PhosMap installation instances (Based on R>3.3)

1. Wei Xin|Win10|x86_64|R-3.6.0|Rtools-3.5|install&library success

1 error occurs and is resolved

(1) Platform information

```
> version              _
platform      x86_64-w64-mingw32
arch          x86_64
os            mingw32
system        x86_64, mingw32
status
major         3
minor         6.0
year          2019
month         04
day           26
svn rev       76424
language      R
version.string R version 3.6.0 (2019-04-26)
nickname      Planting of a Tree
```

(2) Problems during installation

```
> library(devtools)
> install_github("ecnuzdd/PhosMap")
Error: HTTP error 403.
  API rate limit exceeded for 150.109.68.164. (But here's the good new
s: Authenticated requests get a higher rate limit. Check out the docum
entation for more details.)

  Rate limit remaining: 0/60
  Rate limit reset at: 2019-05-27 03:29:31 UTC

  To increase your GitHub API rate limit
  - Use `usethis::browse_github_pat()` to create a Personal Access Tok
en.
  - Use `usethis::edit_r_environ()` and add the token as `GITHUB_PAT`.
> usethis::browse_github_pat()
✔ Opening URL 'https://github.com/settings/tokens/new?scopes=repo,gi
st&description=R:GITHUB_PAT'
● Call `usethis::edit_r_environ()` to open '.Renviron'.
● Store your PAT with a line like:  GITHUB_PAT=xxxyyyzzz
  [Copied to clipboard]
● Make sure '.Renviron' ends with a newline!
```

2. The server|linux-gnu|x86_64|R-3.5.2|install&library success

(1) Platform information

```
> version            _
platform      x86_64-pc-linux-gnu
arch          x86_64
os            linux-gnu
system        x86_64, linux-gnu
status
major         3
minor         5.2
year          2018
month         12
day           20
svn rev       75870
language      R
version.string R version 3.5.2 (2018-12-20)
nickname      Eggshell Igloo
```

(2) Problems during installation

Install smoothly

3. Zhou Haichao|Win10|x86_64|R-3.5.3|Rtools-3.5|install&library success

After installing Rtools, all is well.

(1) Platform information

```
> version            _
platform      x86_64-w64-mingw32
arch          x86_64
os            mingw32
system        x86_64, mingw32
status
major         3
minor         5.3
year          2019
month         03
day           11
svn rev       76217
language      R
version.string R version 3.5.3 (2019-03-11)
nickname      Great Truth
```

(2) Problems during installation

```
>devtools::install_github("ecnuzdd/PhosMap")
```

```
The downloaded binary packages are in
    C:\Users\76512\AppData\Local\Temp\RtmpmGKHQn\downloaded_packages

WARNING: Rtools is required to build R packages, but is not currently
installed.

Please download and install Rtools 3.5 from http://cran.r-project.org/
bin/windows/Rtools/.
```

After installing Rtools3.5 ...Install smoothly

4. Tong Mengsha|Mac|R-3.5.0|install&library success

Install smoothly

5. Li Xianju|Win10|R-3.5.3|x86_64|install&library success

1 warning for Rtools, packages can be installed and loaded.

(1) Platform information

```
> version
             _
platform     x86_64-w64-mingw32
arch         x86_64
os           mingw32
system       x86_64, mingw32
status
major        3
minor        5.3
year         2019
month        03
day          11
svn rev      76217
language     R
version.string R version 3.5.3 (2019-03-11)
nickname     Great Truth
```

(2) Problems during installation

```
> devtools::install_github("ecnuzdd/PhosMap")
Downloading GitHub repo ecnuzdd/PhosMap@master
Enter one or more numbers separated by spaces, or an empty line to canc
el
1:
WARNING: Rtools is required to build R packages, but is not currently
installed.
```

```
Please download and install Rtools 3.5 from http://cran.r-project.org/
bin/windows/Rtools/.
* DONE (PhosMap)
> library(PhosMap)
```

6. Qi Yaning|Win10|x86_64|R-3.5.3|Rtools-3.5|install&library success

1 warning for Rtools, packages can be installed and loaded.

(1) Platform information

```
> version
               _
platform       x86_64-w64-mingw32
arch           x86_64
os             mingw32
system         x86_64, mingw32
status
major          3
minor          5.3
year           2019
month          03
day            11
svn rev        76217
language       R
version.string R version 3.5.3 (2019-03-11)
nickname       Great Truth
```

(2) Problems during installation

```
> devtools::install_github("ecnuzdd/PhosMap")
WARNING: Rtools is required to build R packages, but is not currently
installed.

Please download and install Rtools 3.5 from http://cran.r-project.org/
bin/windows/Rtools/.
* DONE (PhosMap)
> library(PhosMap)
```

7. Sun Yingshuang|Win10|x86_64|R-3.5.3|Rtools-3.5|install&library success

1 warning for Rtools, packages can be installed and loaded.

(1) Platform information

```
> version
               _
platform       x86_64-w64-mingw32
arch           x86_64
```

```
os          mingw32
system       x86_64, mingw32
status
major       3
minor       5.3
year        2019
month       03
day         11
svn rev      76217
language     R
version.string R version 3.5.3 (2019-03-11)
nickname     Great Truth
```

(2) Problems during installation

```
> devtools::install_github("ecnuzdd/PhosMap")
WARNING: Rtools is required to build R packages, but is not currently
installed.

Please download and install Rtools 3.5 from http://cran.r-project.org/
bin/windows/Rtools/.
* DONE (PhosMap)
Making 'packages.html' ... 好了
In R CMD INSTALL
```

8. Du Zeqian|Win10|x86_64|R-3.5.3|Rtools-3.5|install&library success

(1) Platform information

```
> version
            _
platform     x86_64-w64-mingw32
arch         x86_64
os           mingw32
system       x86_64, mingw32
status
major       3
minor       5.1
year        2018
month       07
day         02
svn rev      74947
language     R
version.string R version 3.5.1 (2018-07-02)
nickname     Feather Spray
```

(2) Problems during installation

```
> devtools::install_github("ecnuzdd/PhosMap")
Downloading GitHub repo ecnuzdd/PhosMap@master
Installing 11 packages: ClueR, e1071, foreach, ggseqlogo, glmnet, GSA,
 impute, iterators, Rtsne, samr, shinyFiles
Error: (converted from warning) unable to access index for repository
http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.5:
  cannot open URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/con
trib/3.5/PACKAGES'
```

Then try installing the required packages manually...

```
> install.packages("class")
Warning in install.packages :
  unable to access index for repository http://www.stats.ox.ac.uk/pub/
RWin/bin/windows/contrib/3.5:
  cannot open URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/con
trib/3.5/PACKAGES'
trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.5/class_7.
3-15.zip'
Content type 'application/zip' length 106354 bytes (103 KB)
downloaded 103 KB

package 'class' successfully unpacked and MD5 sums checked

The downloaded binary packages are in
        C:\Users\ergou\AppData\Local\Temp\RtmpIvLRip\downlo
```

Manual way can be installed, but the efficiency is too low.
The right solution is ...

```
> options(repos='http://cran.rstudio.com/')
> devtools::install_github("ecnuzdd/PhosMap")
Downloading GitHub repo ecnuzdd/PhosMap@master
These packages have more recent versions available.
Which would you like to update?

1:   pillar (1.4.0 -> 1.4.1) [CRAN]

Enter one or more numbers separated by spaces, or an empty line to canc
el
1:
Installing 11 packages: ClueR, e1071, foreach, ggseqlogo, glmnet, GSA,
 impute, iterators, Rtsne, samr, shinyFiles
Installing packages into 'C:/Users/ergou/Documents/R/win-library/3.5'
```

```
(as 'lib' is unspecified)
trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.5/ClueR_1.4.
zip'
Content type 'application/zip' length 3328827 bytes (3.2 MB)
downloaded 3.2 MB

trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.5/e1071_1.7
-1.zip'
Content type 'application/zip' length 1015837 bytes (992 KB)
downloaded 992 KB

trying URL 'http://cran.rstudio.com/bin/windows/contrib/3.5/foreach_1.
4.4.zip'
Content type 'application/zip' length 419063 bytes (409 KB)
downloaded 409 KB

WARNING: Rtools is required to build R packages, but is not currently
installed.

Please download and install Rtools 3.5 from http://cran.r-project.org/
bin/windows/Rtools/.
* DONE (PhosMap)
In R CMD INSTALL
> library("PhosMap")
```
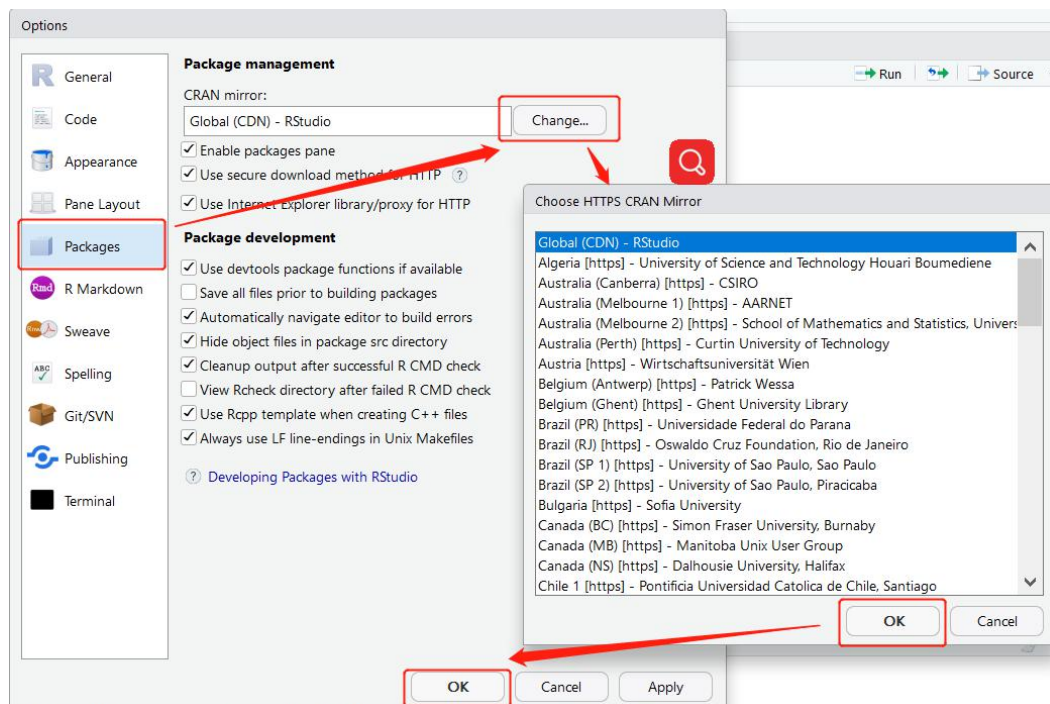
In addition, we recommend that you choose a suitable mirror for downloading and updating packages.

9. Zhang Ruoxian|Win7|x86_64|R-3.6|Rtools-3.5|install&library success

1 warning has not been solved yet, but PhosMap can be used normally.

(1) Platform information

```
>version               _
platform       x86_64-w64-mingw32
arch           x86_64
os             mingw32
system         x86_64, mingw32
status
major          3
minor          6.0
year           2019
month          04
day            26
svn rev        76424
language       R
version.string R version 3.6.0 (2019-04-26)
nickname       Planting of a Tree
```

(2) Problems during installation

```
> devtools::install_github("ecnuzdd/PhosMap")
Enter one or more numbers separated by spaces, or an empty line to canc
el
1: WARNING: Rtools is required to build R packages, but is not current
ly installed.

Please download and install Rtools 3.5 from http://cran.r-project.org/
bin/windows/Rtools/.
√ checking for file 'C:\Users\Administrator\AppData\Local\Temp\Rtmpk
vkgtL\remotes3c6877623cfc\ecnuzdd-PhosMap-78e9c19/DESCRIPTION' ... -
 preparing 'PhosMap':√ checking DESCRIPTION meta-information ... - c
hecking for LF line-endings in source and make files and shell scripts
-  checking for empty or unneeded directories-  building 'PhosMap_0.99.
33.tar.gz'
* DONE (PhosMap)
Warning messages:1: In untar2(tarfile, files, list, exdir) :  skipping
 pax global extended headers2: In untar2(tarfile, files, list, exdir) :
  skipping pax global extended headers
```

After installing Rtools3.5 ...

```
> devtools::install_github("ecnuzdd/PhosMap")
* DONE (PhosMap)
Warning messages:
```

```
1: In untar2(tarfile, files, list, exdir) :  skipping pax global exten
ded headers
2: In untar2(tarfile, files, list, exdir) :  skipping pax global exten
ded headers
```

10. Li Xue|Mac|R-3.6.0|install&library|Error resolved|install&library success

• 1 error occurred while installing the "samr" package.

• Because the gfortran compiler is not provided.

• After the installation of gfortran compiler, samr was installed, then PhosMap was successfully installed and used

(1) Platform information

```
> version           _
platform       x86_64-apple-darwin15.6.0
arch           x86_64
os             darwin15.6.0
system         x86_64, darwin15.6.0
status
major          3
minor          6.0
year           2019
month          04
day            26
svn rev        76424
language       R
version.string R version 3.6.0 (2019-04-26)
nickname       Planting of a Tree
```

(2) Problems during installation

```
> devtools::install_github("ecnuzdd/PhosMap")
Downloading GitHub repo ecnuzdd/PhosMap@master
Installing 1 packages: samr
Package which is only available in source form, and
  may need compilation of C/C++/Fortran: 'samr'
Do you want to attempt to install these from sources? (Yes/no/cancel)
yes
installing the source package 'samr'
试开 URL'https://mirrors.tuna.tsinghua.edu.cn/CRAN/src/contrib/
samr_3.0.tar.gz'
Content type 'application/x-gzip' length 3778876 bytes (3.6 MB)
==================================================
downloaded 3.6 MB


* installing *source* package 'samr' ...
```

```
** 成功将'samr'程序包解包并 MD5 和检查
** using staged installation
** libs
gfortran -fPIC -Wall -g -O2 -c rankcol.f -o rankcol.o
make: gfortran: No such file or directory
make: *** [rankcol.o] Error 1
ERROR: compilation failed for package 'samr'
* removing '/Library/Frameworks/R.framework/Versions/3.6/
Resources/library/samr'
Error in i.p(...) :
  (由警告转换成)installation of package 'samr' had non-zero exit status
```

After installing gfortran compiler and restart R studio ...

```
Restarting R session...
> install.packages("samr")
Package which is only available in source form, and may need
  compilation of C/C++/Fortran: 'samr'
Do you want to attempt to install these from sources? (Yes/no/cancel)
installing the source package 'samr'

试开 URL'https://mirrors.tuna.tsinghua.edu.cn/CRAN/src/contrib/samr_
3.0.tar.gz'
Content type 'application/x-gzip' length 3778876 bytes (3.6 MB)
==================================================
downloaded 3.6 MB
......
* installing *source* package 'samr' ...
** 成功将'samr'程序包解包并 MD5 和检查
** using staged installation
** libs
gfortran -fPIC -Wall -g -O2 -c rankcol.f -o rankcol.o
** R
** inst
** byte-compile and prepare package for lazy loading
** help
*** installing help indices
** building package indices
** testing if installed package can be loaded from temporary location
** checking absolute paths in shared objects and dynamic libraries
** testing if installed package can be loaded from final location
** testing if installed package keeps a record of temporary installation
path
* DONE (samr)
```

```
The downloaded source packages are in
    '/private/var/folders/hl/gmy103yj3k3g6nnhfp4n70hc0000gp/T/Rtmp3Mz
AE5/downloaded_packages'
> library(samr)
> devtools::install_github("KristyWei/PhosMap")
Downloading GitHub repo KristyWei/PhosMap@master
✔                      checking                for             file
'/private/var/folders/hl/gmy103yj3k3g6nnhfp4n70hc0000gp/T/Rtmp3MzAE5
/remotes14234391d490/KristyWei-PhosMap-78e9c19/DESCRIPTION' ...
— preparing 'PhosMap':
✔  checking DESCRIPTION meta-information ...
— checking for LF line-endings in source and make files and shell scripts
— checking for empty or unneeded directories
— building 'PhosMap_0.99.33.tar.gz'

* installing *source* package 'PhosMap' ...
** using staged installation
** R
......
** testing if installed package can be loaded from temporary location
** testing if installed package can be loaded from final location
** testing if installed package keeps a record of temporary installation
path
* DONE (PhosMap)
```

Summary

❖ Case1: Rtools is not available

```
1: WARNING: Rtools is required to build R packages, but is not currently insta
lled.


Please download and install Rtools 3.5 from http://cran.r-project.org/bin/win
dows/Rtools/.
```

This is a common warning on Windows: Rtools is not available

Solution:

Go to the following url to download and install Rtoolsxx. exe.

https://cran.r-project.org/bin/windows/Rtools/

❖ Case2: HTTP error 403

```
Error: HTTP error 403.
  API rate limit exceeded for 150.109.68.164. (But here's the good news: Authe
nticated requests get a higher rate limit. Check out the documentation for mor
e details.)


  Rate limit remaining: 0/60
  Rate limit reset at: 2019-05-27 03:29:31 UTC


To increase your GitHub API rate limit
  - Use `usethis::browse_github_pat()` to create a Personal Access Token.
  - Use `usethis::edit_r_environ()` and add the token as `GITHUB_PAT`.
```

Solution:

Run these two functions...
usethis::browse_github_pat()
usethis::edit_r_environ()

❖ Case3: Repository connection problem

```
Error: (converted from warning) unable to access index for repository http://w
ww.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.5:
  cannot open URL 'http://www.stats.ox.ac.uk/pub/RWin/bin/windows/contrib/3.5
/PACKAGES'
```

Solution:

Run the following commands before the next installation...
options(repos='http://cran.rstudio.com/')

❖ Case4: Warning about untar2

```
Warning messages:
1: In untar2(tarfile, files, list, exdir) :  skipping pax global extended head
ers
```

```
2: In untar2(tarfile, files, list, exdir) :  skipping pax global extended head
ers
```

Solution:

No solution has been found, but this Warning does not affect the use of PhosMap.

We are looking for a solution, maybe it has to do with Rtools.

❖ Case5: The required "samr" package is not available

```
ERROR: compilation failed for package ‘samr’
* removing ‘/Library/Frameworks/R.framework/Versions/3.6/
Resources/library/samr’
Error in i.p(...) :
  (由警告转换成)installation of package ‘samr’ had non-zero exit status
```

Instructions:

- PhosMap requires the "samr" package for certain functions. Computers that have not installed "samr" will automatically start the installation of "samr" when PhosMap is installed.

- In this example, the installation of the "samr" package is problematic.

- The problem was that the "gfortran compiler" compiler required for "samr" was not provided.

Solution:

- Download the corresponding version of the compiler in the following website and install it.

     https://github.com/fxcoudert/gfortran-for-macOS/releases

- Restart R Studio, then you will install samr and PhosMap successfully.