RcppClassic: Deprecated Rcpp API

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This document presents the **RcppClassic** package. This package has been factored out of **Rcpp** (Eddelbuettel and François, 2011; Eddelbuettel, François, Allaire, Chambers, Bates, and Ushey, 2014; Eddelbuettel, 2013) and only contains code that is considered deprecated.

This package is released for the sole purpose of allowing package authors that are still using the classic **Rcpp** API to keep their package buildable. This document explains the changes needed in a package to use both the current and classic **Rcpp** APIs.

1   If you must use RcppClassic

A few changes are needed in packages that want to use the classic **Rcpp** API that is contained in **RcppClassic**. A sample package called **RcppClassicExample** is on CRAN and can be used as a template.

1.1   The DESCRIPTION file

The client package must declare that it depends on both **Rcpp** and **RcppClassic** in the Imports field and the LinkingTo field, so it must contain this:

```
Imports: RcppClassic, Rcpp
LinkingTo: RcppClassic, Rcpp
```

1.2   The NAMESPACE file

The client package should import both **Rcpp** and **RcppClassic**:

```
importFrom(Rcpp, evalCpp)
import(RcppClassic)
```

1.3   Makevars

The Makevars file must be updated so that user libraries for both Rcpp and RcppClassic are used:

```
PKG_LIBS = '$(R_HOME)/bin/Rscript -e "Rcpp:::LdFlags()"' \
           '$(R_HOME)/bin/Rscript -e "RcppClassic:::LdFlags()"'
```

Starting with **Rcpp** version 0.11.0, the result of `Rcpp:::LdFlags()` is an empty string as Rcpp no longer provides a user-library. The above then reduces to

```
PKG_LIBS = '$(R_HOME)/bin/Rscript -e "RcppClassic:::LdFlags()"'
```

1.4 Makevars.win

The Makevars.win must also be updated for the same reason:

```
PKG_LIBS = $(shell "${R_HOME}/bin${R_ARCH_BIN}/Rscript.exe" -e "Rcpp:::LdFlags()")
PKG_LIBS += $(shell           "${R_HOME}/bin${R_ARCH_BIN}/Rscript.exe" -e "RcppClas-
sic:::LdFlags()")
```

Similarly, when **Rcpp** 0.11.0 or later is used, the following is sufficient:

```
PKG_LIBS = $(shell           "${R_HOME}/bin${R_ARCH_BIN}/Rscript.exe" -e "RcppClas-
sic:::LdFlags()")
```

1.5 Include RcppClassic.h instead of Rcpp.h

Finally, all instances of this line :

```
#include <Rcpp.h>
```

need to be replaced by:

```
#include <RcppClassic.h>
```

2 You should not use RcppClassic

The previous section discusses the set of changes required to update a package so that it uses the classic API from **RcppClassic** since it has been removed from **Rcpp**.

We do, however, recommend that package authors stop using the classic API, which is largely superseded by the current **Rcpp** API, in terms of performance, design, maintainance and ease of use.

References

Dirk Eddelbuettel. *Seamless R and C++ Integration with Rcpp*. Use R! Springer, New York, 2013. ISBN 978-1-4614-6867-7.

Dirk Eddelbuettel and Romain François. Rcpp: Seamless R and C++ integration. *Journal of Statistical Software*, 40(8):1–18, 2011. URL http://www.jstatsoft.org/v40/i08/.

Dirk Eddelbuettel, Romain François, JJ Allaire, John Chambers, Douglas Bates, and Kevin Ushey. *Rcpp: Seamless R and C++ Integration*, 2014. URL http://CRAN.R-Project.org/package=Rcpp. R package version 0.11.0.