Removals/Bans

package.provided Deprecated since a long time and finally dropped. See PACKAGE-PROVIDED on page 25.

PORTDIR and ECLASSDIR No longer defined, because ebuilds should not directly access files in the repository. See PORTDIR on page 53 and ECLASSDIR on page 53.

DESTTREE and INSDESTTREE Not defined any more. Use the into and insinto commands instead. See DESTTREE on page 54 and INSDESTTREE on page 54.

dohtml No longer allowed. doins -r can be used as a replacement. See BANNED-COMMANDS on page 61.

dolib and libopts No longer allowed. The specific dolib.a or dolib.so commands should be used as replacement. See BANNED-COMMANDS on page 61.

EAPI 8 (2021-06-13)

Additions/Changes

profiles/updates directory Arbitrary filenames are now allowed, instead of strict naming by quarters (like 2Q-2021). See UPDATES-FILENAMES on page 21.

Bash version Ebuilds can use features of Bash version 5.0 (was 4.2 before). See BASH-VERSION on page 29.

Selective fetch/mirror restriction In SRC_URI, adding a fetch+ or mirror+ prefix to an individual URI means that the file may be fetched or mirrored. This overrides the corresponding global settings in the RESTRICT variable. See URI-RESTRICT on page 32.

IDEPEND This variable specifies install-time dependencies on packages used in (e. g.) pkg_postinst. In a cross-compilation environment, these are dependencies for native tools (CBUILD). See IDEPEND on page 35.

pkg_* phases The initial working directory is guaranteed to be empty. See PHASE-FUNCTION-DIR on page 41.

src_prepare Items in the PATCHES variable are interpreted as files, even if their name begins with a hyphen. See SRC-PREPARE on page 43.

PROPERTIES and RESTRICT These variables are accumulated across the ebuild and inherited eclasses, like IUSE, REQUIRED_USE, and *DEPEND were before. See ACCUMULATE-VARS on page 49.

econf If supported, options --disable-static and --datarootdir=${EPREFIX}/usr/share are passed to configure, respectively. See ECONF-OPTIONS on page 65.

dosym With the new option -r, an absolute path specified for the link target will be converted to a path relative to the link location. See DOSYM-RELATIVE on page 69.

insopts Commands doconfd, doenvd, doheader install files with fixed mode 0644, i. e., they are no longer affected by insopts. See INSOPTS on page 71.

exeopts Command doinitd installs files with fixed mode 0755, i. e., it is no longer affected by exeopts. See EXEOPTS on page 71.

usev This helper has an optional second argument now: usev *<flag> [true]*. If the flag is set, outputs *[true]*, or the flag's name if called with only one argument. Otherwise outputs nothing. See USEV on page 73.

Removals/Bans

useq No longer allowed. Use regular use as a drop-in replacement. See BANNED-COMMANDS on page 61.

hasv and hasq No longer allowed. Regular has should be used instead. See BANNED-COMMANDS on page 61.

unpack No longer supports unpacking of 7-Zip, RAR, and LHA archives. See UNPACK-EXTENSIONS on page 76.

EAPI Cheat Sheet

Christian Faulhammer
fauli@gentoo.org

Ulrich Müller
ulm@gentoo.org

Version 8.0
13th June 2021

Abstract

An overview of the main EAPI changes in Gentoo, for ebuild authors. For full details, consult the Package Manager Specification found on the project page;[1] this is an incomplete summary only.

Official Gentoo EAPIs are consecutively numbered integers (0, 1, 2, ...). Except where otherwise noted, an EAPI is the same as the previous EAPI. All labels refer to the PMS document itself, built from the same checkout as this overview.

This work is released under the Creative Commons Attribution-ShareAlike 4.0 International Licence.[2]

EAPIs 0, 1, 2, 3, 4, and 5

Omitted for lack of space. See version 5.0 of this document for differences between these previous EAPIs.

EAPI 6 (2015-11-13)

Additions/Changes

Bash version Ebuilds can use features of Bash version 4.2 (was 3.2 before). See BASH-VERSION on page 29.

failglob The failglob option of Bash is set in global scope, so that unintentional pattern expansion will be caught as an error. See FAILGLOB on page 29.

---

[1] https://wiki.gentoo.org/wiki/Project:Package_Manager_Specification
[2] https://creativecommons.org/licenses/by-sa/4.0/

EAPI 7 (2018-04-30)

Additions/Changes

package.* and use.* These profile files can be directories instead of regular files. This is intended to be used in overlays only.

|| and ^^ dependency groups These groups now evaluate to false when they are empty (for example, if there are only unmatched use dependencies inside of them).

No trailing slash The paths specified by ROOT, EROOT, D, and ED no longer end with a slash. Thus, default ROOT is empty now.

Cross compilation support Several variables have been added and some commands have been extended for better cross compilation support:

BDEPEND Build dependencies are divided into two classes: BDEPEND for native build tools (CBUILD); DEPEND for dependencies compatible with the system being built (CHOST).

SYSROOT The path to the root directory for DEPEND type dependencies.

ESYSROOT The concatenation of SYSROOT and the applicable offset-prefix.

BROOT The prefixed root directory path for BDEPEND type dependencies, typically executable build tools.

econf If supported, configure will be called with the --with-sysroot=${ESYSROOT:-/} option.

Locale settings It is ensured that the behaviour of case modification and collation order for ASCII characters (LC_CTYPE and LC_COLLATE) are the same as in the POSIX locale.

src_prepare This phase function has a default now, which applies patches from the PATCHES variable with the new eapply command, and user-provided patches with eapply_user.

src_install The default implementation uses the new einstalldocs function for installing documentation.

nonfatal die When die or assert are called under the nonfatal command and with the -n option, they will not abort the build process but return with an error.

unpack changes unpack has been extended:

Pathnames Both absolute paths and paths relative to the working directory are accepted as arguments.

.txz files Suffix .txz for xz compressed tarballs is recognised.

Filename case Character case of filename extensions is ignored.

econf changes Options --docdir and --htmldir are passed to configure, in addition to the existing options.

eapply The eapply command is a simplified substitute for epatch, implemented in the package manager. The patches from its file or directory arguments are applied using patch -p1.

eapply_user The eapply_user command permits the package manager to apply user-provided patches. It must be called from every src_prepare function.

einstalldocs The einstalldocs function will install the files specified by the DOCS variable (or a default set of files if DOCS is unset) and by the HTML_DOCS variable.

in_use The in_use function returns true if the USE flag given as its argument is available in the ebuild for USE queries.

has_version and best_version These helpers support -b, -d or -r options, causing the query to apply to BDEPEND, DEPEND or RDEPEND (the default). This replaces the --host-root option.

Environment blacklist Any environment variable listed in the profile-defined ENV_UNSET variable will be unset by the package manager.

patch All inputs valid for GNU patch version 2.7 are supported. Especially, this includes support for git-formatted patches.

nonfatal In addition to its definition as a shell function, the nonfatal wrapper has now a fallback implementation as an external command. Thus, it can be called from other commands.

Output commands einfo and friends no longer use stdout, so inside of command substitution their output won't be caught.

eqawarn The eqawarn output command is supported in the package manager itself.

die in subshell The die command is guaranteed to work in a subshell context.

domo destination domo installs the specified files under /usr/share/locale instead of ${DESTTREE}/share/locale.

Controllable stripping The dostrip -x command can be used to add paths to an exclusion list for stripping of debug symbols, to allow more fine-grained control than with RESTRICT="strip".

Version manipulation and comparison commands

ver_cut range [version] Print the version substring specified by range. version defaults to PV.

ver_rs range repl ... [version] Replace all version separators in range by string repl. Multiple range repl pairs are allowed. version defaults to PV.

ver_test [v1] op v2 Check if the relation v1 op v2 is true. v1 defaults to PVR; op can be -eq, -ne, -gt, -ge, -lt or -le.

get_libdir The get_libdir command outputs the lib* directory basename suitable for the current ABI.

Removals/Bans

einstall No longer allowed. Use emake install as replacement.