

# Devtools, Git and GitHub

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# Devtools

Hadley Wickham (May 2010)

Easier package development

Infrastructure

Interactive Development

Installation

Integrated with RStudio IDE

R packages - <http://r-pkgs.had.co.nz/>

# use\_\*()

use\_test()

use\_data()

use\_vignette()

use\_package()

use\_rcpp()

use\_coverage()

# create()

load\_all()

test()

BiocGenerics:::testPackage()

check()

document()

# install\_github()

```
install_github("jimhester/covr")
```

```
install_github("jimhester/covr@R6")
```

```
install_github("jimhester/covr@a2aab53f3")
```

```
install_github("jimhester/covr#195")
```

```
install_github("jimhester/covr/sub_dir")
```

# install()

install\_url()

install\_svn()

install\_git()

install\_bitbucket()

install\_bioc() - devtools v1.12.0

# install\_bioc()

```
install_bioc("Biobase")
```

```
install_bioc("release/Biobase")
```

```
install_bioc("3.2/Biobase")
```

```
install_bioc("Biobase#117513")
```

```
install_bioc("user:password@release/Biobase")
```

# Remotes

## DESCRIPTION

Un-released Development dependencies

All `install_*` functions

Travis



# Remotes

Depends: Biobase

Imports: testthat

Suggests: covr

Remotes:

`jimhester/covr,`

`bioc::release/Biobase#117513,`

`local::/pkgs/testthat`

# use\_github()

Discoverability

Issue Tracking

Pull Requests / Code Comparison

Continuous Integration / Services

# use\_travis()

Integrated R Support

Multiple R versions

Bioconductor Aware

Dependency Caching

Prevent breakage

# jimhester / covr



build passing

[Current](#) [Branches](#) [Build History](#) [Pull Requests](#)

More options



✓ **Pull Request #195** proof-of-concept (mc)parallel support.

Commit 11eef89

#195: proof-of-concept (mc)parallel support.

Karl Forner authored and committed

#312 passed



Elapsed time 3 min 24 sec

Total time 9 min 34 sec

a day ago

## Build Jobs

✓ # 312.1	R: oldrel	no environment variables set	3 min 6 sec
✓ # 312.2	R: release	no environment variables set	3 min 4 sec
✓ # 312.3	R: devel	no environment variables set	3 min 24 sec

# travis.yml

language: r

cache: packages

r:

- bioc-devel
- bioc-release

# use\_git()

Distributed

Full local history

Lightweight branch creation / switching

Sophisticated Merging

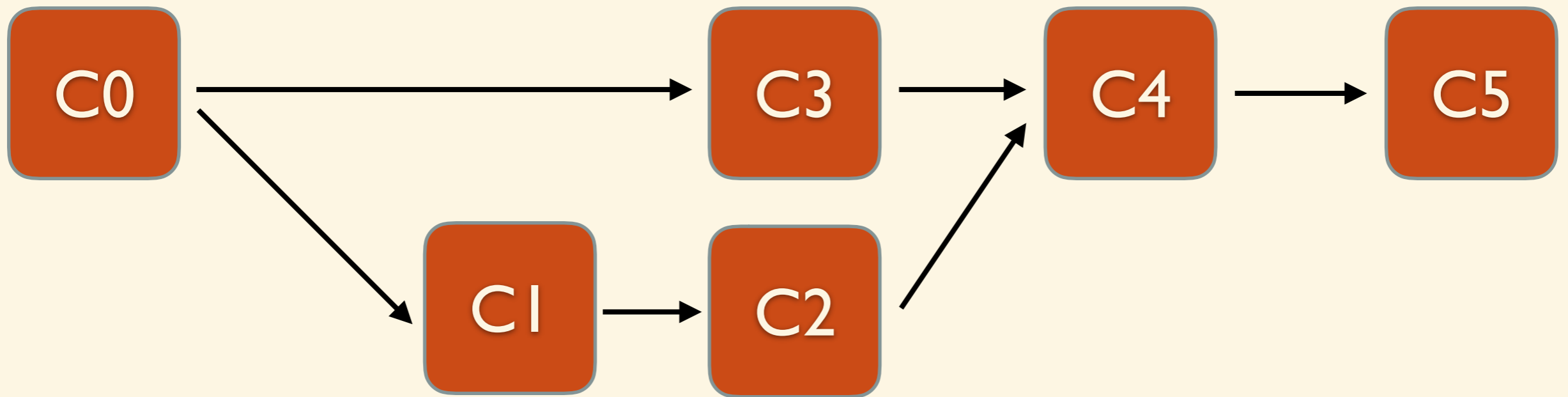
# Git Mirrors

[www.github.com/Bioconductor-mirror](https://www.github.com/Bioconductor-mirror)

git-svn

[bioconductor.org/developers/how-to/git-mirrors](https://bioconductor.org/developers/how-to/git-mirrors)

Merge commits 🤖





# CONFLICT

Never merge 😬

```
git cherry-pick first_commit..last_commit
```

```
git checkout devel; git merge --squash master
```

```
git rebase --abort, git merge --abort
```

```
git reset --hard A1B3CD
```

```
git reflog
```

## Devtools

`use_test()`, `use_vignette()`,  
`use_data()`

`load_all()`, `test()`, `check()`,  
`document()`

`install_github("pkg@branch")`

`install_bioc("3.3/Biobase")`

Remotes: `bioc::Biobase`

`use_github()`

`use_travis()`

`git-svn: git merge --squash`

`git rebase --abort`

`git reset --hard`