



# 2016中国开源年会

## China Open Source Conference 2016



# 更了不起的Node.js

从零开始构建一个Node.js Web框架（基于Koa 2.x）

# i5ting：一个开源爱好者

StuQ明星讲师

Node.js布道者

空弦科技CTO

Cnodejs管理员





# 以前 我们总是喜欢拿异步说事儿

现在我们拿都小程序说事儿



# 除了性能 其他都是病？

不按照流程办事，当然都是病

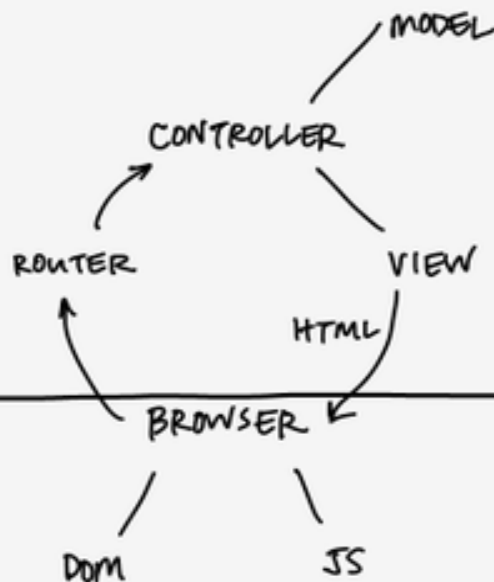




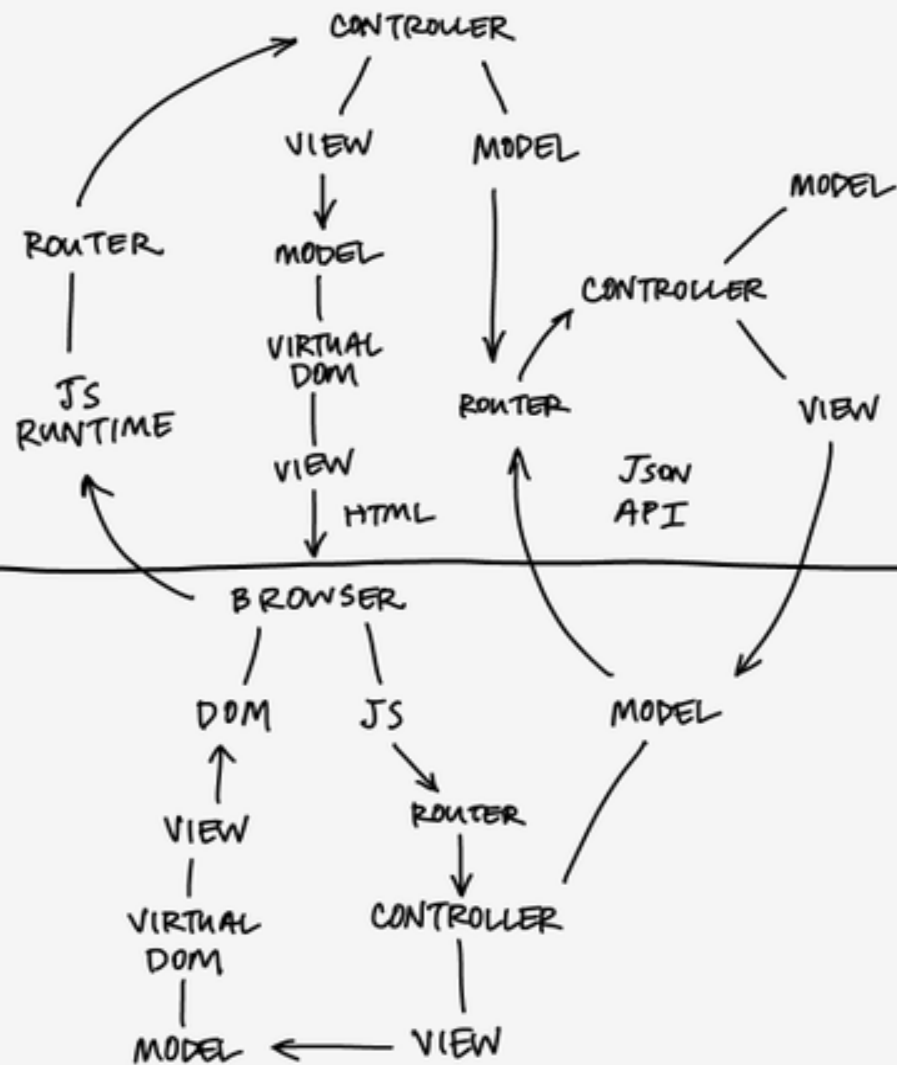
# 更了不起的Node.js

- 跨平台
- 无处不在的npm
- Async/await
- Koa 2.x
- 从零开始构建一个Node.js Web 框架

2004



2016





# 跨平台



CNODE 应用号版

全部 精华 分享 问答 招聘

HugoJing 精华

5小时前

仿照唐少做了个前端小教程，新手向，也是自己巩固一下《使用 Babel + Webpack 编写 ECMAScript 2015 代码》

2391 17

xicilion 精华

8小时前

很久没来，丢一份前阵子做的 10 万连接性能测试 (fibjs, golang, nginx, nodejs)

6989 61

wf744 精华

9小时前

node开发游戏服务器遇到的性能问题

5996 78

hexie 精华

1天前

Node.js下自定义错误类型

9258 10

i5ting 精华

1天前

Node.js写爬虫系列

我的

Console Sources Network Storage AppData

Sources Content ... Snippets

appservice topics.js x

top271469366.appservice.open.weixin.qq.com

pagesdetailindexlogstopicstoptics.jsutilsappserviceWAService.jsapp.jsasdebug.js(no domain)

define("pages/topics/topics.js", function(require) {  
 // posts.js  
 var Api = require("../utils/api.js");  
 var util = require("../utils/util.js");  
  
 Page({  
 data: {  
 title: '话题列表',  
 postsList: [],  
 hidden: false,  
 page: 1,  
 tab: 'all'  
 },  
 onPullDownRefresh: function () {  
 this.fetchData();  
 },  
 onLoad: function () {  
 console.log(1)  
 this.fetchData();  
 },  
 onTapTag: function (e) {  
 console.dir(e)  
 var self = this;  
 var tab = e.currentTarget.id;  
 self.setData({  
 tab: tab  
 });  
 if (tab !== 'all') {  
 this.fetchData({tab: tab});  
 } else {  
 this.fetchData();  
 }  
 },  
 fetchData: function (data) {  
 var self = this;  
 self.setData({  
 hidden: false  
 });  
 if (!data) data = {};  
 if (!data.page) data.page = 1;  
 if (data.page === 1) {  
 self.setData({  
 postsList: []  
 });  
 }  
 wx.request({  
 url: Api.getTopics(data),  
 success: function (res) {  
 self.setData({  
 postsList: self.data.postsList.concat(res.data.posts)  
 });  
 }  
 });  
 }  
 })  
})

http://271469366.appservice.open.weixin.qq.com/appservice

Watch

Call Stack

onTapTag topics.js:23

m WAService.js:1826

(anonymous function) WAService.js:1878

(anonymous function) WAService.js:2264

(anonymous function) WAService.js:748

e.(anonymous function) WAService.js:878

a asdebug.js:59

(anonymous function) asdebug.js:380

Paused on a JavaScript breakpoint.

Scope

Local

e: Object

self: undefined

tab: undefined

this: e

Closure

Global Window

Breakpoints

topics.js:23 console.dir(e)

DOM Breakpoints

XHR Breakpoints

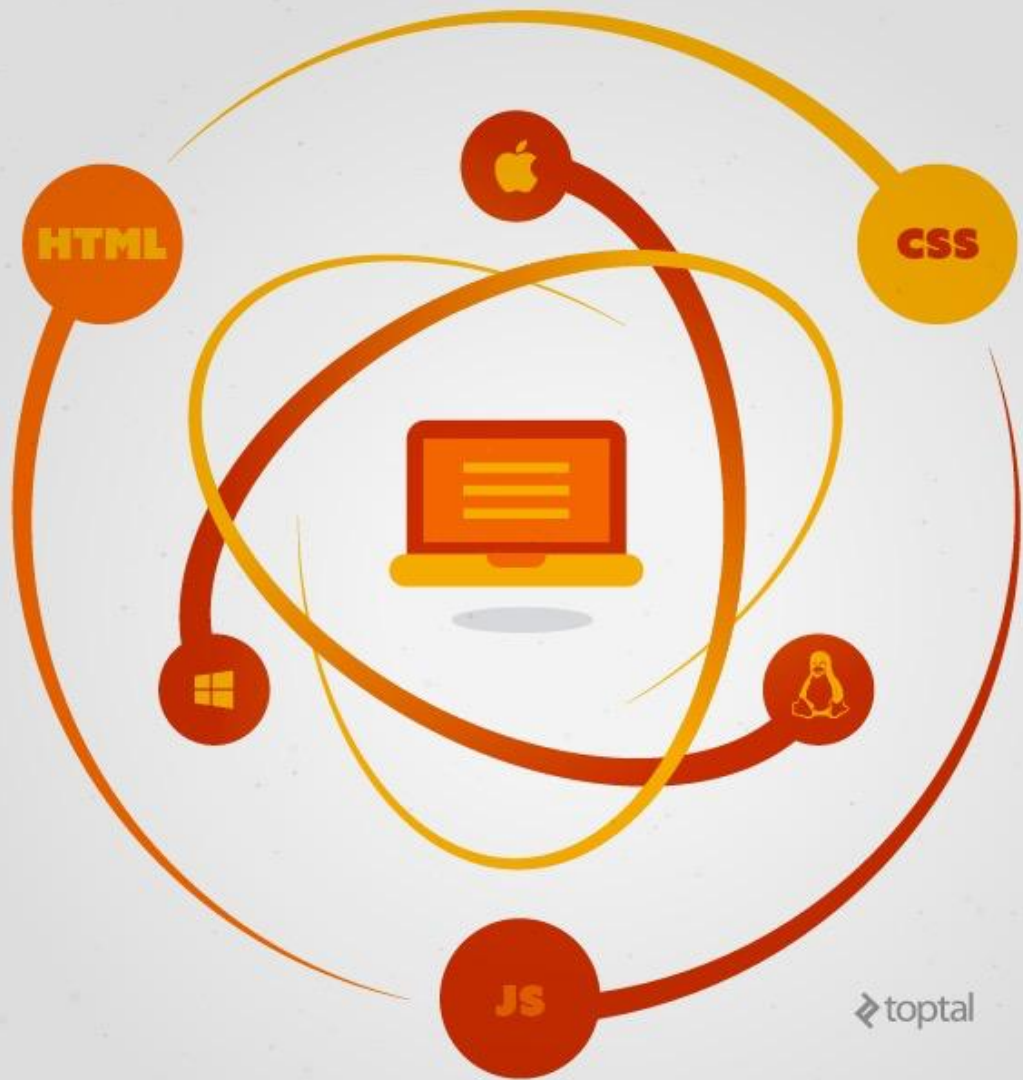
Event Listener Breakpoints

Event Listeners

Line 23, Column 5

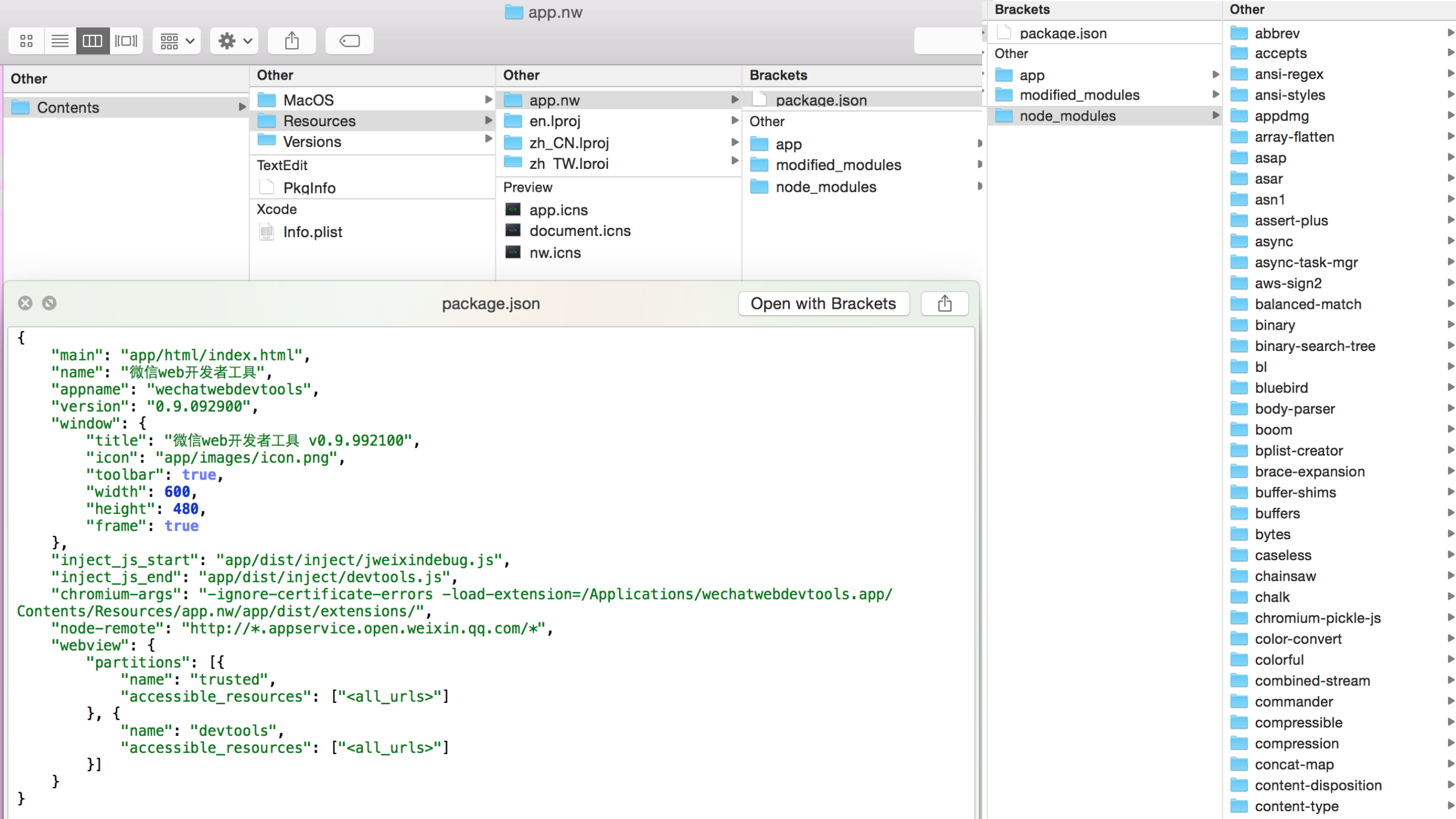


眼熟么？

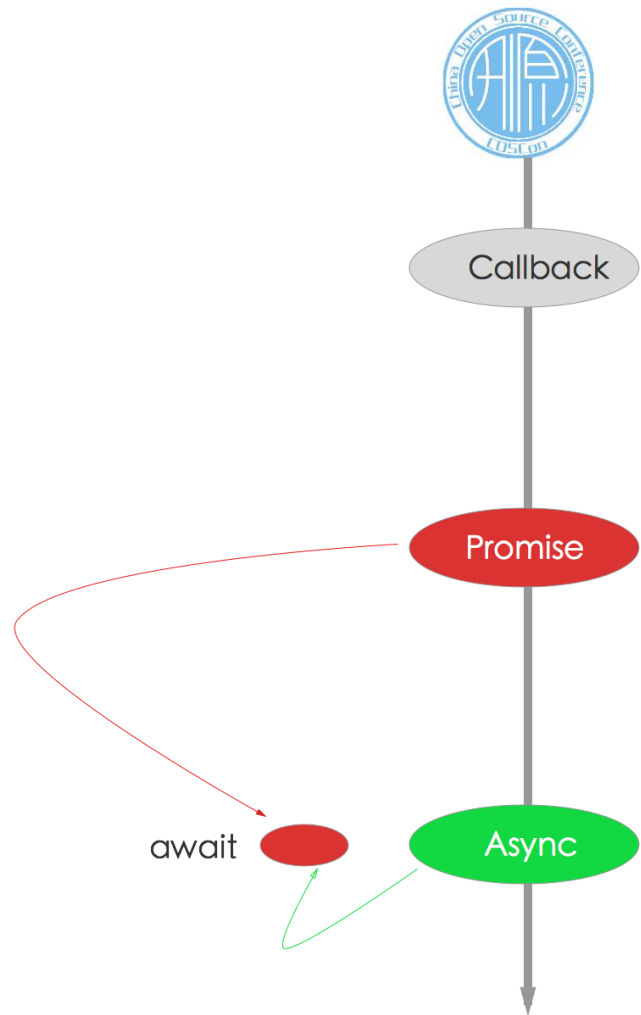
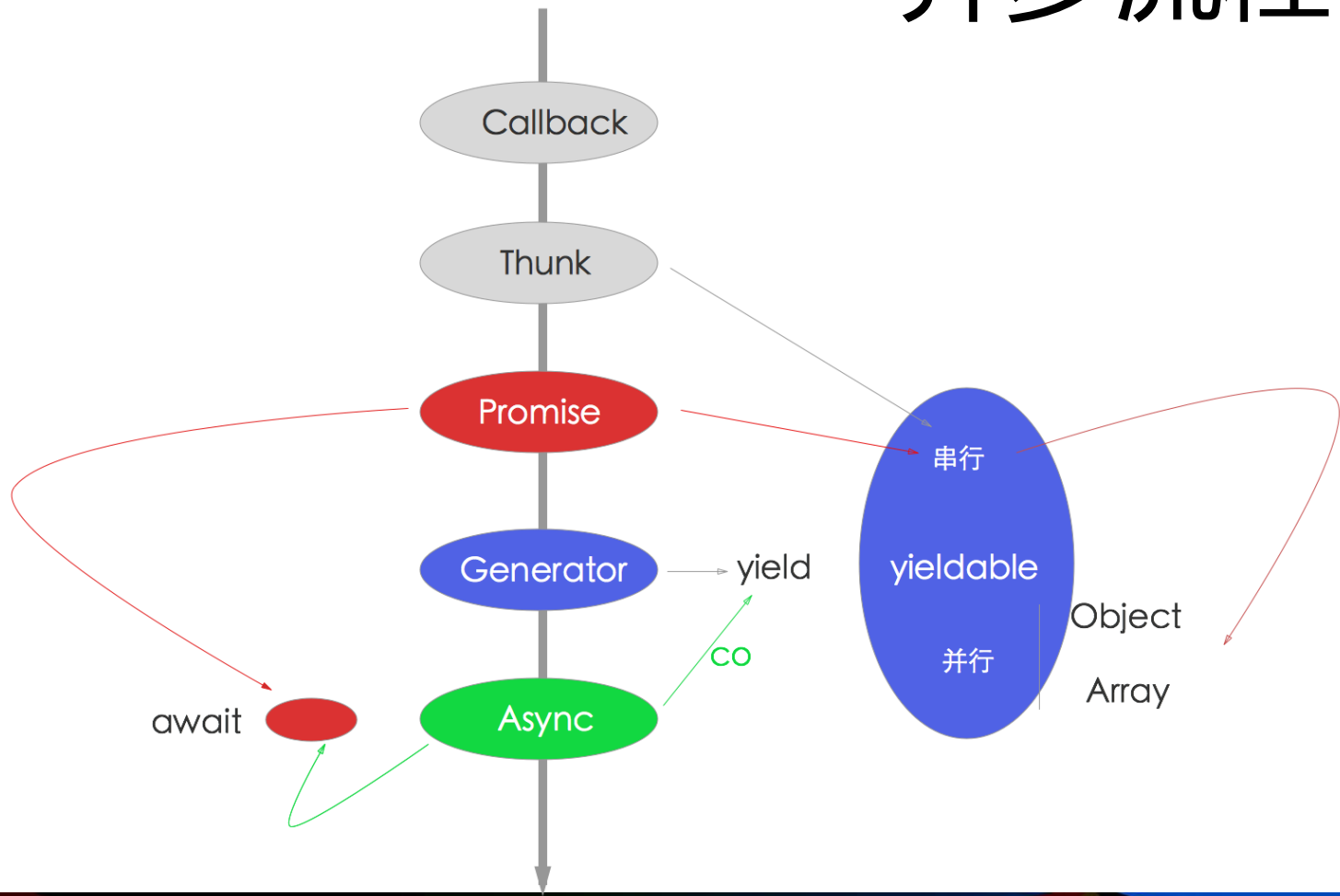




# 无处不在的npm



# 异步流程





```
import test from 'ava'

var superkoa = require('.')

test.cb('superkoa()', t => {
  superkoa('./app')
    .get('/')
    .expect(200, function (err) {
      t.ifError(err)
      t.is(res.text, 'Hello Koa')
    })
  t.end()
})
```

```
test('yield superkoa()', function * (t) {
  let res = yield superkoa('./app')
    .get('/')

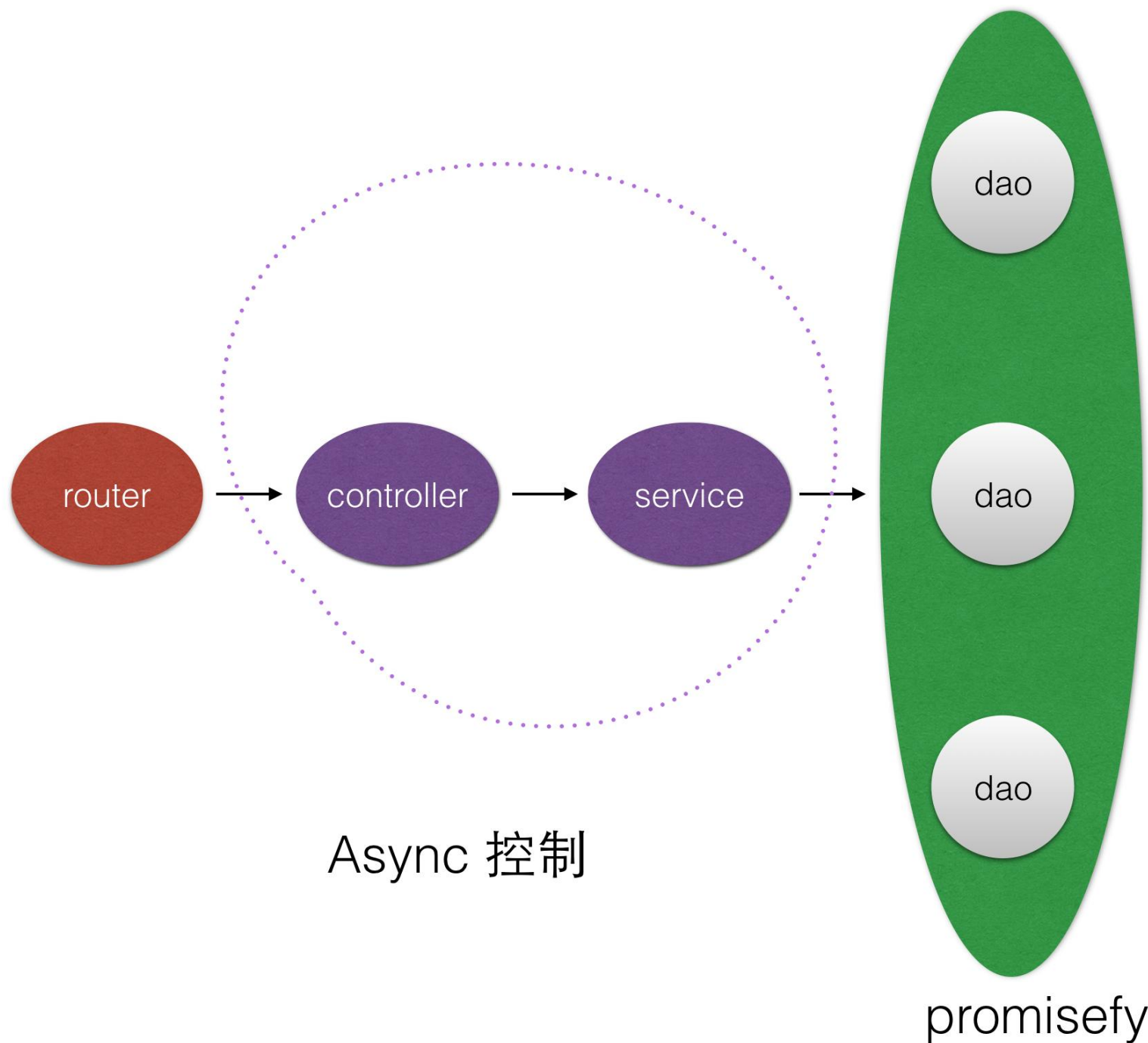
  t.is(200, res.status)
  t.is(res.text, 'Hello Koa', 'res.text == Hello Koa')
})

test('async superkoa()', async (t) => {
  let res = await superkoa('./app')
    .get('/')

  t.is(200, res.status)
  t.is(res.text, 'Hello Koa', 'res.text == Hello Koa')
})
```



# Node Style



# 技术选型

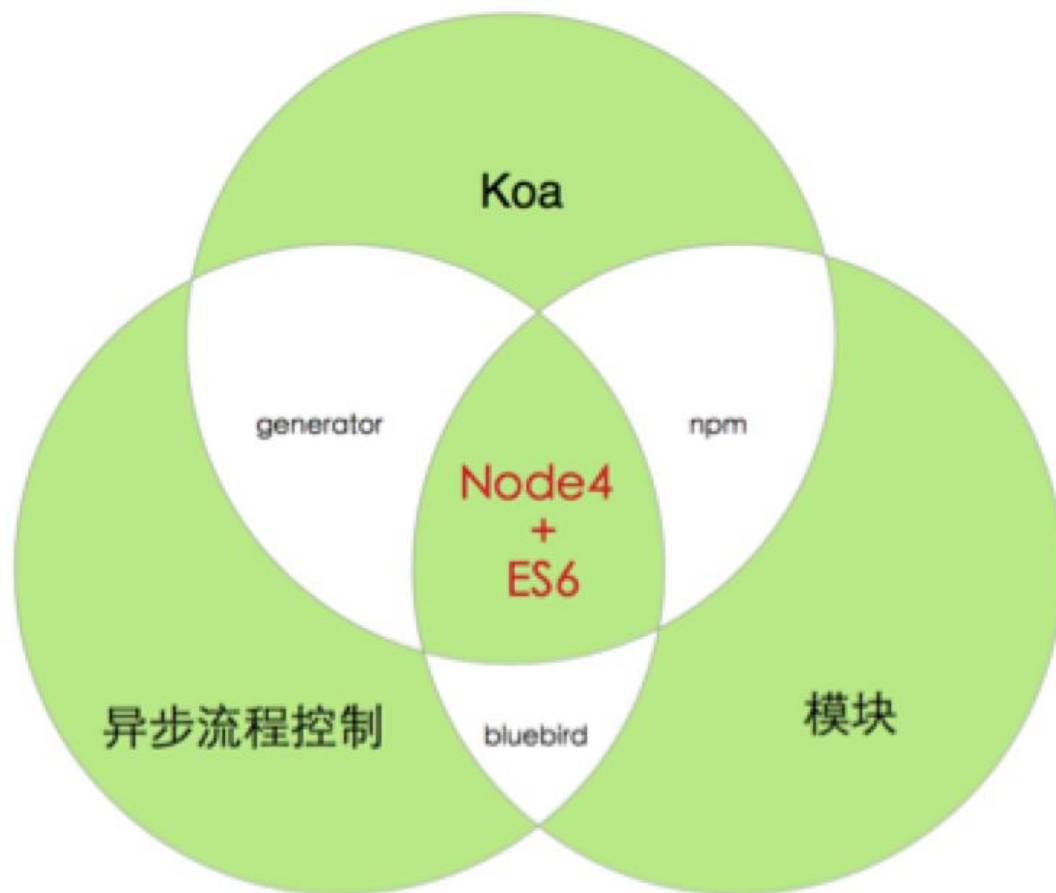
## 2015年推荐

- express 4.x (express最新版本, 初学者先别去碰)
- mongoose (mongodb)
- bluebird (Promise/A+实现)
- jade (视图层模板)
- mocha (测试)
- node-inspector(调试)

## 2016年推荐



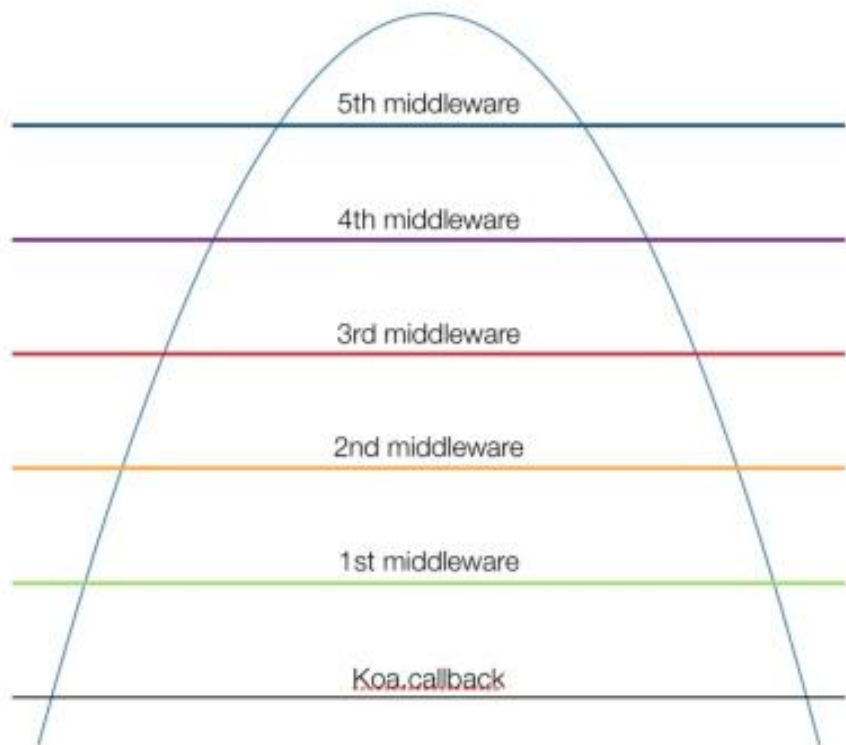
- koa 1.0 && 2.0 (koa2.0刚发布不久, 喜欢折腾的可以考虑)
- mongoose (mongodb)
- bluebird (Promise/A+实现)
- jade (视图层模板)
- ava (测试)
- vscode(调试)



# 变化

- Es6语法
- 异步流程控制
- Koa框架

# 一个回形针 三种中间件



```
1 var koa = require('koa');
2 var app = koa();
3
4 app.use(function* responseTime(next) {
5   var start = new Date;
6   yield next;
7   var ms = new Date - start;
8   this.set('X-Response-Time', ms + 'ms');
9 });
10
11 app.use(function* logger(next) {
12   var start = new Date;
13   yield next;
14   var used = new Date - start;
15   console.log('%s %s %s %sms',
16     this.method,
17     this.originalUrl,
18     this.status, used);
19 });
20
21 app.use(function* contentType(next) {
22   yield next;
23   if (!this.body) return;
24   this.set('Content-Length', this.body.length);
25 });
26
27 app.use(function* body(next) {
28   yield next;
29   if (this.path !== '/') return;
30   this.body = 'Hello World';
31 });
32
33 app.listen(3000);
```

- 4.18. 随堂练习：完善用户注册、登录...
5. 从0开始写一个基于Koa的web框架 ✓
- 5.1. 生成项目
- 5.2. 使用nodemon
- 5.3. 自动挂载路由
- 5.4. 添加测试
- 5.5. 添加mongoose
- 5.6. 添加mvc目录
- 5.7. 加载某个目录到一个对象上
- 5.8. 如何发布npm模块
- 5.9. 继续优化mvc结构
- 5.10. 庖丁解views
- 5.11. 没REST怎么行？
- 5.12. 脚手架scaffold
- 5.13. 更多
- 5.14. 随堂练习：自己动手集成sequeli...
6. 项目实战
- 6.1. 需求原型

改为

```
mount(app, __dirname + '/routes', true);
```

然后

```
$ npm start
[nodemon] app crashed - waiting for file changes before starting...
[nodemon] restarting due to changes...
[nodemon] starting node bin/www
koa deprecated Support for generators will be removed in v3. See the documentation for examples of
mount route /index.js
mount route /users.js

*****
      M a J S  A p i s  D u m p
*****
*****
```

File	Method	Path
/Users/sang/workspace/github/your-koa/routes/index.js	GET	/
/Users/sang/workspace/github/your-koa/routes/users.js	GET	/users/

在路由里复制users.js为test.js

测试

<http://127.0.0.1:3000/test>

# 从0开始写一个基于Koa的Node.js Web框架



# 真正的喜爱，才没有伤害







# Console.log('The End, Thanks')

<https://github.com/i5ting>