

NAME

genup – update Portage tree, all installed packages, and kernel

SYNOPSIS

genup [*options*]

DESCRIPTION

genup is a utility intended to simplify the process of keeping your Gentoo system up to date. When invoked, it automatically performs the following steps, in order:

- updates Portage tree (and active overlays), and syncs **eix**(1) (using **eix-sync**)
- removes any prior **emerge**(1) resume history; (using **emaint --fix cleanresume**)
- ensures Portage itself is up-to-date (using **emerge --oneshot --update portage**)
- updates all packages in the @world set (using **emerge --deep --with-bdeps=y --newuse --update @world**)
- builds any external modules (such as those for VirtualBox) (using **emerge @module-rebuild**)
- rebuilds any packages depending on stale libraries (using **emerge @preserved-rebuild**)
- updates any old **perl**(1) modules (if desired) (using **perl-cleaner --all**)
- updates any old **python**(1) modules (if desired) (using **python-updater**)
- resolves clashing config file changes (in interactive mode) (using **dispatch-conf**)
- upgrades the kernel if possible (to staging, in */boot*) (using **buildkernel --stage-only**)
- removes unreferenced packages (using **emerge --depclean**)
- fixes missing shared library dependencies (using **revdep-rebuild**)
- rebuilds any packages depending on stale libraries (again) (using **emerge @preserved-rebuild**)
- removes any unused source tarballs (if desired) (using **eclean --deep distfiles**)
- deploys new kernel from staging (if desired and available) (using **buildkernel --copy-from-staging**)
- updates environment settings (as a precautionary measure) (using **env-update**)

The **genup** utility can be invoked in non-interactive (default) or interactive mode (see the **--ask** option, below). Non-interactive mode is suitable for use in a scripted invocation, for example as part of a nightly **cron**(8) job (see **AUTOMATING GENUP**, below).

OPTIONS

-a, --ask

By default, **genup** will: a) attempt to perform the update automatically; b) attempt to rebuild the kernel (if a new version becomes available); c) fail immediately on any error; d) invoke underlying

tools (such as **buildkernel**(8)) in non-interactive mode; and e) not invoke **dispatch-conf**(1) to resolve clashing configuration file updates (unless the **--dispatch-conf** option has been specified)

However, if you supply the **--ask** option, then **genup** will instead: a) prompt for confirmation during important steps of the update; b) ask whether or not you wish to rebuild the kernel (if a new version becomes available) c) fail immediately on any error, **except** when that error occurs during the @world update **emerge**(1) (in which case, prompt whether or not to retry, allowing the problem — for example, a missing use flag — to be fixed in a separate terminal); d) invoke most underlying tools (such as **buildkernel**(8)) in interactive mode; and e) invoke **dispatch-conf**(1) to resolve clashing configuration file updates.

In both interactive and non-interactive modes, **genup** can be instructed to skip the kernel rebuild check, using the **--no-kernel-upgrade** option (see below).

-A, --alert

If possible, sounds the terminal bell when interaction is needed. Selecting this option automatically selects **--ask**.

-b, --buildkernel-args=ADDITIONAL_ARGS

Passes the specified arguments to the main **buildkernel**(8) invocation (the one used to create a new kernel in the **/boot** staging area). These arguments are *not* passed to the second invocation, where used (which copies the built kernel to from the staging area to the system partition).

-c, --dispatch-conf

Always forces **dispatch-conf**(1) to be run, where necessary, even if not in interactive mode.

-d, --deploy-from-staging

When a new kernel is available (and, if in interactive mode, you so request) **genup** will build that new kernel to the staging area in **/boot** (using **buildkernel**(8) with the **--stage-only** option). This ensures that the build can proceed without needing your boot USB key (if used) to be inserted, so it can be completed in an unattended context. When the **--deploy-from-staging** option is specified, **genkernel** will also attempt to deploy the new kernel (if any) at the end of the process to your EFI system partition (NB, in interactive mode, you will be asked whether you wish to do this anyway).

If you create a new kernel as the result of a **genup** run, but do *not* choose to deploy it at the time, you can always do so later by issuing: **buildkernel --ask --copy-from-staging**.

-e, --emerge-args=ADDITIONAL_ARGS

Passes the specified arguments to the main **emerge**(1) invocation. One possible use here is to specify:

--emerge-args="--autounmask-write"

This instructs **emerge**(1) to automatically make any necessary changes to Portage configuration files to ensure that the process can proceed (adding additional use flags, allowing libraries, and so on), provided the Portage **--autounmask** option is enabled (which by default it is). This can be useful when running **genup** in an unattended situation (assuming of course you are comfortable with such changes being made automatically on your behalf; you will of course still get a chance to review any changes made via the **dispatch-conf**(1) mechanism). Note also that if you do use this approach, you should also specify the **--ignore-required-changes** option.

-h, --help

Displays a short help screen, and exits.

-i, --ignore-required-changes

By default, when running in non-interactive mode, **genup** checks to see if the **emerge @world** step would fail due to required user changes (to **/etc/portage/package.use** etc.), and stops with an error if so. This option suppresses that check.

Note that specifying this option (in non-interactive mode) can result in cases where your **genup** run completes successfully, but the **@world** set has **not**, in fact, been brought fully up to date.

It has no effect in interactive mode.

-k, --keep-old-distfiles

By default, **genup** will remove any source tarballs that have previously been downloaded by Portage, but which do not relate to the installed version of any package. This option inhibits such cleaning.

-n, --no-kernel-upgrade

Do not perform (in non-interactive mode) or offer to perform (in interactive mode) a kernel recompile, even should a newer version be available. This option is implied if the **buildkernel** USE flag is unset.

Note, this does **not** itself prevent the update of **gentoo-sources** (or similar package), during the **@world emerge(1)** step.

-p, --no-perl-cleaner

Do not attempt to run **perl-cleaner(1)** during the process.

-P, --no-python-updater

Do not attempt to run **python-updater(1)** during the process.

-v, --verbose

Provides more verbose output from invoked tools, where possible.

-V, --version

Displays the version number of **genup**, and exits.

EXIT STATUS

The exit status is 0 if the update completed successfully, and 1 otherwise.

PARALLEL MAKE

Quite frequently, large **emerge(1)** runs fail because one or more of the invoked ebuids have problems running with parallel **make(1)** (as set via **MAKEOPTS="-jN"**, where $N > 1$).

Because of this, **genup** will attempt to automatically resume any **emerge(1)** operation with parallel make inhibited, should the original operation fail. A warning is issued if this happens.

In a similar fashion, if you are using distributed compilation with the **distcc** and **distcc-pump** features, these will be automatically inhibited if operations are retried.

AUTOMATING GENUP

Should you wish to run **genup** automatically, you need to ensure it has an appropriate environment. For example, you could put the following script in **/etc/cron.daily/genup**, to execute an update nightly (be sure to make the file executable):

```
#!/bin/bash
export PATH="/usr/local/sbin:/usr/local/bin:"\
"/usr/sbin:/usr/bin:/sbin:/bin:/opt/bin"
genup >/var/log/latest-genup-run.log 2>&1
```

EFFECT OF USE FLAGS

If the **buildkernel** USE flag is *unset* when **genup** is emerged (it is set by default), then in effect the **--no-kernel-upgrade** option is always forced on, and as such **genup** will never attempt to call **buildkernel(8)**. This makes it suitable for use in an embedded context (where there may be no EFI system partition etc.).

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AUTHORS

sakaki — send bug reports or comments to <sakaki@deciban.com>

SEE ALSO

dispatch-conf(1), **eclean(1)**, **emerge(1)**, **eix(1)**, **emaint(1)**, **make(1)**, **perl-cleaner(1)**, **python-updater(1)**, **buildkernel(8)**, **revdep-rebuild(1)**, **cron(8)**, **portage(5)**.