





Full Stack Development With Swift

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BROKENHANDS

Introduction

- Very varied background
- Software Engineer @ BBC
- Founder of Broken Hands
- Author and Instructor @ raywenderlich.com
- @0xTim    
- Organiser of ServerSide.swift



Survey

Why Full Stack?

- World has moved to Agile
- Separated front-end and back-teams != Agile!
- Want a new API or feature in the back end? “File a JIRA ticket” 😞



Why Full Stack?

- To move quickly you **have** to control the full end-to-end feature
- Includes *all* clients and deployments
- Leads to cross-functional teams
 - (This is a good thing!)



Why Microservices?

- One team can't build and maintain every client and back-end
- Break up the monolith with teams responsible for a feature
- Allows teams to move quickly and independently
- Pioneered by Netflix, Amazon, Monzo etc



Why Microservices?

- Better ownership
- Smaller releases = less risk
- Easier to fix
- Scale independently
- Adapt to change quicker 🤖



The Move to Apps

- Move away from websites to apps (especially in enterprise)
- PWAs not living up to the hype
- iOS is still the market leader, especially in business
- All roads lead to Swift



Why Swift?

- Fast growing, hugely popular language 🥰
- Backed by Apple and open sourced 🎉
- Modern 🍰
- Safe 🛡️
- Fast 🚀



“It’s not JavaScript.”

– *Tim Condon*

JavaScript

- <https://www.destroyallsoftware.com/talks/wat>



Vapor



- Open-source web framework created by Tanner Nelson and Logan Wright
- Built on top of SwiftNIO
- Makes use of latest Swift features and Swift-like API
- Most popular Swift framework
- Awesome community



Why Vapor?

- Happier developers
- You get a compiler! 🍹
- Same tooling as iOS
- Debugging support in Xcode

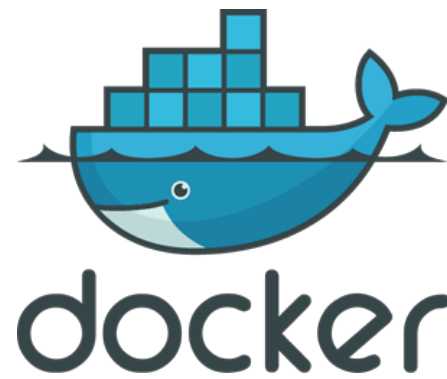
Why Vapor?



- Completely non-blocking (including the database drivers)
- More requests per second = less servers
- Small memory footprint ~ 6MB
- Less memory = less servers
- Safer



Deployment



```
$ vapor cloud deploy
```



Demo

Building on Vapor

- Vapor is like Swift - simple **and** powerful
- Completely modular design - easy to change components (and test)
- Full Swift - look through the source code!
- Growing package Ecosystem
 - Swift Server Working Group



Recap

- Really easy to get a full CRUD API built - makes feature development quick
- Safety and error handling built in to both Swift and Vapor
- Easy to extend and make extremely powerful



Thank you!



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Questions?

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