Changes in R

From version 3.4.2 to version 3.4.3

by R Core Team

CHANGES IN R 3.4.3

INSTALLATION on a UNIX-ALIKE

- A workaround has been added for the changes in location of time-zone files in macOS 10.13 'High Sierra' and again in 10.13.1, so the default time zone is deduced correctly from the system setting when R is configured with '`--with-internal-tzcode`' (the default on macOS).
- `R CMD javareconf` has been updated to recognize the use of a Java 9 SDK on macOS.

BUG FIXES

- `raw(0) & raw(0)` and `raw(0) | raw(0)` again return `raw(0)` (rather than `logical(0)`).
- `intToUtf8()` converts integers corresponding to surrogate code points to `NA` rather than invalid UTF-8, as well as values larger than the current Unicode maximum of `0x10FFFF`. (This aligns with the current RFC3629.)
- Fix calling of methods on S4 generics that dispatch on `...` when the call contains `....`
- Following Unicode 'Corrigendum 9', the UTF-8 representations of U+FFFE and U+FFFF are now regarded as valid by `utf8ToInt()`.
- `range(c(TRUE,NA),finite = TRUE)` and similar no longer return `NA`. (Reported by Lukas Stadler.)
- The self starting function `attr(SSlogis,"initial")` now also works when the y values have exact minimum zero and is slightly changed in general, behaving symmetrically in the y range.
- The printing of named raw vectors is now formatted nicely as for other such atomic vectors, thanks to Lukas Stadler.

CHANGES IN R 3.4.2

NEW FEATURES

- Setting the `LC_ALL` category in `Sys.setlocale()` invalidates any cached locale-specific day/month names and the AM/PM indicator for `strptime()` (as setting `LC_TIME` has since R 3.1.0).
- The version of LAPACK included in the sources has been updated to 3.7.1, a bug-fix release.
- The default for `tools::write_PACKAGES(rds_compress=)` has been changed to `"xz"` to match the compression used by CRAN.
- `c()` and `unlist()` are now more efficient in constructing the `names(.)` of their return value, thanks to a proposal by Suharto Anggono. (PR#17284)

UTILITIES

- `R CMD check` checks for and `R CMD build` corrects CRLF line endings in shell scripts `configure` and `cleanup` (even on Windows).

INSTALLATION on a UNIX-ALIKE

- The order of selection of OpenMP flags has been changed: Oracle Developer Studio 12.5 accepts '`-fopenmp`' and '`-xopenmp`' but only the latter enables OpenMP so it is now tried first.

BUG FIXES

- `within(List,rm(x1,x2))` works correctly again, including when `List[["x2"]]` is `NULL`.
- `regexec(pattern,text,*)` now applies `as.character(.)` to its first two arguments, as documented.
- `write.table()` and related functions, `writeLines()`, and perhaps other functions writing text to connections did not signal errors when the writes failed, e.g. due to a disk being full. Errors will now be signalled if detected during the write, warnings if detected when the connection is closed. (PR#17243)
- `rt()` assumed the `ncp` parameter was a scalar. (PR#17306)
- `menu(choices)` with more than 10 choices which easily fit into one `getOption("width")`-line no longer erroneously repeats choices. (PR#17312)
- `length()<-` on a pairlist succeeds. (`https://stat.ethz.ch/pipermail/r-devel/2017-July/074680.html`)
- Language objects such as `quote(("\n"))` or R functions are correctly printed again, where R 3.4.1 accidentally duplicated the backslashes.
- Construction of `names()` for very large objects in `c()` and `unlist()` now works, thanks to Suharto Anggono's patch proposals in PR#17292.
- Resource leaks (and similar) reported by Steve Grubb fixed. (PR#17314, PR#17316, PR#17317, PR#17318, PR#17319, PR#17320)
- `model.matrix(~1,mf)` now gets the row names from `mf` also when they differ from `1:nrow(mf)`, fixing PR#14992 thanks to the suggestion by Sebastian Meyer.
- `sigma(fm)` now takes the correct denominator degrees of freedom for a fitted model with `NA` coefficients. (PR#17313)
- `hist(x,"FD")` no longer "dies" with a somewhat cryptic error message when `x` has extreme outliers or `IQR()` zero: `nclass.FD(x)` tries harder to find a robust bin width h in the latter case, and `hist.default(*,breaks)` now checks and corrects a too large `breaks` number. (PR#17274)
- `callNextMethod()` works for `...` methods.
- `qr.coef(qd,y)` now has correct names also when `qd` is a complex QR or stems from `qr(*,LAPACK=TRUE)`.
- Setting `options(device = *)` to an invalid function no longer segfaults when plotting is initiated. (PR#15883)
- `encodeString(<very large string>)` no longer segfaults. (PR#15885)

- It is again possible to use `configure --enable-maintainer-mode` without having installed `notangle` (it was required in R 3.4.[01]).
- S4 method dispatch on `...` calls the method by name instead of `.Method` (for consistency with default dispatch), and only attempts to pass non-missing arguments from the generic.
- `readRDS(textConnection(.))` works again. (PR#17325)
- `(1:n)[-n]` no longer segfaults for `n <-2.2e9` (on a platform with enough RAM).
- `x <-1:2; tapply(x,list(x,x),function(x) "")[1,2]` now correctly returns `NA`. (PR#17333)
- Running of finalizers after explicit GC request moved from the R interface `do_gc` to the `C` interface `R_gc`. This helps with reclaiming inaccessible connections.
- `help.search(topic)` and `??topic` matching topics in vignettes with multiple file name extensions (e.g., '*.md.rsp' but not '*.Rmd') failed with an error when using `options(help_type = "html")`.
- The X11 device no longer uses the Xlib backing store (PR#16497).
- `array(character(),1)` now gives (a 1D array with) `NA` as has been documented for a long time as in the other cases of zero-length array initialization and also compatibly with `matrix(character(),*)`. As mentioned there, this also fixes PR#17333.
- `splineDesign(..,derivs = 4)` no longer segfaults.
- `fisher.test(*,hybrid=TRUE)` now (again) will use the hybrid method when Cochran's conditions are met, fixing PR#16654.