



—— ⏰ 2016年8月26日-27日 🔍 北京珠三角JW万豪酒店 ——

# World Of Tech 2016

## 移动互联网技术峰会

THE BEST MOBILE TECH IN HERE

主办: 51CTO

# 从0到1搭建自有、高效、健壮的 Hybrid App 框架

## Redux VS Ionic

Nathan Zhang  
2016.08

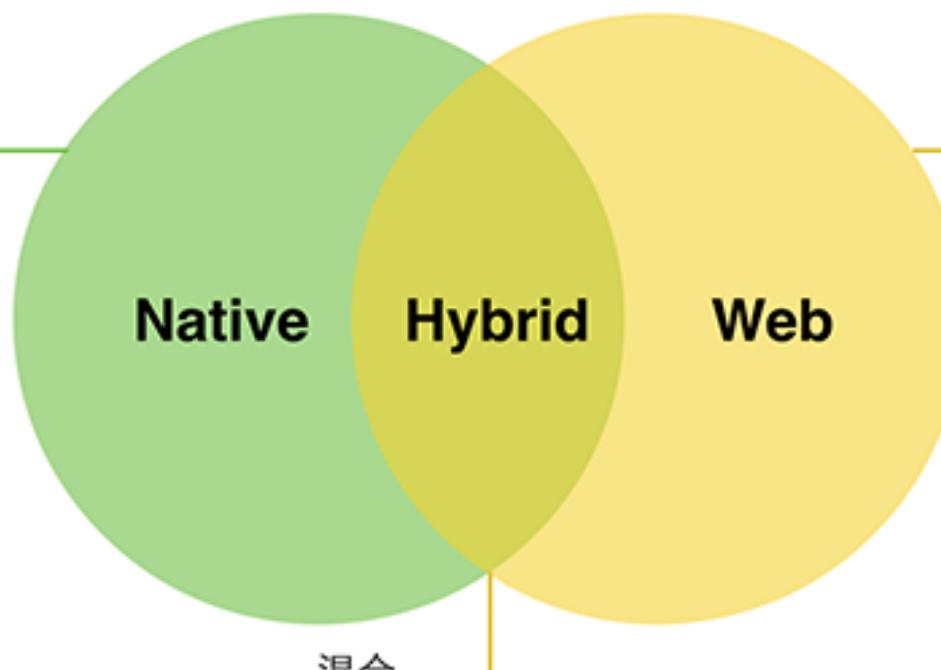
# Hybrid 和 Native 的区别

原生

语言：Object C (IOS)

Java(Android)

页面 存放于本地



web

语言：Html

受限制于UIWebView

页面放于服务器

混合

语言：Object C (IOS)+ Html

受限制于UIWebView

# Hybrid 和 Native 的区别

	Native	Html5	Hybrid
<b>APP 特性</b>			
图像渲染	本地API渲染	Html, Canvas, CSS	混合
性能	快	慢	慢
原生界面	原生	模仿	模仿
发布	App Store	Web	App store
<b>本机设备访问</b>			
照相机	支持	不支持	支持
系统通知	支持	不支持	支持
定位	支持	支持	支持
<b>网络要求</b>			
网络要求	支持离线	大部分依赖网络	大部分依赖网络

# Hybrid 的价值

- 前端跨界搞 App
- 多平台发布
- Web 组件重用

# Hybrid 也有坑

- Document Base App
- 调用外设出状况
- 框架多 并且 良莠不齐

# Barcode 插件

是的您没看错有96个类似的库

The screenshot shows a GitHub search interface with the query 'cordova barcode'. The sidebar on the left displays metrics for repositories: 96 repositories, 125,893 code contributions, 313 issues, and 0 users. The main area shows 96 repository results. The first result is 'Scandit/Barcode ScannerPlugin', described as a cross-platform Phonegap/Cordova plugin for the Scandit Barcode Scanner SDK, updated 3 days ago. The second result is 'Icenium/Sample-Barcode-Scanner', a sample using the BarcodeScanner Apache Cordova plugin from the Telerik Verified Plugins Marketplace, updated 11 days ago. The third result is 'fumitoito/angularjs-barcode Scanner', an angular.js wrapper around window.plugins.barcodeScanner, updated 1 day ago.

Search · cordova barcode

<https://github.com/search?utf8=%E2%9C%93&q=cordova+barcode>

Pull requests Issues Gist

Search cordova barcode Search

Repositories 96

Code 125,893

Issues 313

Users 0

We've found 96 repository results Sort: Best match ▾

**Scandit/Barcode ScannerPlugin** Java ★ 148 ⚡ 49

Cross platform Phonegap/Cordova Plugin of the Scandit Barcode Scanner SDK

Updated 3 days ago

**Icenium/Sample-Barcode-Scanner** JavaScript ★ 21 ⚡ 19

This sample uses the BarcodeScanner Apache Cordova plugin from the Telerik Verified Plugins Marketplace to scan and decode barcodes.

Updated 11 days ago

**fumitoito/angularjs-barcode Scanner** JavaScript ★ 26 ⚡ 11

An angular.js wrapper around window.plugins.barcodeScanner for

Languages

Language	Count
Java	40
JavaScript	22
Objective-C	14
CSS	5
C++	4
HTML	2
C#	2
Shell	1
OCaml	1

# 经过测试 这个库好用

Star 个数只有0

A barcode scanner plugin for Apache Cordova for both iOS and Android.

2 commits 1 branch 0 releases 0 contributors

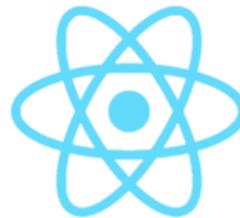
Branch: master New pull request Create new file Upload files Find file Clone or download

Liam Chen readme updated Latest commit 026aaaa on Apr 5

File	Commit Message	Time Ago
scripts	moved to github	3 months ago
src	moved to github	3 months ago
www	moved to github	3 months ago
.gitignore	moved to github	3 months ago
IMG_1772.png	readme updated	3 months ago
README.md	readme updated	3 months ago
plugin.xml	moved to github	3 months ago

# 聚焦 前端技术 开发 Hybrid

从0到1搭建自有、高效、健壮的 Hybrid App 框架



React + Redux + Cordova



# React 介绍

Virtual DOM

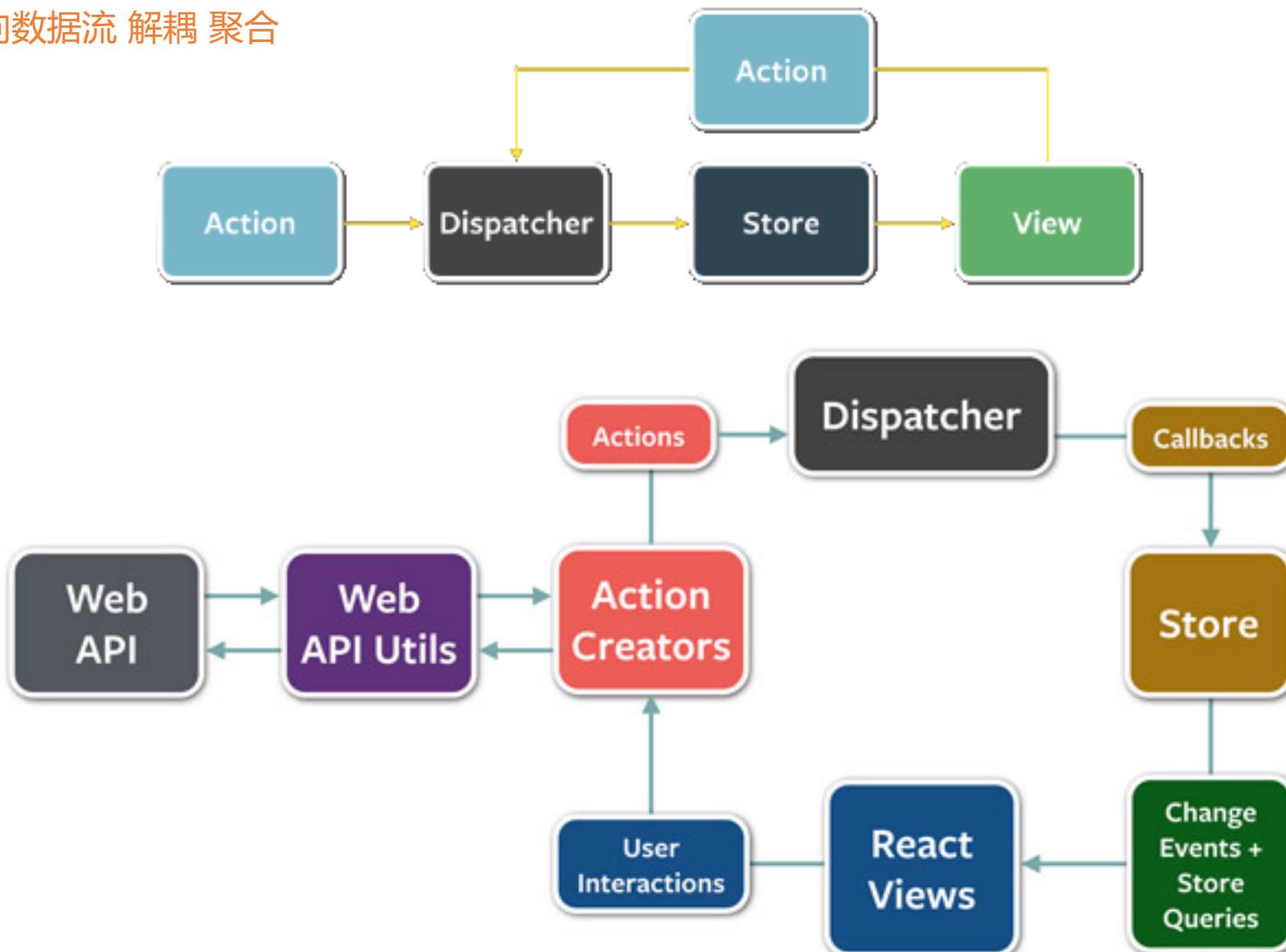
View

Component View

Component 让UI到开发 更 统一和高效

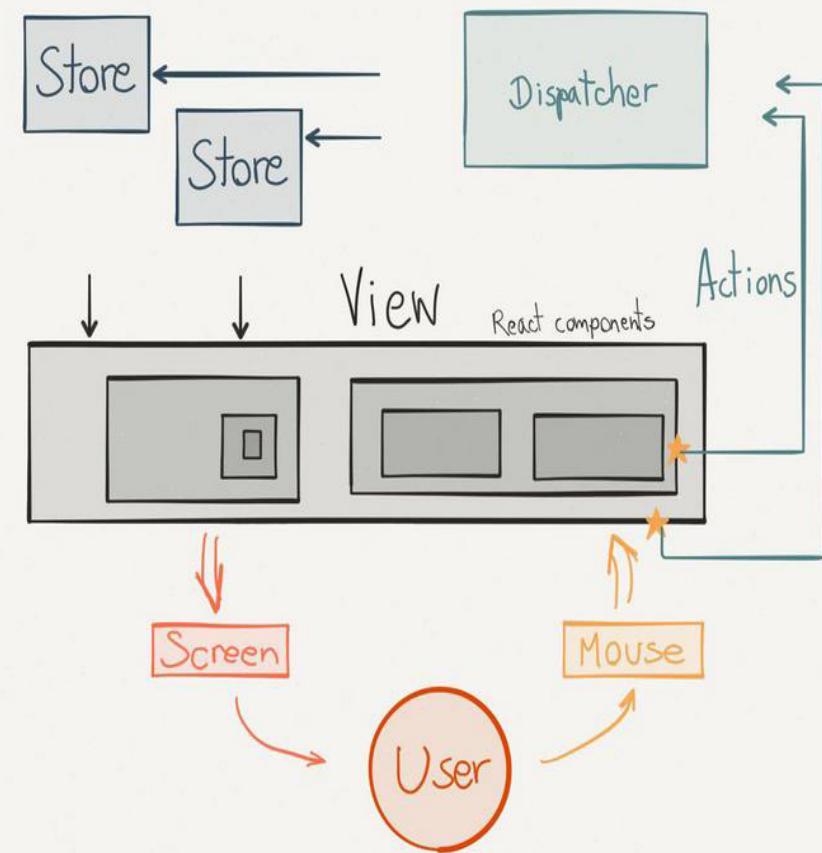
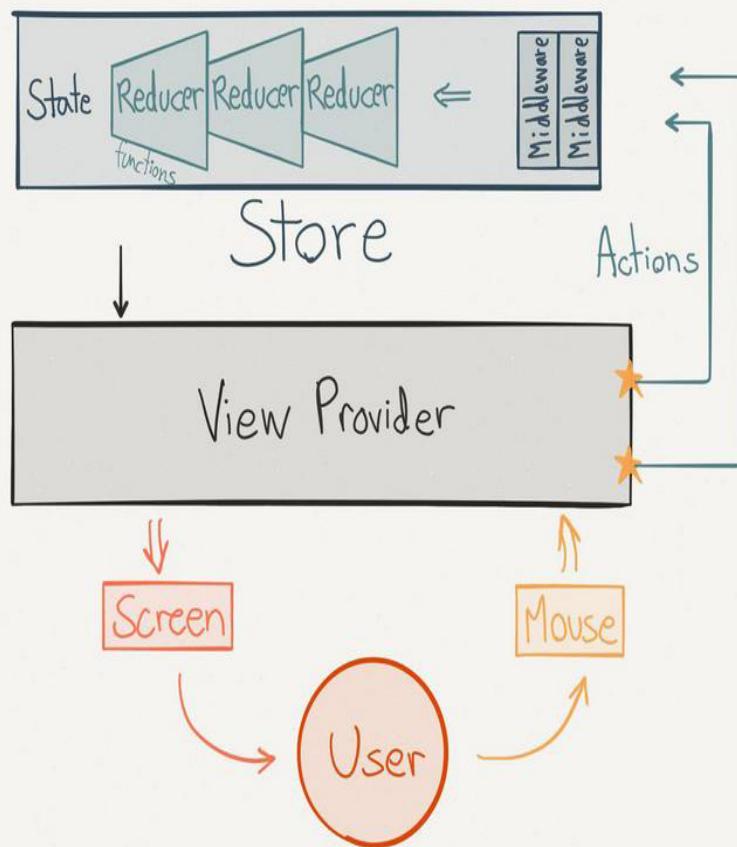
# Flux

单向数据流 解耦 聚合



# Redux

只有一个Store 简化单向的数据流 更容易测试



```
1 import React from 'react'
2 import ReactDOM from 'react-dom'
3 import { Redirect, Router, Route, IndexRoute, hashHistory } from 'react-router'
4 import { Provider } from 'react-redux'
5
6 import App from './containers/App'
7 import Home from './containers/Home'
8 import Features from './containers/Features'
9 import Posts from './containers/Posts'
10 import Static from './containers/Static'
11
12 import getStoreInstance from './store/configureStore'
13
14 import 'file?name=[name].[ext]!../icon.png'
15 import '../config.xml'
16
17 document.addEventListener('deviceready', () => {}, false)
18
19 ReactDOM.render(
20   <div>
21     <Provider store={getStoreInstance()}>
22       <Router history={hashHistory}>
23         <Route component={App}>
24           <IndexRoute component={Home}>/>
25           <Route path='/home' component={Home} />
26           <Route path='/posts/:id' component={Posts} />
27           <Route path='/features/:phrase' component={Features} />
28           <Route path='/static/:type' component={Static} />
29           <Redirect from='/' to='/home' />
30         </Route>
31       </Router>
32     </Provider>
33   </div>,
34   document.getElementById('root')
35 )
36
```

# Demo Code

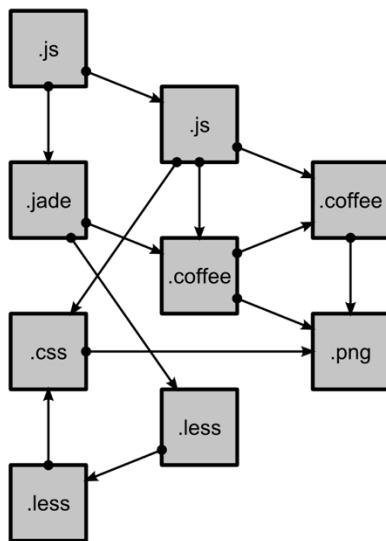
光说不练 假把式 上代码

ES6 ES7 写Js

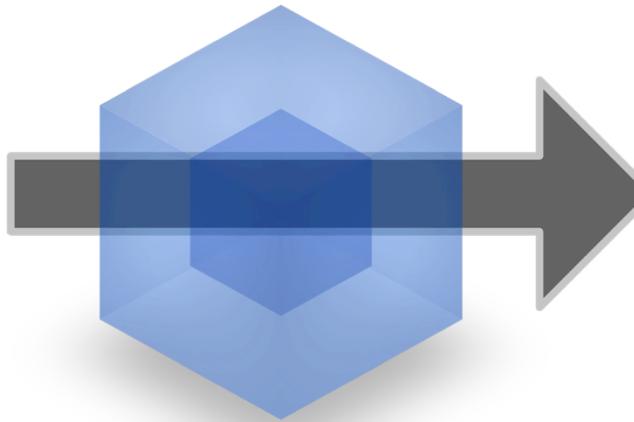
<https://github.com/zhangsichu/HybridAppReduxVsIonic>

# Webpack

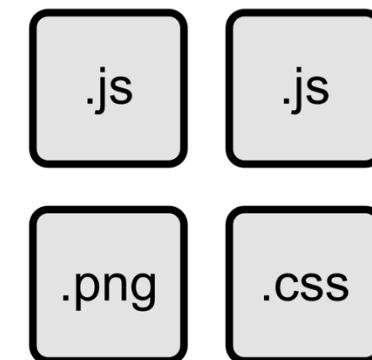
把前端代码高效的构建起来



modules  
with dependencies



**webpack**  
MODULE BUNDLER



static  
assets

# Webpack

把前端代码高效的构建起来

- webpack-dev-server
- webpack loader
- devtool setting
- scss source map issue
- icon resource exclude
- css loader
- babel-eslint
- stylelint
- statistics

# Webpack

高效的开发Server

- webpack-dev-server
- webpack loader
- devtool setting

## Demo Code

# Webpack

良好的打包方式

CSS loader BEM CSS

- scss source map issue
- icon resource exclude
- css loader

## Demo Code

# Webpack

统一的代码检查

# Demo Code

- babel-eslint

```
webpack: bundle is now VALID.          flex-grow: 1;
webpack: bundle is now INVALID.        flex-shrink: 0;
Hash: d6921f7375274281eb25           a {
Version: webpack 1.13.0 scss
Time: 251ms
chunk  {0} bundle.js (html) 216 kB     display: block;
+ 77 hidden modules                  padding: 1em 0;
chunk  {1} bundle.js (jsx) 1.81 MB    border-right: 1px solid #f0776e;
+ 507 hidden modules                text-decoration: none;
>   Static
[336] ./src/containers/App/app.js 4.07 kB {1} [built] [1 warning]
<text>:14:32: There should be no space before '}'
WARNING in ./src/containers/App/app.js
<text>:14:32: There should be no space before '}'
```

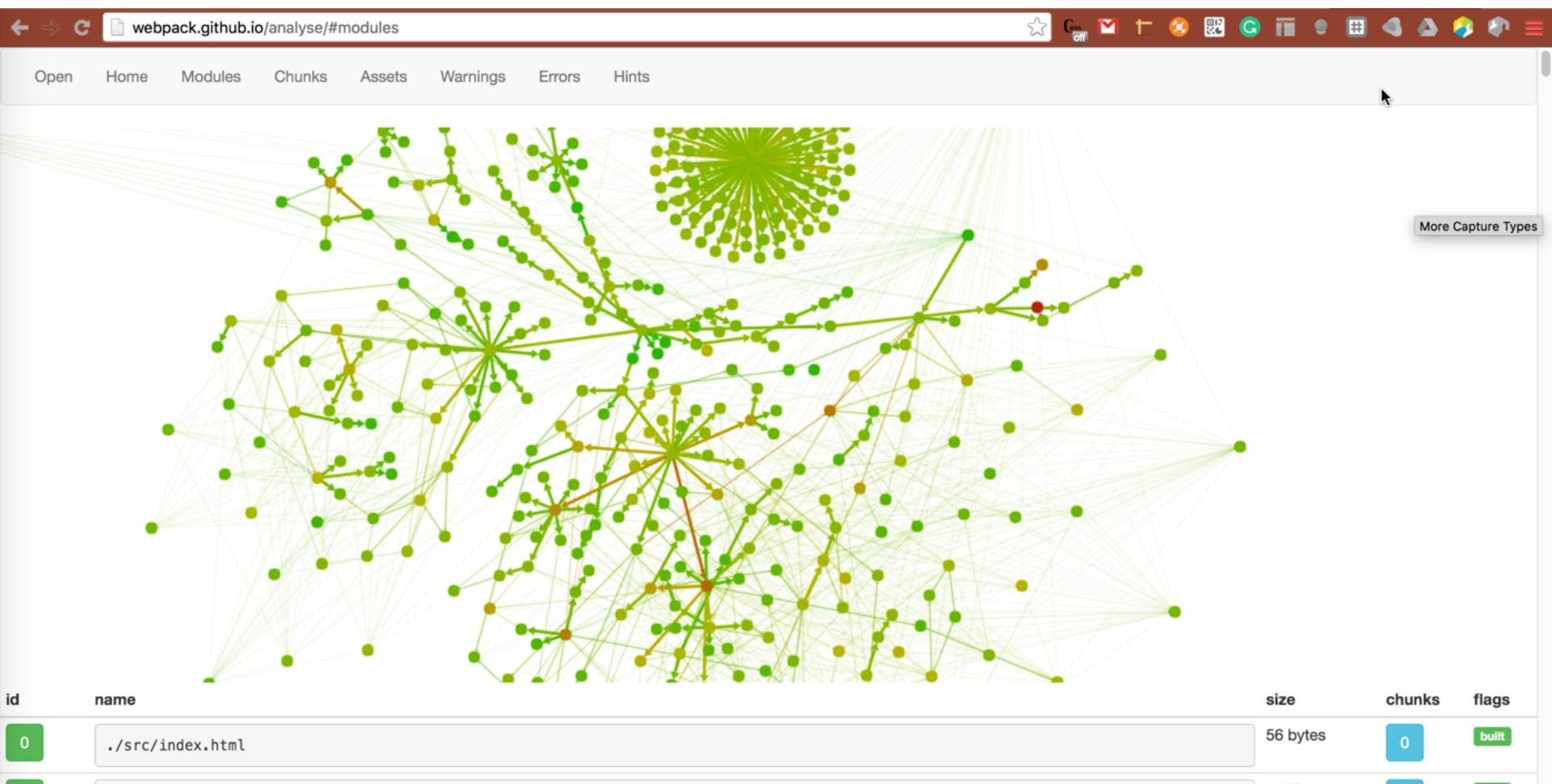
- stylelint

```
Asset      Size  Chunks      Chunk Names
bundle.js  2.03 MB  0, 1  [emitted]  html, jsx
1.9e38b570798b45c78178.hot-update.js  3.08 kB  1  [emitted]  jsx
9e38b570798b45c78178.hot-update.json  36 bytes  [emitted]
chunk  {0} bundle.js (html) 216 kB  [rendered]
+ 77 hidden modules
chunk  {1} bundle.js, 1.9e38b570798b45c78178.hot-update.js (jsx) 1.81 MB  [rendered]
[340] ./~/css-loader?modules&sourceMap&importLoaders=1&localIdentName=[name]__[local]--[hash:base64:5]!./~/postcss-loader!./src/containers/App/styles.scss 2.36 kB {1} [built] [1 warning]
+ 507 hidden modules
Sichu Zhang
23
WARNING in ./~/css-loader?modules&sourceMap&importLoaders=1&localIdentName=[name]__[local]--[hash:base64:5]!./~/postcss-loader!./src/containers/App/styles.scss
stylelint: /Users/szhang/Documents/Project/HybridAppReduxVsIonic/src/containers/App/styles.scss:18:13: Unexpected unit on zero length number (number-zero-length-no-unit)
webpack: bundle is now VALID.
```

# Webpack

代码包关系分析

- statistics



# 保证质量 Ava 测试



# 保证质量Ava测试

- 并发执行，对于 IO 繁重的测试特别有用。
- 每一个测试文件可以获得更好的性能和独立的环境。
- 强制你写原子测试，测试不需要依赖全局状态或者其他测试的状态。

## Demo

- Test Action
- Test Reducer

# 质量保证

- Mocha
- Chai
- Nock
- Enzyme

# Cordova 打包



APACHE  
**CORDOVA™**

Mobile apps with **HTML, CSS & JS**

Target multiple platforms with **one code base**

Free and **open source**



+4 more...

# Cordova 打包

- Platform (iOS Android)
- Plugin
- Hook (UAT PRD 环境切换)

Demo Code

# CI Circle/Travis

CI 上 Build Artifacts

- Circle CI
- Travis CI
- Deployment Artifacts

# CI Circle/Travis

## CI 上 Build Artifacts

The screenshot shows a web browser displaying a CircleCI build summary for the project 'zhangsichu/HybridAppReduxVsIonic' in the 'master' branch, build number 18. The build status is 'SUCCESS' and it finished 5 days ago (03:54). It triggered by 'Zhang Sichu' (pushed d2e826d). The commit log shows a single commit: 'Sichu - d2e826d fix: add the stats'. The 'Artifacts' tab is selected, showing a tree view of build artifacts:

- Container 0
  - home/
  - ubuntu/
    - HybridAppReduxVsIonic/
      - platforms/
        - android/
          - build/
            - outputs/
              - apk/
                - ReduxHybridApp.18.apk
                - android-debug-unaligned.apk

# 大而全的 Hybrid 框架怎么样？

# Ionic & Ionic-Cli

## Create incredible apps.

Ionic is the beautiful, open source front-end SDK for developing hybrid mobile apps with web technologies.

[Get Started](#)[Docs & Help](#)

v1.1.1 "yttrium-yeti" · 2015-11-05 · MIT Licensed



Ionic View

# Ionic 总览

上手快 扩展难

1. Angular Base
2. CSS framework
3. JavaScript framework
4. Good document
5. Ionic Service
6. Ionic 2.0
7. ng-cordova
8. 活跃的社区
9. Hook API 环境转换



# Ionic Demo Code

说了这么多 **上代码**

大而全的Ionic

<https://github.com/zhangsichu/HybridAppIonicVsRedux>

还差一步

前端要调用后端

契约制定

# Service契约制定

MockDB

- Express
- Json Base
- 简单粗暴
- 没有文档

DEMO

# Service契约制定

Raml

1. RESTfuls API 描述
2. 快速生成文档
3. Raml 0.8 -> 1.0 (高级特性)
4. Swagger 也可以试试

DEMO

# Service契约制定

Raml

The screenshot shows a web browser window with the URL `localhost:7100/#menus_get`. The page displays an API schema for a `/menus` endpoint. The schema includes a `GET /menus` method, a `Response` section, and an `Example` section.

**GET /menus**

**Response**

**HTTP status code 200**

**Body**

Type: application/json

Example:

```
{  
  "success": true,  
  "packageData": [  
    {  
      "id": "9BD8D696-217E-4F9C-B8B4-C5A2A9176C1E",  
      "name": "冬瓜虾仁套餐",  
      "price": 18,  
      "src": "img/data/dgxr.jpg",  
      "bigSrc": "img/data/dgxr-big.jpg",  
      "info": "冬瓜虾仁套餐，油烧热，下虾仁滑油后倒进漏勺沥去油；原锅留余油回旺火上，下姜丝炒出香味，烹入绍酒，倒入清汤，加精盐、味精调味，倒入虾仁、冬瓜条、胡萝卜条炒匀，湿淀粉勾薄芡。淋上麻油。装盘即可！",  
      "count": 1  
    }  
  ]  
}
```

# Service契约制定

## Raml用Abao 测试

```
[CNsczhang:spec sczhang$ abao api.raml --server http://localhost:7000
```

```
GET /error/401 -> 200           Install latest development version in GitHub branch
  ✓ Validate response code only (59ms)
```

```
GET /error/403 -> 403
  ✓ Validate response code only   $ npm install -g github:cybertk/abao
```

```
POST /login -> 200
  ✓ Validate response code only
```

Un\*x users will likely need to run these commands using sudo .

```
GET /isAuthorized -> 200
  ✓ Validate response code only
```

```
POST /logout -> 200
  ✓ Validate response code only
```

```
GET /orders -> 200
  ✓ Validate response code only
```

```
GET /order/id/{id} -> 200
  ✓ Validate response code only
```

```
GET /menus -> 200
  ✓ Validate response code only
```

## Get Started Testing Your API

For general usage, an API endpoint (i.e., web service to be tested) **must** be specified explicitly, with the latter having priority. If the RAML file to be tested provides an endpoint, it will be used implicitly set to that value.

```
$ abao api.raml
```

```
GET /menu/id/{id} -> 200
  ✓ Validate response code only
```

```
GET /location -> 200
  ✓ Validate response code only
```

To explicitly specify the API endpoint, use the `--server` argument.

```
$ abao api.raml --server http://localhost:8080
```

```
11 passing (102ms)
```

## Writing testable RAML

到这里 ...

您可以自己做 Hybrid 框架 按需裁剪 灵活扩展

也可以 选个框架来高效、健壮的开发 Hybrid App 了

Q&A  
Thank you

Sichu Zhang