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 & overlays; syncs **eix**(1) (if desired)
  (using (if needed) **emaint sync --auto**, and **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**)
- ensures genup itself is up-to-date (restarting if not)
  (using **emerge --oneshot --update genup**)
- updates all packages in the @world set
  (first using **emtee**, if the matching USE flag is set, and then using **emerge --deep --with-bdeps=y --changed-use --update @world**)
- removes unreferenced packages
  (using **emerge --depclean**)
- builds any external modules (such as those for VirtualBox)
  (using **emerge @module-rebuild --exclude '*-bin'**)
- rebuilds any packages depending on stale libraries
  (using **emerge @preserved-rebuild**)
- updates any old **perl**(1) modules (if desired)
  (using **perl-cleaner --all**)
- removes stale versions of **python**(1) from eselect list
  (using **eselect python cleanup**)
- 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 (again)
  (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**)

- updates the **eix**(1) package metadata (if desired) (using **eix-sync -0**)

- runs any custom updaters in */etc/genup/updaters.d*

The **genup** utility can be invoked in non-interative (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.

−C, **−−no−custom−updaters**

Do not attempt to run any custom updaters found in */etc/genup/updaters.d*.

−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.

−E, **−−no−emtee**
Do not attempt to use the **emtee**(1) tool, even when the eponymous USE flag has been enabled.

−h, **−−help**
Displays a short help screen, and exits.

−i, **−−ignore−required−changes**
By default, wqhen 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.

−m, **−−no−eix−metadata−update**
Do not perform an update of the **eix** metadata at the end-of-run (NB, specifying this may cause odd results to be reported when using the **eix** tool subsequently).

−M, **−−no−module−rebuild**
Do not attempt to rebuild external modules by default.

−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.

−N, **−−no−nocache**
Do not attempt to use **nocache**(1) with **eix-sync**(1), even when the **nocache** USE flag is set.

−p, **−−no−perl−cleaner**
Do not attempt to run **perl-cleaner**(1) during the process.

−r, **−−adjustment=N**
Specifies the **nice**(1) adjustment value N (-20<=N<=19) under which to run **emerge**(1) and **buildkernel**(8) operations.

If this option is unspecified, the default niceness adjustment value is 19, which causes builds to run at the lowest possible priority; this is useful to prevent **genup** clogging up your system. Be careful about using negative values!

−S, **−−no−eix−sync**
Do not attempt to run **eix-sync**(1) at the start of the process.

−v, **−−verbose**
Provides more verbose output from invoked tools, where possible.

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

−x, **−−eix−sync−args=ADDITIONAL_ARGS**
Passes the specified arguments to the main **eix-sync**(1) invocation. One possible use here is to specify:
--eix-sync-args="-q"

This instructs **eix-sync**(1) to suppress its otherwise verbose output (which was the default behaviour of **genup** prior to version 1.0.14).

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 ebuilds 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 *un*set 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.).

If the **emtee** USE flag is set when **genup** is emerged (it is *un*set by default), then the **@world** update will first be attempted using the (often, more efficient) **emtee** tool. This behaviour may always be suppressed by using the **--no-emtee** option. Note that even when **emtee** *is* used, and even when it returns successfully, a regular **@world emerge** will always still be attempted immediately afterwards (nomally a relatively rapid no-op, this behaviour ensures all corner cases are resoved correctly).

If the **nocache** USE flag is set when **genup** is emerged (it is *un*set by default), then all repo sync steps will be prefixed by **nocache**, which can prevent overswapping etc. on limited memory systems. This behaviour may always be suppressed by using the **--no-nocache** option.

EXTENDING GENUP

At the end of the main process, **genup** will attempt to run any executable files found in the */etc/genup/updaters.d* directory (symlinks to executable files are also OK). You can use this facility to add your own custom update steps should you need to do so.

Should any such custom updater exit with a non-zero exit status, **genup** will also exit (immediately) with a

failure code.

Note that you can suppress the running of custom updaters, by passing the **--no-custom-updaters** option to **genup**.

USE WITH WEBRSYNC-GPG

If you have the webrsync-gpg FEATURE enabled in */etc/portage/make.conf*, **genup** will select the -w option when calling **eix-sync**. Since, in this mode, **eix-sync** does not automatically sync (non-layman) overlays, **genup** will call **emaint sync --auto** to do this for you, before **eix-sync**.

As such, you must make sure you have set "auto-sync = no" in */etc/portage/repos.conf/gentoo.conf* when using the webrsync-gpg FEATURE, to prevent **emaint sync --auto** from also updating the main gentoo repo using rsync (which will almost certainly not be what you want).

NB: most users will **not** have the webrsync-gpg FEATURE set, and so should ignore this note.

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SEE ALSO

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