



# CUSTOMIZING YOUR SHELL

COMPOUNDING LOTS OF SMALL CHANGES FOR LARGER EFFECTS

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Dirk Edelbuettel

7<sup>4</sup> Video Lightning Talk #003

May 24, 2020

## Previously we

- Introduced the series with an overview in [episode 000](#)
- Started some first shell customization with color in [episode 001](#)
- Looked into setting up custom shell prompts in [episode 002](#)
- Showed the [GitHub repo t4](#) for comments, questions etc

## More Shell Customization and Tips

- An `alias` can save typing
- But what else saves typing that have not mentioned?
  - TAB completion
  - Command-line search
- So let's do those first

### How

- Briefly:
  - Applications can tell bash about their commands
  - Bash then knows what command arguments are *possible*
  - And can complete
- E.g. the R package for Debian/Ubuntu has long carried a file contributed by Deepayan Sarkar of the R Core team
- DEMO

### What keys?

- Ctrl-A and Ctrl-E for begin and end of line
- Ctrl-R to search command history
- Ctrl-L to redraw screen

# SHELL TIP 4: THOSE KEYBOARD SHORTCUTS

JULIA EVANS  
@b0rk

## bash tricks

10

★ ctrl + r ★

search your history!

I use this ♥ constantly ♥  
to rerun commands

★ magical braces ★

```
$ convert file.{jpg,png}
```

expands to

```
$ convert file.jpg file.png
```

{1..5} expands to 1 2 3 4 5  
(for i in {1..100} ...)

!!

expands to the last  
command run  
\$ sudo !!

commands that start  
with a space don't go  
in your history. good if  
there's a password 🔒

### loops

```
for i in *.png  
do  
  convert $i $i.jpg  
done
```



for loops:  
easy & useful!

### \$( )

gives the output of a  
command

```
$ touch file-$(date -I)
```

↑  
create a file named  
file-2018-05-25

### more keyboard shortcuts

ctrl a beginning of line

ctrl e end of line

ctrl+l clear the screen

+ lots more emacs  
shortcuts too!

Source: <https://wizardzines.com/comics/bash-tricks/>

### Where?

- Locally `~/.bash_aliases`
  - or any file you source from `~/.bash_profile`
- We have already seen how it turned on color for `ls`
- I just keep a few for common commands

## SHELL TIP 5: ALIASES

### Mine

```
## stterm simpler terminal with 'large enough' font for obs
#alias st18='/usr/bin/stterm -f "Liberation Mono-18"'
#alias st20='/usr/bin/stterm -f "Liberation Mono-20"'

## docker run and mount
## use -u `id -u`:`id -g` if unclear what uid:gid to use
alias dkrr='docker run --rm -ti -u1000:1000 -v$(pwd):/work -w /work'
alias dkrrr='docker run --rm -ti -v$(pwd):/work -w /work'
alias dkrrx='docker run --rm -it -u1000:1000 -e DISPLAY=$DISPLAY \
-v /tmp/.X11-unix:/tmp/.X11-unix'

## emacsclient for byobu/tmux/screen
alias be='TERM=screen emacsclient -nw'
```



### How does one write an alias?

- Keyword `alias` followed by `key=value`
  - where value can be an expression
- Expression can contain further
  - shell commands such as `$(pwd)`
  - shell variables such as `$DISPLAY`
- Simpler than bash functions
- Simpler than bash scripts
- And *obviously* more limited too
- DEMO

## Likely Start with **byobu**

- “Shell session multiplexing” made popular by GNU **screen**
- Later replaced / supplanted by **tmux**
- And **byobu** wraps both with nicer UI and options
- Likely Next Sunday

# SERIES RESOURCE

The screenshot shows the GitHub interface for the repository 'eddelbuettel / t4'. At the top, there are navigation links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The repository name is 'eddelbuettel / t4' with 1 Unwatch, 0 Stars, and 0 Forks. Below the repository name, it says 'Support repo for T4 Video Lightning Talks' with an 'Edit' button. There are statistics for 1 commit, 1 branch, 0 packages, 0 releases, and 1 contributor. A navigation bar includes 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. The commit history shows 'eddelbuettel' with an 'initial commit' 31 seconds ago, and a file 'README.md' also with an 'initial commit' 31 seconds ago. The content of the README.md file is displayed below, featuring sections: 't4: Tips, Trick, Tools and Toys', 'What Is This?', 'Schedule so far', 'What Else?', and 'Who'.

eddelbuettel / t4

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Manage topics

1 commit 1 branch 0 packages 0 releases 1 contributor

Branch: master New pull request Create new file Upload files Find file Clone or download

eddelbuettel initial commit Latest commit 3122af9 31 seconds ago

README.md initial commit 31 seconds ago

README.md

## t4: Tips, Trick, Tools and Toys

### What Is This?

An informal series of *lightning talks* taped as videos and supported by a few slides. Focused on a few little ticks and tricks, or tools, or toys, to make computing life just that little bit easier.

### Schedule so far

with the [initial video](#) and [slides](#)

### What Else?

Please use the [issue tracker](#) to provide feedback, corrections, ideas, ...

### Who

Dirk Eddelbuettel

Source: <https://github.com/eddelbuettel/t4>

Thu, 07 May 2020

## Rcpp Virtual Talk on June 5

We had to [cancel R/Finance 2020](#) due to what is happening all around us. But I plan to present the one-hour workshop I often give in the tutorial session preceding the first day—but this time online!

To keep it simple, we will stick with the same day, and possibly the same time: Friday morning at 8:00am! So that makes Friday, June 5, at 08:00h Central time.

[This YouTube! link](#) should then provide the stream, I reckon there may also be a recording afterwards.

**I ILLINOIS**

**INTRODUCTION TO RCPP:  
FROM SIMPLE EXAMPLES TO MACHINE LEARNING**

(VIRTUAL) R/FINANCE PRE-CONFERENCE TUTORIAL

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Dirk Eddelbuettel  
5 June 2020

The talk / demo / presentation will be about an hour long, and material will be similar to the previous ones (of the same length) still available at the [talks](#) page (which also has longer talks all the way to the two-day workshops).

If you like this or other open-source work I do, you can now [sponsor me](#) at GitHub. For the first year, [GitHub will match your contributions](#).

*This post by Dirk Eddelbuettel originated on his [Thinking inside the box](#) blog. Please report excessive re-aggregation in third-party for-profit settings.*

Source: Blog post at [http://dirk.eddelbuettel.com/blog/2020/05/07#rcpp\\_announce\\_talk\\_20200605](http://dirk.eddelbuettel.com/blog/2020/05/07#rcpp_announce_talk_20200605)

# SATRDAYS

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## satRday Chicago

**A virtual conference featuring  
useRs in the Chicagoland area  
on May 30, 2020!**

[TELL ME MORE](#)

Source: <https://chicago2020.satRdays.org>

# THANK YOU!

slides <http://dirk.eddelbuettel.com/presentations/>

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repo <https://github.com/eddelbuettel/t4>