



🕒 2016年8月26日-27日

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World Of Tech 2016

移动互联网技术峰会

THE BEST MOBILE TECH IN HERE

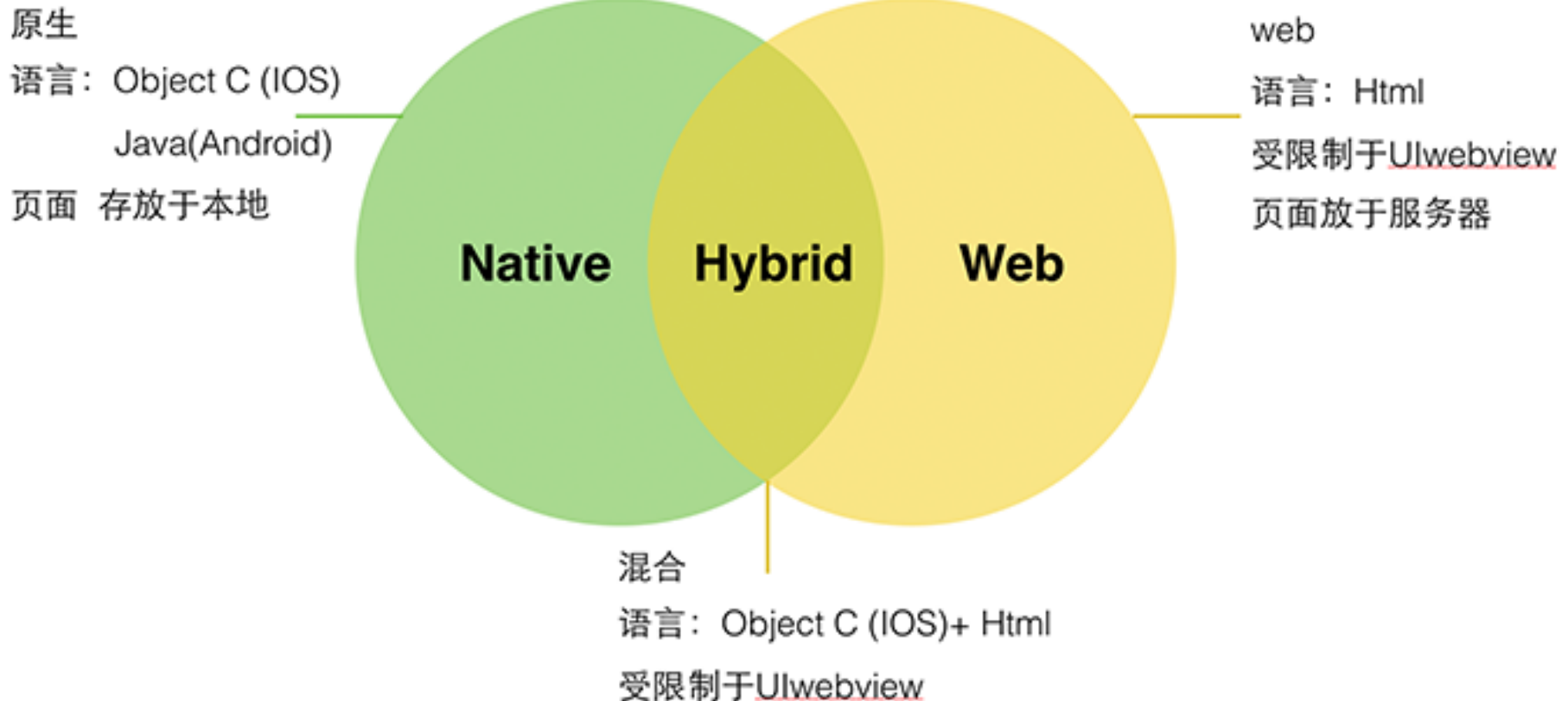
主办: 51CTO

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



Hybrid 和 Native 的区别

	Native	Html5	Hybrid
APP 特性			
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
本机设备访问			
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
网络要求			
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

Search · cordova barcode

https://github.com/search?utf8=✓&q=cordova+barcode

Pull requests Issues Gist

Search cordova barcode Search

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

Repositories 96

Code 125,893

Issues 313

Users

Languages

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

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

经过测试 这个库好用

Star 个数只有0

The screenshot shows a web browser window with the address bar displaying `https://github.com/netray722/barcode-scanner`. The page header includes the GitHub logo, a search bar, and navigation links for 'Pull requests', 'Issues', and 'Gist'. The repository name 'netray722 / barcode-scanner' is prominently displayed, along with statistics: 1 Watch, 0 Stars, and 1 Fork. Below this, tabs for 'Code', 'Issues', 'Pull requests', 'Wiki', 'Pulse', and 'Graphs' are visible. The main content area describes the repository as 'A barcode scanner plugin for Apache Cordova for both iOS and Android.' It also shows a progress bar with metrics: 2 commits, 1 branch, 0 releases, and 0 contributors. At the bottom, there are buttons for 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. A commit history table is displayed, showing the latest commit by Liam Chen on April 5, with a list of files changed, including scripts, src, www, .gitignore, IMG_1772.png, README.md, and plugin.xml.

Search · jieweifu x netray722/barcode-scanner x

<https://github.com/netray722/barcode-scanner>

This repository Search Pull requests Issues Gist

netray722 / barcode-scanner Watch 1 Star 0 Fork 1

Code Issues 0 Pull requests 0 Wiki Pulse Graphs

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

2 commits 1 branch 0 releases 0 contributors

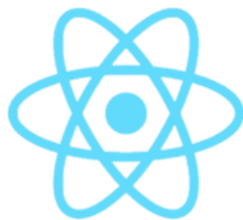
Branch: master New pull request Create new file Upload files Find file Clone or download

Liam Chen readme updated Latest commit 026aaae on Apr 5

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

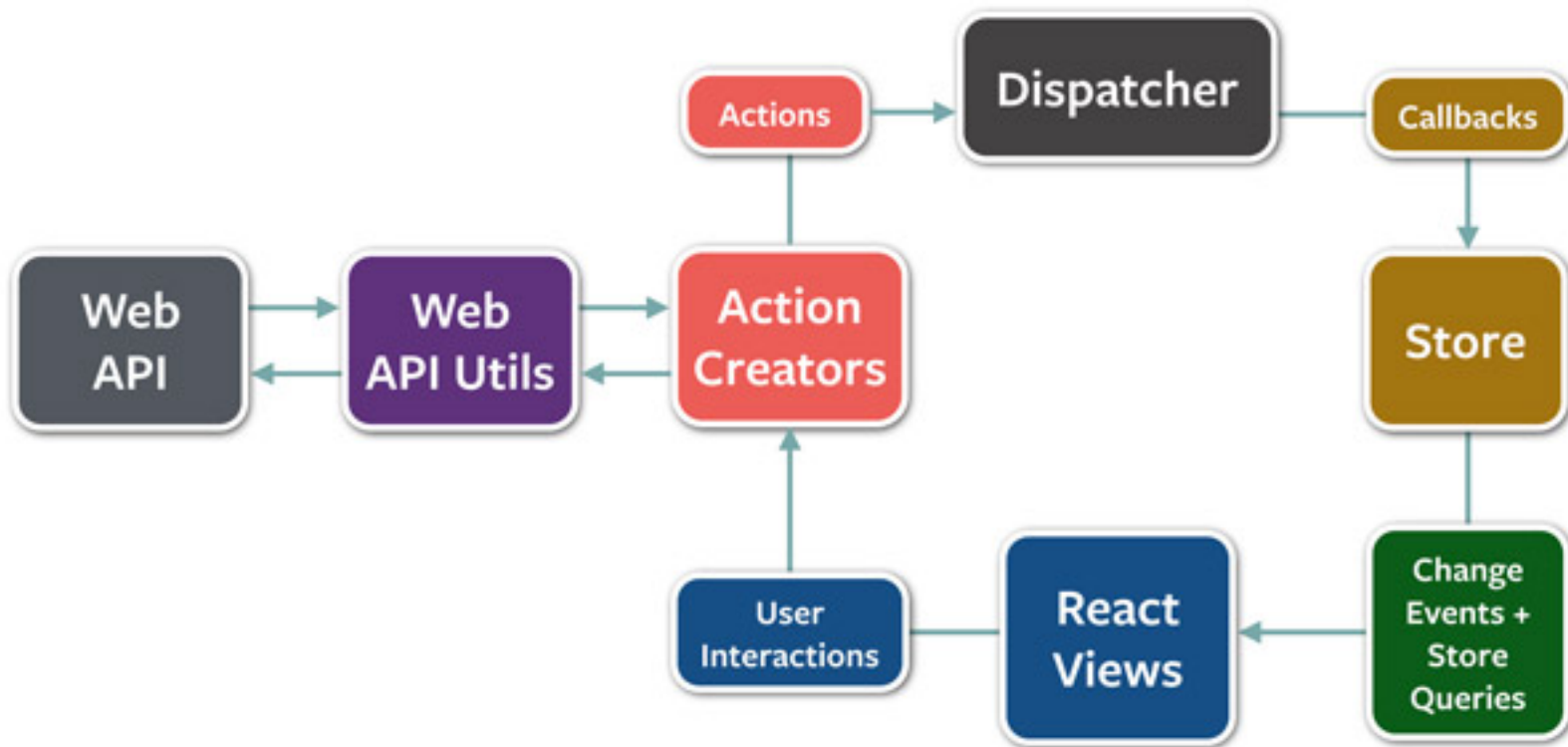
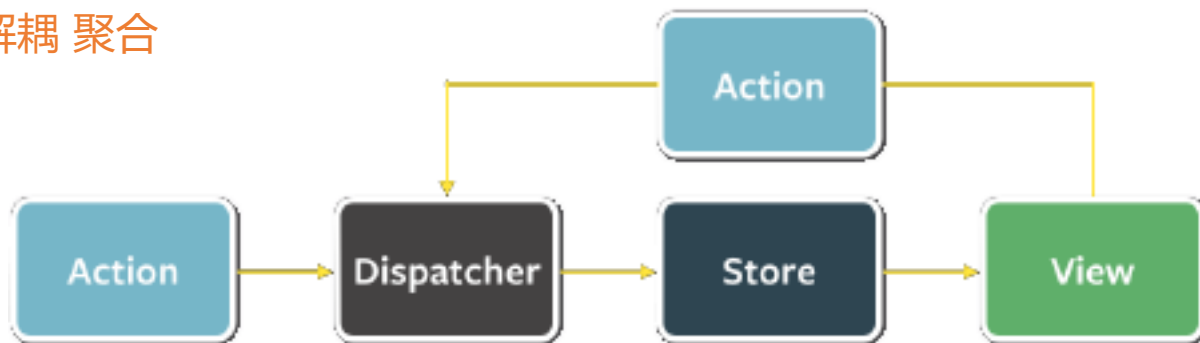
View

Component View

Component 让UI到开发 更 统一和高效

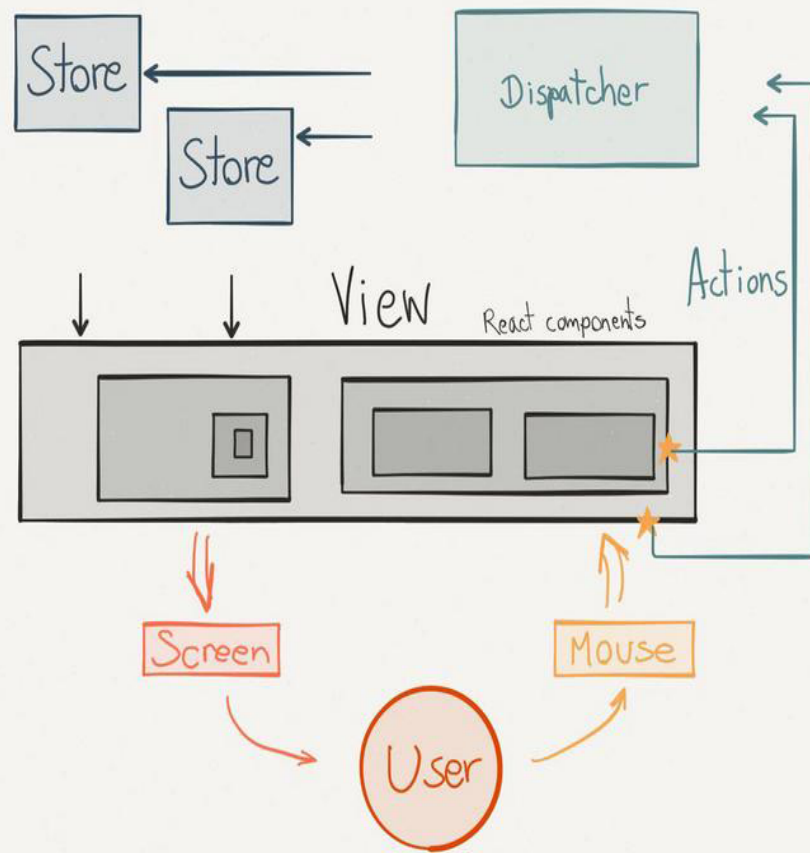
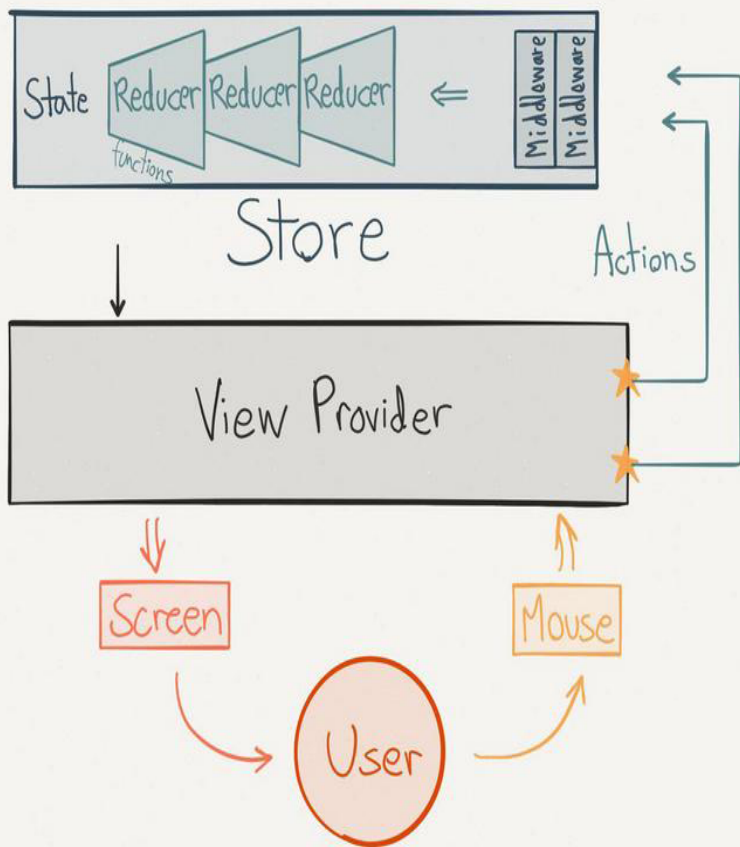
Flux

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 getInstance 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={getInstance()}>
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

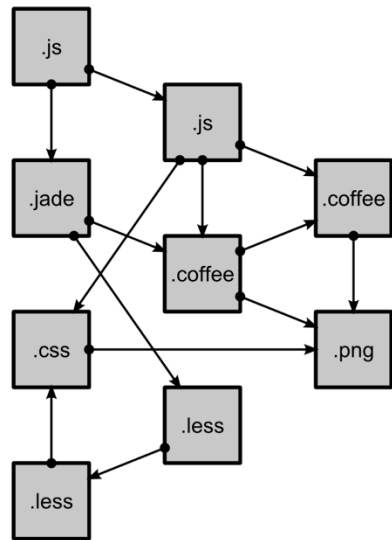
光说不练 假把式 上代码

ES6 ES7 写Js

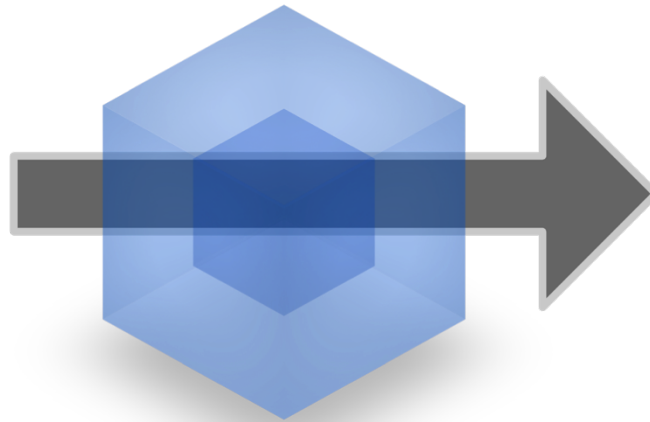
<https://github.com/zhangsichu/HybridAppReduxVslonic>

Webpack

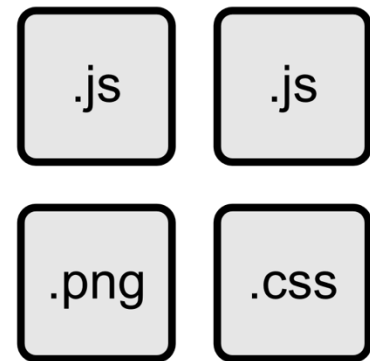
把前端代码高效的构建起来



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

- stylelint

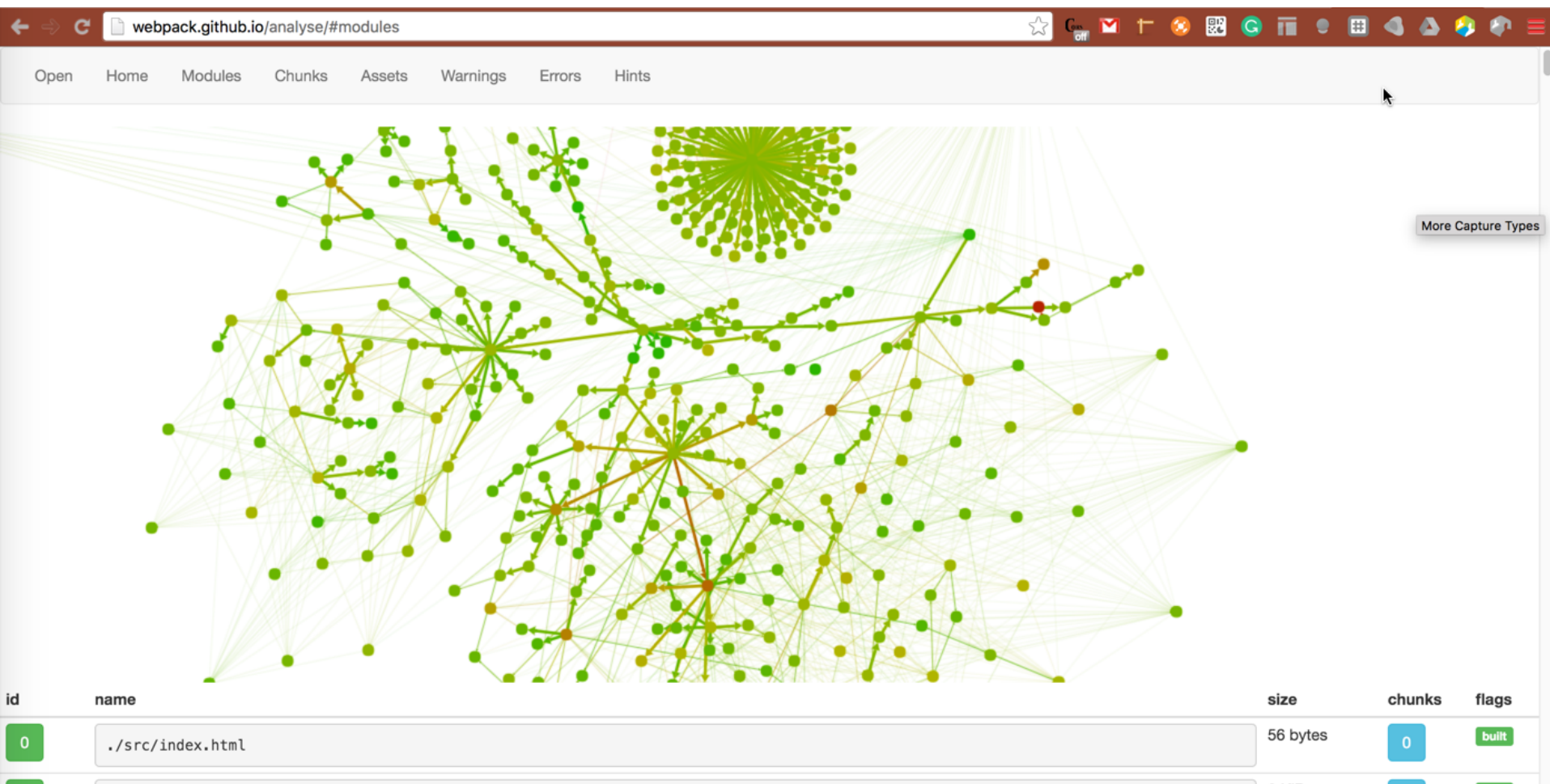
Asset	Size	Chunks	Chunk Names
bundle.js	2.03 MB	0, 1 [emitted]	html, jsx
1.9e38b570798b45c78178.hot-update.js	3.08 kB	1 [emitted]	jsx
9e38b570798b45c78178.hot-update.json	36 bytes	[emitted]	

```
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
WARNING in ./~/css-loader?modules&sourceMap&importLoaders=1&localIdentName=[name]__[local]--[hash:base64:5]!./~/postcss-loader!./src/containers/App/styles.scss
stylelint: /Users/sczhang/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)

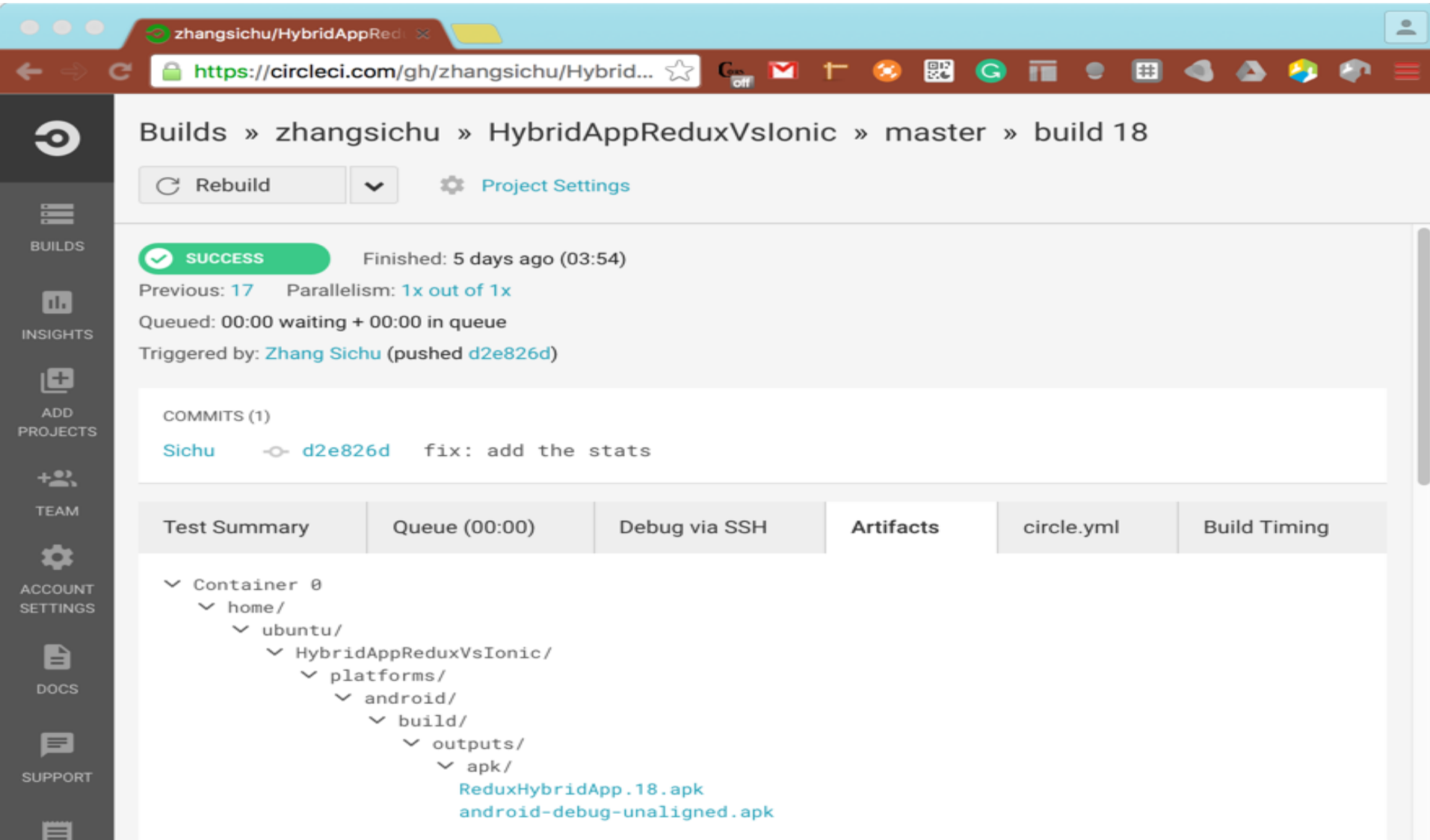
Demo Code

CI Circle/Travis

CI 上 Build Artifacts

- Circle CI
- Travis CI
- Deployment Artifacts

CI 上 Build Artifacts



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/HybridApplonicVsRedux>

还差一步

前端要调用后端

契约制定

Service契约制定

Mock DB

- Express
- Json Base
- 简单粗暴
- 没有文档

DEMO

Service契约制定

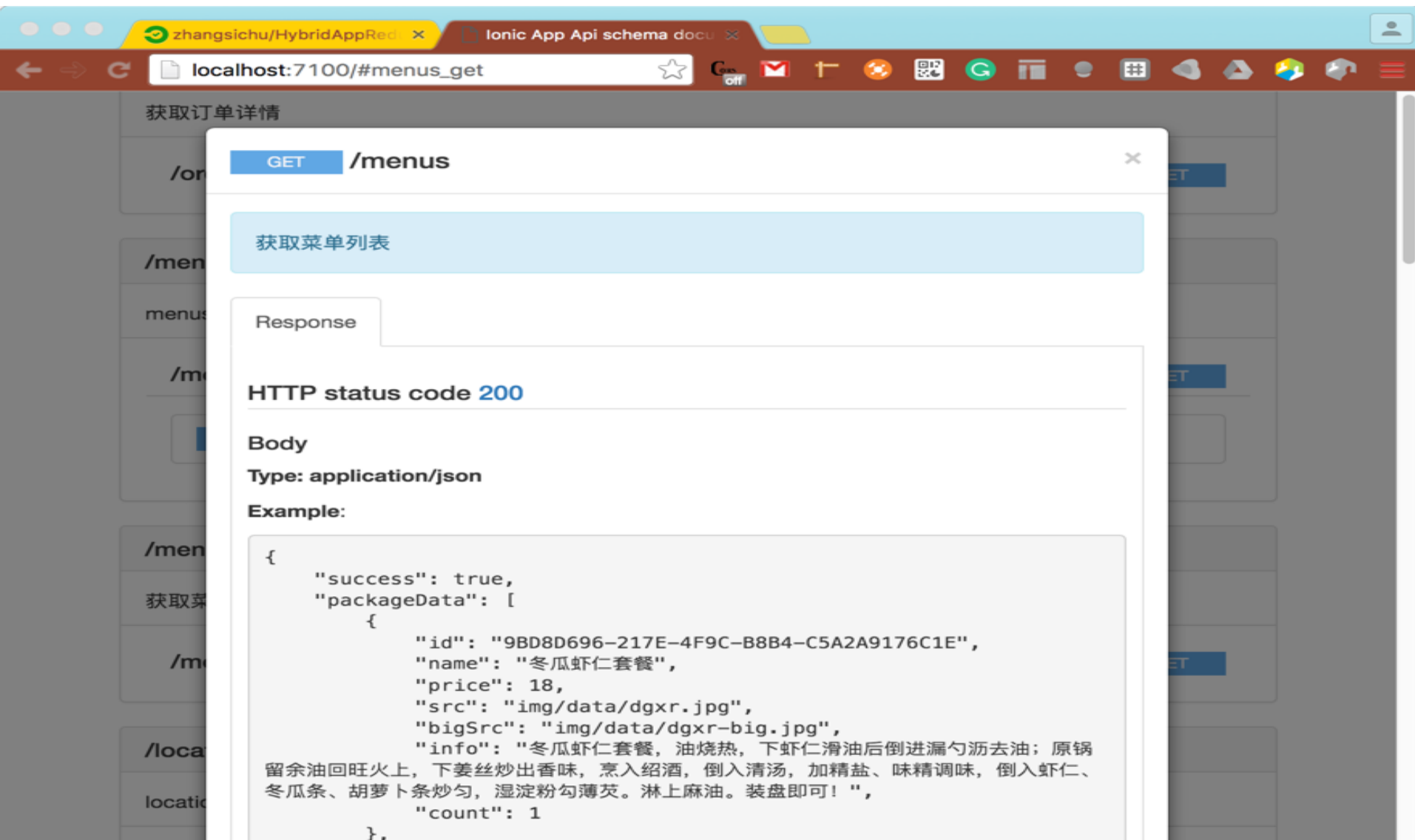
Raml

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



zhangsichu/HybridAppRed Ionic App Api schema docu

localhost:7100/#menus_get

获取订单详情

GET /menus

获取菜单列表

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  
✓ Validate response code only (59ms)
```

```
GET /error/403 -> 403  
✓ Validate response code only
```

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

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

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

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

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

```
CNsczhang:spec sczhang$
```

Install latest development version in GitHub branch

```
$ npm install -g github:cybertk/abao
```

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

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 implicitly set to that value.

```
$ abao api.raml
```

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

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

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