

Bash



SIGPWN

Meeting Flag!

Reminder to write meeting flag on board

Bash I/O Redirection

- |
 - Redirects the output of one command to the input of another
 - Ex: `echo "hello" | nc chal.sigpwny.com 1337`
- >
 - Redirects the output of one command to a file
 - Ex: `cat someFile.txt > newFile.txt`
- >>
 - Appends the output of one command to end of a file
 - Ex: `cat someFile.txt >> existingFile.txt`
- <
 - Takes file contents as input to a command
 - Ex:
- \$()
 - Uses the output of any command as a parameter of another command
 - Very useful for BOF attacks.

Tmux

What is it? Why is it wonderful?

Terminal Multiplexor

Have different instances of terminal in one terminal window.

Tmux Basics

`tmux` opens a tmux window, which is unlike a normal terminal window.

Once in tmux, the action command is `ctrl + B`

Some helpful things

Command (B + ?)	What it does
d	Detaches you from your tmux session
c	Creates a new tmux window
“	Creates a horizontal split pane
%	Creates a vertical split pane
Arrow Keys	Navigates between panes
n (or 0-9)	Moves to next window (windows 0-9)

More Cool Tmux Stuff

Renaming

Re-attaching

Killing Windows

Persistent uptime (super helpful)

Why use tmux?

Quickly host something

Multitask quickly (no mouse)

(If VM hosted somewhere) Keep things up for a long time

Tmux is probably the Jankest way to keep a minecraft server up for awhile.

Challenges

Replicate & navigate

that --->

```
Restored session: Thu Feb 20 17:37:37 CST 2020
The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208858.
(base) ~/Developer/SigPwny:

The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208858.
(base) ~/Developer/SigPwny:

The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208858.
(base) ~/Developer/SigPwny:

To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208858.
(base) ~/Developer/SigPwny:

Restored session: Thu Feb 20 17:48:25 CST 2020
The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208858.
(base) ~/Developer/SigPwny: traceroute sydney.edu.au

The default interactive shell is now zsh.
To update your account to use zsh, please run 'chsh -s /bin/zsh'.
For more details, please visit https://support.apple.com/kb/HT208858.
(base) ~/Developer/SigPwny:
```

Do something cool with tmux, then show us.

There aren't really many things you can challenge people on with tmux.