

NAME

perl5133delta - what is new for perl v5.13.3

DESCRIPTION

This document describes differences between the 5.13.3 release and the 5.13.2 release.

If you are upgrading from an earlier release such as 5.13.1, first read *perl5132delta*, which describes differences between 5.13.1 and 5.13.2.

Core Enhancements

`\o{...}` for octals

There is a new escape sequence, `"\o"`, in double-quote-like contexts. It must be followed by braces enclosing an octal number of at least one digit. It interpolates as the character with an ordinal value equal to the octal number. This construct allows large octal ordinals beyond the current max of 0777 to be represented. It also allows you to specify a character in octal which can safely be concatenated with other regex snippets and which won't be confused with being a backreference to a regex capture group. See *"Capture groups" in perlre*.

`\N{name}` and `chardnames` enhancements

`\N{ }` and `chardnames::vianame` now know about the abbreviated character names listed by Unicode, such as NBSP, SHY, LRO, ZWJ, etc., as well as all the customary abbreviations for the C0 and C1 control characters (such as ACK, BEL, CAN, etc.), as well as a few new variants in common usage of some C1 full names.

In the past, it was ineffective to override one of Perl's abbreviations with your own custom alias. Now it works.

You can also create a custom alias directly to the ordinal of a character, known by `\N{...}`, `chardnames::vianame()`, and `chardnames::viacode()`. Previously, an alias had to be to an official Unicode character name. This made it impossible to create an alias for a code point that had no name, such as the ones reserved for private use. So this change allows you to make more effective use of private use characters. Only if there is no official name will `chardnames::viacode()` return your custom one.

See *chardnames* for details on all these changes.

Uppercase X/B allowed in hexadecimal/binary literals

Literals may now use either upper case `0X...` or `0B...` prefixes, in addition to the already supported `0x...` and `0b...` syntax. (RT#76296) (a674e8d, 333f87f)

C, Ruby, Python and PHP already supported this syntax, and it makes Perl more internally consistent. A round-trip with `eval sprintf "%#X", 0x10` now returns 16 in addition to `eval sprintf "%#x", 0x10`, which worked before.

Incompatible Changes

`\400 - \777`

Use of `\400 - \777` in regexes in certain circumstances has given different, anomalous behavior than their use in all other double-quote-like contexts. Since 5.10.1, a deprecated warning message has been raised when this happens. Now, all double-quote-like contexts have the same behavior, namely to be equivalent to `\x{100} - \x{1FF}`, with no deprecation warning. Use of these values in the command line option `"-0"` retains the current meaning to slurp input files whole; previously, this was documented only for `"-0777"`. It is recommended, however, because of various ambiguities, to use the new `\o{...}` construct to represent characters in octal. (fa1639c..f6993e9).

Deprecations

Omitting a space between a regular expression and subsequent word

Omitting a space between a regex pattern or pattern modifiers and the following word is deprecated. Deprecation for regular expression *matches* was added in Perl 5.13.2. In this release, the deprecation is extended to regular expression *substitutions*. For example, `s/foo/bar/sand $bar` will still be parsed as `s/foo/bar/s` and `$bar` but will issue a warning. (aa78b66)

Deprecation warning added for deprecated-in-core .pl libs

This is a mandatory warning, not obeying `-X` or lexical warning bits. The warning is modelled on that supplied by `deprecate.pm` for deprecated-in-core `.pm` libraries. It points to the specific CPAN distribution that contains the `.pl` libraries. The CPAN version, of course, does not generate the warning. (0111154)

Performance Enhancements

There are several small optimizations to reduce CPU cache misses in various very commonly used modules like `warnings` and `Carp` as well in accessing file-handles for reading.

Modules and Pragmata

Updated Modules and Pragmata

`autodie`

Upgraded from version 2.06_01 to 2.10.

`charnames`

Upgraded from version 1.08 to 1.10.

`viacode()` is now significantly faster. (f3227b7)

`lib`

Upgraded from version 0.62 to 0.63.

`threads`

Upgraded from version 1.77_02 to 1.77_03.

`threads::shared`

Upgraded from version 1.33_01 to 1.33_02.

`warnings`

Upgraded from version 1.09 to 1.10.

Calling `use warnings` without arguments is now significantly more efficient. (8452af9)

`Archive::Extract`

Upgraded from version 0.38 to 0.42.

Updates since 0.38 include: a safe print method that guards `Archive::Extract` from changes to `$\`; a fix to the tests when run in core perl; support for TZ files; and a modification for the `Izma` logic to favour `IO::Uncompress::Unlzma` (d7f8799)

`Archive::Tar`

Upgraded from version 1.54 to 1.64.

Important changes since 1.54 include: compatibility with busybox implementations of tar; a fix so that `write()` and `create_archive()` close only handles they opened; and a bug was fixed regarding the exit code of `extract_archive`. (afabe0e)

`Attribute::Handlers`

Upgraded from version 0.87 to 0.88.

`Compress::Raw::Bzip2`

Upgraded from version 2.024 to 2.027.

Compress::Raw::Zlib

Upgraded from version 2.024 to 2.027_01.

Compress::Zlib

Upgraded from version 2.024 to 2.027.

CPANPLUS

Upgraded from version 0.90 to 0.9007.

Fixed the shell test to skip if test is not being run under a terminal; resolved the issue where a prereq on Config would not be recognised as a core module. (d4e225a)

Digest::MD5

Upgraded from version 2.39 to 2.40.

Digest::SHA

Upgraded from version 5.47 to 5.48.

Exporter

Upgraded from version 5.64_02 to 5.64_03.

Exporter no longer overrides \$SIG{__WARN__} (RT #74472) (9b86bb5)

ExtUtils::CBuilder

Upgraded from version 0.27 to 0.2703.

ExtUtils::Manifest

Upgraded from version 1.57 to 1.58.

ExtUtils::ParseXS

Upgraded from version 2.2205 to 2.2206.

File::Copy

Upgraded from version 2.19 to 2.20.

Skips suid tests on a nosuid partition. These tests were being skipped on OpenBSD, but nosuid partitions can exist on other systems too. Now it just checks if it can create a suid directory, if not the tests are skipped. Perl builds without errors in a nosuid /tmp with this patch. (cae9400)

I18N::LangTags

Upgraded from version 0.35 to 0.35_01.

IPC::Cmd

Upgraded from version 0.58 to 0.60.

IPC::SysV

Upgraded from version 2.01 to 2.03.

Locale::Maketext

Upgraded from version 1.14 to 1.15.

Locale::Maketext guts have been merged back into the main module (87d86da) and adds external cache support (ace47d6)

Module::Build

Upgraded from version 0.3603 to 0.3607.

Module::CoreList

Upgraded from version 2.34 to 2.36.

Module::Load

Upgraded from version 0.16 to 0.18.

Term::ANSIColor

Upgraded from version 2.02 to 3.00.

Test::Harness

Upgraded from version 3.17 to 3.21.

The core update from Test-Harness 3.17 to 3.21 fixed some things, but also *introduced a known problem* with argument passing to non-Perl tests.

Time::HiRes

Upgraded from version 1.9719 to 1.9721.

Time::Piece

Upgraded from version 1.15_01 to 1.20_01.

Unicode::Collate

Upgraded from version 0.52_01 to 0.53.

Includes Unicode Collation Algorithm 18 (74b94a7)

Unicode::Normalize

Upgraded from version 1.03 to 1.06.

Documentation

New Documentation

perl5121delta

The Perl 5.12.1 perldelta file was added from the Perl maintenance branch

Changes to Existing Documentation

General changes

- Octal character escapes in documentation now prefer a three-digit octal escape or the new `\o{...}` escape as they have more consistent behavior in different contexts than other forms. (ce7b6f0) (d8b950d) (e1f120a)
- Documentation now standardizes on the term 'capture group' over 'buffer' in regular expression documentation (c27a5cf)

perlfunc

- Added cautionary note about "no VERSION" (e0de7c2)
- Added additional notes regarding srand when forking (d460397)

perlop

- Improved documentation of unusual character escapes (4068718, 9644846)
- Clarified how hexadecimal escapes are interpreted, with particular attention to the treatment of invalid characters (9644846)

perlrun

- Clarified the behavior of the `-0NNN` switch for `-0400` or higher (7ba31cb)

perlpolicy

- Added the policy on compatibility and deprecation along with definitions of terms like "deprecation" (70e4a83)

perlre

- Added examples of the perils of not using `\g{}` when there are more than nine back-references (9d86067)

perltie

- Updated some examples for modern Perl style (67d00dd)

Utility Changes

perldb

- The remote terminal works after forking and spawns new sessions - one for each forked process (11653f7)
- Uses the less pager path from Config instead of searching for it (bf320d6)

Configuration and Compilation

- Adjusted 'make test.valgrind' to account for cpan/dist/ext separation (e07ce2e)

Testing

- `t/harness` clears PERL5LIB, PERLLIB, PERL5OPT as `t/TEST` does (a2d3de1)
- Many common testing routines were refactored into `t/lib/common.pl`
- Several test files have been modernized to use `Test::More`

Platform Support

Discontinued Platforms

MacOS Classic

Support for MacOS Classic within `ExtUtils::MakeMaker` was removed from Perl in December 2004. Vestigial MacOS Classic specific code has now been removed from other core modules as well (8f8c2a4..c457df0)

Platform-Specific Notes

Win32

`t/io/openpid.t` now uses the `alarm()` watchdog strategy for more robustness (5732108)

Internal Changes

- Under some circumstances, the `CvGV()` field of a CV is now reference counted. To ensure consistent behaviour, direct assignment to it, for example `CvGV(cv) = gv` is now a compile-time error. A new macro, `CvGV_set(cv, gv)` has been introduced to perform this operation safely. Note that modification of this field is not part of the public API, regardless of this new macro. This change caused some *issues* in modules that used the private `GvGV()` field.
- It is now possible for XS code to hook into Perl's lexical scope mechanism at compile time, using the new `Perl_blockhook_register` function. See "*Compile-time scope hooks*" in *perlguts*.
- Added `Perl_croak_no_modify()` to implement `Perl_croak("%s", PL_no_modify)` (6ad8f25)
- Added prototypes for `tie()` and `untie()` to allow overloading (RT#75902) (1db4d19)
- Adds `my_[l]stat_flags()` to replace `my_[l]stat()`, `my_stat()` and `my_lstat()` call

get magic on the stack arg, so create `_flags()` variants that allow us to control this. (0d7d409)

Selected Bug Fixes

- Some work has been done on the internal pointers that link between symbol tables (stashs), typeglobs and subroutines. This has the effect that various edge cases related to deleting stashs or stash entries (e.g. `<%FOO:: = ()>`), and complex typeglob or code reference aliasing, will no longer crash the interpreter.
- Fixed `readline()` when interrupted by signals so it no longer returns the "same thing" as before or random memory
- Fixed a regression of `kill()` when a match variable is used for the process ID to kill (RT#75812) (8af710e)
- Fixed several subtle bugs in `sort()` when `@_` is accessed within a subroutine used for sorting (RT#72334) (8f443ca)
- Catch `yyparse()` exceptions in `(?{...})` (RT#2353) (634d691)
- Avoid UTF-8 cache panics with offsets beyond a string (RT #75898) (3e2d381)
- Fixed POSIX::strftime memory leak (RT#73520) (c4bc4aa)
- Doesn't set strict with `no VERSION` if `VERSION` is greater than 5.12 (da8fb5d)
- Avoids multiple FETCH/stringify on filetest ops (40c852d)
- Fixed issue with string `eval` not detecting taint of overloaded/tied arguments (RT #75716) (895b760)
- Fix potential crashes of string `eval` when evaluating a object with overloaded stringification by creating a stringified copy when necessary (3e5c018)
- Fixed bug where overloaded stringification could remove tainting (RT #75716) (a02ec77)
- Plugs more memory leaks in `vms.c`. (9e2bec0)
- Fix pthread include error for `Time::Piece` (e9f284c)

Known Problems

- Bug fixes involving `CvGV` reference counting break `Sub::Name`. A patch has been sent upstream to the maintainer
- `readline()` returns an empty string instead of `undef` when it is interrupted by a signal
- Test-Harness was updated from 3.17 to 3.21 for this release. A rewrite in how it handles non-Perl tests (in 3.17_01) broke argument passing to non-Perl tests with `prove` (RT #59186), and required that non-Perl tests be run as `prove ./test.sh` instead of `prove test.sh`. These issues are being solved upstream, but didn't make it into this release. They're expected to be fixed in time for perl v5.13.4. (RT #59457)
- `version` now prevents object methods from being called as class methods (d808b68)

Errata

- Retroactively added the Acknowledgements list to *perl5132delta*, which was excluded in the original release (d1e2db0)

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Perl 5.13.3 represents approximately one month of development since Perl 5.13.2, and contains 12,184 lines of changes across 575 files from 104 authors and committers.

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Reporting Bugs

If you find what you think is a bug, you might check the articles recently posted to the comp.lang.perl.misc newsgroup and the perl bug database at <http://rt.perl.org/perlbug/> . There may also be information at <http://www.perl.org/> , the Perl Home Page.

If you believe you have an unreported bug, please run the **perlbug** program included with your release. Be sure to trim your bug down to a tiny but sufficient test case. Your bug report, along with the output of `perl -V`, will be sent off to `perlbug@perl.org` to be analysed by the Perl porting team.

If the bug you are reporting has security implications, which make it inappropriate to send to a publicly archived mailing list, then please send it to `perl5-security-report@perl.org`. This points to a closed subscription unarchived mailing list, which includes all the core committers, who be able to help assess the impact of issues, figure out a resolution, and help co-ordinate the release of patches to mitigate or fix the problem across all platforms on which Perl is supported. Please only use this address for security issues in the Perl core, not for modules independently distributed on CPAN.

SEE ALSO

The *Changes* file for an explanation of how to view exhaustive details on what changed.

The *INSTALL* file for how to build Perl.

The *README* file for general stuff.

The *Artistic* and *Copying* files for copyright information.