/user/gentoo'
 * S: '/home/user/gentoo/var/tmp/portage/media-sound/alsa-utils-1.1.2/work/alsa-
utils-1.1.2'
!!! post install failed; exiting.
```

```
$ nano gentoo/usr/portage/net-misc/mikutter/mikutter-3.4.2.ebuild
```



```
RDEPEND="
libnotify? ( x11-libs/libnotify )
media-sound/alsa-utils"
```


ebuild#########manifest#########

```
$ ebuild gentoo/usr/portage/net-misc/mikutter/mikutter-3.4.2.ebuild digest
```



```
$ emerge -av mikutter
```


#############ruby-2.1.10####

```
* ERROR: dev-lang/ruby-2.1.10::gentoo failed (install phase):
    rm rubygems failed
*

* Call stack:
    ebuild.sh, line 115: Called src_install
    environment, line 3215: Called die
    The specific snippet of code:
        rm -r "${D}/usr/$(get_libdir)/ruby/${RUBYVERSION}/rubygems" || die "rm rubygems failed";
    *

* If you need support, post the output of `emerge --info '=dev-lang/ruby-2.1.10::gentoo'`,
    * the complete build log and the output of `emerge -pqv '=dev-lang/ruby-2.1.10::gentoo'`.
```

```
* The complete build log is located at '/home/user/gentoo/var/tmp/portage/dev-
lang/ruby-2.1.10/temp/build.log'.

* The ebuild environment file is located at '/home/user/gentoo/var/tmp/portage/
dev-lang/ruby-2.1.10/temp/environment'.

* working directory: '/home/user/gentoo/var/tmp/portage/dev-lang/ruby-2.1.10/work/
ruby-2.1.10'

* S: '/home/user/gentoo/var/tmp/portage/dev-lang/ruby-2.1.10/work/ruby-2.1.10'

>>> Failed to emerge dev-lang/ruby-2.1.10, Log file:

>>> '/home/user/gentoo/var/tmp/portage/dev-lang/ruby-2.1.10/temp/build.log'
```

```
$ nano gentoo/usr/portage/dev-lang/ruby/ruby-2.1.10.ebuild
3###${D}#${ED}###
    # Remove installed rubygems copy
    rm -r "${ED}/usr/$(get_libdir)/ruby/${RUBYVERSION}/rubygems" || die "rm
rubygems failed"
    rm -r "${ED}/usr/$(get_libdir)/ruby/${RUBYVERSION}"/rdoc* || die "rm rdoc
failed"
    rm -r "${ED}/usr/bin/"{ri,rdoc}"${MY_SUFFIX}" || die "rm rdoc bins failed"

$ ebuild gentoo/usr/portage/dev-lang/ruby/ruby-2.1.10.ebuild digest
>>> Creating Manifest for /home/user/gentoo/usr/portage/dev-lang/ruby
```

##dev-ruby/rcairo###########

```
>>> Completed installing rcairo-1.15.2 into /home/user/gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/

* Final size of build directory: 1872 KiB

* Final size of installed tree: 560 KiB

* QA Notice: home/user/gentoo///home/user/gentoo/ double prefix

* QA Notice: home/user/gentoo///home/user/gentoo/usr double prefix

* QA Notice: home/user/gentoo///home/user/gentoo/usr/include double prefix

* QA Notice: home/user/gentoo///home/user/gentoo/usr/include/ruby-2.1.0 double prefix

* QA Notice: home/user/gentoo///home/user/gentoo/usr/include/ruby-2.1.0/rb_cairo.h double prefix

* ERROR: dev-ruby/rcairo-1.15.2::gentoo failed:

* Aborting due to QA concerns: double prefix files installed

* Call stack:

* misc-functions.sh, line 603: Called install_qa_check
```

```
misc-functions.sh, line 217: Called source 'install_symlink_html_docs'
 *
              O5prefix, line 114: Called install_qa_check_prefix
              O5prefix, line 19: Called die
 * The specific snippet of code:
                die "Aborting due to QA concerns: double prefix files installed"
 * If you need support, post the output of `emerge --info '=dev-ruby/
rcairo-1.15.2::gentoo',
 * the complete build log and the output of `emerge -pqv '=dev-ruby/
rcairo-1.15.2::gentoo'`.
!!! When you file a bug report, please include the following information:
GENTOO_VM= CLASSPATH="" JAVA_HOME=""
JAVACFLAGS="" COMPILER=""
and of course, the output of emerge --info =rcairo-1.15.2
 * The complete build log is located at '/home/user/gentoo/var/tmp/portage/dev-
ruby/rcairo-1.15.2/temp/build.log'.
 * The ebuild environment file is located at '/home/user/gentoo/var/tmp/portage/
dev-ruby/rcairo-1.15.2/temp/environment'.
 * Working directory: '/home/user/gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/
image/home/user/gentoo'
 * S: '/home/user/gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/work'
!!! post install failed; exiting.
>>> Failed to emerge dev-ruby/rcairo-1.15.2, Log file:
   '/home/user/gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/temp/build.log'
```

```
$ find . -name rb_cairo.h
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/work/all/rcairo-1.15.2/ext/cairo/
rb_cairo.h
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/work/ruby21/rcairo-1.15.2/ext/
cairo/rb_cairo.h
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user/
gentoo/usr/include/ruby-2.1.0/rb_cairo.h
```

```
$ ls -R ./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/
home/
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/:
user
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user:
```

```
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user/
gentoo:
usr
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user/
gentoo/usr:
include
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user/
gentoo/usr/include:
ruby-2.1.0
./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user/
gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/home/user/
gentoo/usr/include/ruby-2.1.0:
rb_cairo.h
```

```
$ ls ./gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/home/user/gentoo/
home usr
```



```
$ nano gentoo/usr/portage/dev-ruby/rcairo/rcairo-1.15.2.ebuild

each_ruby_install() {
    each_fakegem_install
    insinto $(ruby_get_hdrdir)
    doins ext/cairo/rb_cairo.h
}
```



```
each_ruby_install() {
    each_fakegem_install

    echo log: $(ruby_get_hdrdir)
    insinto $(ruby_get_hdrdir)
    doins ext/cairo/rb_cairo.h
```

```
}
```

```
$ ebuild gentoo/usr/portage/dev-ruby/rcairo/rcairo-1.15.2.ebuild digest
>>> Creating Manifest for /home/user/gentoo/usr/portage/dev-ruby/rcairo
$ emerge mikutter

* Running install phase for ruby21 ...
log: /home/user/gentoo/usr/include/ruby-2.1.0
```



```
each_ruby_install() {
    each_fakegem_install

echo log: `echo $(ruby_get_hdrdir) | sed "s|${EPREFIX}||"`
    insinto `echo $(ruby_get_hdrdir) | sed "s|${EPREFIX}||"`
    doins ext/cairo/rb_cairo.h
}
```

```
$ ebuild gentoo/usr/portage/dev-ruby/rcairo/rcairo-1.15.2.ebuild digest
>>> Creating Manifest for /home/user/gentoo/usr/portage/dev-ruby/rcairo
$ emerge -1 dev-ruby/rcairo

>>> Install rcairo-1.15.2 into /home/user/gentoo/var/tmp/portage/dev-ruby/
rcairo-1.15.2/image/ category dev-ruby

* Running install phase for ruby21 ...
log: /usr/include/ruby-2.1.0
```

#? Gentoo Prefix

```
* Running install phase for all ...

* Running check install phase for ruby21 ...

>>> Completed installing rcairo-1.15.2 into /home/user/gentoo/var/tmp/portage/dev-ruby/rcairo-1.15.2/image/
```

7.