

drat

A Hands-On Introduction

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Lightning Talk

useR! 2015

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```
install.packages()
```

```
update.packages()
```

```
devtools::install_github()
```

Basic R infrastructure with three file system trees

- Source: `src/contrib/`
- OS X: `bin/macosx/mavericks/contrib/$VERSION`
- Windows: `bin/windows/contrib/$VERSION`

each with a `PACKAGES{.gz}` file.

See the [drat repo](#) for an example

Keys points:

1. Every GitHub repository has a **built-in webserver**
2. Given repository name (*i.e.* drat) we **just need *username***
3. So we standardize on `addRepo("username")`
4. And `http://username.github.io/drat` follows

With the repo name, and directory layout, we are done:

```
drat::addRepo("ghrr")           # could be in ~/.Rprofile  
  
install.package("fasttime")    # install, with depends  
  
update.packages()              # or update against repos
```

Adding to a drat

Either in the shell (here using a `littler` helper script)

```
R CMD build somePkg  
dratInsert.r somePkg_1.2.3.tar.gz
```

or directly from R

```
file <- devtools::build("somePkg")  
drat::insertPackage(file)
```

where both default to using `~/git/drat/` if no alternate location is specified

Adding to a drat

- Sometimes we want private or local repos.
- Use write-able directory share as 2nd argument to `insertRepo()`

```
file <- devtools::build("somePkg")  
drat::insertPackage(file, "/nfs/some/dir")
```

- Similarly to use this local drat:

```
drat::addRepo("local", "file:/nfs/some/dir")
```

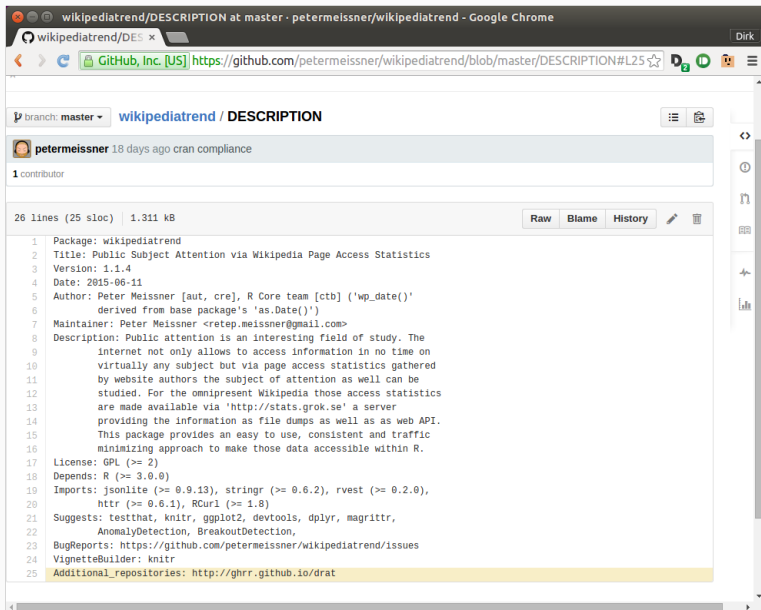
Non-GitHub / Local Use

```
# following lines could be ~/.Rprofile or Rprofile.site  
# and one could also set options("repos") directly  
drat::addRepo("local", "file:/nfs/some/dir")  
drat::addRepo("alt", "http://ourR.local") # what we do  
  
install.package("fasttime") # install, with depends  
  
update.packages() # or update against repos
```

Other Topics and Use Cases

- Use drat from Travis CI (cf vignette by Colin Gillespie)
- Use drat with miniCRAN (also examples by Colin)
- Use drat with builder scripts (work by Rich FitzJohn et al)
- Really nice direct Git(Hub) access thanks to [git2r](#)

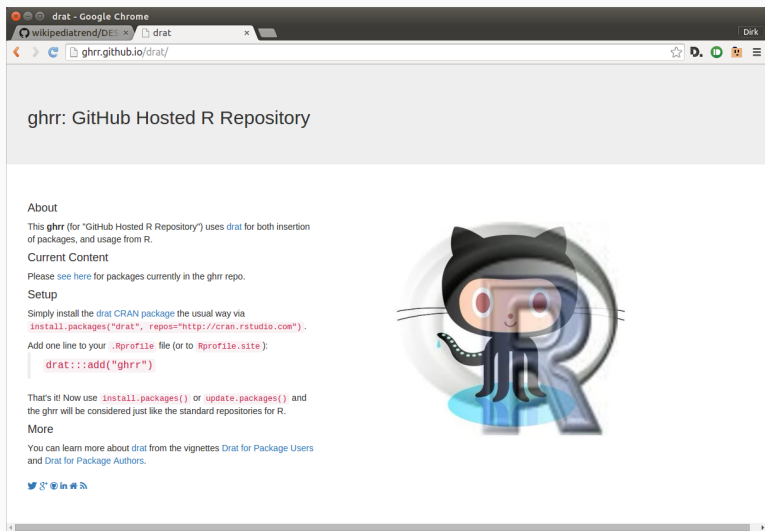
Unexpected Corollary Benefits



The screenshot shows a web browser window displaying the GitHub repository page for 'wikipediatrend/DESCRIPTION' at the master branch. The page header includes the repository name and the current branch. Below the header, there is a commit by 'petermeissner' from 18 days ago, titled 'cran compliance', with one contributor. The main content area shows the DESCRIPTION file with 26 lines (25 sloc) and a size of 1.311 kB. The file content is as follows:

```
1 Package: wikipediatrend
2 Title: Public Subject Attention via Wikipedia Page Access Statistics
3 Version: 1.1.4
4 Date: 2015-06-11
5 Author: Peter Meissner [aut, cre], R Core team [ctb] ('wp_date()'
6   derived from base package's 'as.Date()')
7 Maintainer: Peter Meissner <retep.meissner@gmail.com>
8 Description: Public attention is an interesting field of study. The
9   internet not only allows to access information in no time on
10  virtually any subject but via page access statistics gathered
11  by website authors the subject of attention as well can be
12  studied. For the omnipresent Wikipedia those access statistics
13  are made available via 'http://stats.grok.se' a server
14  providing the information as file dumps as well as as web API.
15  This package provides an easy to use, consistent and traffic
16  minimizing approach to make those data accessible within R.
17 License: GPL (>= 2)
18 Depends: R (>= 3.0.0)
19 Imports: jsonlite (>= 0.9.13), stringr (>= 0.6.2), rvest (>= 0.2.0),
20   httr (>= 0.6.1), RCurl (>= 1.8)
21 Suggests: testthat, knitr, ggplot2, devtools, dplyr, magrittr,
22   AnomalyDetection, BreakoutDetection,
23 BugReports: https://github.com/petermeissner/wikipediatrend/issues
24 VignetteBuilder: knitr
25 Additional_repositories: http://ghrr.github.io/drat
```

Unexpected Corrolary Benefits



The screenshot shows a Google Chrome browser window with the URL `ghrr.github.io/drat/`. The page title is "ghrr: GitHub Hosted R Repository".

About

This `ghrr` (for "GitHub Hosted R Repository") uses `drat` for both insertion of packages, and usage from R.

Current Content

Please [see here](#) for packages currently in the `ghrr` repo.

Setup

Simply install the `drat` CRAN package the usual way via `install.packages("drat", repos="http://cran.rstudio.com")`.

Add one line to your `.Rprofile` file (or to `Rprofile.site`):


```
drat::add("ghrr")
```

That's it! Now use `install.packages()` or `update.packages()` and the `ghrr` will be considered just like the standard repositories for R.

More

You can learn more about `drat` from the vignettes `Drat for Package Users` and `Drat for Package Authors`.

At the bottom of the page, there are social media icons for Twitter, GitHub, LinkedIn, and Facebook.



Unexpected Corollary Benefits



CRAN - Package wikipediatrend - Google Chrome

wikipediatrend/DES x drat CRAN - Package wikipediatrend x Dirk

cran.r-project.org/web/packages/wikipediatrend/index.html

wikipediatrend: Public Subject Attention via Wikipedia Page Access Statistics

Public attention is an interesting field of study. The internet not only allows to access information in no time on virtually any subject but via page access statistics gathered by website authors the subject of attention as well can be studied. For the omnipresent Wikipedia those access statistics are made available via 'http://stats.grok.se' a server providing the information as file dumps as well as as web API. This package provides an easy to use, consistent and traffic minimizing approach to make those data accessible within R.

Version: 1.1.4
Depends: R (≥ 3.0.0)
Imports: [jsonlite](#) (≥ 0.9.13), [stringr](#) (≥ 0.6.2), [rvest](#) (≥ 0.2.0), [httr](#) (≥ 0.6.1), [RCurl](#) (≥ 1.8)
Suggests: [testthat](#), [knitr](#), [ggplot2](#), [devtools](#), [dplyr](#), [magrittr](#), AnomalyDetection, BreakoutDetection
Published: 2015-06-11
Author: Peter Meissner [aut, cre], R Core team [ctb] ('wp_date()' derived from base package's 'as.Date()')
Maintainer: Peter Meissner <retep.meissner@gmail.com>
BugReports: <https://github.com/petermeissner/wikipediatrend/issues>
License: [GPL-2](#) | [GPL-3](#) [expanded from: GPL (≥ 2)]
NeedsCompilation: no
Materials: [README](#) [NEWS](#)
CRAN checks: [wikipediatrend results](#)

Downloads:

Reference manual: [wikipediatrend.pdf](#)
Vignettes: [Using Wikipediatrend](#)
Package source: [wikipediatrend_1.1.4.tar.gz](#)
Windows binaries: r-devel: [wikipediatrend_1.1.4.zip](#), r-release: [wikipediatrend_1.1.4.zip](#), r-older: [wikipediatrend_1.1.4.zip](#)
OS X Snow Leopard binaries: r-older: [wikipediatrend_0.2.0.tgz](#)
OS X Mavericks binaries: r-release: [wikipediatrend_1.1.4.tgz](#)
Old sources: [wikipediatrend archive](#)

Conclusion

- **Packages** are what our community is built on
- (Package) **Repositories** are their natural habitat
- **R itself has everything** we need to deploy repositories
- GitHub a natural match for hosting (package) repositories, with standard network storage an alternate
- **drat** facilitates use of alternate | test | dev repos like **ghrr**
- So let a thousand package repositories bloom!