## Homebrew → CHEATSHEET

workbrew.com/homebrew/cheat-sheet



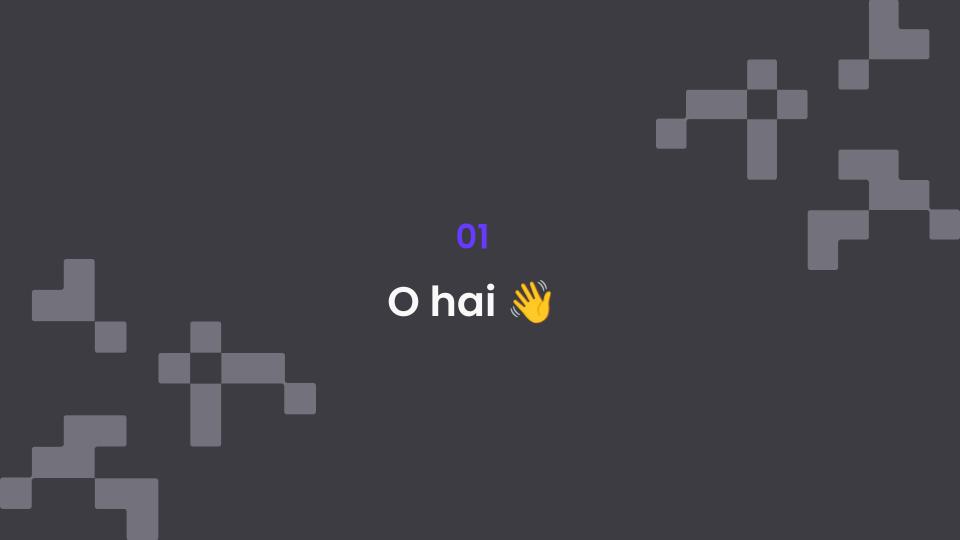
## Workbrew

Homebrew: How to Unite Developers IT Administrators, and Security Professionals

Brandon Valentine brandon@workbrew.com

## Agenda

- 1. O hai 👋
- 2. Homebrew
- 3. How do I get started?
- 4. Problems
- 5. Locking Things Down
- 6. Lessons Learned
- 7. Workbrew
- 8. Q&A



## O hai

## Who am I to give advice?

2000-2010

**Systems Administrator** 

2010-2020

**Software Developer** 

2020-Present

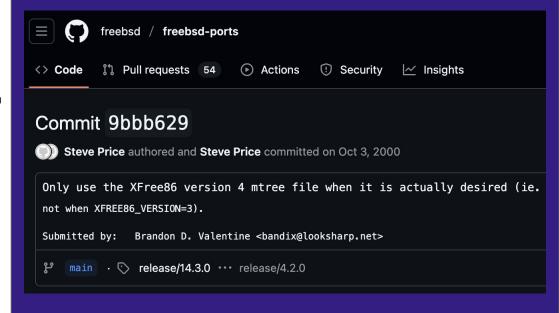
Grew a big beard and started to have Big Thoughts™.



In the year 2000....

## O hai

Don't call it a comeback. I've been here for [25] years.



O hai

## <del>DarwinPorts</del>

•••

## **MacPorts**

**But now**, the Mac!

#7948 closed defect (fixed)

Opened 19 years ago Closed 19 years ago

**UPDATE:** maildrop-2.0.2

Reported by:

Component:

Keywords:

bugs@...

Owned by:

matt@...

Priority:

Normal ports

Milestone:

Version: 1.2

Cc:

markd@...

Port:

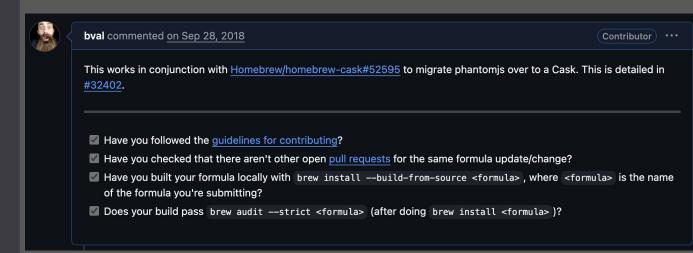
### Description

patch to update to maildrop-2.0.2

Updates the maildrop port to 2.0.2. Patch attached. The port is currently at revision 1.6.3, for which distfiles are no longer available, so it fails to build. Maildrop 2.0.x requires PCRE so it has added as a dependency.

My first stab at DarwinPorts, so be gentle.

## At long last!





## Homebrew, the #1 app store for devs

**Open Source** with a thriving community of contributors and maintainers.

**Industry Standard** with over 15 years of history, it's the default choice for developers.



## \$> brew install python

## \$> brew upgrade python

## Homebrew, the #1 app store for <del>devs</del> everybody

**Open Source** with a thriving community of contributors and maintainers.

**Industry Standard** with over 15 years of history, it's the default choice for installing software.



## \$> brew install google-chrome

## \$> brew install microsoft-office

## 15K Packages

### HOMEBREW

## Everything under the sun

Open Source programming languages, databases, IDEs and libraries.

Closed Source desktop applications, drivers, or any other binary.

Internal Software CLIs, automations, data-analysis, and utilities.

## Homebrew is everywhere

**Trusted** by tens of millions of developers daily.

**Default** package manager for macOS.

**Multi-platform** runs on Linux and Windows under WSL.

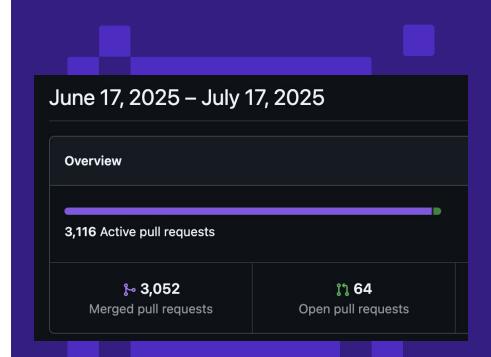


## Homebrew is active

Updated 100+ times daily.

**Strength in numbers.** To date 14,000+ unique people have contributed to Homebrew Core.

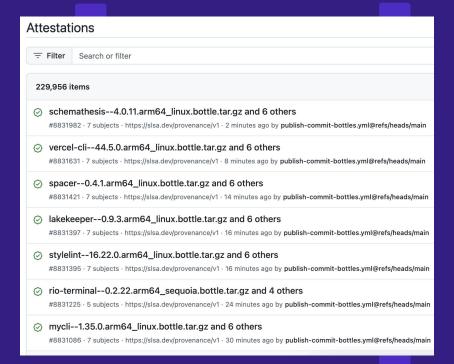
**Automated**. Homebrew CI runs all day long automatically looking for new versions and patches.

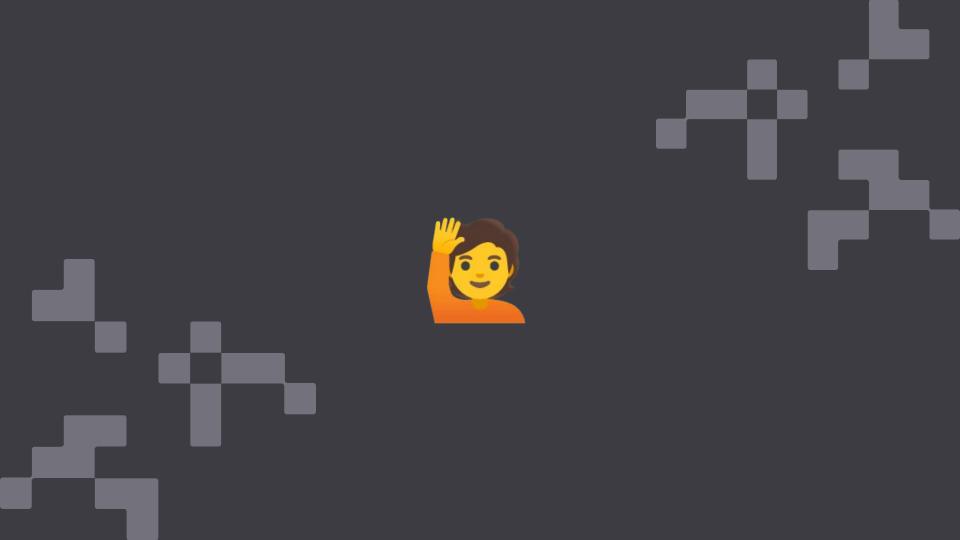


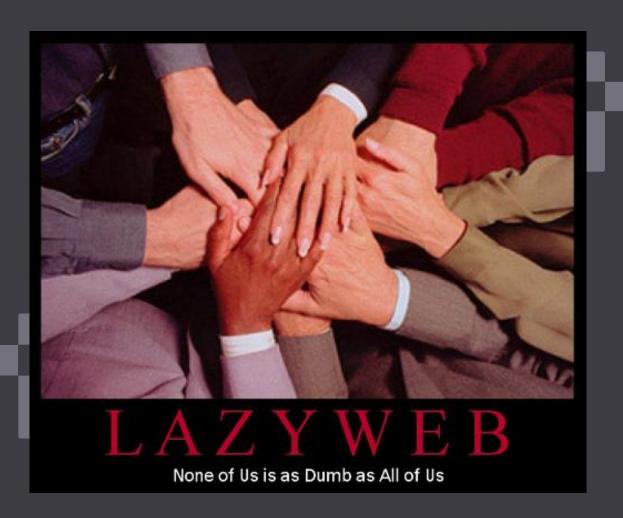
## Homebrew is consistent and secure

**Configuration as code** builds packages the same way. Every time.

**Signatures!** Thanks to a collaboration between Trail of Bits, GitHub, and Homebrew you can now cryptograpically verify a given Homebrew package is an official build.







# **Getting Started**

## Install Homebrew

Install Homebrew on all developer Macs through your MDM.

## **Options:**

- Official Homebrew .pkg installer
- Workbrew installer .pkg



### **GETTING STARTED**

## Install Packages

Install software on your Macs through your MDM.

\$ brew install <package>

•••

\$ brew bundle -file=Brewfile

Put these commands in self-service?

```
1 # brew bundle --file=Brewfile
   cask_args appdir: "/Applications"
 5 cask "1password"
 6 cask "aerial"
  cask "alfred"
 8 cask "ankermake"
 9 cask "bartender"
10 cask "cleanmymac"
11 cask "cloudapp"
12 cask "cyberduck"
13 cask "docker"
14 cask "google-chrome"
15 cask "oracle-jdk"
16 cask "keybase"
17 cask "microsoft-remote-desktop"
18 cask "microsoft-teams"
19 cask "moom"
20 cask "paparazzi"
21 cask "plex"
22 cask "tenor"
23 cask "whatsapp"
24 cask "xquartz"
25 cask "zoom"
```

### **GETTING STARTED**

## Upgrade and Patch Packages

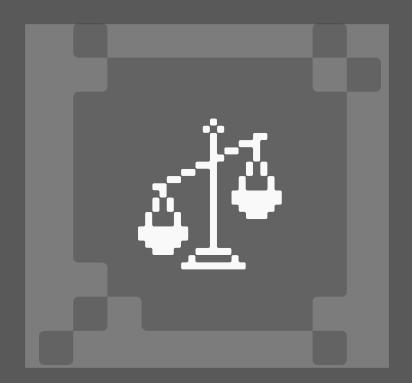
\$ brew upgrade

Seriously, that's it.

Add an MDM policy around it and you'll never get behind.







### **PROBLEMS**

## What is Homebrew missing?

Single-player design.

**No central visibility** - data about what's installed lives on device, not where you can see it easily.

**No guardrails** means anyone can install anything on any device at any time.

## **PROBLEMS**

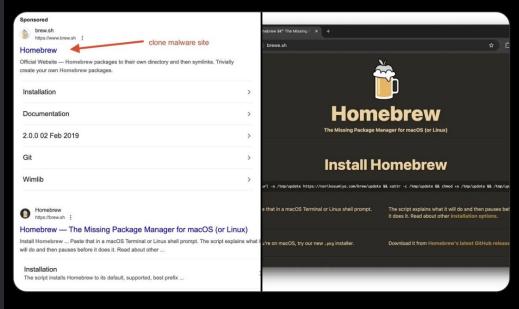
## Homebrew is an attack vector

Bad actors have targeted Homebrew as a way to install malware.

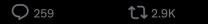


♠ Developers, please be careful when installing Homebrew.

Google is serving sponsored links to a Homebrew site clone that has a cURL command to malware. The URL for this site is one letter different than the official site.



4:33 PM · Jan 18, 2025 · 1.3M Views



## **PROBLEMS**

## Third-party taps are unregulated

\$ brew tap risky/business

Without work on your part, Homebrew can ingest software from any git URL provided.



## Locking Things Down

### **LOCKING THINGS DOWN**

## Provide Homebrew

**Provide Homebrew:** `brew` is officially supported and installed on every new Mac out of the box.

No chance of anyone downloading the wrong, malware-infested version.

You're in control of where and how it's installed.



### LOCKING THINGS DOWN

## Configure Homebrew

/etc/homebrew/brew.env

## **Config options:**

- HOMEBREW\_FORBIDDEN\_FORMULAE
- HOMEBREW\_FORBIDDEN\_CASKS
- ALLOWED\_TAPS

If users have sudo - they can override this.



06

Lessons Learned (mostly the hard way)

### **LESSONS LEARNED**

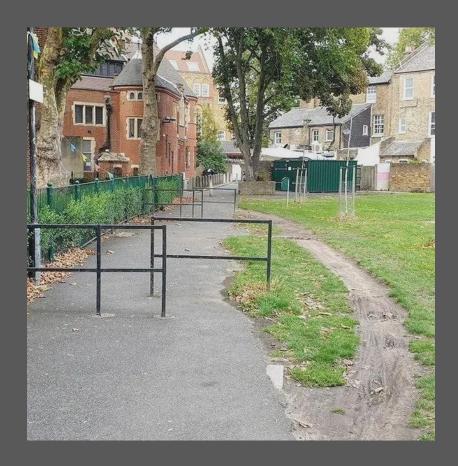
## Life Finds A Way

Developers Find A Way - you might not be ready to embrace Homebrew, but your developers already are. It's in your fleet, whether you know it or not. If you can't beat 'em, join 'em.

## Make the Right Thing the Easy Thing

**The Power of Consistency** – this helps everyone. Embrace it and be able to say with confidence where software is installed, when, and at what version.





## **LESSONS LEARNED**

## Developers Find A Way

First page on Google.

(Mac pentest series) Install Homebrew without sudo privilege



Chenny Ren (



3 min read · Jun 5, 2023

## **LESSONS LEARNED**

## Make the Right Thing the Easy Thing

If you give developers an easy button, we'll use it.



### homebrew\_packages The installed homebrew package database. Improve this Description on Github TYPE COLUMN DESCRIPTION TEXT Package name name TEXT Package install path path TEXT Current 'linked' version version TEXT Homebrew install prefix prefix

### **LESSONS LEARNED**

## The Power of Consistency

- Normalization
- Reporting
- Vulnerability remediation



### **WORKBREW**

## Enterprise-Ready Homebrew

Loved by **developers**, approved by **security**.

Deploy, manage, and secure Homebrew at scale.



## **WORKBREW**

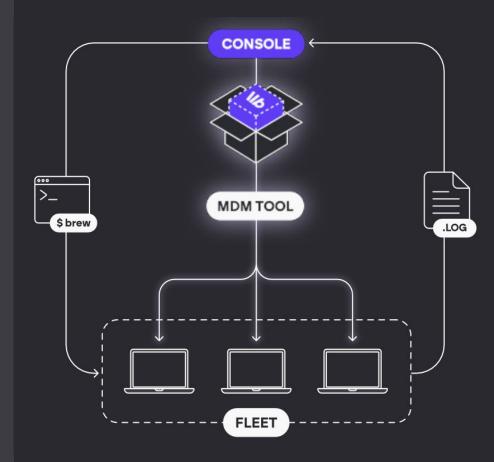
## How it works

**Deployment** 

**Analytics & Observability** 

**Remote Management** 

**Security & Compliance** 





## **Work**brew workbrew

₽≣ Dashboard ∨ulnerabilities

☐ Devices

~

 □ Device Groups Default Packages

Policies >\_ Brew Commands Brew Configurations

Packages ☐ Taps 

□ Licenses Bootstrap

Settings Subscription

workbrew.com

□ Contact Documentation Bo's MacBook Pro ↗ MacBook Pro

**Devices** 

DEVICE

Brandon's MacBook Air 7

John's MacBook Pro 7

Kristján's MacBook Pro 7

MacBook Air

MacBook Pro

MacBook Pro

Emil's MacBook Pro 7 MacBook Pro Luke's MacBook Pro 7 MacBook Pro Vanessa's MacBook Pro ↗ MacBook Pro Workbrews-Virtual-Machine.local Apple Virtual Machine 1

Joes-MacBook-Pro.local

Anup's MacBook Pro ↗

MacBook Pro

MacBook Pro

Engineers Just Kristján Engineers Engineers Default Default Quarantine

Engineers

**GROUP** 

Default

Default

1.3.3 1.3.3 1.3.2-7-g6c35d64 1.3.3

1.3.3

WORKBREW \$

1.3.3

1.3.3

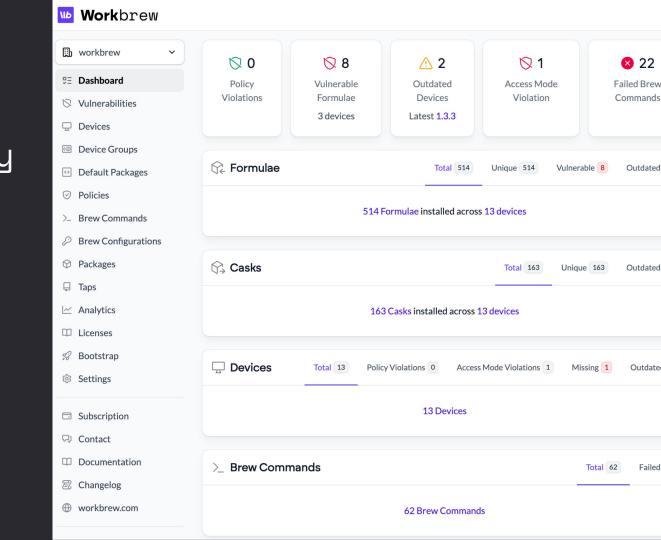
1.3.3

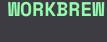
1.3.3

1.3.3

## WORKBREW

## Analytics & observability





## Remote management



- n workbrew V
- □ Dashboard ∇ulnerabilities
  - Devices
- □ Device Groups Default Packages
- **Policies**
- >\_ Brew Commands

  - **Brew Configurations**
- Packages
- Taps
- Analytics
- Licenses
- Bootstrap
- Settings

□ Contact

Subscription

Label

All Current Devices Run on new Devices adde

Brewfile-Workbrew-Dogfor

Run after Input a time in UTC below to mm/dd/yyyy, --:-- --

Schedule

Run on Devices

**Edit Brewfile** 

**Brewfile** 

Cask

Formula

Cask

+ Add more

- actionlint

1password

open-in-code

visual-studio

understand

prisma-studio

serial-studio

mono-mdk-for-visual-studio

valentina-studio

- visual-studio-code
- visual-studio-code
- visual-studio-code@insiders Open-sou Finder toolbar app to open curren
  - Integrated developme
    - Visual

Open-sou

- Code visualization and Visual database editor for
- Open source implementation of N

Data visualisation software for er

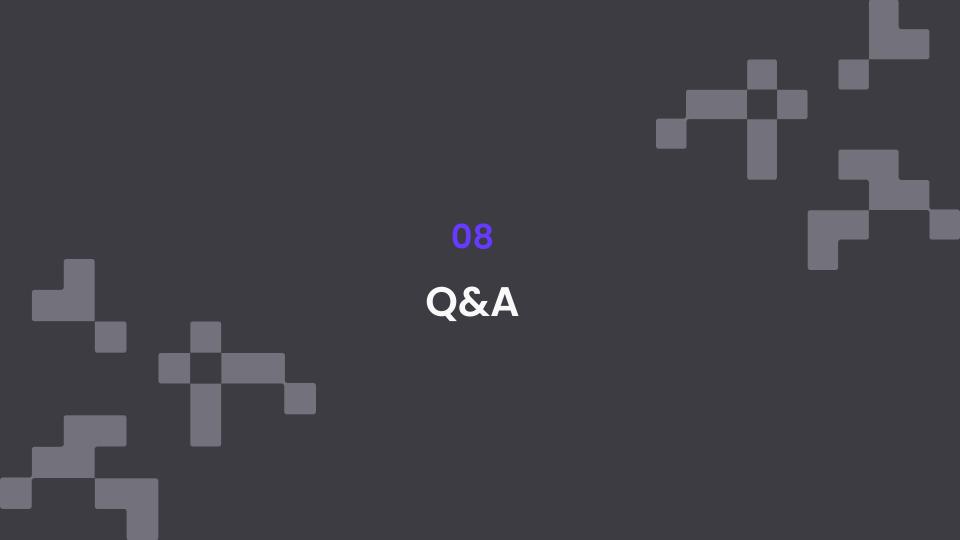
Visualisation and debugging foxglove-studio



**THANK YOU** 

## Workbrew

workbrew.com/demo



## Homebrew → CHEATSHEET

workbrew.com/homebrew/cheat-sheet

