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 (HOST). See BDEPEND on page 34.

SYSROOT The path to the root directory for DEPEND type dependencies. See SYSROOT on page 52.

ESYSROOT The concatenation of SYSROOT and the applicable offset-prefix. See SYSSROOT on page 52.

BROOT The prefixed root directory path for BDEPEND type dependencies, typically executable build tools. See BROOT on page 52.

econf If supported, configure will be called with the --with-sysroot=${ESYSROOT:-/} option. See ECONF-OPTIONS on page 64.

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. See PM-QUERY-OPTIONS on page 61.

Environment blacklist Any environment variable listed in the profile-defined ENV_UNSET variable will be unset by the package manager. See ENV-UNSET on page 55.

patch All inputs valid for GNU patch version 2.7 are supported. Especially, this includes support for git-formatted patches. See GNU-PATCH on page 59.

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. See NONFINAL on page 60.

Output commands einfo and friends no longer use stdout, so inside of command substitution their output won’t be caught. See OUTPUT-NO-STDOUT on page 61.

eqawarn The eqawarn output command is supported in the package manager itself. See EQAWARN on page 61.

die in subshell The die command is guaranteed to work in a subshell context. See SUBSHELL-DIE on page 62.

domo destination domo installs the specified files under /usr/share/locale instead of $(DESTTREE)/share/locale. See DOMO-PATH on page 68.

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". See DOSTRIP on page 70.

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.

See VER-COMMANDS on page 72.

Removals/Bans

package.provided Deprecated since a long time and finally dropped. See PACKAGE-PROVIDED on page 24.

PORTDIR and ECLASSDIR No longer defined, because ebuilds should not directly access files in the repository. See PORTDIR on page 52 and ECLASSDIR on page 52.

DESTTREE and INSDESTTREE Not defined any more. Use the into and insinto commands instead. See DESTTREE on page 53 and INSDESTTREE on page 53.

dohtml No longer allowed. doins -r can be used as a replacement. See BANNED-COMMANDS on page 60.

dolib and libopts No longer allowed. The specific dolib.a or dolib.so commands should be used as replacement. See BANNED-COMMANDS on page 60.

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.

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EAPIs 0, 1, 2, 3, and 4

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

EAPI 5 (2012-09-20)

Additions/Changes

Sub-slots The SLOT variable and slot dependencies may contain an optional sub-slot part that follows the regular slot, delimited by a / character; for example 2/2.30. The sub-slot is used to represent cases in which an upgrade to a new version of a package with a different sub-slot may require dependent packages to be rebuilt. If the

\(^1\)https://wiki.gentoo.org/wiki/Project/Package_Manager_Specification
\(^2\)https://creativecommons.org/licenses/by-sa/3.0/
Some extracted text from the image, which appears to be related to software configuration and build processes.

**EAPI 6 (2016-11-13)**

**Additions/Changes**

- Bash version: EBuild can use features of Bash version 4.2 (was 3.2 before). See BASH-VERSION on page 28.
- At most one of groups: In REQUIRED USE flags explicitly listed in USE flags, additional flags can be implicitly provided by profiles. See PROFILES on page 56.
- Parallel tests: The default for PROFILES on page 56.
- A slot value is acceptable. The package can break when its dependency is updated to a different slot (or sub-slot).

**Profiles**

- USE flags in PROFILES on page 56.
- The default for PROFILES on page 56.
- USE flags in PROFILES on page 56.
- The default for PROFILES on page 56.
- A slot value is acceptable. The package can break when its dependency is updated to a different slot (or sub-slot).

**EAPI 7 (2018-04-30)**

**Additions/Changes**

- Sh test cases: Makefile files if |DOCFILE| or |PERSISTENT| are specified.
- No trailing slash on page 38.
- Sub-slots are not specified in SLOT, it defaults to the regular slot. See SUB-SLOT on page 38.
- Slot operator dependencies are supported in profile directories, but they similar on packages that would be merged due to a stable keyword. See STABLEMASK on page 24.
- Slot operator dependencies: Package dependencies can specify one of the following operators as a suffix, which will affect updates of runtime dependencies:
  - :=: Any slot value is acceptable. The package will not break when its dependency is updated to a different slot (or sub-slot).

**Filesystem**

- A slot value is acceptable. The package will not break when its dependency is updated to a different slot (or sub-slot).

**EBUILD**

- EBUILD files, in addition to the existing HTML_DOCS function will in:
  - ROOT DIR and command permits emake install variable (or a default on page 62.
  - These groups now eval-
    - COMMANDS on page 64.
    - src_prepare on page 74.
    - The EXEC function returns true if the USE flag given as its argument is available in the build for USE queries. See USE on page 71.
    - The get_libdir function outputs the directory basename suitable for the current ABI.
    - Do not trail trailing slash.

**Recipe**

- The default for PROFILES on page 56.
- A slot value is acceptable. The package can break when its dependency is updated to a different slot (or sub-slot).

**Examples**

- A slot value is acceptable. The package will not break when its dependency is updated to a different slot (or sub-slot).

**License**

- A slot value is acceptable. The package will not break when its dependency is updated to a different slot (or sub-slot).