

Changes in R

From version 3.2.2 to version 3.2.3

by the R Core Team

CHANGES IN R 3.2.3

NEW FEATURES

- Some recently-added Windows time zone names have been added to the conversion table used to convert these to Olson names. (Including those relating to changes for Russia in Oct 2014, as in PR#16503.)
- (Windows) Compatibility information has been added to the manifests for 'Rgui.exe', 'Rterm.exe' and 'Rscript.exe'. This should allow `win.version()` and `Sys.info()` to report the actual Windows version up to Windows 10.
- Windows "wininet" FTP first tries EPSV / PASV mode rather than only using active mode (reported by Dan Tenenbaum).
- `which.min(x)` and `which.max(x)` may be much faster for logical and integer `x` and now also work for long vectors.
- The 'emulation' part of `tools::texi2dvi()` has been somewhat enhanced, including supporting `quiet = TRUE`. It can be selected by `texi2dvi = "emulation"`.
(Windows) MiKTeX removed its `texi2dvi.exe` command in Sept 2015: `tools::texi2dvi()` tries `texify.exe` if it is not found.
- (Windows only) Shortcuts for printing and saving have been added to menus in `Rgui.exe`. (Request of PR#16572.)
- `loess(..., iterTrace=TRUE)` now provides diagnostics for robustness iterations, and the `print()` method for `summary(<loess>)` shows slightly more.
- The included version of PCRE has been updated to 8.38, a bug-fix release.
- `View()` now displays nested data frames in a more friendly way. (Request with patch in PR#15915.)

INSTALLATION and INCLUDED SOFTWARE

- The included configuration code for `libintl` has been updated to that from `gettext` version 0.19.5.1 — this should only affect how an external library is detected (and the only known instance is under OpenBSD). (Wish of PR#16464.)
- `configure` has a new argument `--disable-java` to disable the checks for Java.
- The `configure` default for `MAIN_LDFLAGS` has been changed for the FreeBSD, NetBSD and Hurd OSes to one more likely to work with compilers other than `gcc` (FreeBSD 10 defaults to `clang`).
- `configure` now supports the OpenMP flags `-fopenmp=libomp` (`clang`) and `-qopenmp` (Intel C).
- Various macros can be set to override the default behaviour of `configure` when detecting OpenMP: see file `'config.site'`.
- Source installation on Windows has been modified to allow for MiKTeX installations without `texi2dvi.exe`. See file `'MkRules.dist'`.

BUG FIXES

- `regexpr(pat, x, perl = TRUE)` with Python-style named capture did not work correctly when `x` contained NA strings. (PR#16484)
- The description of dataset `ToothGrowth` has been improved/corrected. (PR#15953)
- `model.tables(type = "means")` and hence `TukeyHSD()` now support "aov" fits without an intercept term. (PR#16437)
- `close()` now reports the status of a `pipe()` connection opened with an explicit open argument. (PR#16481)
- Coercing a list without names to a data frame is faster if the elements are very long. (PR#16467)
- (Unix-only) Under some rare circumstances piping the output from `Rscript` or `R -f` could result in attempting to close the input file twice, possibly crashing the process. (PR#16500)
- (Windows) `Sys.info()` was out of step with `win.version()` and did not report Windows 8.
- `topenv(baseenv())` returns `baseenv()` again as in R 3.1.0 and earlier. This also fixes `compilerJIT(3)` when used in `‘.Rprofile’`.
- `detach()`ing the **methods** package keeps `.isMethodsDispatchOn()` true, as long as the methods namespace is not unloaded.
- Removed some spurious warnings from `configure` about the preprocessor not finding header files. (PR#15989)
- `rchisq(*, df=0, ncp=0)` now returns 0 instead of NaN, and `dchisq(*, df=0, ncp=*)` also no longer returns NaN in limit cases (where the limit is unique). (PR#16521)
- `pchisq(*, df=0, ncp > 0, log.p=TRUE)` no longer underflows (for `ncp > ~60`).
- `nchar(x, "w")` returned -1 for characters it did not know about (e.g. zero-width spaces): it now assumes 1. It now knows about most zero-width characters and a few more double-width characters.
- Help for `which.min()` is now more precise about behavior with logical arguments. (PR#16532)
- The print width of character strings marked as "latin1" or "bytes" was in some cases computed incorrectly.
- `abbreviate()` did not give names to the return value if `minlength` was zero, unlike when it was positive.
- (Windows only) `dir.create()` did not always warn when it failed to create a directory. (PR#16537)
- When operating in a non-UTF-8 multibyte locale (e.g. an East Asian locale on Windows), `grep()` and related functions did not handle UTF-8 strings properly. (PR#16264)
- `read.dcf()` sometimes misread lines longer than 8191 characters. (Reported by Hervé Pagès with a patch.)
- `within(df, ...)` no longer drops columns whose name start with a ".".
- The built-in HTTP server converted entire Content-Type to lowercase including parameters which can cause issues for multi-part form boundaries (PR#16541).

- Modifying slots of S4 objects could fail when the **methods** package was not attached. (PR#16545)
- `splineDesign(*,outer.ok=TRUE)` (**splines**) is better now (PR#16549), and `interpSpline()` now allows `sparse=TRUE` for speedup with non-small sizes.
- If the expression in the traceback was too long, `traceback()` did not report the source line number. (Patch by Kirill Müller.)
- The browser did not truncate the display of the function when exiting with `options("deparse.max.lines")` set. (PR#16581)
- When `bs(*,Boundary.knots=)` had boundary knots inside the data range, extrapolation was somewhat off. (Patch by Trevor Hastie.)
- `var()` and hence `sd()` warn about factor arguments which are deprecated now. (PR#16564)
- `loess(*,weights = *)` stored wrong weights and hence gave slightly wrong predictions for newdata. (PR#16587)
- `aperm(a,*)` now preserves `names(dim(a))`.
- `poly(x,...)` now works when either `raw=TRUE` or `coef` is specified. (PR#16597)
- `data(package=*)` is more careful in determining the path.
- `prettyNum(*,decimal.mark,big.mark)`: fixed bug introduced when fixing PR#16411.

CHANGES IN R 3.2.2

SIGNIFICANT USER-VISIBLE CHANGES

- It is now easier to use secure downloads from 'https://' URLs on builds which support them: no longer do non-default options need to be selected to do so. In particular, packages can be installed from repositories which offer 'https://' URLs, and those listed by `setRepositories()` now do so (for some of their mirrors).

Support for 'https://' URLs is available on Windows, and on other platforms if support for `libcurl` was compiled in and if that supports the `https` protocol (system installations can be expected to do). So 'https://' support can be expected except on rather old OSes (an example being OS X 'Snow Leopard', where a non-system version of `libcurl` can be used).

(Windows only) The default method for accessing URLs *via* `download.file()` and `url()` has been changed to be "wininet" using Windows API calls. This changes the way proxies need to be set and security settings made: there have been some reports of 'ftp:' sites being inaccessible under the new default method (but the previous methods remain available).

NEW FEATURES

- `cmdscale()` gets new option `list`. for increased flexibility when a list should be returned.
- `configure` now supports `texinfo` version 6.0, which (unlike the change from 4.x to 5.0) is a minor update. (Wish of PR#16456.)
- (Non-Windows only) `download.file()` with default `method = "auto"` now chooses "libcurl" if that is available and a 'https://' or 'ftp://' URL is used.

- (Windows only) `setInternet2(TRUE)` is now the default. The command-line option `--internet2` and environment variable `R_WIN_INTERNET2` are now ignored. Thus by default the "internal" method for `download.file()` and `url()` uses the "wininet" method: to revert to the previous default use `setInternet2(FALSE)`. This means that 'https://' URLs can be read by default by `download.file()` (they have been readable by `file()` and `url()` since R 3.2.0). There are implications for how proxies need to be set (see `?download.file`).
- `chooseCRANmirror()` and `chooseBioCmirror()` now offer HTTPS mirrors in preference to HTTP mirrors. This changes the interpretation of their `ind` arguments: see their help pages.
- `capture.output()` gets optional arguments `type` and `split` to pass to `sink()`, and hence can be used to capture messages.

C-LEVEL FACILITIES

- Header 'Rconfig.h' now defines `HAVE_ALLOCA_H` if the platform has the 'alloca.h' header (it is needed to define `alloca` on Solaris and AIX, at least: see 'Writing R Extensions' for how to use it).

INSTALLATION and INCLUDED SOFTWARE

- The `libtool` script generated by `configure` has been modified to support FreeBSD ≥ 10 (PR#16410).

BUG FIXES

- The HTML help page links to demo code failed due to a change in R 3.2.0. (PR#16432)
- If the `na.action` argument was used in `model.frame()`, the original data could be modified. (PR#16436)
- `getGraphicsEvent()` could cause a crash if a graphics window was closed while it was in use. (PR#16438)
- `matrix(x, nr, nc, byrow = TRUE)` failed if `x` was an object of type "expression".
- `strptime()` could overflow the allocated storage on the C stack when the timezone had a non-standard format much longer than the standard formats. (Part of PR#16328.)
- `options(OutDec = s)` now signals a warning (which will become an error in the future) when `s` is not a string with exactly one character, as that has been a documented requirement.
- `prettyNum()` gains a new option `input.d.mark` which together with other changes, e.g., the default for `decimal.mark`, fixes some `format()` variants with non-default `getOption("OutDec")` such as in PR#16411.
- `download.packages()` failed for type equal to either "both" or "binary". (Reported by Dan Tenenbaum.)
- The dendrogram method of `labels()` is much more efficient for large dendrograms, now using `rapply()`. (Comment #15 of PR#15215)
- The "port" algorithm of `nls()` could give spurious errors. (Reported by Radford Neal.)

- Reference classes that inherited from reference classes in another package could invalidate methods of the inherited class. Fixing this requires adding the ability for methods to be “external”, with the object supplied explicitly as the first argument, named `.self`. See “Inter-Package Superclasses” in the documentation.
- `readBin()` could fail on the SPARC architecture due to alignment issues. (Reported by Radford Neal.)
- `qt(*,df=Inf,ncp=.)` now uses the natural `qnorm()` limit instead of returning `NaN`. (PR#16475)
- Auto-printing of `S3` and `S4` values now searches for `print()` in the base namespace and `show()` in the **methods** namespace instead of searching the global environment.
- `polym()` gains a `coefs = NULL` argument and returns class “poly” just like `poly()` which gets a new `simple=FALSE` option. They now lead to correct `predict()`ions, e.g., on subsets of the original data.
- `rhyper(nn,<large>)` now works correctly. (PR#16489)
- `tkimage()` did not (and could not) work so was removed. Ditto for `tkimage.cget()` and `tkimage.configure()`. Added two Ttk widgets and missing subcommands for Tk’s image command: `ttkscale()`, `ttkspinbox()`, `tkimage.delete()`, `tkimage.height()`, `tkimage.inuse()`, `tkimage.type()`, `tkimage.types()`, `tkimage.width()`. (PR#15372, PR#16450)
- `getClass("foo")` now also returns a class definition when it is found in the cache more than once.