

# New Web Application Stack: Node.js, MongoDB and Cloud Foundry

Allen Rothschild

# Overview

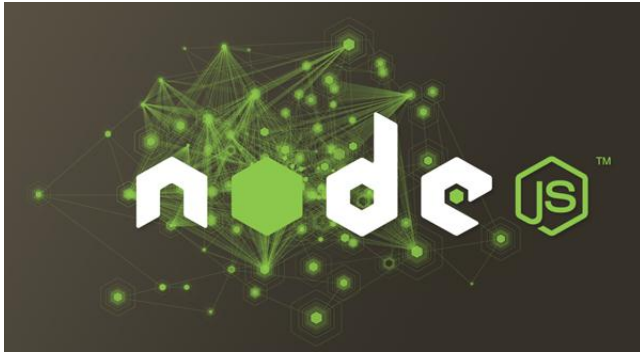
- Introduce a new, light web application stack
  - Node.js
  - MongoDB
  - Cloud Foundry
- Review a simple application, and test locally
- Deploy application to the cloud

## The Goal

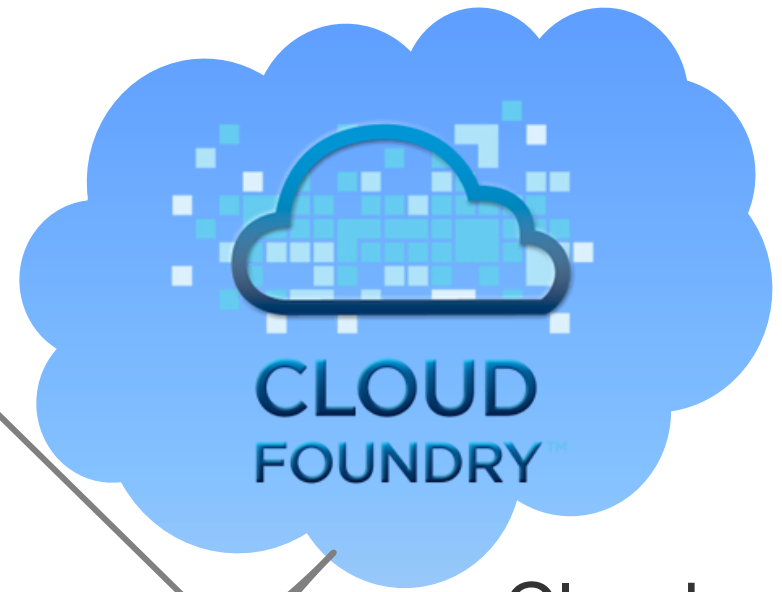
- Simple, lightweight web app to record user visits, and provide a report of the last 10 visits.
- Demonstrate ease of getting up & running with these technologies

# Introducing a new stack

Server



App Logic

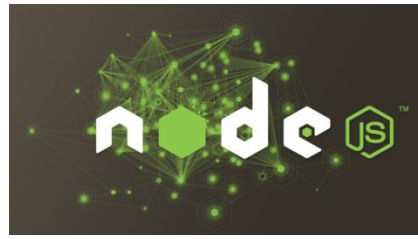


Cloud  
Hosting

Database



# What's the deal with



?



- Fast and Scalable app engine
- Event-driven, (mostly) non-blocking I/O model
  - Lightweight and efficient!
  - Speaks JavaScript!
  - “Really freaking fast” (1 process)
- Perfect for data-intensive real-time applications
- Uses Google’s V8 JavaScript Engine
- High Concurrency with Low Overhead
- Haters gonna hate...
  - “Node.js is cancer”
  - “Scalability disaster waiting to happen”

# Node.js upsies and downsies

## Good for

- Web servers serving fast, non-blocking apps
- JSON message passing
- Web sites with real-time, synchronous interaction (i.e. Chat)

## Not so good for

- Full-stack web framework (Ruby)
- Serving up large files concurrently
- CPU-intensive work (may block process)

# What's the deal with



?

- Fast and Scalable NoSQL database
- Speaks JavaScript and JSON!
- Document-oriented data storage
  - JSON-style documents
  - Dynamic schemas: simplicity, power
  - Rich querying capabilities
- Horizontal Scalability through “Sharding” (partitioning)
- Free!



# MongoDB upsies and downsies

## Good for

- Flexible data schemas
- Working with JavaScript apps and speaking JSON
- Fast applications with speedy response needs
- High throughput & concurrency
- (Sensing a pattern? A great fit with Node)

## Not so good for

- Flexible querying (no joins)
- Transactions (not supported)
- Replacing RDBMS (but can be an alternative)

# Pre-requisites for a demo (on PC! Sweet!)

- Cloud Foundry hosting account (free)
- Local installation of Node.JS
- Local installation of MongoDB
- Download Cloud Foundry's VMC tools (command-line interfacing with host)
  - Ruby and Ruby Gems needed for install
- cURL (command-line data transfer over HTTP)
- Good old Notepad++



**DEMO**