

# Bash Scripting for Beginners

...

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[bit.ly/bcc2018-bash](https://bit.ly/bcc2018-bash)

# Disclaimers

No, I did not lose a bet and get stuck talking about Bash.

I actually like Bash.

Bash scripts are software, too.

This talk is full of my own opinions.

# Who am I?

- Grew up in Yakima, WA
- Majored in math at University of Washington
- Boise resident for 11 years (and counting)
- Former Software/Release Engineer at Bodybuilding.com
- Former Software Engineer at TSheets
- Site Reliability Engineer at Driver, Inc.
- Free time?

# Agenda

- Bash 101: A Brief Introduction
- Bash 102: The Command Line
- Bash 103: One-Liners
- Bash 201: Intro to Scripting
- Bash 202: Limits of Bash

# Bash 101: A Brief Introduction

# What is Bash?

- Unix shell and command language
- Written in 1989 by Brian Fox for GNU Project
- Replacement for Bourne shell
- Bash is short for “Bourne-again shell”
- Default login shell for most Linux distros and macOS
- You can even get it for Windows 10

# How do I use Bash?

Two primary options...

- 1) From a command line
- 2) In a shell script

# Bash 102: The Command Line



# Useful commands

- Dealing with files: ls, cd, mv, cp, rm, cat
- Looking for stuff: grep, find
- Working with text: awk, sed, sort, uniq, head, tail
- Remote requests: curl, wget
- Bonus round: xargs

Let's look at a few of these...

# grep

- `grep "some string" filename`
- `grep "some string" file_*`
- `grep -i "some string" filename`
- `grep -v "some string" filename`
- `grep "some regex" filename`
- `grep -5 "some string" filename`
- `grep -A 5 "some string" filename`
- `grep -B 5 "some string" filename`

# awk and sed

- `awk '{print $1}' filename`
- `sed 's/this/that/g' filename`

This is just scratching the surface. Awk is a language in its own right.

# Bash 103: One-Liners

# Normal one-liners

I had a dream that I was a muffler last night. I woke up exhausted.

What's Forrest Gump's password? lforrestl

I quit my job at the tire shop. I just felt like I was spinning my wheels.

Don't trust atoms. They make up everything.

What does a zombie vegetarian eat? GRRRAAAAIIINNNS!

# Bash one-liners

```
svn status | grep ^? | awk '{print $2}' | xargs svn add
```

```
tail -f filename | grep "some_text"
```

```
for i in {1..10}; do echo $i; done
```

# Bash 201: Intro to Scripting

# Some best practices

- Use comments
- Version your scripts
- Put scripts in revision control
- Validate input
- Provide help for users
- Consider functions
- Use comments



# Install jq

The example scripts use a utility called jq. You'll need to install it...

- `brew install jq`
- `apt-get install jq`
- `yum install jq`

etc.

**Time for some code!**

# Further topics in Bash

- Interactive scripts
- Signals
- Daemons
- Remote scripts
- ...and much more

# Bash 202: Limits of Bash

# How far is too far?

- MVC frameworks
- Template parsing
- Anything on the Web
- DNA sequencers
- ...and much more

# What to use instead

- Python
- Ruby
- Go
- ~~Perl~~

**Thank you. Happy Bashing.**