

# CommandBox vs Node.js

Nolan Erck  
South of Shasta

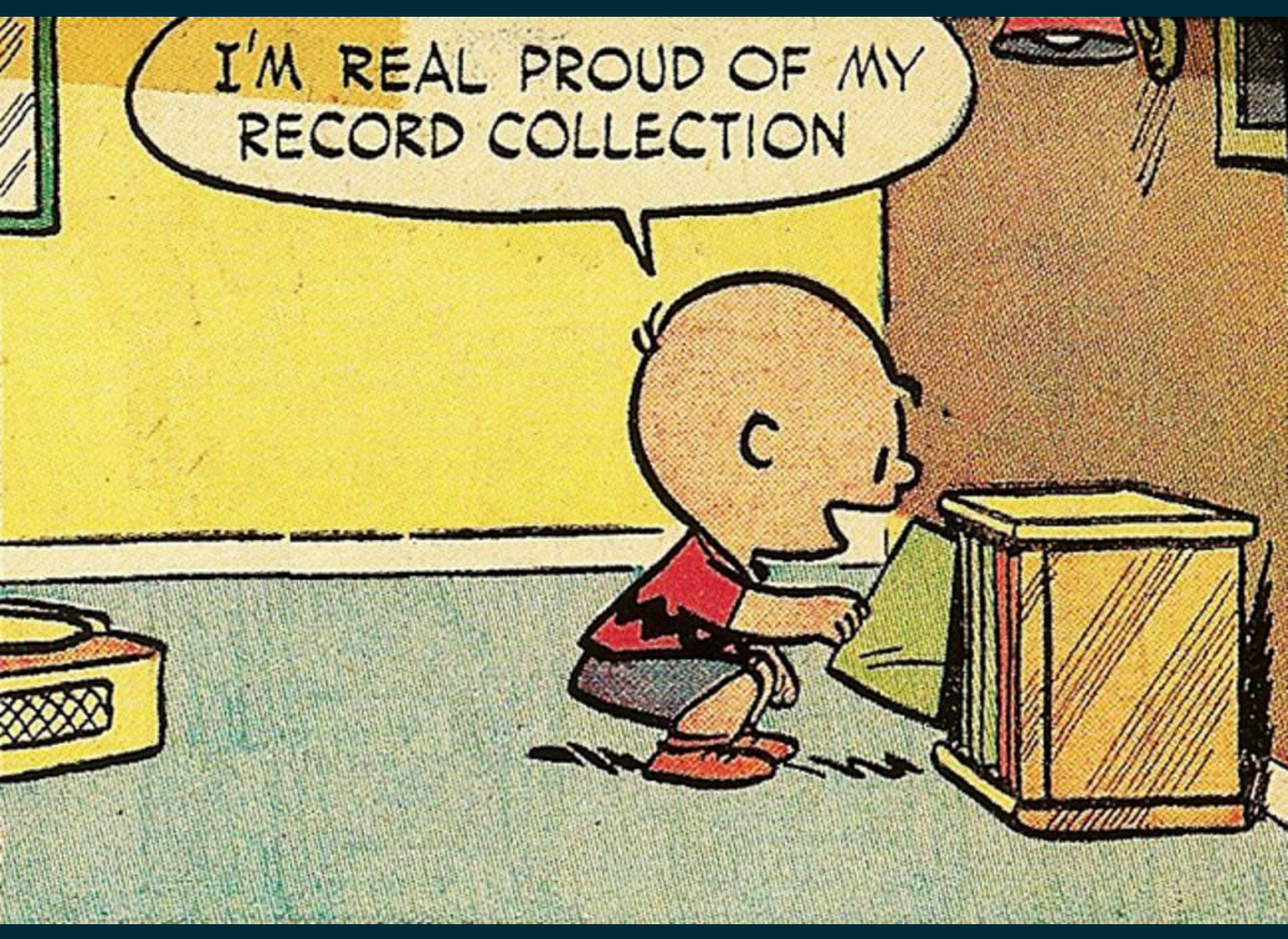
# About Me

- Software Consultant ([southofshasta.com](http://southofshasta.com))
  - Software Development, Training, Design
- ColdFusion, C++, Java, jQuery, PHP, .NET, HTML5, Angular, SQL, etc...
- Manager of SacInteractive User Group
- Reformed Video Game Developer (Grim Fandango, SimPark, StarWars Rogue Squadron, etc).
- Music Junkie





I'M REAL PROUD OF MY  
RECORD COLLECTION





**Slide deck and code samples are here:**

`github.com/nolanerck`  
`commandbox-vs-node`

# For today's talk

- Screenshots and recorded videos
- No smoke and mirrors
- I'm merely avoiding hotel wifi

**Let's get started!**

## We've all heard these things:

- JavaScript has all the cool toys!
- CFML is old, dying and only for legacy stuff!



# Incorrect!

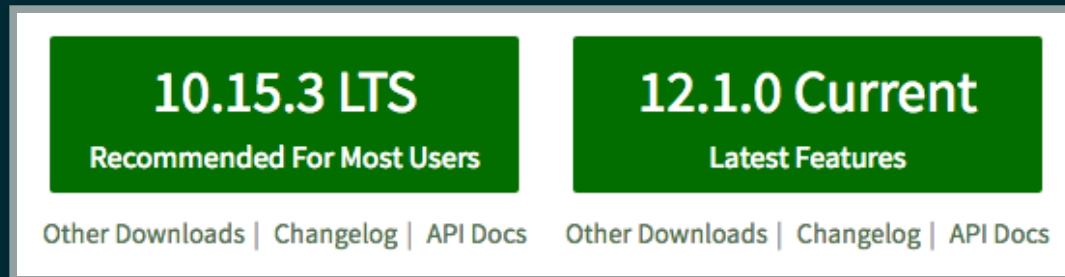
- CommandBox is here to save the day!
- All of the Node.js fundamentals are available to CFML developers

# What is Node.js?

- App you install
- On laptop or server
- "JavaScript can run anywhere"
- In web browser (obviously)
- As a server side language (ala CFML)
- As a native CLI tool on your laptop

# Installing Node.js

- Go to Nodejs.org
- Click one of these:



- It usually "just works"
- Regular updates are available

# What is CommandBox?

- App you install
- On laptop or server
- "CFML from the command line"
- As a server side language (duh)
- As a native CLI tool on your laptop







# Installing CommandBox

- Go to [ortussolutions.com/products/commandbox](http://ortussolutions.com/products/commandbox)
- Click one of these:






### No JRE Included

The following downloads **do not** include a Java Runtime.

|   |   |   |   |
|---|---|---|---|
|  |  |  |  |
| <b>Windows Binary</b><br>(37mb)   | <b>Binary Mac-Linux</b><br>(37mb)   | <b>RPM</b><br>(37mb)  | <b>Debian Package</b><br>(37mb)   |

### With JRE Included

The following downloads **include** a Java Runtime.

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
| <b>Windows JRE-32</b><br>(100mb)   | <b>Windows JRE-64</b><br>(100mb)   | <b>Mac 64-bit JRE</b><br>(100mb)   | <b>Linux 32-Bit JRE</b><br>(100mb)   | <b>Linux 64-Bit JRE</b><br>(100mb)   |

- It usually "just works"
- Regular updates are available

**The score:**

CommandBox 1, Node 1

# The Command Line...

# Launching Node.js

- Open a command prompt, type "node"
- This happens:

```
Nolans-MacBook-Pro-2:1_HelloWorldNode nolanerck$ node  
> console.log( "Hello" );  
Hello  
undefined  
> █
```



# Why did it say "undefined"?

- Not a bug, working as designed
- You see 2 things in the results:
- The *output* of your code
- And the *return value* of your code
- `console.log()` doesn't return anything, so you get "undefined"

# Launching CommandBox

- Open a command prompt, type "box"
- This happens:

```
Nolans-MacBook-Pro-2:CommandBoxDemos nolanerck$ box
```

Use "server cd myServer" to drop directly in the webroot of a s

```
Welcome to CommandBox!
[CommandBox> repl
Enter any valid CFML code in the following prompt in order to evaluate i
Type 'quit' or 'q' to exit!
CFSCRIPT-REPL: WriteOutput( "Hello" );
Hello
CFSCRIPT-REPL:
```

**The score:**

CommandBox 2, Node 2

# Running files via Node

- Type "node app.js", this happens:

```
Nolans-MacBook-Pro-2:2_Files nolanerck$ node app.js  
Hello from a script run via Node CLI  
Nolans-MacBook-Pro-2:2_Files nolanerck$ █
```



# Running files via CommandBox

- Type "execute app.cfm", this happens:

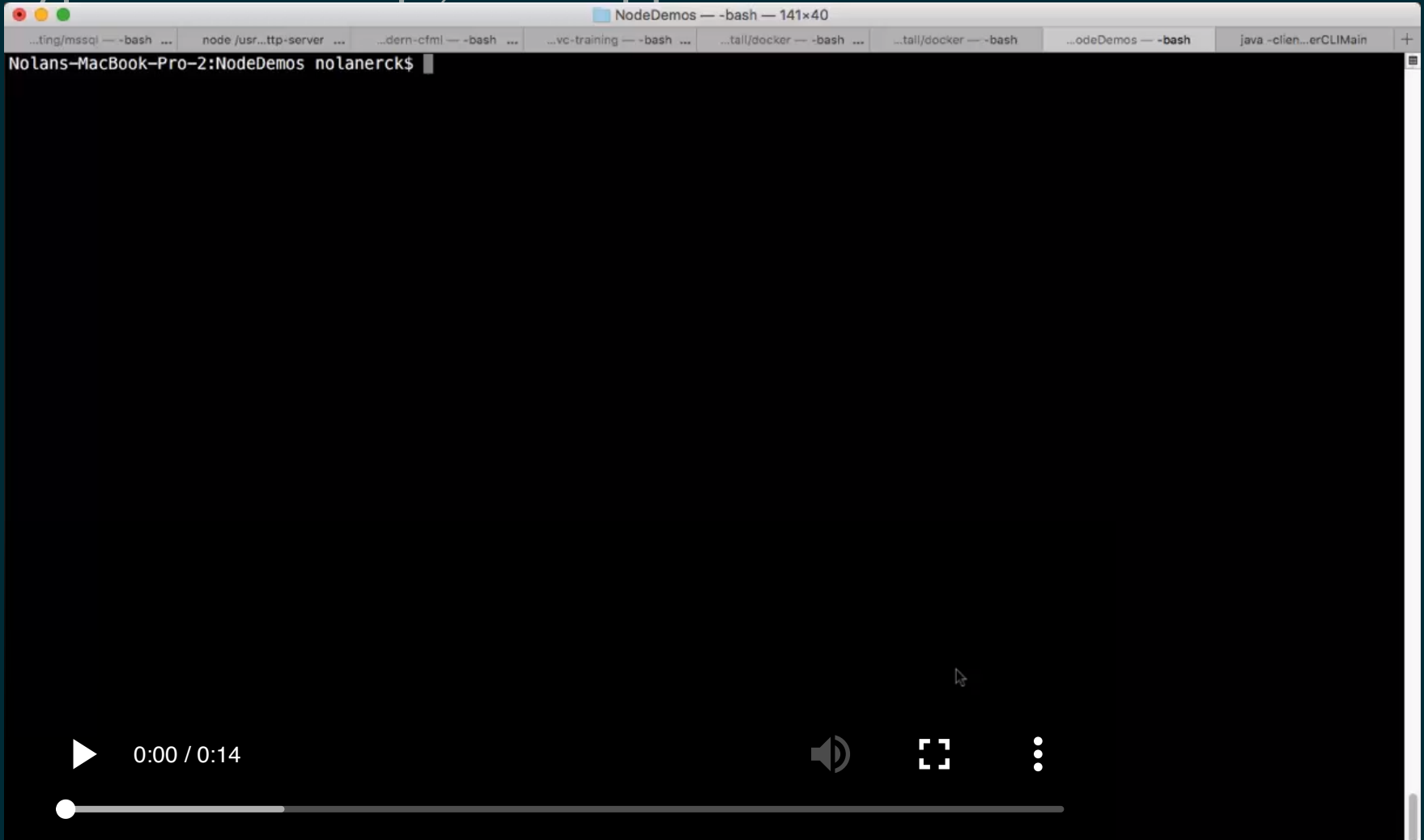
```
CommandBox:2_Files> execute app.cfm  
Hello from inside a CFM page  
CommandBox:2_Files> █
```

**The score:**

CommandBox 3, Node 3

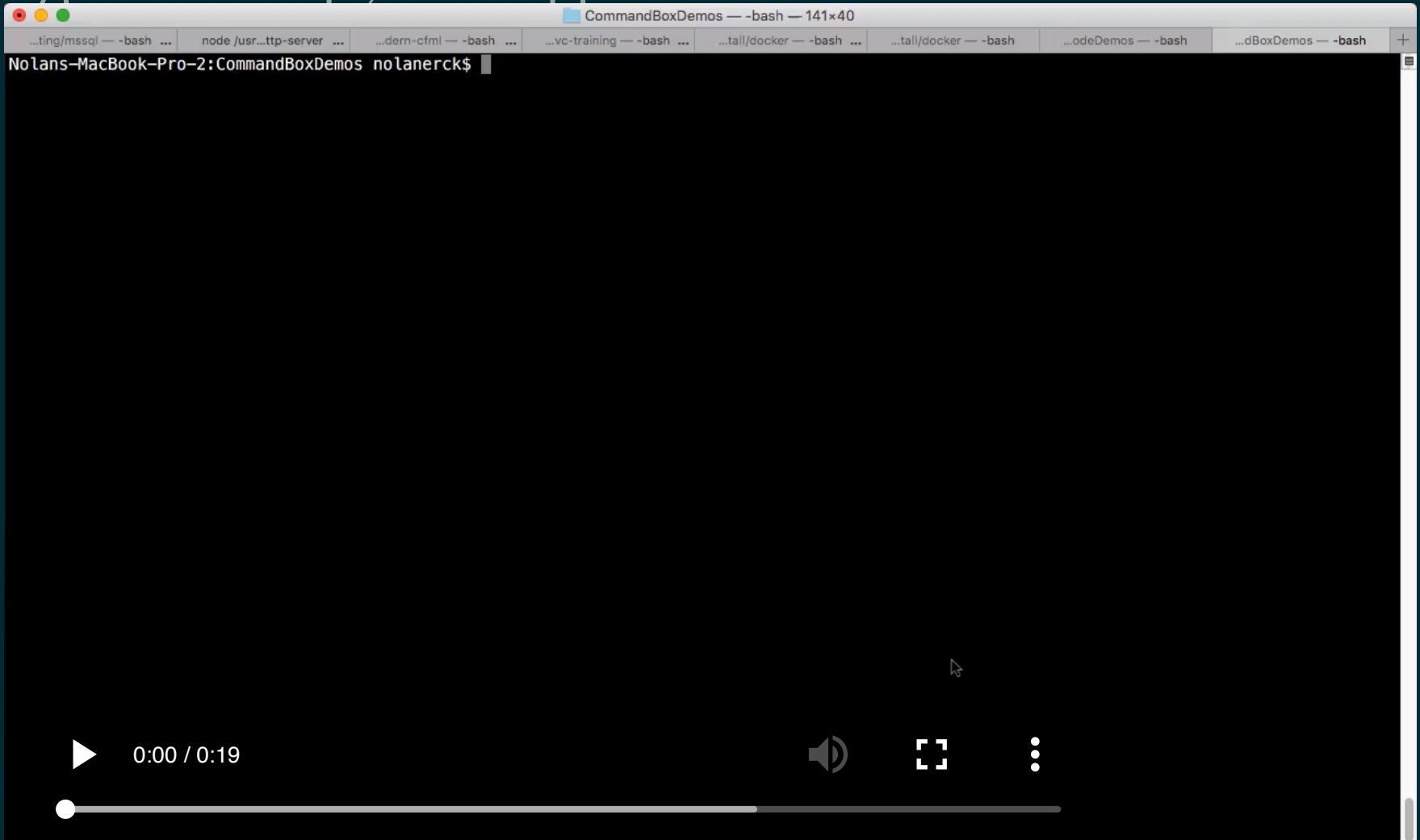
# Built-in help from Node.js

- Type "node --help", this happens:



# Built-in help from CommandBox

- Type "box help", this happens:



# Built-in help from CommandBox

- But wait, there's more!
- CommandBox is broken up into "namespaces"
- Each "namespace" contains many different commands
- Switch to a new namespace to see more detailed help

**The score:**

CommandBox 4, Node 4



# How does Node do it?

- Running a JavaScript application engine on your computer (or server)
- Code is processed thru the engine
- Spins up different services as needed
- Customizable per project via ".json" config files

# How does CommandBox do it?

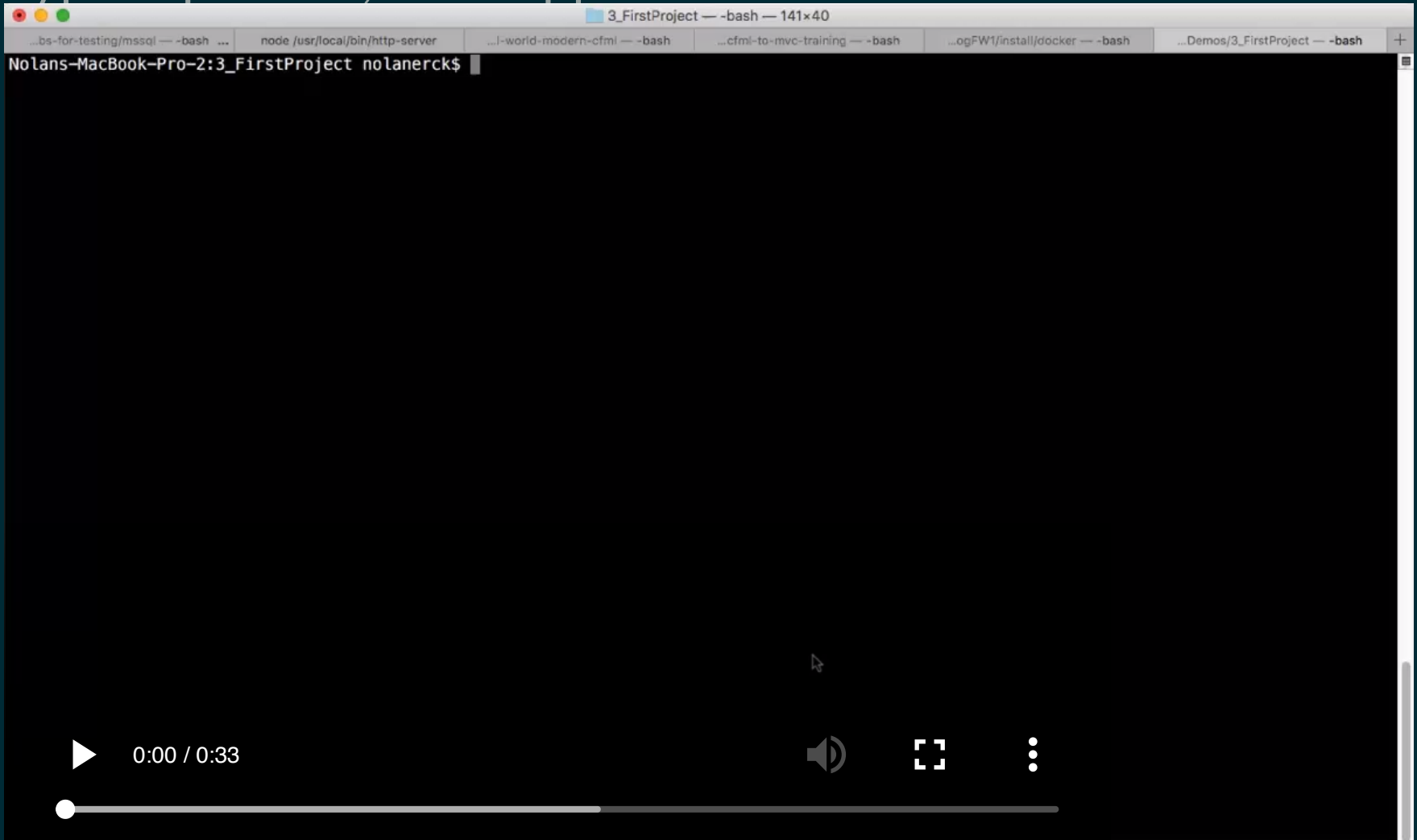
- Running a CFML application engine on your computer (or server)
- Code is processed thru the engine
- Spins up different services as needed (modules, packages)
- Customizable per project via ".json" config files

**The score:**

CommandBox 5, Node 5

# Setting up a Node Project

- Type "npm init", this happens:



# Setting up a CommandBox Project

- Type "box init", this happens:



**The score:**

CommandBox 6, Node 6

# Dependencies With Node

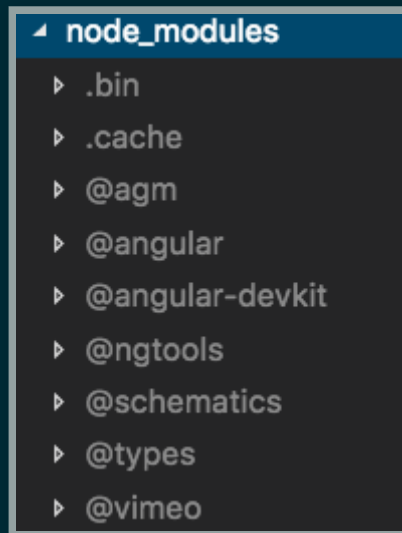
- In package.json, "dependencies" section  
Things your app needs to *run*
- jquery, lodash, Angular, libraries from your team, etc
- "npm install"
- Node goes out to "the registry" and grabs those assets
- Puts them in "node\_modules" folder

# Dependencies Witih Node

```
"dependencies": {  
  "@agm/core": "^1.0.0-beta.3",  
  "@angular/animations": "^5.2.0",  
  "@angular/common": "^5.2.0",  
  "@angular/compiler": "^5.2.0",  
  "@angular/core": "^5.2.0",  
  "@angular/forms": "^5.2.0",  
  "@angular/http": "^5.2.0",  
  "@angular/platform-browser": "^5.2.0",  
  "@angular/platform-browser-dynamic": "^5.2.0",  
  "@angular/router": "^5.2.0",  
  "@vimeo/player": "^2.6.4",  
}
```



# Dependencies Witih Node



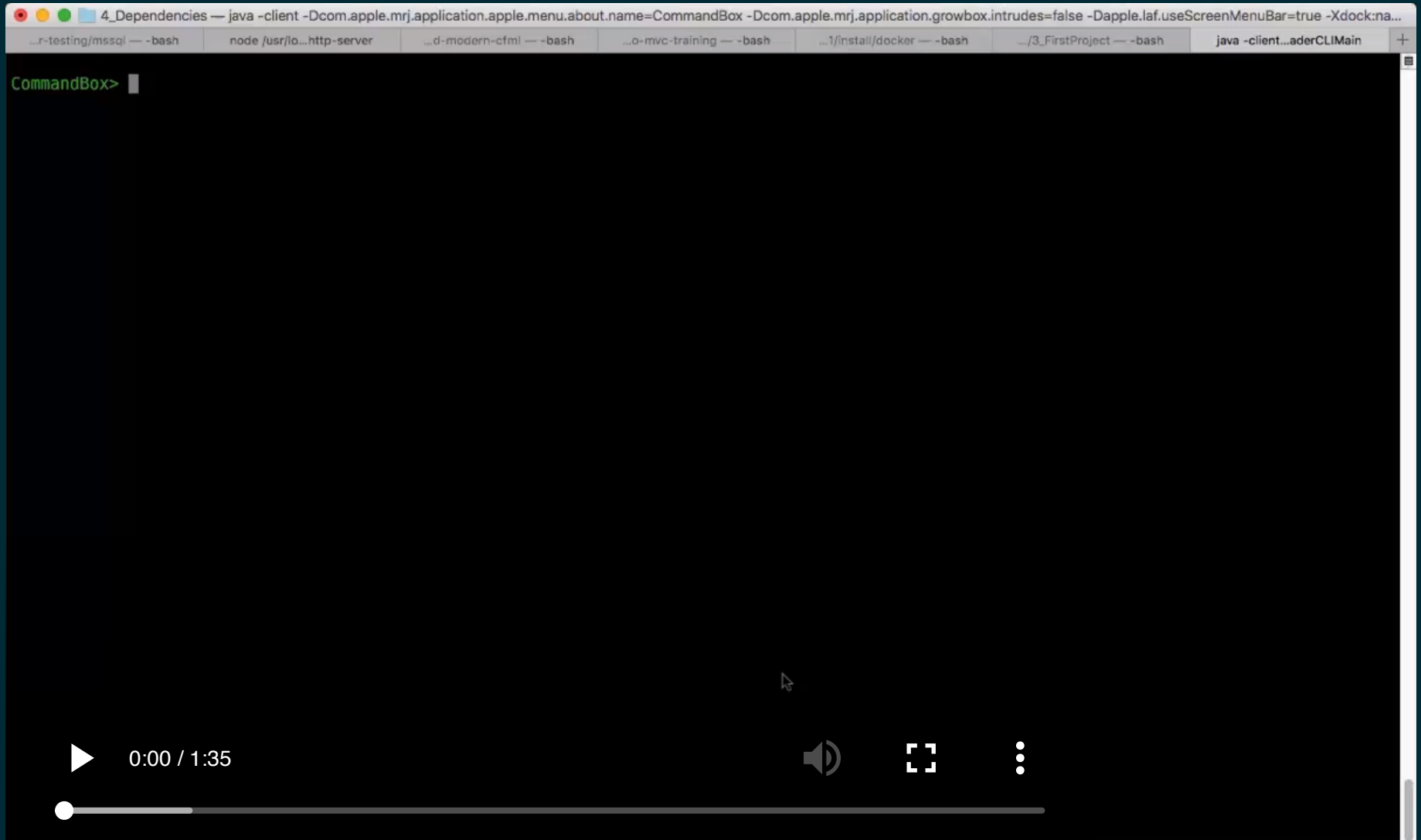
# Dependencies With CommandBox

- In box.json, "dependencies" section  
Things your app needs to *run*
- jquery, lodash, Angular, libraries from your team, etc
- "box install"
- CommandBox goes out to "the cloud" and grabs those assets
- Puts them in "installPaths" folders

# Dependencies Within CommandBox

```
contributors: [],  
"dependencies": {  
  "Font-Awesome": "git://github.com/FortAwesome/Font-Awesome.git#v4.7.0",  
  "bootstrap": "git://github.com/twbs/bootstrap.git#v3.3.7",  
  "jquery": "git://github.com/jquery/jquery.git#2.2.4"  
},  
"installPaths": {  
  "Font-Awesome": "assets/Font-Awesome",  
  "bootstrap": "assets/bootstrap",  
  "jquery": "assets/jquery"  
},
```

# Dependencies With CommandBox



**The score:**

CommandBox 7, Node 7

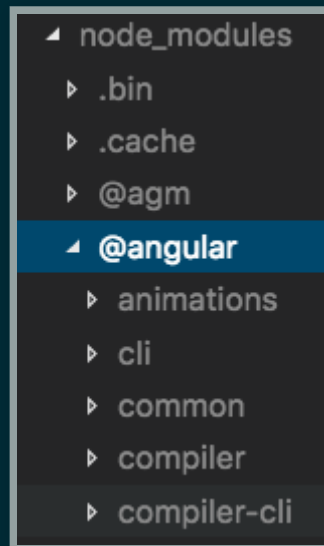
# Dev Dependencies With Node

- In package.json, "devDependencies" section  
Things your app needs to *build*
- CLI Tools, Typescript transpiler, Code Analyzer, Linter, etc
- Angular CLI, TypeScript, Webpack, etc
- "npm install --dev [thing]"
- Node goes out to "the registry" and grabs those assets
- Puts them in "node\_modules" folder

# Dev Dependencies Witih Node

```
"devDependencies": {  
  "@angular/cli": "~1.7.3",  
  "@angular/compiler-cli": "^5.2.0",  
  "@angular/language-service": "^5.2.0",  
  "@types/jasmine": "~2.8.3",  
  "@types/jasminewd2": "~2.0.2",  
  "@types/node": "~6.0.60",  
  "code_lyzer": "^4.0.1",  
  "gulp": "3.9.1",  
}
```

# Dev Dependencies With Node





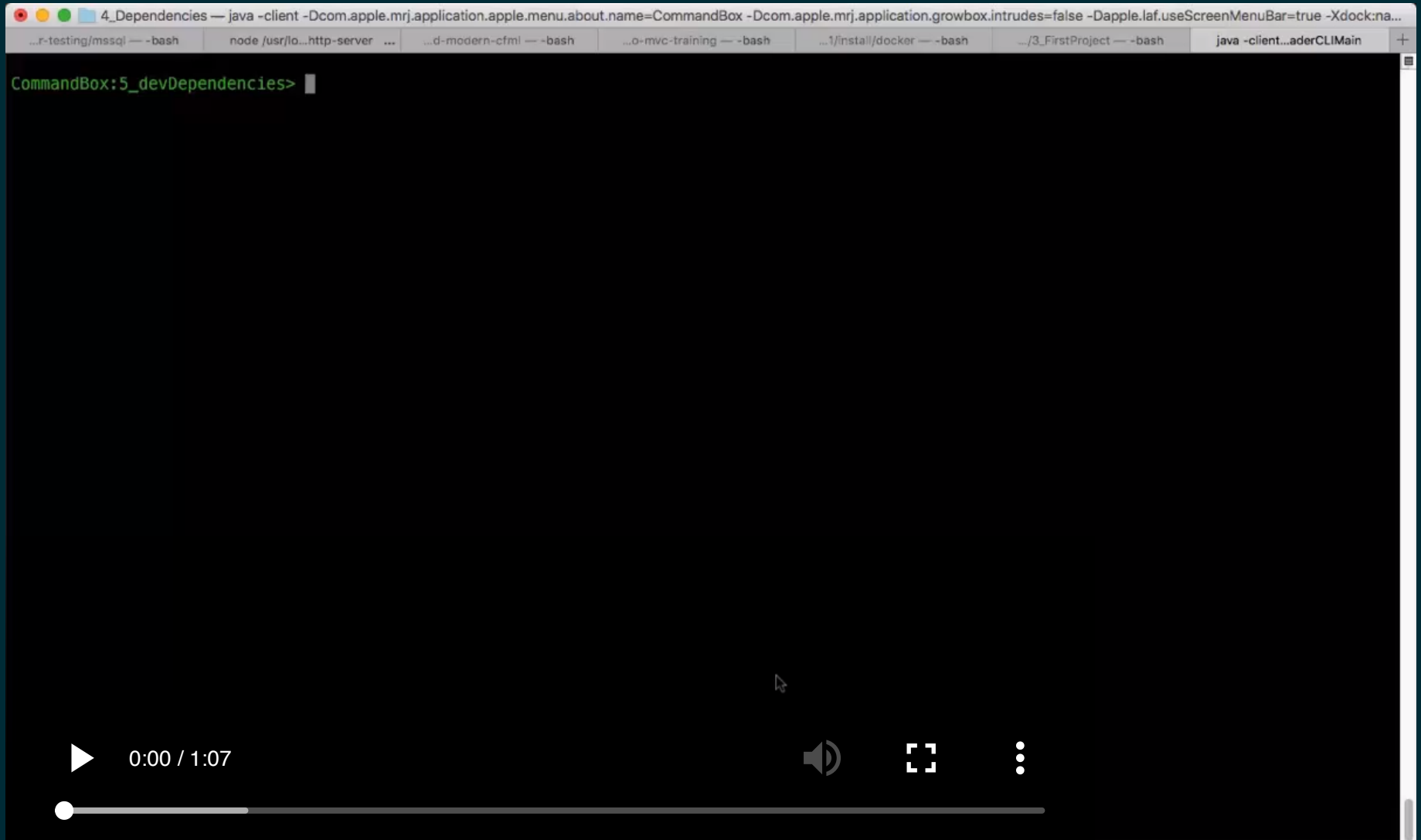
# Dev Dependencies With CommandBox

- In box.json, "devDependencies" section  
Things your app needs to *build*
- jquery, lodash, Angular, libraries from your team, etc
- "box install --saveDev [thing]"
- CommandBox goes out to "the cloud" and grabs those assets
- Puts them in "installPaths" folders

# Dev Dependencies Witih CommandBox

```
{
  "dependencies":{
    "coldbox":"^5.0.0",
    "bootstrap":"git://github.com/twbs/bootstrap.git#v3.3.7",
    "jquery":"git://github.com/jquery/jquery.git#2.2.4",
    "bootstrap-rating":"git://github.com/dreyescat/bootstrap-rating.git#v1.4.0"
  },
  "devDependencies":{
    "testbox":"^2.0.0"
  },
  "installPaths":{
    "coldbox":"coldbox",
    "testbox":"testbox",
    "bootstrap": "assets\\bootstrap",
    "jquery": "assets\\jquery",
    "bootstrap-rating": "assets\\bootstrap-rating"
  }
}
```

# Dev Dependencies Witih CommandBox



**The score:**

CommandBox 8, Node 8

# Node has a Registry: npm

- Magic place in "the cloud" where reusable JavaScript lives
- "npm install [some library]"
- Node talks to "the registry", downloads the lib
- These dependencies live in the "node\_modules" folder of your project

How do I add *my* project to npm?

# Adding My Project to npm

- Create a package.json file
- Follow a few basic guidelines
- README, semantic version, Author, etc
- More details: <https://docs.npmjs.com>

# CommandBox has a Registry: ForgeBox

- The "npm" of the CF world
- Not just \*Box stuff!
- Can install CFWheels, Mura, FW/1, etc
- Any general CFML project can live here



How do I add *my* project to ForgeBox?

# Adding My Project to npm

- Create a box.json file
- Follow a few basic guidelines
- README, semantic version, Author, etc
- More details: <https://forgebox.io>

**The score:**

CommandBox 9, Node 9

# Using Node and Docker

- [hub.docker.com/\\_/node](https://hub.docker.com/_/node)



node ☆

[Docker Official Images](#)

Node.js is a JavaScript-based platform for server-side and networking applications.

↓ 10M+

# Using CommandBox and Docker

- Official Docker images from Ortus Solutions
- [hub.docker.com/r/ortussolutions/commandbox/](https://hub.docker.com/r/ortussolutions/commandbox/)



**ortussolutions/commandbox** ☆

By [ortussolutions](#) • Updated a month ago

The Official CommandBox Docker Package from Ortus Solutions for orchestrating CFML servers

Container

[Overview](#)

[Tags](#)

**The score:**

CommandBox 10, Node 10

# Using Node to Make Games

- Tons of resources
- Many game engines support JavaScript
- Can get as simple or advanced as you like

# Using CommandBox to Make Games



# Using both JavaScript \*and\* CFML for Games!

- box snake  
Vintage gaming at its finest!
- Minh Vo's preso on React at Gov't Summit
- draftstudios.com
- Giancarlo Gomez's preso on WebSockets:  
"Refreshing Your UI: Modern Uses for WebSockets"

**The score:**

CommandBox 11, Node 11

# Contributing to Node.js

- Main engine is written in C++, not JavaScript
- Add-ons can be JavaScript but not the core
- e.g the Angular CLI, create-react-app

# Contributing to CommandBox

- 90% of the core is CFML
- Remaining 10% is Java
- Installing CommandBox also gives you the source code!

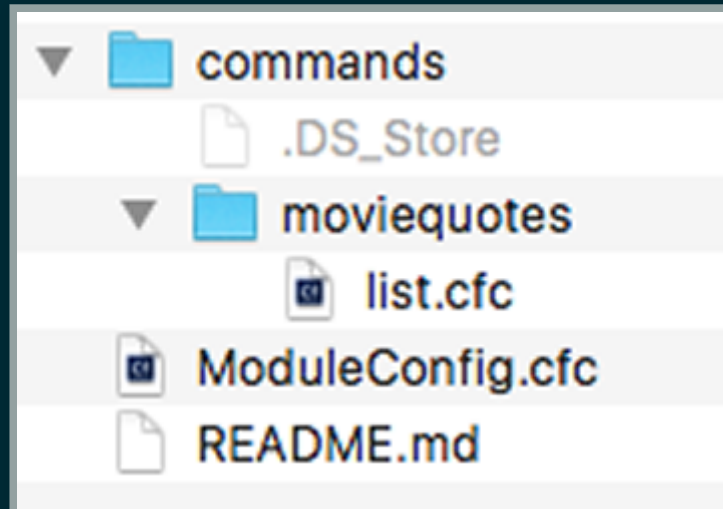
# Contributing to CommandBox

```
CommandBox: .CommandBox> pwd
/Users/nolanerck/.CommandBox/
CommandBox: .CommandBox> ls
Jul 18,2018 00:07:23 H <DIR> .logs/
Mar 22,2019 00:03:49 <DIR> artifacts/
Sep 10,2018 23:09:45 <DIR> cfml/
Nov 12,2017 10:11:13 <DIR> commands/
Nov 12,2017 10:11:07 <DIR> engine/
Sep 10,2018 23:09:45 <DIR> lib/
Nov 12,2017 10:11:10 <DIR> logs/
Apr 29,2019 23:04:37 <DIR> server/
May 02,2019 11:05:16 <DIR> temp/
Feb 13,2018 14:02:53 H 8.0 KB .DS_Store
May 02,2019 13:05:47 H 17.7 KB .history-command
Apr 30,2019 16:04:33 H 0.4 KB .history-repl-script
Apr 26,2018 09:04:38 0.4 KB CommandBox.json
May 01,2019 07:05:00 248.9 KB servers.json
CommandBox: .CommandBox> █
```

**But my custom commands have to be ColdBox apps, right?**

**Nope!**

# My First CommandBox Command





# ModuleConfig.cfc

```
component {  
  
    this.name = "moviequotes";  
    this.author = "";  
    this.webUrl = "https://github.com/nolanerck/moviequotes";  
  
    function configure()  
    {  
        //  
    }  
  
}
```

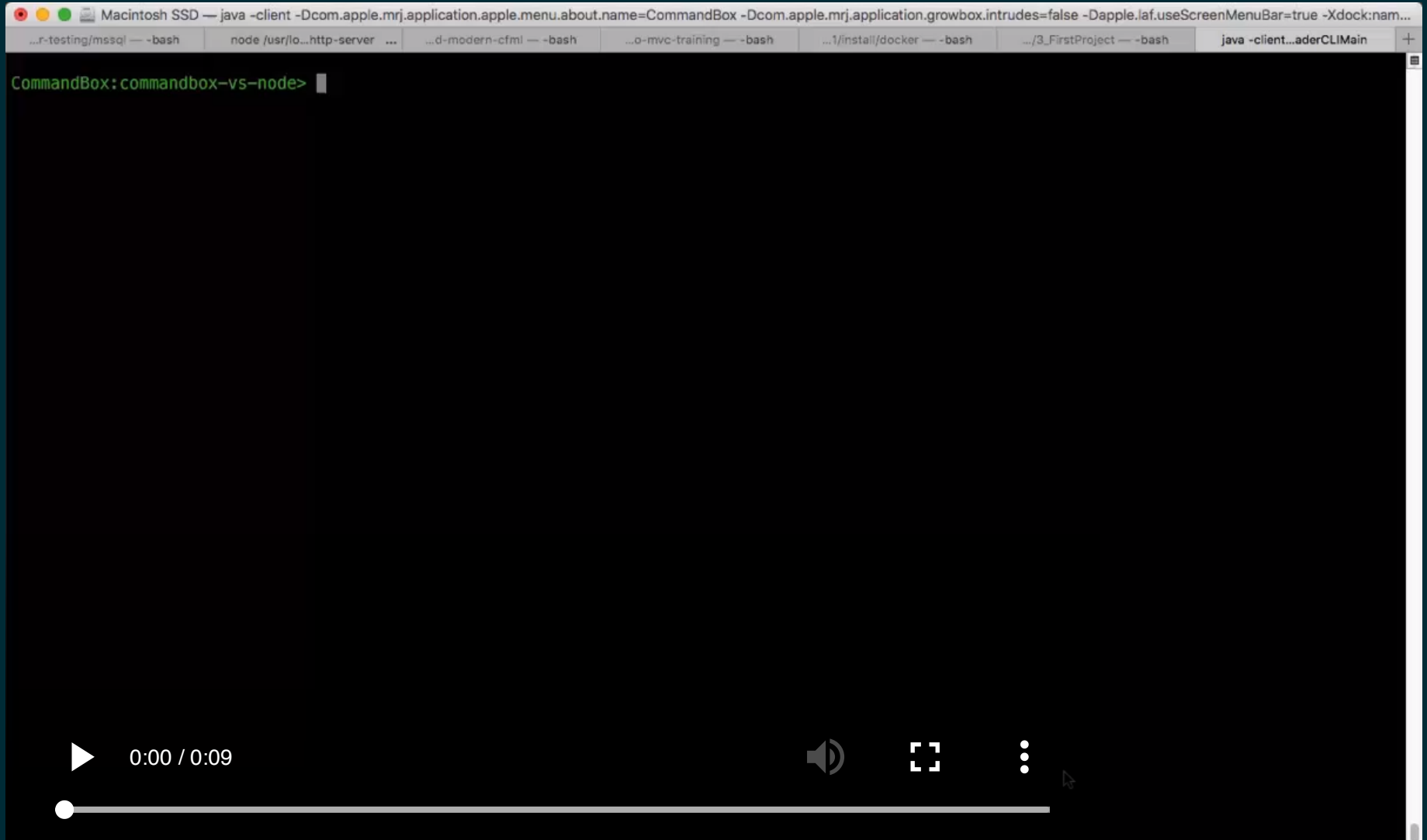
# list.cfc

```
component
{
    function run()
    {
        var quotes = [ "I do not think that word means what you think it means.",
                        "Does Barry Manilow know that you raid his wardrobe?",
                        "So, what would you little maniacs like to do first?",
                        "My name is Warner Brandis. My voice is my passport. Verify me.",
                        "All of my filth is in alphabetical order."
        ];

        var num = RandRange( 1, 5 );

        return quotes[ num ];
    }
}
```

# MovieQuotes In Action!



**The score:**

CommandBox 12, Node 12

**Okay so what's the catch?**

# There isn't one

- CommandBox is...
- Free, open source, well supported
- Supports all CFML engines
- Lucee and Railo
- Adobe CF as far back as version 9

# CommandBox Really is a Game-Changer

- You *can* do all the cool things that Node/JavaScript developers do

**So which do I have installed for development?  
Node or CommandBox?**



# Both

- They serve different purposes

# Uses for Node.js

- It's ubiquitous with modern front-end development
- Front-end tooling requires Node
- Angular, Vue, React, PhoneGap, Grunt, Gulp, Stylus, SASS, SCSS, LESS, WebPack, Babel, TypeScript, etc
- This is a "given" nowadays

# Uses for CommandBox

- This is *the* way to tell *modern* CFML developers from legacy programmers
- Spinning up Dev environments, testing everything, containerization, onboarding new team members
- Managing production web servers
- Building CLI tools for development AND production servers!

# Other Resources

- South of Shasta - onsite and remote training
- [nodejs.org](https://nodejs.org)
- [docs.npmjs.com](https://docs.npmjs.com)
- [commandbox.ortusbooks.com](https://commandbox.ortusbooks.com)
- Ortus Solutions
- Brad Wood's Blog
- Talk to people at the conference!

**Learning in 30 minutes a day.**

# Questions? Comments?

- [southofshasta.com](http://southofshasta.com)
- [nolan@southofshasta.com](mailto:nolan@southofshasta.com)
- Twitter: [@southofshasta](https://twitter.com/southofshasta)
- Github: [nolanerck](https://github.com/nolanerck)
- Slides and code:  
[github.com/nolanerck/commandbox-vs-node](https://github.com/nolanerck/commandbox-vs-node)

Thanks!