

NAME

Dpkg::Deps – parse and manipulate dependencies of Debian packages

DESCRIPTION

The Dpkg::Deps module provides objects implementing various types of dependencies.

The most important function is **deps_parse()**, it turns a dependency line in a set of Dpkg::Deps::{Simple,AND,OR,Union} objects depending on the case.

FUNCTIONS

All the `deps_*` functions are exported by default.

`deps_eval_implication($rel_p, $v_p, $rel_q, $v_q)`

`($rel_p, $v_p)` and `($rel_q, $v_q)` express two dependencies as (relation, version). The relation variable can have the following values that are exported by Dpkg::Version: REL_EQ, REL_LT, REL_LE, REL_GT, REL_GE.

This function returns 1 if the “p” dependency implies the “q” dependency. It returns 0 if the “p” dependency implies that “q” is not satisfied. It returns undef when there’s no implication.

The `$v_p` and `$v_q` parameter should be Dpkg::Version objects.

`$dep = deps_concat(@dep_list)`

This function concatenates multiple dependency lines into a single line, joining them with “, ” if appropriate, and always returning a valid string.

`$dep = deps_parse($line, %options)`

This function parses the dependency line and returns an object, either a Dpkg::Deps::AND or a Dpkg::Deps::Union. Various options can alter the behaviour of that function.

`use_arch` (defaults to 1)

Take into account the architecture restriction part of the dependencies. Set to 0 to completely ignore that information.

`host_arch` (defaults to the current architecture)

Define the host architecture. By default it uses **Dpkg::Arch::get_host_arch()** to identify the proper architecture.

`build_arch` (defaults to the current architecture)

Define the build architecture. By default it uses **Dpkg::Arch::get_build_arch()** to identify the proper architecture.

`reduce_arch` (defaults to 0)

If set to 1, ignore dependencies that do not concern the current host architecture. This implicitly strips off the architecture restriction list so that the resulting dependencies are directly applicable to the current architecture.

`use_profiles` (defaults to 1)

Take into account the profile restriction part of the dependencies. Set to 0 to completely ignore that information.

`build_profiles` (defaults to no profile)

Define the active build profiles. By default no profile is defined.

`reduce_profiles` (defaults to 0)

If set to 1, ignore dependencies that do not concern the current build profile. This implicitly strips off the profile restriction formula so that the resulting dependencies are directly applicable to the current profiles.

`reduce_restrictions` (defaults to 0)

If set to 1, ignore dependencies that do not concern the current set of restrictions. This implicitly strips off any architecture restriction list or restriction formula so that the resulting dependencies are directly applicable to the current restriction. This currently implies `reduce_arch` and `reduce_profiles`, and overrides them if set.

union (defaults to 0)

If set to 1, returns a `Dpkg::Deps::Union` instead of a `Dpkg::Deps::AND`. Use this when parsing non-dependency fields like `Conflicts`.

build_dep (defaults to 0)

If set to 1, allow build-dep only arch qualifiers, that is “:native”. This should be set whenever working with build-deps.

tests_dep (defaults to 0)

If set to 1, allow tests-specific package names in dependencies, that is “@” and “@builddeps@” (since `dpkg` 1.18.7). This should be set whenever working with dependency fields from `debian/tests/control`.

`$bool = deps_iterate($deps, $callback_func)`

This function visits all elements of the dependency object, calling the callback function for each element.

The callback function is expected to return true when everything is fine, or false if something went wrong, in which case the iteration will stop.

Return the same value as the callback function.

`deps_compare($a, $b)`

Implements a comparison operator between two dependency objects. This function is mainly used to implement the `sort()` method.

OBJECTS – `Dpkg::Deps::*`

There are several kind of dependencies. A `Dpkg::Deps::Simple` dependency represents a single dependency statement (it relates to one package only). `Dpkg::Deps::Multiple` dependencies are built on top of this object and combine several dependencies in different manners. `Dpkg::Deps::AND` represents the logical “AND” between dependencies while `Dpkg::Deps::OR` represents the logical “OR”. `Dpkg::Deps::Multiple` objects can contain `Dpkg::Deps::Simple` object as well as other `Dpkg::Deps::Multiple` objects.

In practice, the code is only meant to handle the realistic cases which, given Debian’s dependencies structure, imply those restrictions: AND can contain Simple or OR objects, OR can only contain Simple objects.

`Dpkg::Deps::KnownFacts` is a special object that is used while evaluating dependencies and while trying to simplify them. It represents a set of installed packages along with the virtual packages that they might provide.

CHANGES

Version 1.06 (dpkg 1.18.7; module version bumped on dpkg 1.18.24)

New option: Add `tests_dep` option to `Dpkg::Deps::deps_parse()`.

Version 1.05 (dpkg 1.17.14)

New function: `Dpkg::Deps::deps_iterate()`.

Version 1.04 (dpkg 1.17.10)

New options: Add `use_profiles`, `build_profiles`, `reduce_profiles` and `reduce_restrictions` to `Dpkg::Deps::deps_parse()`.

Version 1.03 (dpkg 1.17.0)

New option: Add `build_arch` option to `Dpkg::Deps::deps_parse()`.

Version 1.02 (dpkg 1.17.0)

New function: `Dpkg::Deps::deps_concat()`

Version 1.01 (dpkg 1.16.1)

<Used to document changes to `Dpkg::Deps::*` modules before they were split.>

Version 1.00 (dpkg 1.15.6)

Mark the module as public.