

Node.js

NodeJs. Чем нода стала в 21-ом году. Запуск стартапов на NodeJs, какие тулзы лучше взять и почему + тренды

Егор Малькевич 2021

- Качество картинки
- Не отскакивать в сторону
- Методологии тяжело воспринимаются
 - + – тяжело читаются – визуализация или упростить
 - Ноукод – непонятно причем Node.js склеить

- JAM стэк – почему он сюда
- Где используют Node.js – игры???

Егор

Егор IT-предприниматель из Минска. Любит Web и все еще пишет на JavaScript



Зачем нам Web?



Информация

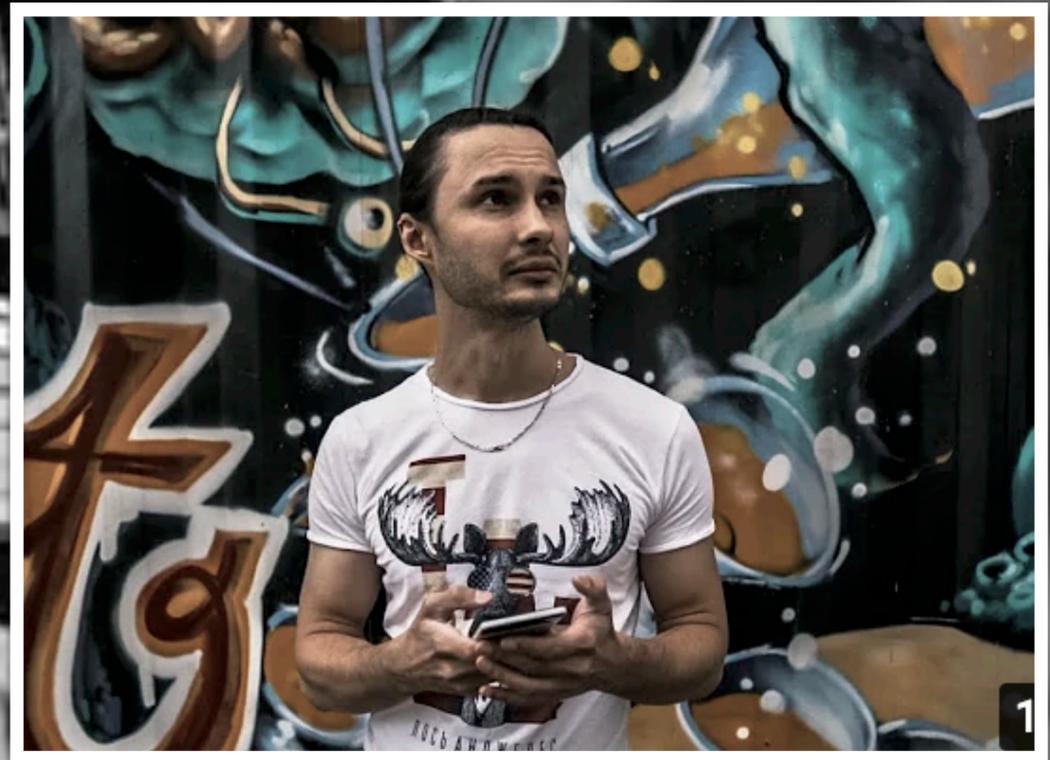
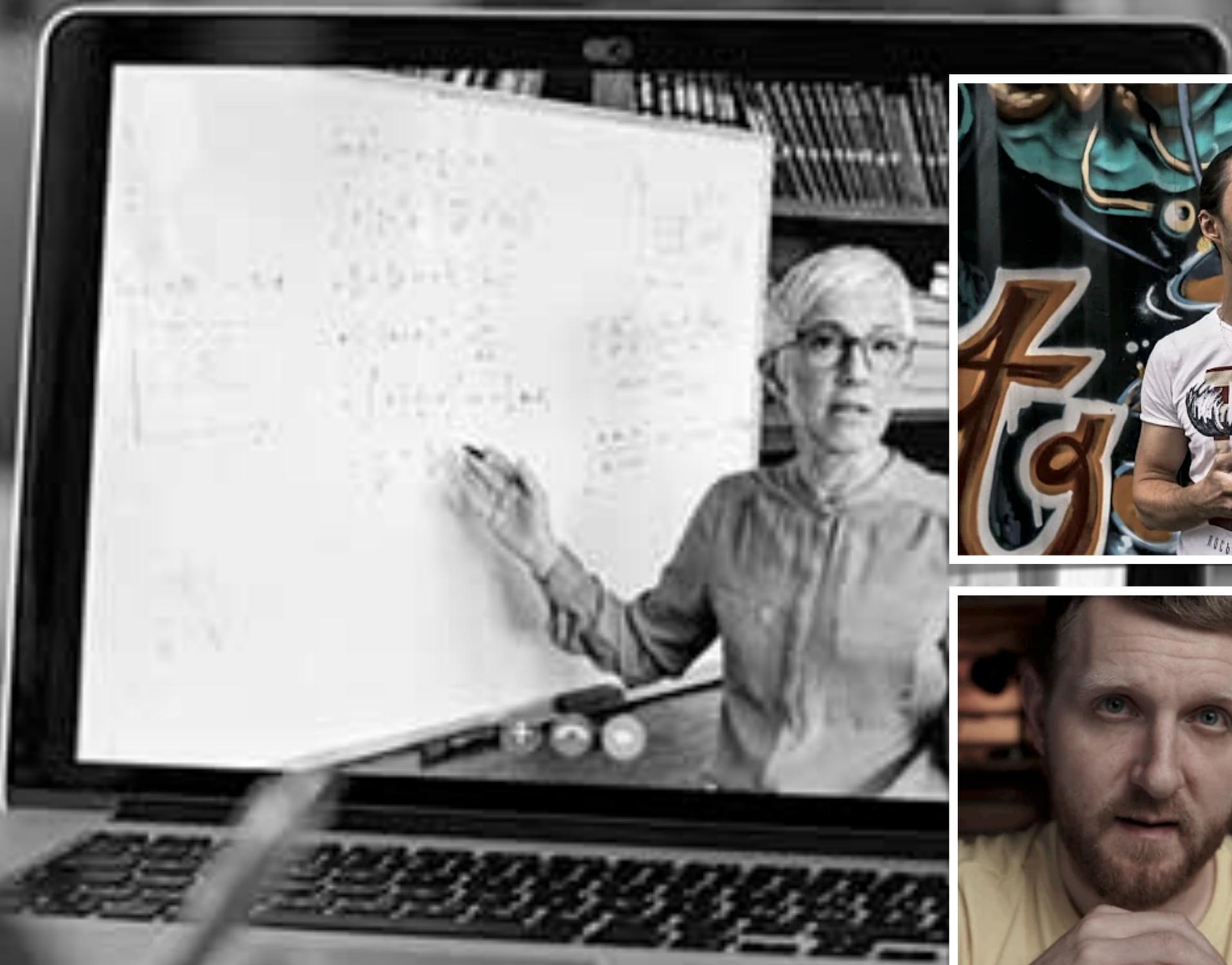


Интеграция



Накаливания знаний и опыта

Современное обучение

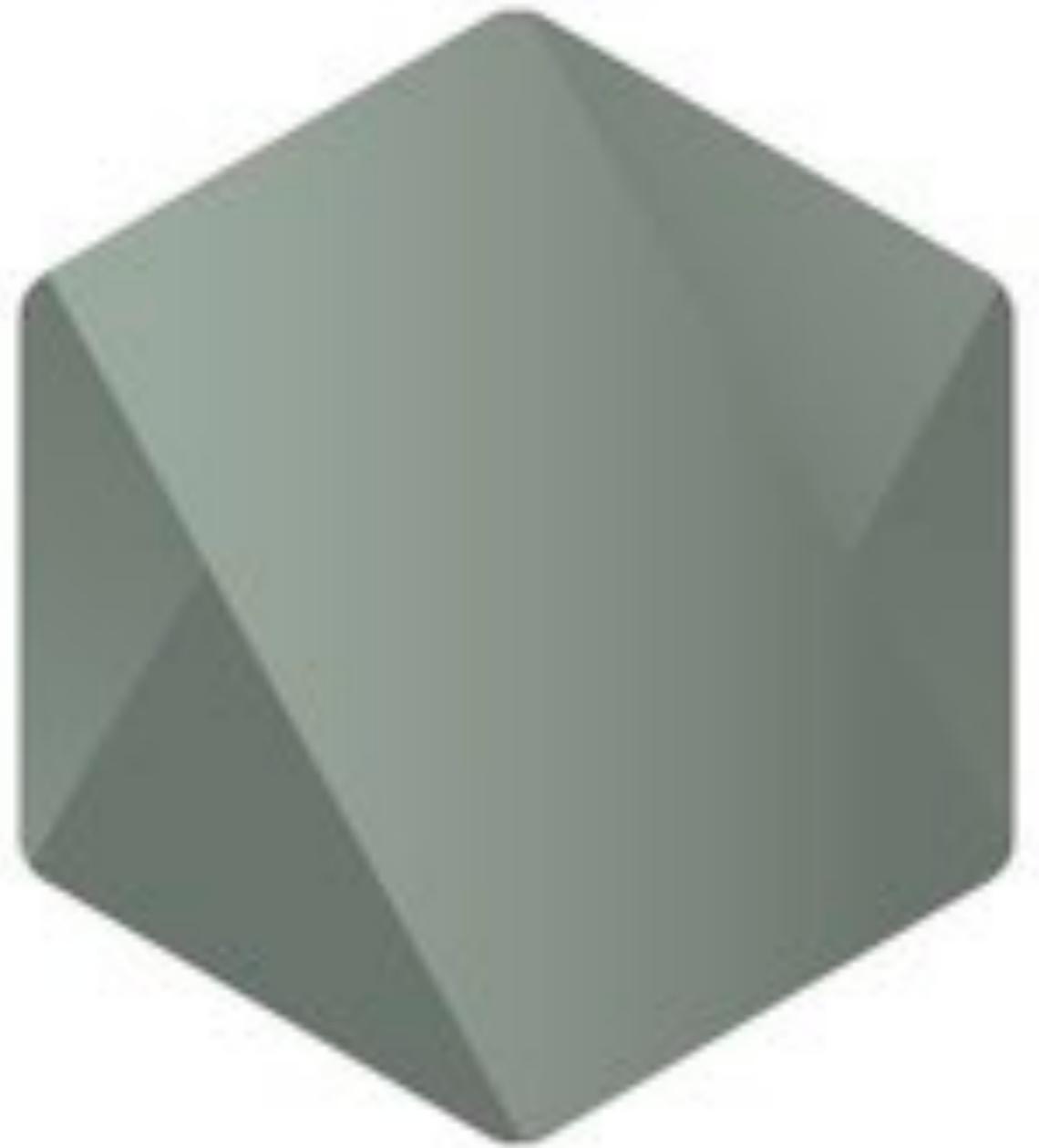


Ютуб / Онлайн школы??

<https://openjs.io/>

Такс, а причем тут Node.js?

Куда двигаться Node.js разработчику? Во что инвестировать свое время и деньги?



Информация

Что с обменом информации, кто лидеры?

Люди

То что создается руками

- Социальные сети
- Чаты
- Сообщества
- Магазины / Marketplace



Среда

Физические сервисы вокруг нас

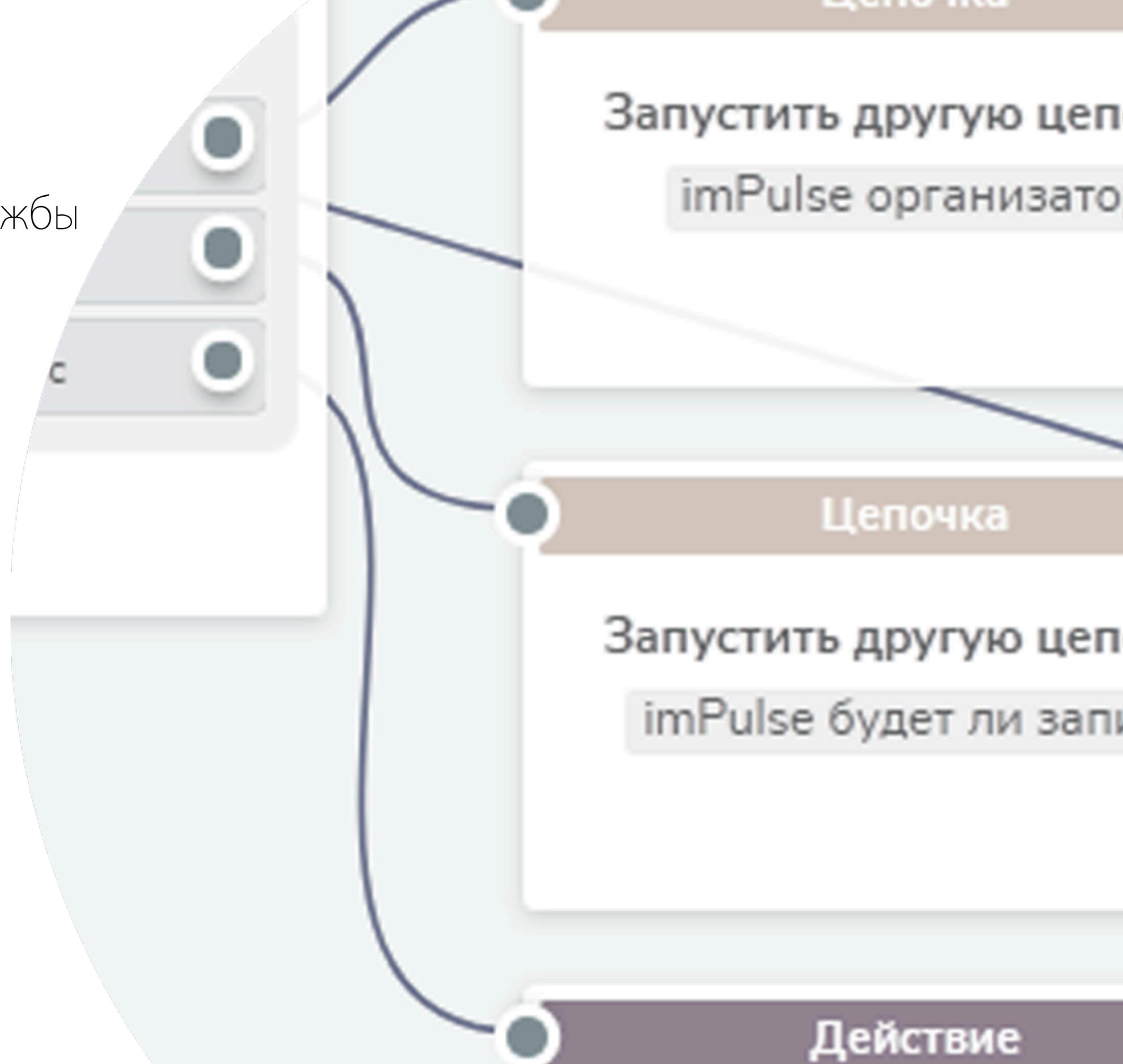
- Банки – финансовые службы, налоги
- Инфраструктура города – поезда, метро, такси, логистика, полиция, клиники, пожарники
- Техника – ЖКХ, машины, самокаты, датчики.



Цифровая среда

Полностью цифровые боты и службы

- Боты
- Аудиторы
- Интеграторы
- Парсеры



ЗНАНИЯ

Кто и зачем учится?



Забываем так же быстро?

Для движения вперед надо знать куда уже ходили или делали что бы снова не наступать на те же грабли



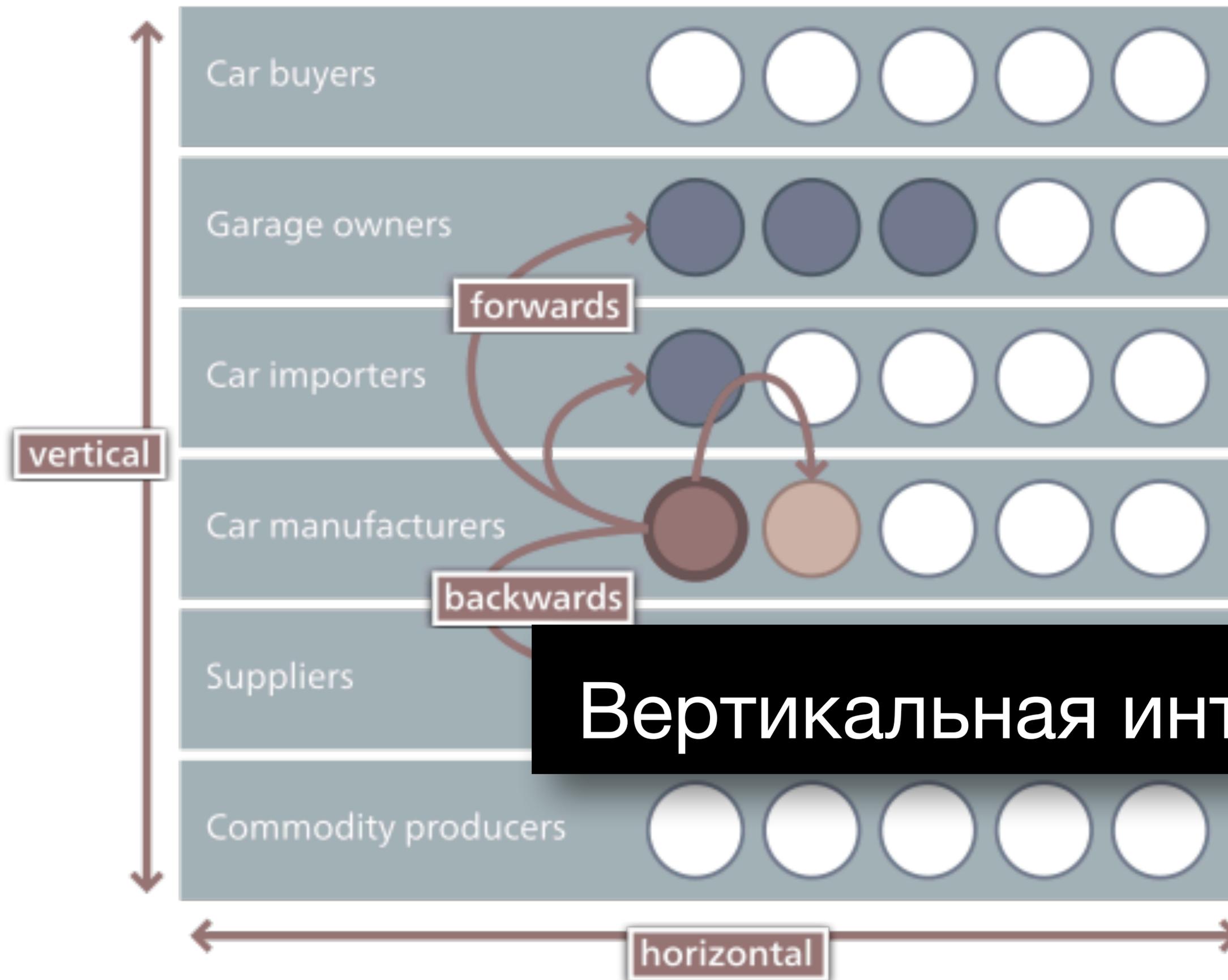
Умные бизнесы?

Опыт, экспертиза, преимущества: продукты уже и так одинаковые



DataScience?

Снижать риск человеческого фактора



Вертикальная интеграция

Тааак!?

К чему это все, да действительно, давайте подумать



Кругом столько динозавров

Node.js – ну вот нафига





98% OF FORTUNE 500 COMPANIES
Use Node JS Regularly.

NODE JS FOUNDATION SURVEY

ИЗЫСКАННО И УДОБНО
ОБРАЗ С ПОДИУМА

1 | 6



BURBERRY





Abu Dhabi Government Services

A unified system helping you find Abu Dhabi government services and information

🔍 What are you looking for?

Popular : [Trade Licence Enquiry](#) [Request for Issuing Economic Licence](#)

Benefits for Emiratis
Healthcare, education, employment, Emiratisation, financing, retirement, social welfare and support

Business Events & Advertising
Abu Dhabi government promotions and event services, permits, funding, campaigns

Start & Manage a Business
Economic licences and industrial licences for investors in one place to start and manage their business

Consultations & Training
Managing and developing a business in Abu Dhabi, expert guidance and support

Education & Training
Abu Dhabi education system, universities, scholarships and training opportunities

Entertainment & Events
Family activities, community recreation, programs, celebrations

→

Planning
landmarks, activities

TAMM.AbuDhabi

Возможно маркетинг, но все равно

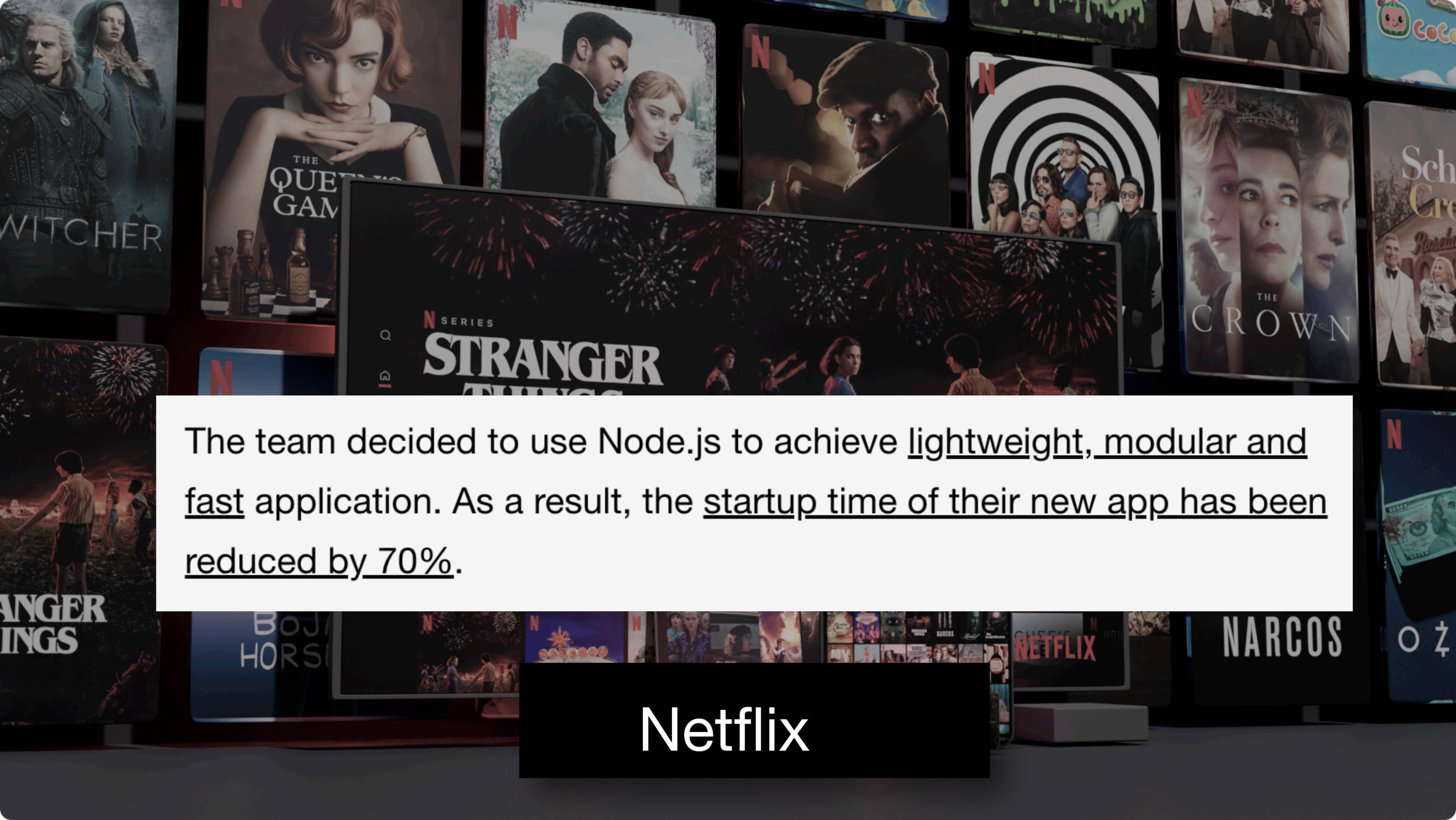


The Node.js app was built almost **twice as fast with fewer people**, in **33% fewer lines of code** and **40% fewer files** (in comparison with previous Java-based application).

PayPal

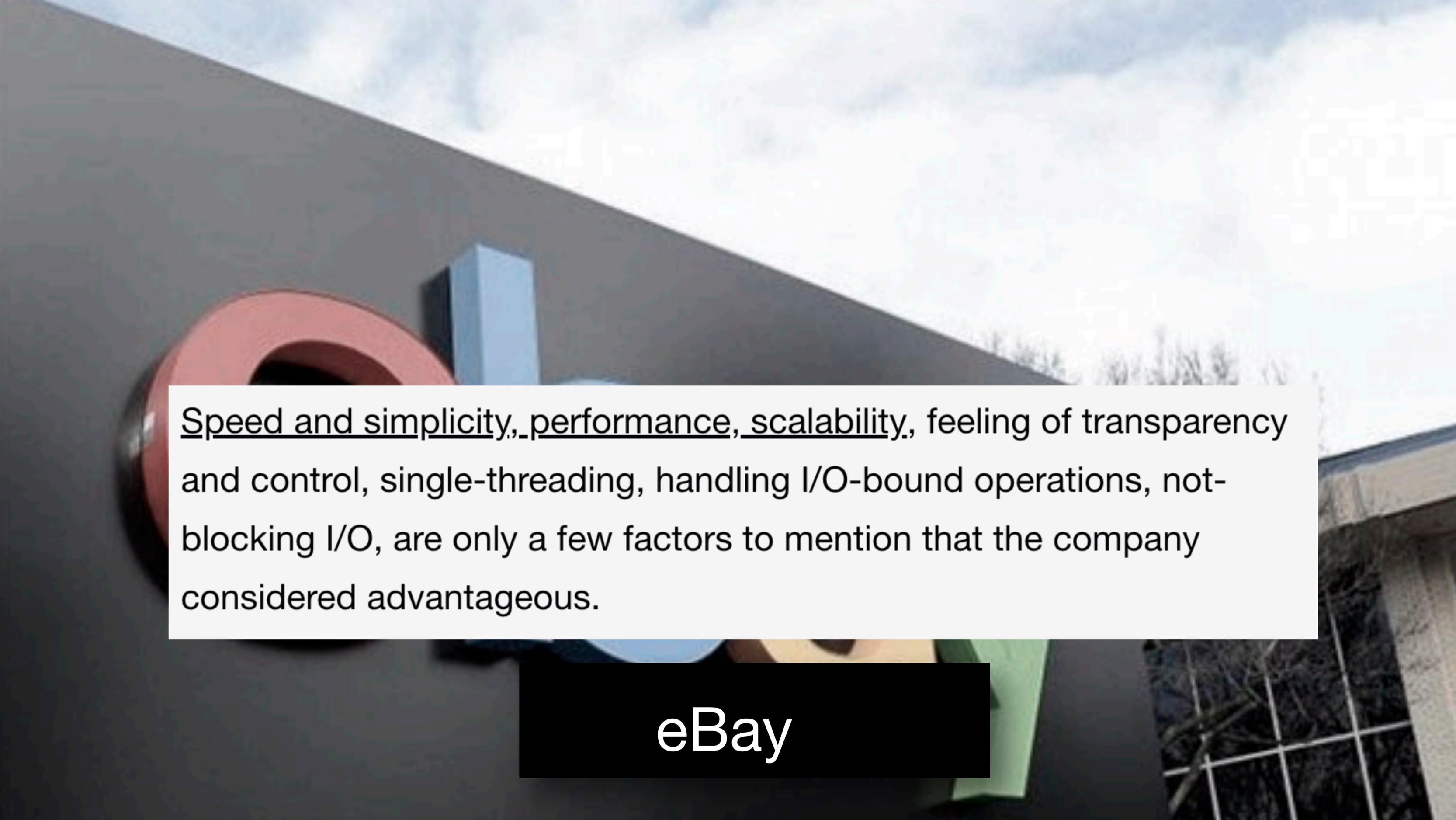
When compared with the previous Ruby on Rails-based version, the new mobile app is up to 20 times faster and uses only a fraction of resources – servers were cut from 30 to 3. The development itself was unusually fast.

LinkedIn



The team decided to use Node.js to achieve lightweight, modular and fast application. As a result, the startup time of their new app has been reduced by 70%.

Netflix

The background of the image shows a grey building wall with the eBay logo. The logo consists of several large, 3D letters in various colors: a red 'e', a blue 'b', a yellow 'a', and a green 'y'. The letters are partially visible and appear to be mounted on the wall. The sky is visible in the upper right corner, showing some light clouds.

Speed and simplicity, performance, scalability, feeling of transparency and control, single-threading, handling I/O-bound operations, non-blocking I/O, are only a few factors to mention that the company considered advantageous.

eBay

sources



Financials & Growth Data

17 Goals And KPIs

and Guide

Employee Manual

Add a card...

To Do

Build A Better Burrito: 7 Layers To Success

Nacho Ordinary Birthday - Event Space Rentals



Taco Drone Delivery Service

Superbowl Ad - "

Add a card...

Doing

The Taco Truck World Tour



Operation "Awesome Sauce" - A Recipe For Profit

#NoFiller Instagram Campaign

Global Franchise Opportunities

Done

Focus Group: Corn vs. Flour Tortillas

New Swag: Socks, Scarves & Salsa

Eco Friendly Utensils & Napkins

Update Yelp Listing



Grand Opening Celebration

Add a card...

Trello

А еще?

Кто и где использует JS?

Unity

```
import {UnityEngine} from 'csharp'

UnityEngine.Debug.Log('hello world');
let gameObject = new UnityEngine.GameObject("testobject");
console.log(gameObject.name);
gameObject.transform.position = new UnityEngine.Vector3(1, 2, 3);
```

Unreal

```
import * as UE from 'ue'
import {argv} from 'puerts';
let world = argv.getByName("World") as UE.World;
let actor = world.SpawnActor(UE.MainActor.StaticClass(),
    undefined, UE.ESpawnActorCollisionHandlingMethod.Undefined, undefined, undefined) as UE.MainActor;
console.log(actor.GetName());
console.log(actor.K2_GetActorLocation().ToString());
```



We have taken pains to make AWS CDK app development in each language follow that language's usual conventions, so writing AWS CDK apps feels natural, not like writing TypeScript in Python (for example). Take a look:

TypeScript	JavaScript	Python	Java	C#
------------	------------	--------	------	----

```
const bucket = new s3.Bucket(this, 'MyBucket', {
  bucketName: 'my-bucket',
  versioned: true,
  websiteRedirect: {host: 'aws.amazon.com'}});
```

Note
These code snippets are intended for illustration only. They are incomplete and won't run as they are.

ПРОТИВОРЕЧИЯ

Время посмотреть, что где-то есть противоречия





Node.js

Программное обеспечение

Node или Node.js — программная платформа, основанная на движке V8, превращающая JavaScript из узкоспециализированного языка в язык общего назначения. [Википедия](#)

Разработчик: Node.js Foundation и [Даль, Райан](#)

Сайт: nodejs.org (англ.)

Первый выпуск: 27 мая 2009

Последняя версия: 16.7.0 (17 августа 2021);

Лицензия: [лицензия MIT](#)

Написана на: [JavaScript](#), [C++](#), [Python](#), [C](#)

Языки программирования: [JavaScript](#), [Си](#), [C++](#), [CoffeeScript](#)



Deno

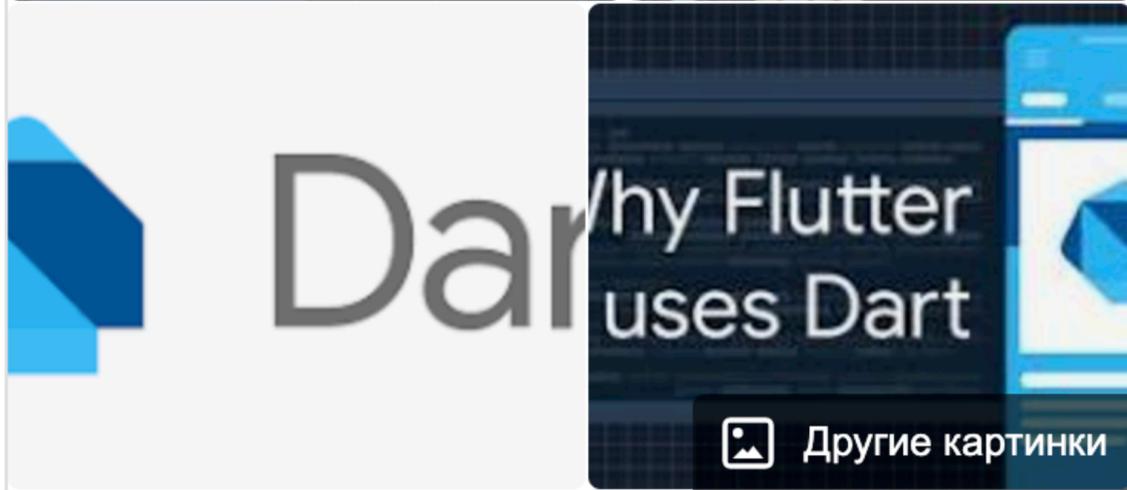
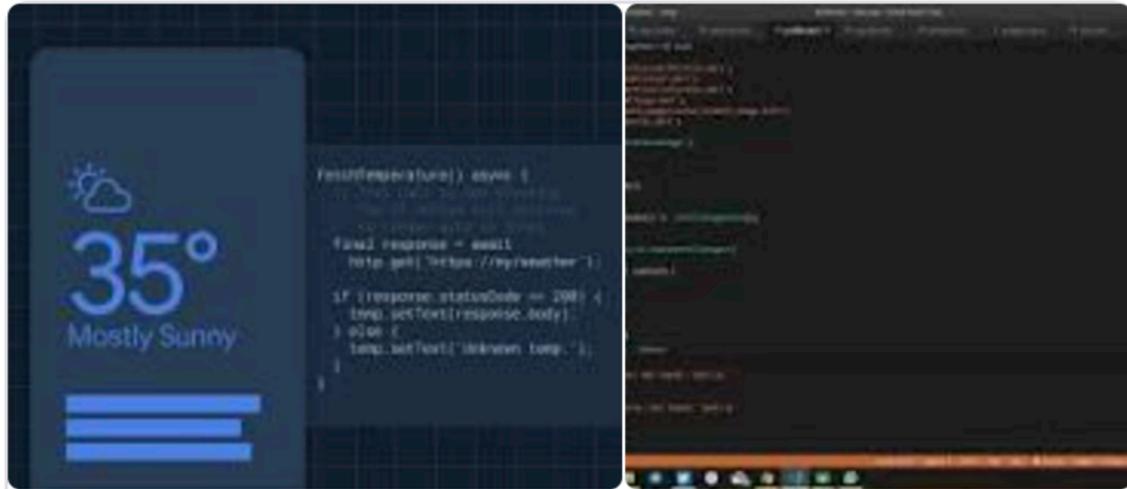
Программное обеспечение

Deno — программная платформа, среда выполнения для JavaScript и TypeScript, основанная на движке JavaScript V8 и написанная на языке программирования Rust. Проект Deno был создан Райаном Далем, создателем Node.js. Deno совмещает функциональность среды выполнения и пакетного менеджера. [Википедия](#)

Автор-создатель: [Райан Даль](#)

Дата выхода: 13 мая 2018 г.

Языки программирования: [JavaScript](#), [TypeScript](#), [Rust](#), [Go](#), [C++](#)



Dart

Язык программирования

Dart — язык программирования, созданный Google. Dart позиционируется в качестве замены/альтернативы JavaScript. Один из разработчиков языка Марк Миллер написал, что JavaScript «имеет фундаментальные изъяны», которые невозможно исправить. Поэтому и был создан



Deno

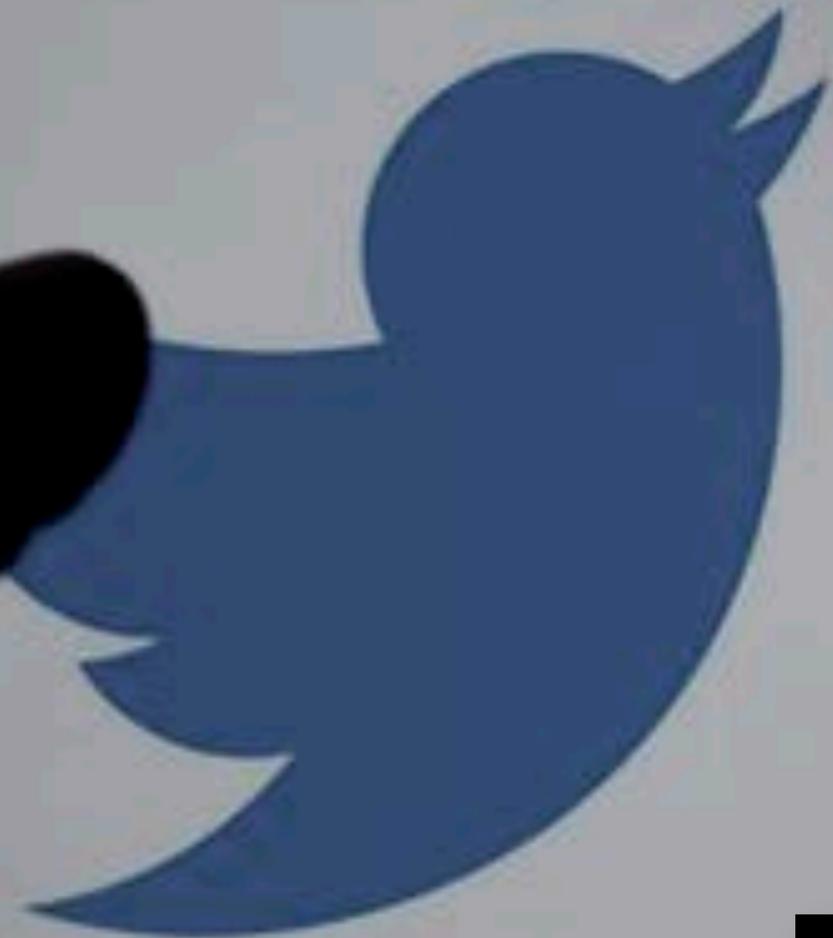
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Автор-создатель: [Райан Даль](#)

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Языки программирования: [JavaScript](#), [TypeScript](#), [Rust](#), [Go](#), [C++](#)



Twitter



NodeJs

VS



PHP



TREND

230,283

WEBSITES



TREND

5,744,034

WEBSITES

🕒 NodeJs is **free** to use

🔗 <https://nodejs.org>

📖 Node.js is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient.

🕒 PHP is **free** to use

🔗 <http://php.net/>

📖 PHP is a widely-used general-purpose scripting language that is especially suited for Web development and can be embedded into HTML.

Java Script

vs

Node JS

Чем он так хорош?

Это какая то ошибка?

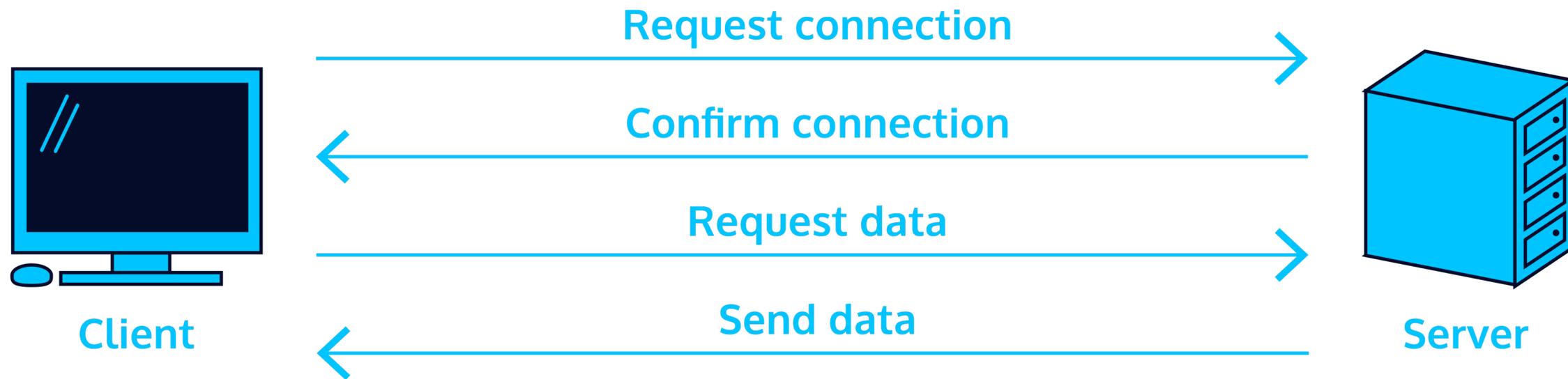
```
11  var http = require('http');
12
13  // An example of a web server written with Node which responds with 'Hello World'
14  // To run the server, put the code into a file called example.js and execute it
15  http.createServer(function (request, response) {
16      response.writeHead(200, {'Content-Type': 'text/plain'});
17      response.end('Hello World\n');
18  }).listen(8124);
19
20  console.log('Server running at http://127.0.0.1:8124/');
21
```

```

198  /* *****
199  * EVENTS
200  * http://nodejs.org/api/events.html
201  * ***** */
202
203
204  // All objects which emit events are instances of events.EventEmitter. You can access this module by doing:
205  // To access the EventEmitter class, require('events').EventEmitter.
206  // All EventEmitters emit the event 'newListener' when new listeners are added and 'removeListener' when a li
207
208  emitter.addListener(event, listener); // Adds a listener to the end of the listeners array for the spe
209  emitter.on(event, listener); // Same as emitter.addListener().
210  emitter.once(event, listener); // Adds a one time listener for the event. This listener is invo
211  emitter.removeListener(event, listener); // Remove a listener from the listener array for the specified e
212  emitter.removeAllListeners([event]); // Removes all listeners, or those of the specified event.
213  emitter.setMaxListeners(n); // By default EventEmitters will print a warning if more than 10
214  emitter.listeners(event); // Returns an array of listeners for the specified event.
215  emitter.emit(event, [arg1], [arg2], [...]); // Execute each of the listeners in order with the supplied argu
216
217  EventEmitter.listenerCount(emitter, event); // Return the number of listeners for a given event.

```

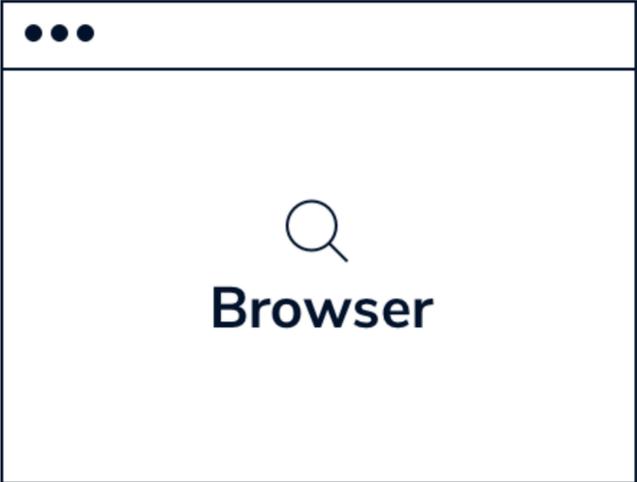
TCP



UDP



Client Side



1. HTTP Request



Web Server

Server Side



2. Data Request



Database

3. Data Response



4. HTTP Response



Node.js Application

Node.js API (JavaScript)

Node.js Bindings
(JavaScript to C/C++)

Node.js Standard Library
(Core Modules)

C / C++ AddOns

V8
JavaScript Engine

LibUv
Library

c-ares

llhttp /
http-parser

open-ssl

zlib

Operating System

Shared memory and atomics

2018-10-31

```
var sab = new SharedArrayBuffer(1024);  
worker.postMessage(sab);
```

<https://hacks.mozilla.org/category/code-cartoons/a-cartoon-intro-to-sharedarraybuffers/>

https://developer.mozilla.org/ru/docs/Web/JavaScript/Reference/Global_Objects/SharedArrayBuffer

https://exploringjs.com/es2016-es2017/ch_shared-array-buffer.html

2018-06-20

Worker Threads

Workers (threads) are useful for performing CPU-intensive JavaScript operations. They do not help much with I/O-intensive work.

The Node.js built-in asynchronous I/O operations are more efficient than Workers can be.

https://nodejs.org/api/worker_threads.html

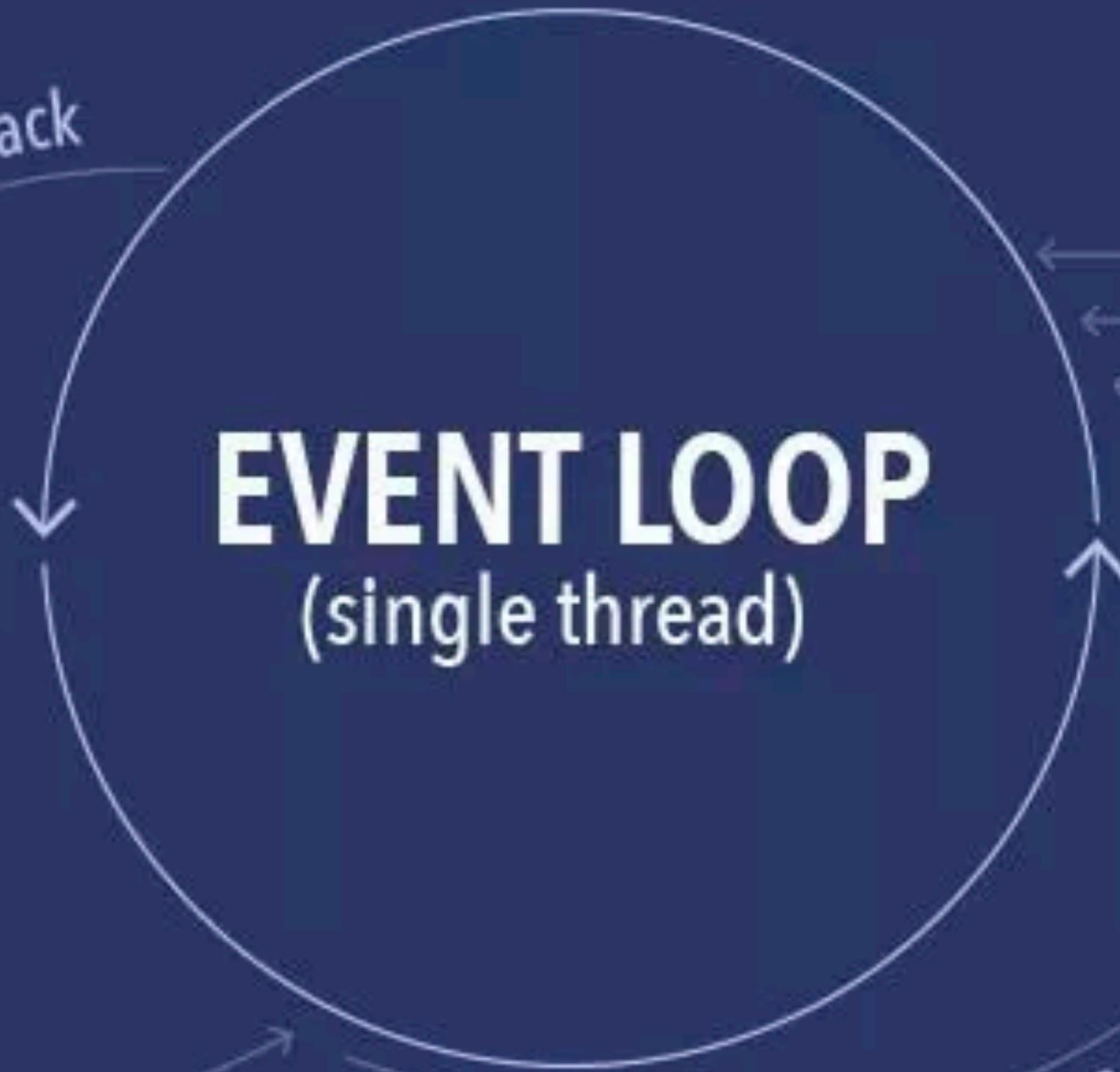
```
const {
  Worker, isMainThread, parentPort, workerData
} = require('worker_threads');

if (isMainThread) {
  module.exports = function parseJSAsync(script) {
    return new Promise((resolve, reject) => {
      const worker = new Worker(__filename, {
        workerData: script
      });
      worker.on('message', resolve);
      worker.on('error', reject);
      worker.on('exit', (code) => {
        if (code !== 0)
          reject(new Error(`Worker stopped with exit code ${code}`));
      });
    });
  };
} else {
  const { parse } = require('some-js-parsing-library');
  const script = workerData;
  parentPort.postMessage(parse(script));
}
```

INTENSIVE OPERATION

- File System
- Database
- Computation

Register Callback



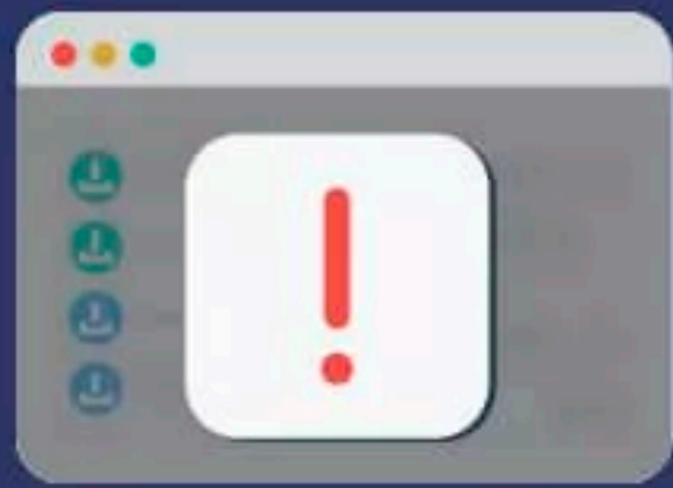
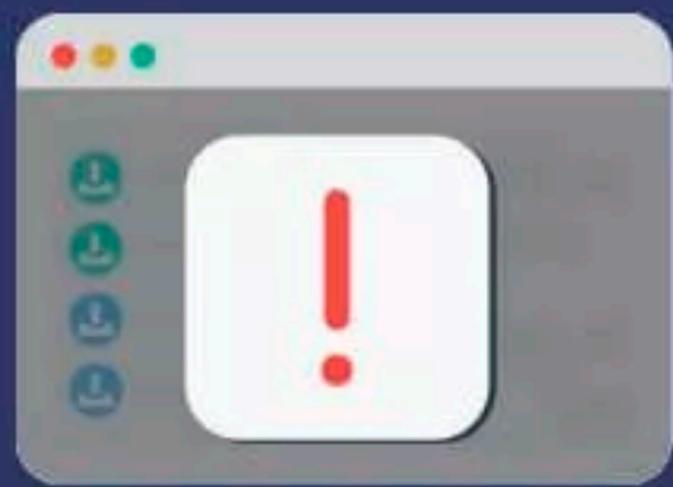
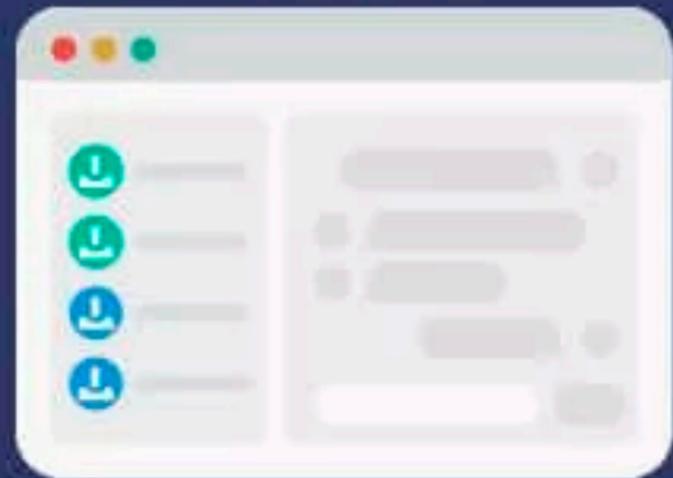
REQUESTS, ETC



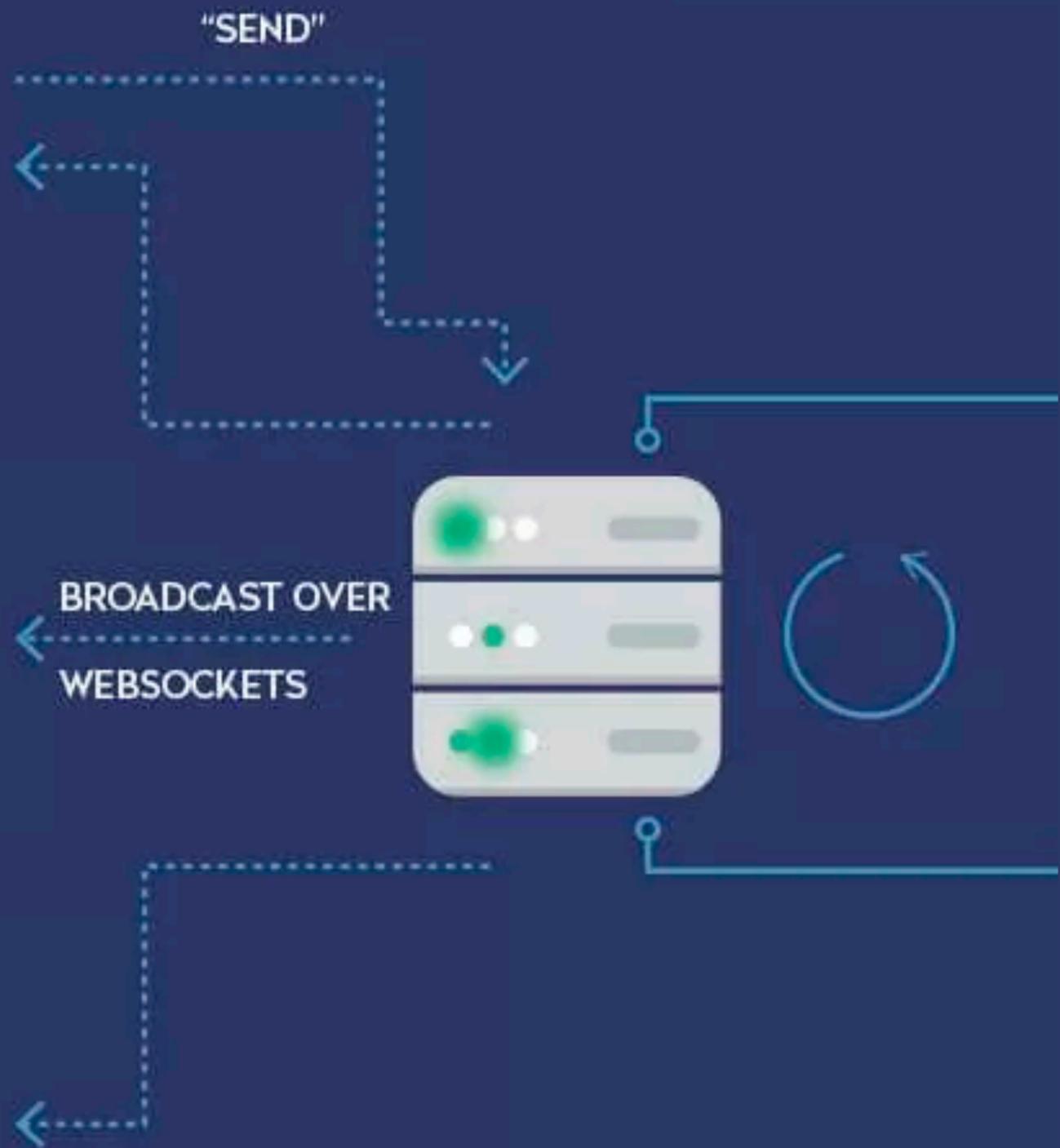
Operation Complete

Trigger Callback.

USERS



SERVER



"SEND"

BROADCAST OVER WEBSOCKETS

Universal JavaScript

The diagram illustrates the architecture of Universal JavaScript. It features a central vertical line with a small circle at the bottom. A red bar labeled 'API' is positioned above the line. To the left of the line, there are two stacked green bars: the top one is labeled 'Node.js' and the bottom one is labeled 'Shared code'. To the right of the line, there are two stacked grey bars: the top one is labeled 'Browser' and the bottom one is labeled 'Client'. The 'Shared code' bar is connected to the 'API' bar, and the 'Node.js' bar is connected to the 'Browser' bar.

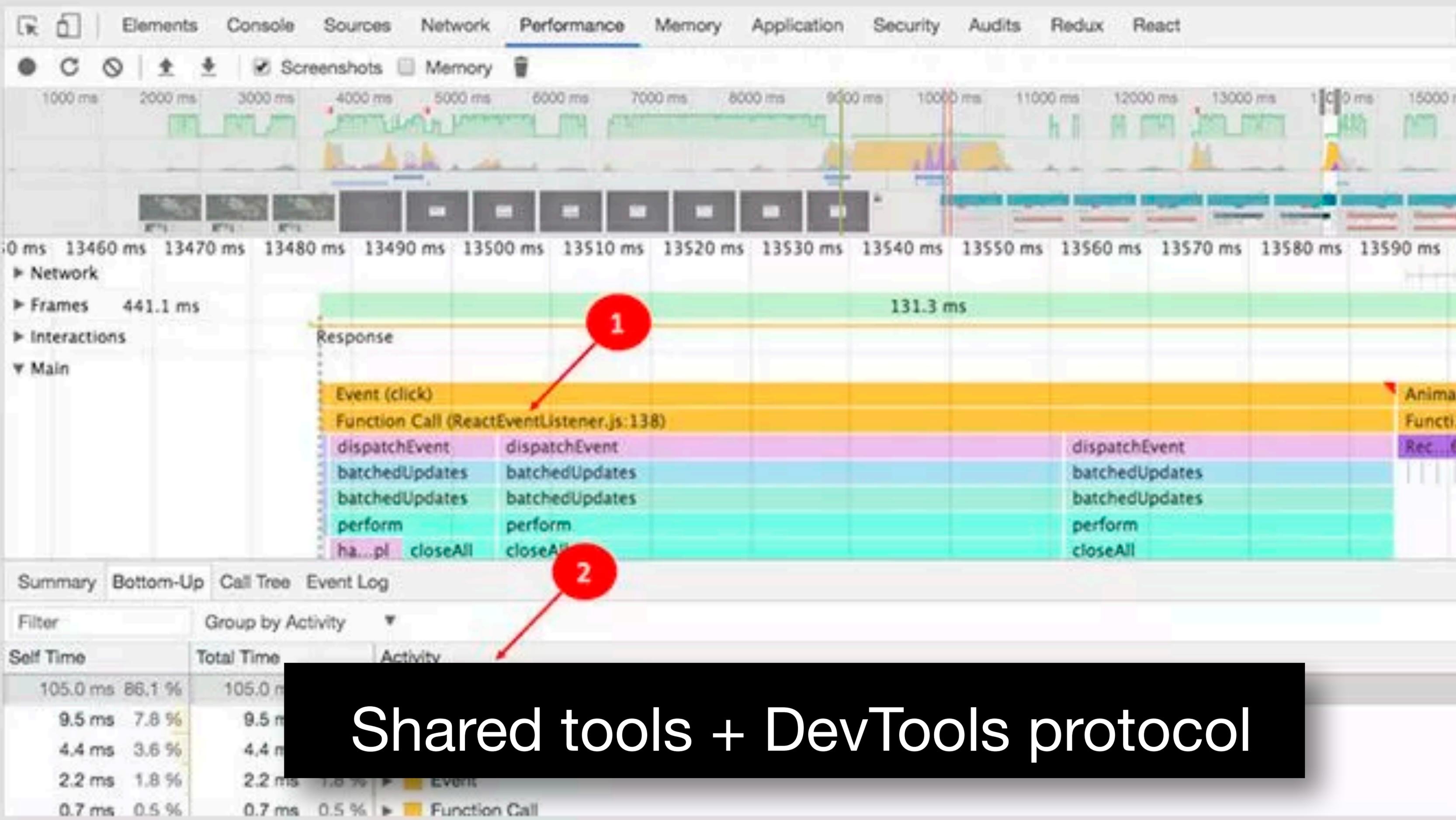
Node.js

Browser

API

Shared code

Client



Shared tools + DevTools protocol



В 2019 году Node.js Foundation объединилась с JS Foundation, чтобы сформировать новую OpenJS Foundation. с заявленной миссией способствовать здоровому росту JavaScript и веб-экосистемы в целом. Википедия [site:hrwiki.ru](https://hrwiki.ru)

Среди учредителей были Google , Microsoft , IBM , PayPal , GoDaddy и Joyent

<https://openjsf.org/>

OpenJS Foundation Members

the **BLOG STARTER**

Bloomberg
Engineering

Coil

coinbase

GitHub

GoDaddy

Google

GROUPON

hackerone

IBM

Joyent

Microsoft

NearForm

NETFLIX

NODESOURCE

NodeXperts

Profound Logic

Red Hat

SAUCELABS

snyk

stream





2020
Developer
Survey

Исследования

In February 2020 nearly 65,000 developers told us how they learn and level up, which tools they're using, and what they want.

<https://insights.stackoverflow.com/survey/2020>



2020
Developer
Survey

Организация труда

In February 2020 nearly 65,000 developers told us how they learn and level up, which tools they're using, and what they want.

<https://insights.stackoverflow.com/survey/2020#correlated-technologies>



2020
Developer
Survey

Про бабки

In February 2020 nearly 65,000 developers told us how they learn and level up, which tools they're using, and what they want.

<https://insights.stackoverflow.com/survey/2020#top-paying-technologies>

Node JS Developer Salary

Yearly Monthly Weekly Hourly Table View



Node JS Developer Salary Comparison by Location

Nationwide United States	\$113,791
St Petersburg, RU	\$113,791

Node JS Developer Salary

Yearly Monthly Weekly Hourly Table View



Node JS Developer Salary Comparison by Location

Nationwide United States	\$113,791
St Petersburg, RU	\$113,791

Javascript Developer Salary

Yearly Monthly Weekly Hourly Table View



Javascript Developer Salary Comparison by Location

Nationwide United States	\$107,529
St Petersburg, RU	\$107,529



Node JS Developer Salary

Yearly Monthly Weekly Hourly Table View



Node JS Developer Salary Comparison by Location

Nationwide United States	\$113,791
St Petersburg, RU	\$113,791

Scala Developer Salary

Yearly Monthly Weekly Hourly Table View



Scala Developer Salary Comparison by Location

Nationwide United States	\$139,292
St Petersburg, RU	\$139,292



Node JS Developer Salary

Yearly Monthly Weekly Hourly Table View



Node JS Developer Salary Comparison by Location

Nationwide United States	\$113,791
St Petersburg, RU	\$113,791

Go Developer Salary

Yearly Monthly Weekly Hourly Table View



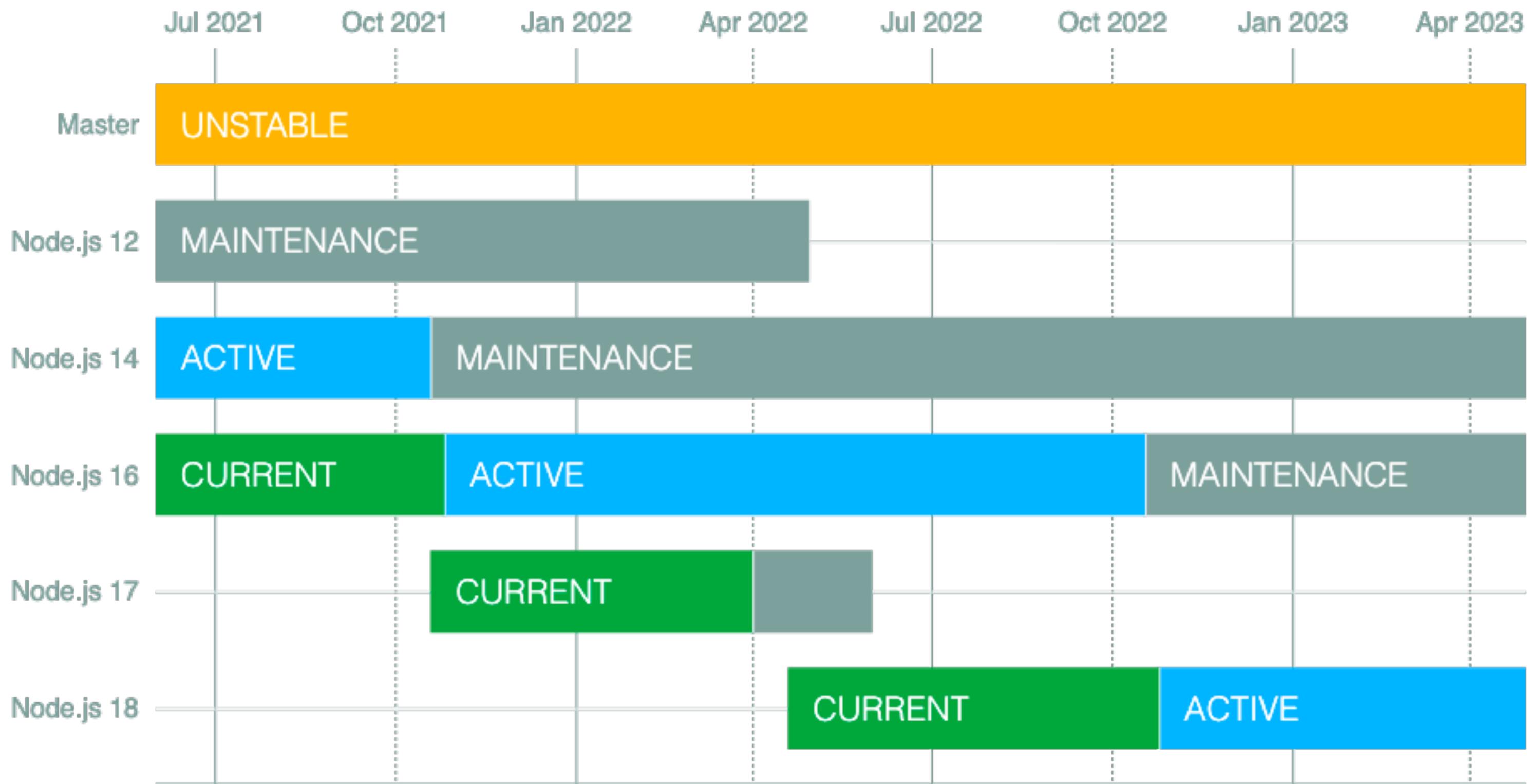
Go Developer Salary Comparison by Location

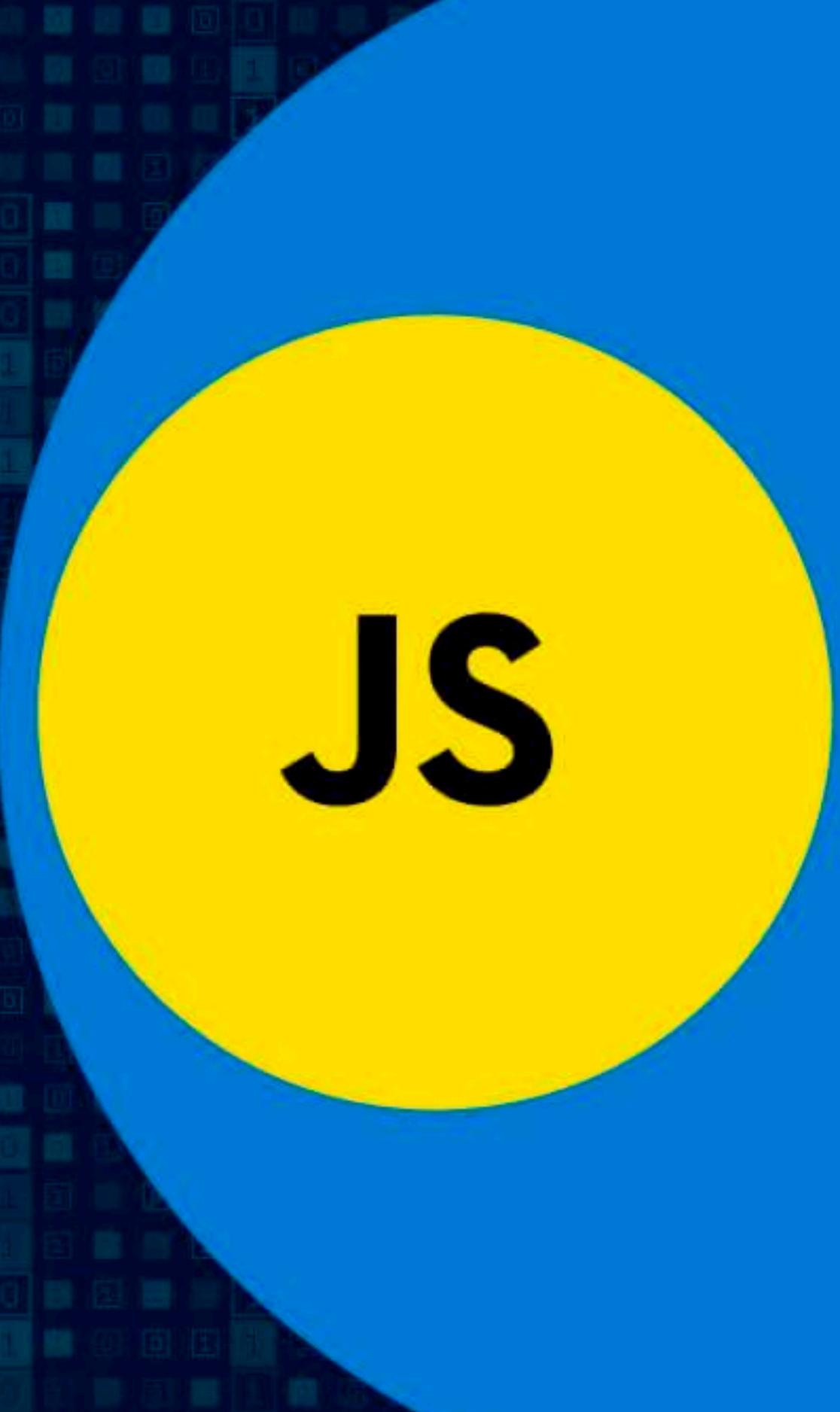
Nationwide United States	\$110,456
St Petersburg, RU	\$110,456



Качество?

Это же JS все еще бардак? Каждый день новый фреймворк?



A graphic consisting of a large blue circle on a dark blue background with a grid of binary code. Inside the blue circle is a smaller yellow circle. The letters 'JS' are written in a bold, black, sans-serif font in the center of the yellow circle.

JS

A graphic consisting of a large blue circle on a dark blue background with a grid of binary code. The letters 'TS' are written in a bold, white, sans-serif font in the center of the blue circle.

TS

Pre-release

v4.4-rc

55dd850

Compare

TypeScript 4.4 RC

weswigham released this 14 days ago

For release notes, check out the [release announcement](#).

For the complete list of fixed issues, check out the

- [fixed issues query for Typescript 4.3.0 \(Beta\)](#).
- [fixed issues query for Typescript 4.3.0 \(Beta\)](#).

Downloads are available on:

- [npm](#)
- [Visual Studio 2017/2019 \(Select new version in project options\)](#)
- [NuGet package](#)



13

7

14 people reacted

Latest release

v5.51.1

d3da48e

Compare

v5.51.1

sokra released this 7 days ago

Bugfixes

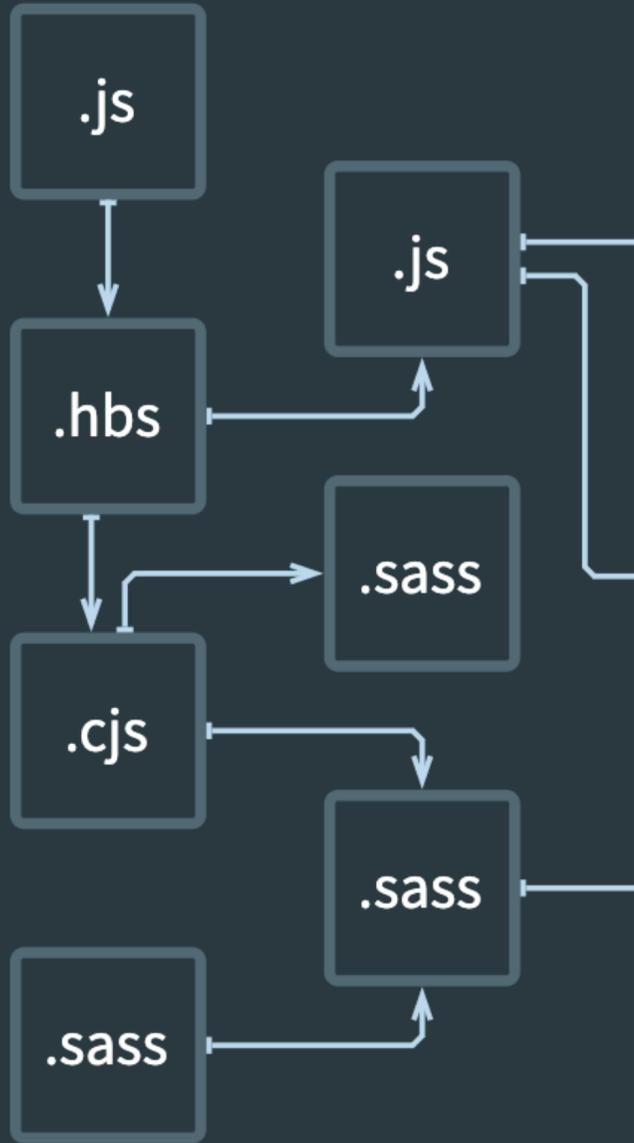
- library: "module" propages top-level-await correctly
- fix crash in filesystem snapshotting when trying to snapshot a non-existing
- fix some context-dependent logic in concatenated modules and source url

👍 1 ❤️ 6 🚀 7 10 people reacted

Assets 2

Source code (zip)

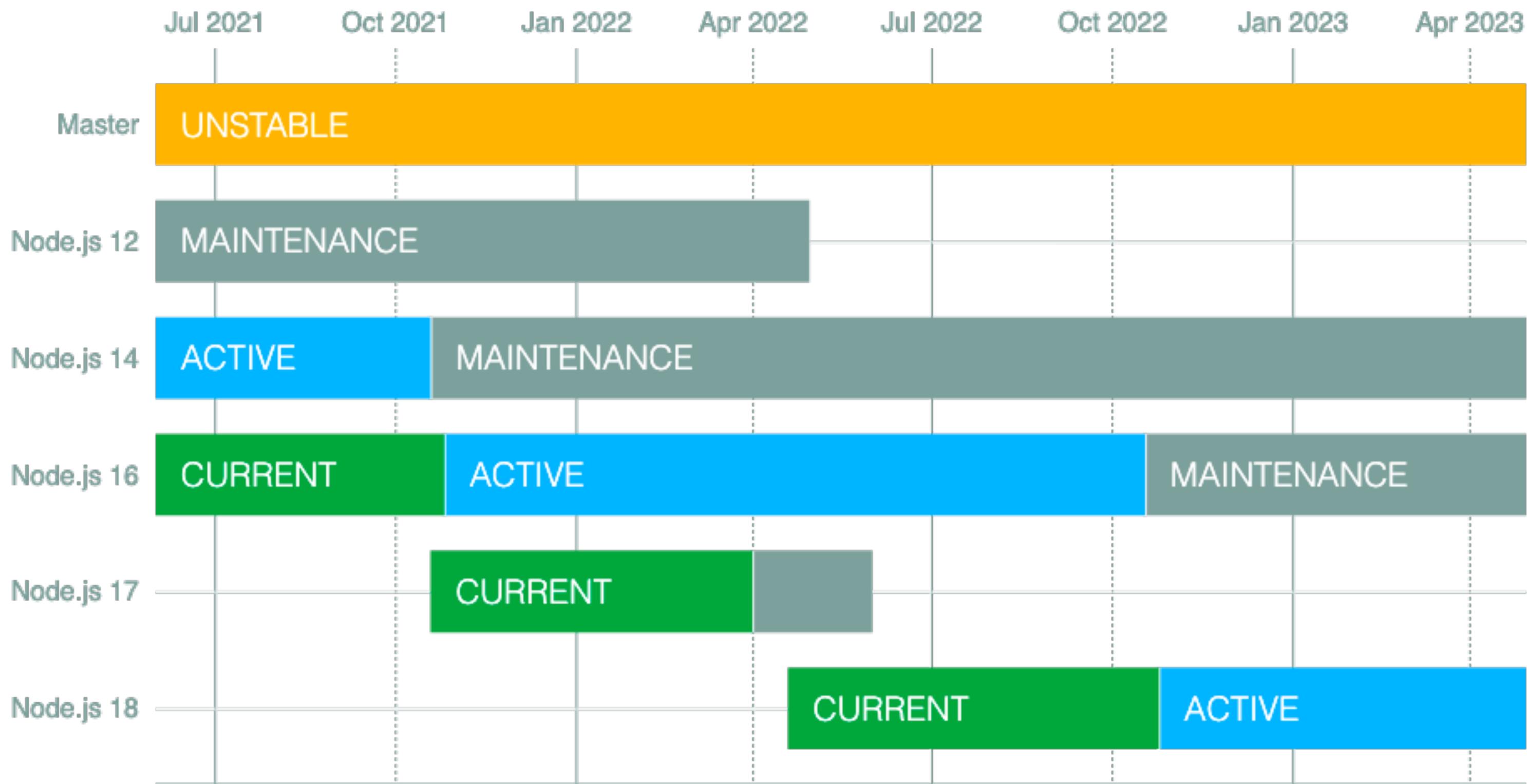
Source code (tar.gz)

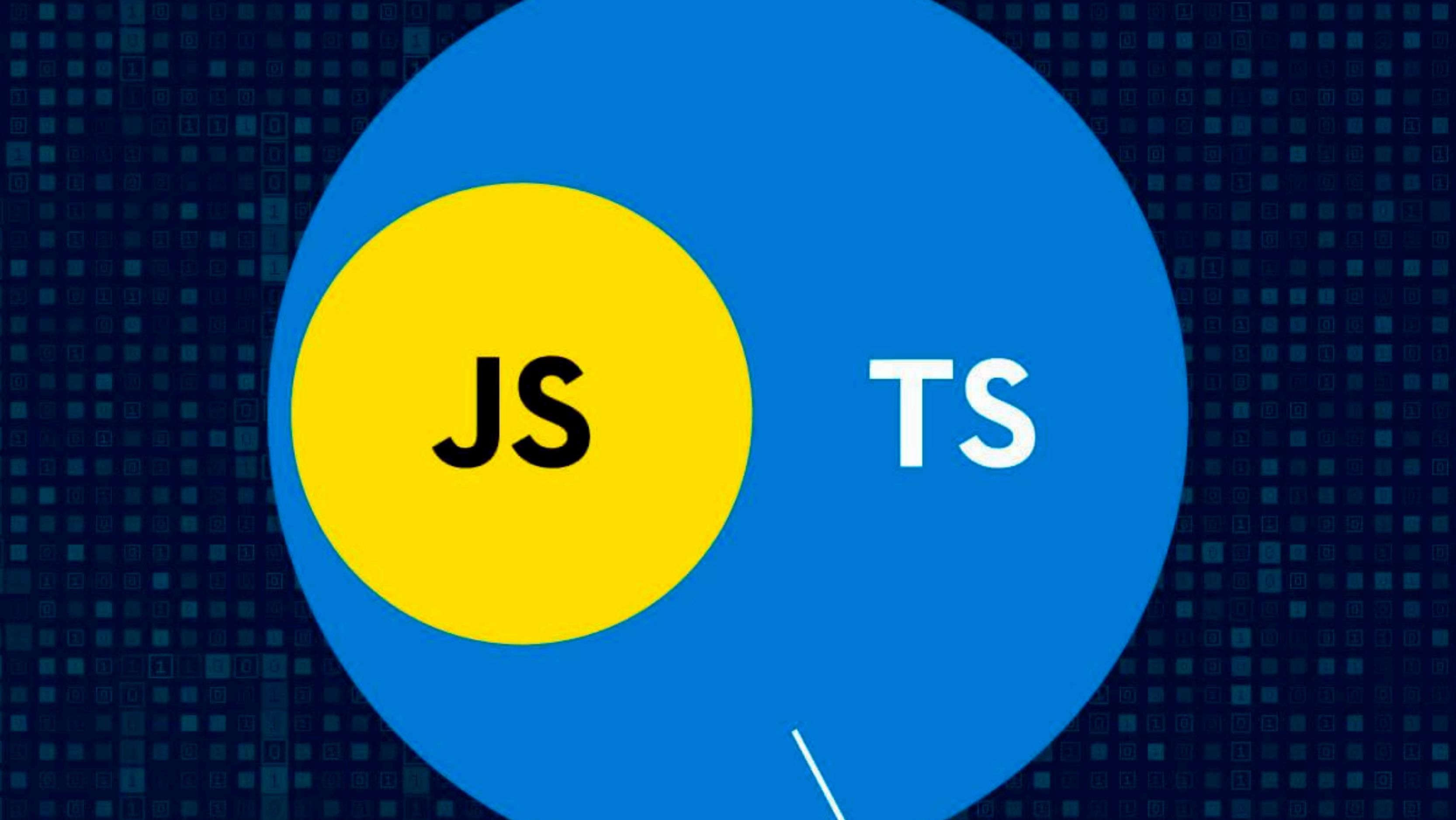


MODULES WITH DEPENDEN

Стандарты?

Что со стандартизацией разработки? Есть ли подвижки?





JS

TS

Pre-release

v4.4-rc

55dd850

Compare

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<https://www.typescriptlang.org/>

0 people reacted

Latest release

v5.51.1

d3da48e

Compare

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 sokra released this 7 days ago

Bugfixes

- `library: "module"` propages top-level-await correctly
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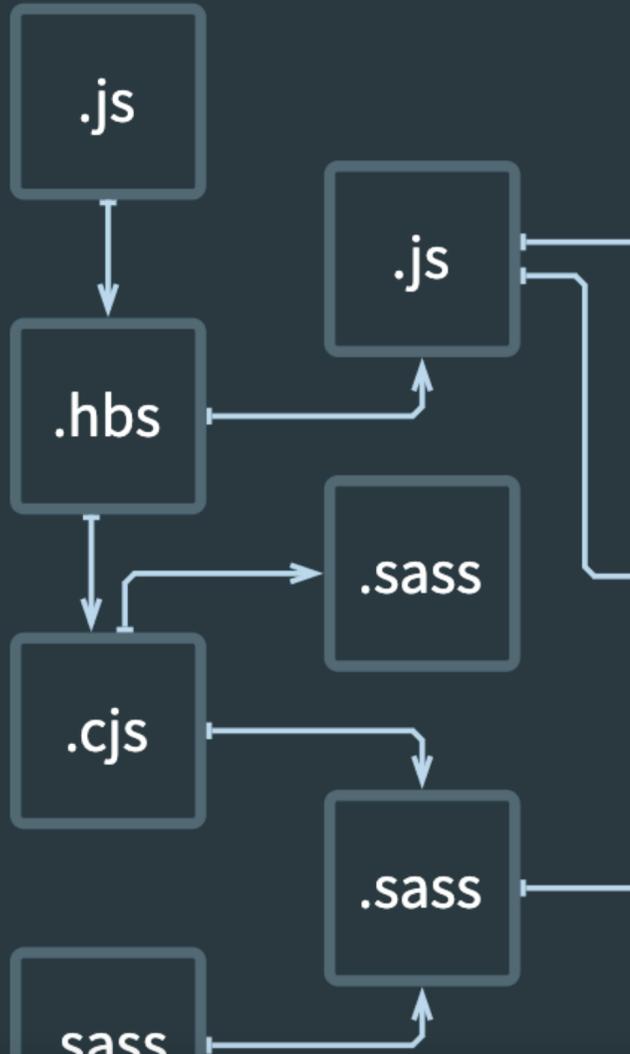
  1  6  7 10 people reacted

Assets 2

 [Source code \(zip\)](#)

[Source code \(tar.gz\)](#)

<https://webpack.js.org/>





Hello, n

A progressive Node.js
and scalable server-si

<https://nestjs.com/>

2017

Releases

Tags

21 days ago ... Show 6 newer tags

Latest release

v8.0.0

8b9b0df

Compare

v8.0.0



kamilmysliwiec released this on 7 Jul

Features

- **common:** refactor the built-in console logger class [#6142](#) [#5353](#), separate out add buffering logs feature (buffer init logs and flush them out when a custom log support log levels feature [nestjs/docs.nestjs.com#1613](#))
- **common:** add `StreamableFile` class for streaming files from controller routes
- **common:** add `ParseFloatPipe` and `ParseEnumPipe` classes [#6232](#)
- **core:** add lazy module loader class [#6386](#)
- **core:** add `RouterModule` for defining per-module controller prefixes
- **core:** add the ability to exclude certain routes from the global prefix [#5291](#)
- **core:** API versioning feature [#6278](#)
- **microservices:** support multiple event subscribers (`@EventPattern()` can be
- **microservices:** support passing a property key to the `@Payload()` decorator <#>
- **websockets:** support passing a property key to the `@MessageBody()` decorator

📌 Packet Sender will be at

 Packet Se

Award-winning
send & receive
packets. TCP,

📄 Free Download

Releases

Tags

Latest release

v7.2.3

0d88d7d

Compare

Various bug fixes and enhancements

 dannagle released this on 2 Apr

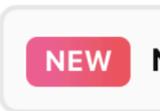
Not every release needs to be ground breaking. Stability updates

The most notable changes are as follows:

1. There is now a toggle switch for Dark Mode. It seems some of us actually just dark styling turned off in attempt to better reuse
2. Some touch-ups to the Dark Mode (maybe you will turn it back
3. Macros now support re-use during persistent connections
4. The snapcraft snap has finally been fixed and a new build rel
5. Complete from-scratch rewrite of the mobile apps, [Android](#) and [iOS](#) (S).

to discuss this release [in the new forums](#).

<https://packetsender.com/>



Pre-release

v11.1.1-canary.17

ed6ce1a

Compare

The 1

Next.js gives you the best
rendering, Type

<https://nextjs.org/>

v11.1.1-canary.17

style released this 18 hours ago

Documentation Changes

- Use recommended pattern in testing example: [#28404](#)

Example Changes

- Update to use the latest MongoDB best practices to limit connection pooling issues

Misc Changes

- [ESLint Plugin] Handles edge case for `no-import-document-in-page` rule: [#28261](#)

Credits

Huge thanks to @htunnicliff, @kukicado, and @housseindjirdeh for helping!

3 people reacted

The Fullstack Framework

Blitz is a batteries-included framework inspired by Ruby on Rails, featuring a "Zero-API" data layer that eliminates the need for REST.

Try Blitz in Under 5 Mins →

<https://blitzjs.com/>

Releases

Tags

Pre-release

v0.40.0-canary.5

25fafd9

Compare

v0.40.0-canary.5

flybayer released this 2 days ago

🌟 Breaking Changes

- `getBlitzRuntimeData()` function removed. It was only used for the `blitz` in installed that recipe, update the `secureheaders.ts` file with the changes in this

🚀 Big Update

- 🎉 Remove custom blitz compiler - all custom features now in core framework!
 - The `next-env.d.ts` feature now works correctly but as `blitz-env.d.ts` updated based on your specific feature usage. *You should check `blitz-e`*
 - The intermediate `.blitz/build` folder is no longer used
 - Fixes all issues caused by `.blitz/build` step
 - Should now work with pnpm
 - Debugger breakpoints should now work
 - Issues with `.gitignore` files is resolved
 - Overall dev/build perf is somewhat improved

2 days ago

v3.5.0-beta.8 ...

698bb87 zip tar.gz

2 days ago

v3.4.9 ...

2ef9855 zip tar.gz

3 days ago

v3.5.0-beta.7 ...

0ff3de1 zip tar.gz

8 days ago

v3.5.0-beta.6 ...

0cb6e25 zip tar.gz

ago

v3.4.8 ...

87ca9d8 zip tar.gz

Next Node Type

Prisma helps app
errors with an o
MySQL and SQL

Releases

Tags

Latest release

2.30.0

120f04c

Verified

Compare

2.30.0

Jolg42 released this 2 days ago

Today, we are excited to share the `2.30.0` stable release 🎉

🌟 Help us spread the word about Prisma by starring the repo or [tweeting](#) about the release

New features & improvements

Full-Text Search for PostgreSQL is now in Preview 🚀

We're excited to announce that Prisma Client now has [preview support](#) for Full-Text Search on F

You can give this a whirl in `2.30.0` by enabling the `fullTextSearch` preview flag:

```
datasource db {  
  provider = "postgresql"  
  url      = env("DATABASE_URL")  
}
```

```
prisma client {  
  provider = "prisma-client-js"  
  previewFeatures = ["fullTextSearch"]  
}
```

<https://www.prisma.io/>

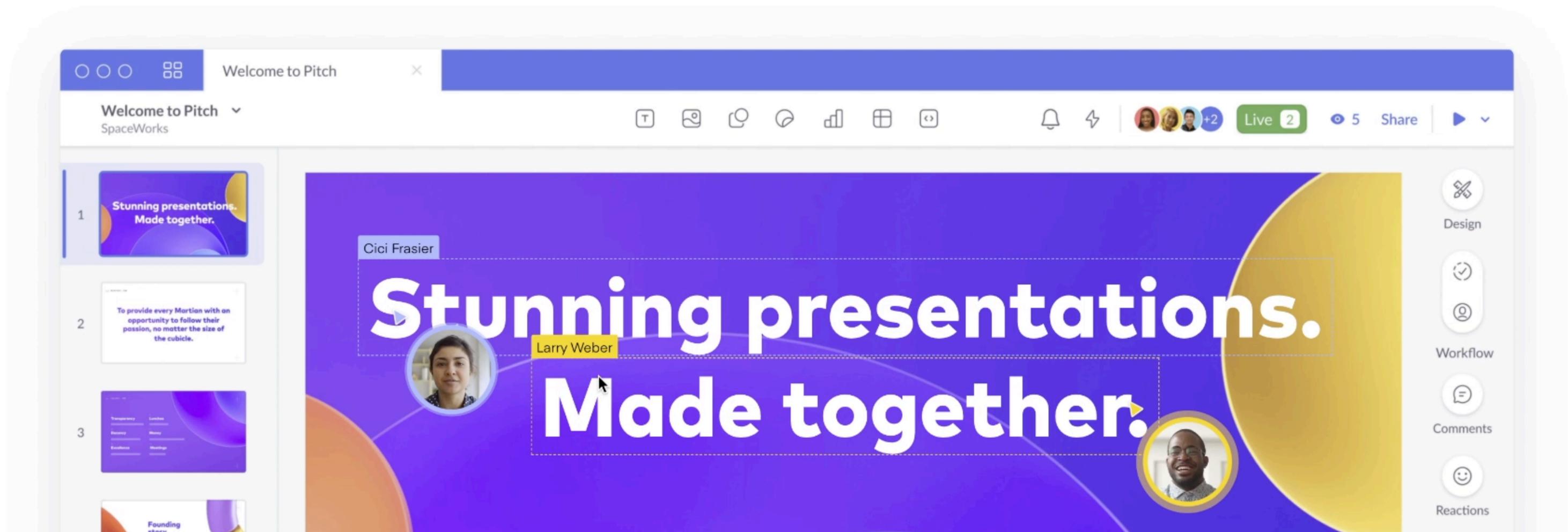
Что решаем?

Кейсы Node.JS

```
3  const request = require('request');
4
5  module.exports.webhook = (event, context, callback) => {
6    const token = '[YOU TOKEN PLZ]';
7    const BASE_URL = `https://api.telegram.org/bot${token}/sendMessage`;
8
9    const body = JSON.parse(event.body)
10   const message = body.message
11   const chatId = message.chat.id
12
13   request.post(BASE_URL).form({ text: message.text, chat_id: chatId });
14
15   const response = {
16     statusCode: 200,
17     body: JSON.stringify({
18       input: event,
19     }),
20   };
21
22   return callback(null, response);
23
24   };
```

Разработка Ботов

Для соц сетей и всего такого



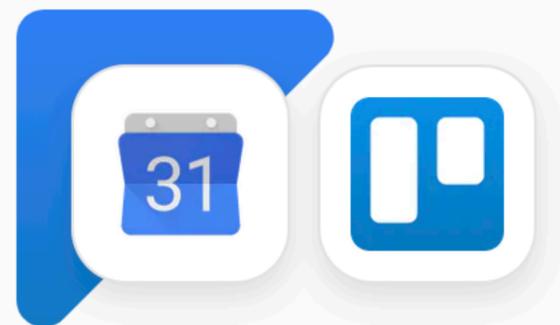
Collaborative web WebRTC/CRDT/I/O

Для всяких коллаборативных вещей

<https://slate-collaborative.herokuapp.com/>

<https://github.com/yjs/yjs>

<https://github.com/automerge/automerge>



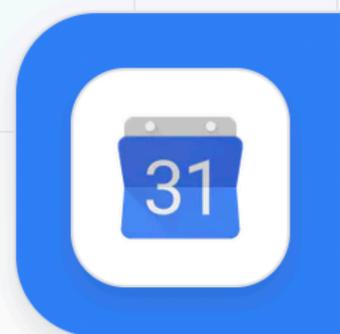
Google Calendar + Trello Integrations

[Integrations](#)[Help](#)

How to connect Google Calendar + Trello

Zapier lets you send info between Google Calendar and Trello automatically—no code required.

When this happens...



New Event

Triggers when an event is created.

automatically do this!



Микросервисы

Уже столько всего есть, хух

[Try this template](#)

НАСТРОЙКИ

- Интеграции
- Счет и оплата
- Общие настройки
- Пользователи
- API
- Коммуникации
- Сенсей**
- Почта
- Аналитика
- Настройки

Выслать бриф и информацию >

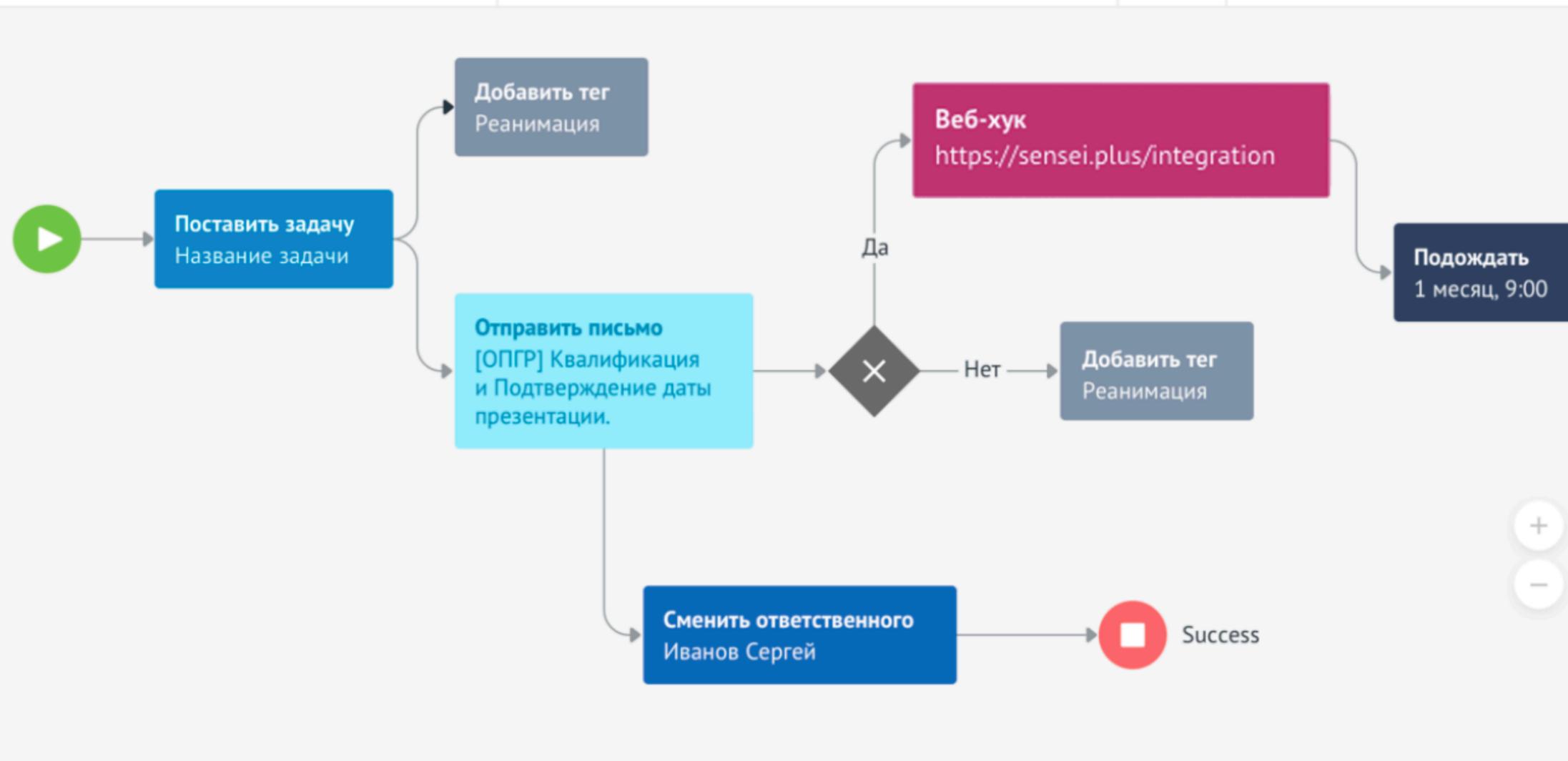
Демо-режим до 14.11.2018

Купить



Отменить

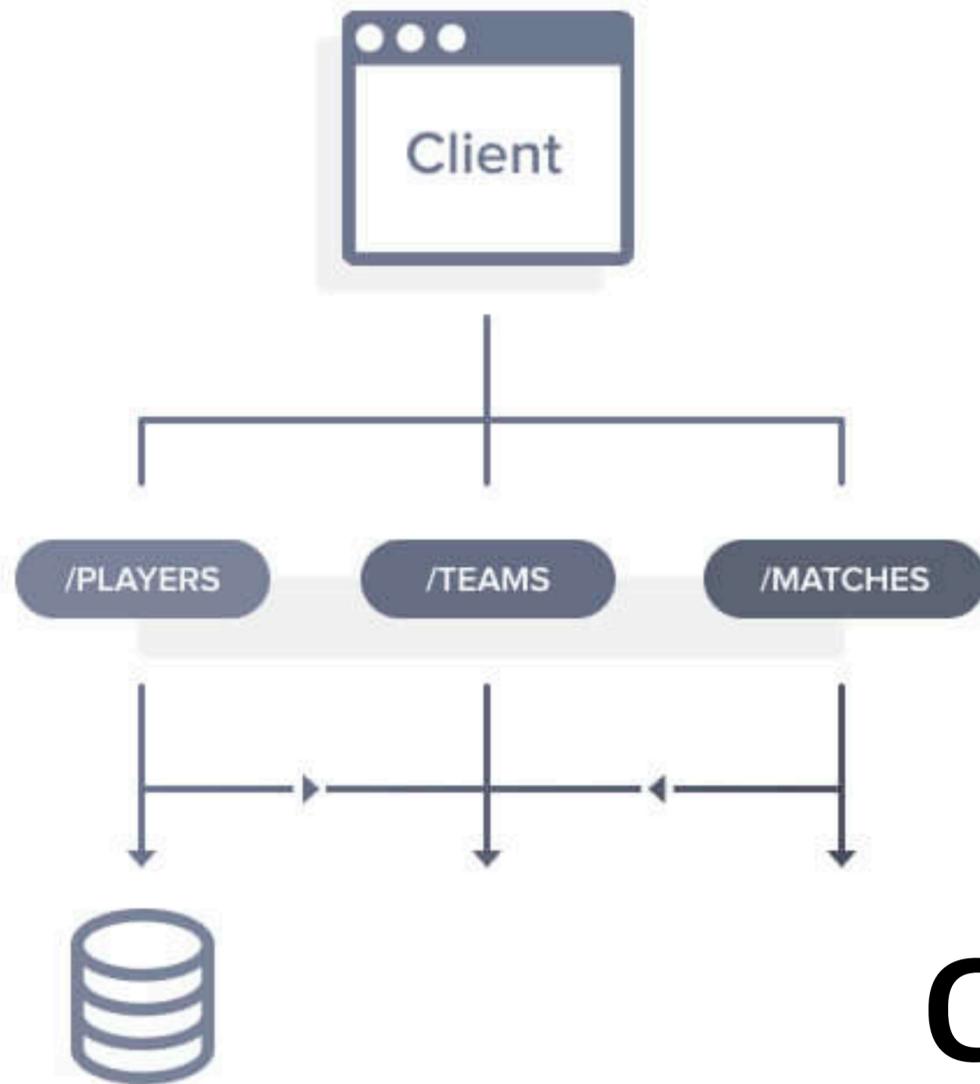
Сохранить



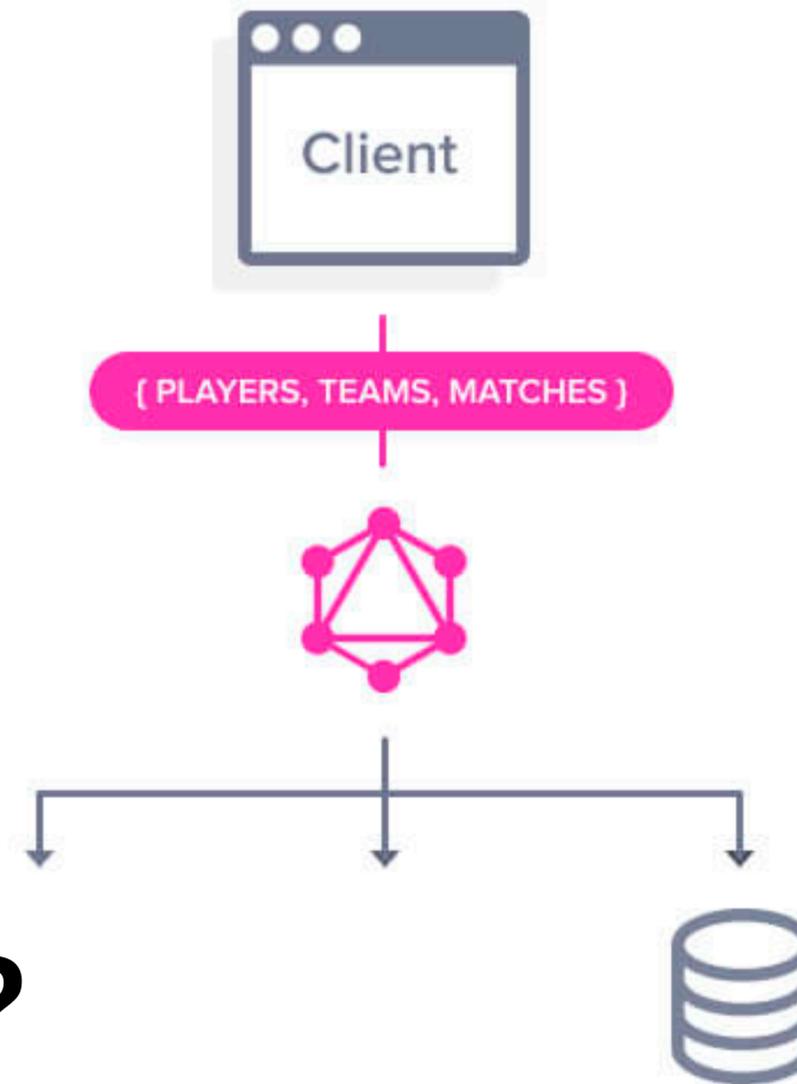
Интеграции

Уже столько всего есть, хух

Rest API

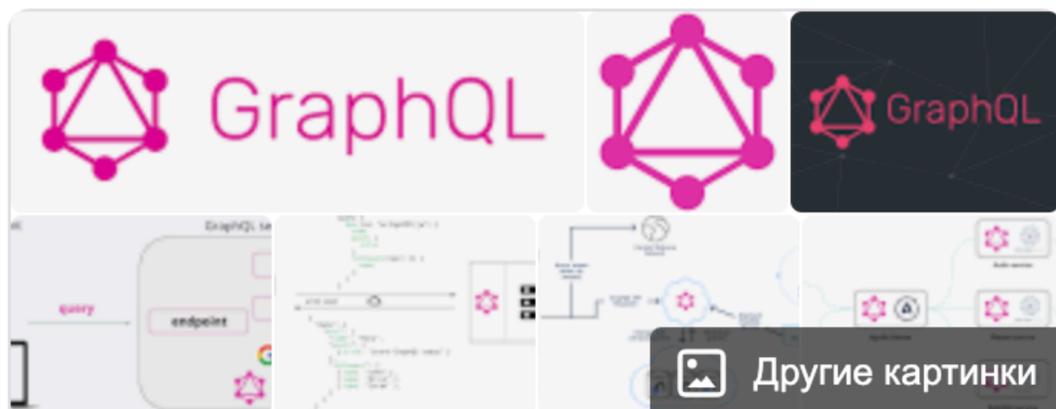


GraphQL API



CRUD?

Так какой CRUD REST?



GraphQL

Язык программирования

Переведено с английского языка. - GraphQL - это язык запросов и манипулирования данными с открытым исходным кодом для API, а также среда выполнения для выполнения запросов с существующими данными.

[Википедия \(Английский язык\)](#)

Оригинал описания ^

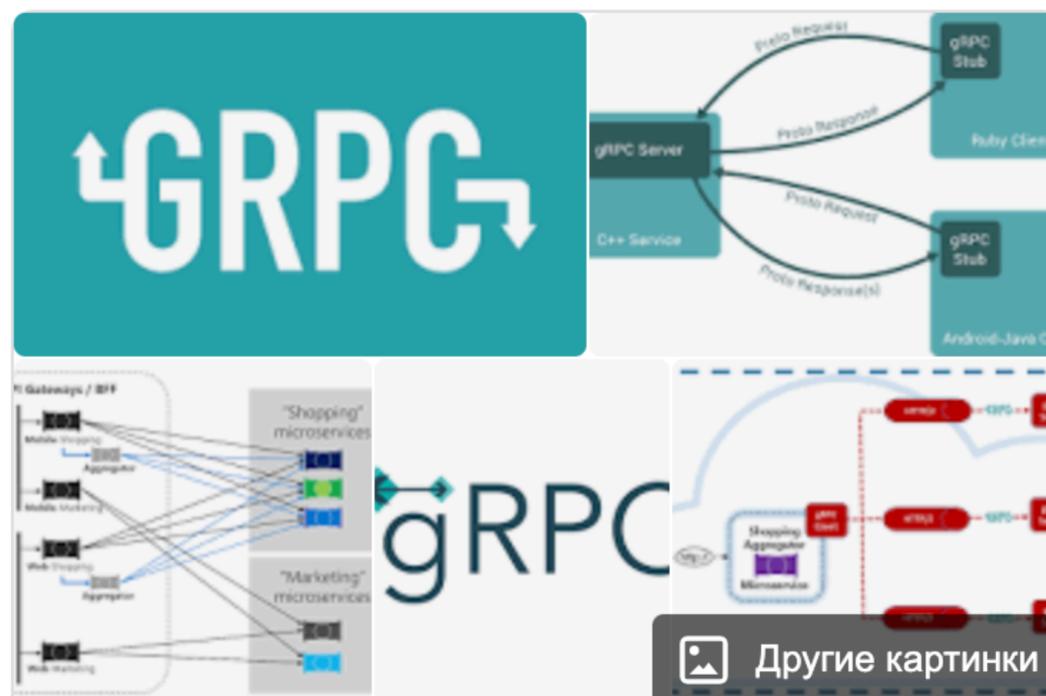
GraphQL is an open-source data query and manipulation language for APIs, and a runtime for fulfilling queries with existing data. GraphQL was developed internally by Facebook in 2012 before being publicly released in 2015. [Wikipedia](#)

Похожие запросы

Ещё 10+

GraphQL

Релиз 2015 год, и еще многовато косяков



gRPC

gRPC — это система удалённого вызова процедур с открытым исходным кодом, первоначально разработанная в Google в 2015 году. [Википедия](#)

Дата выхода: август 2016 г.

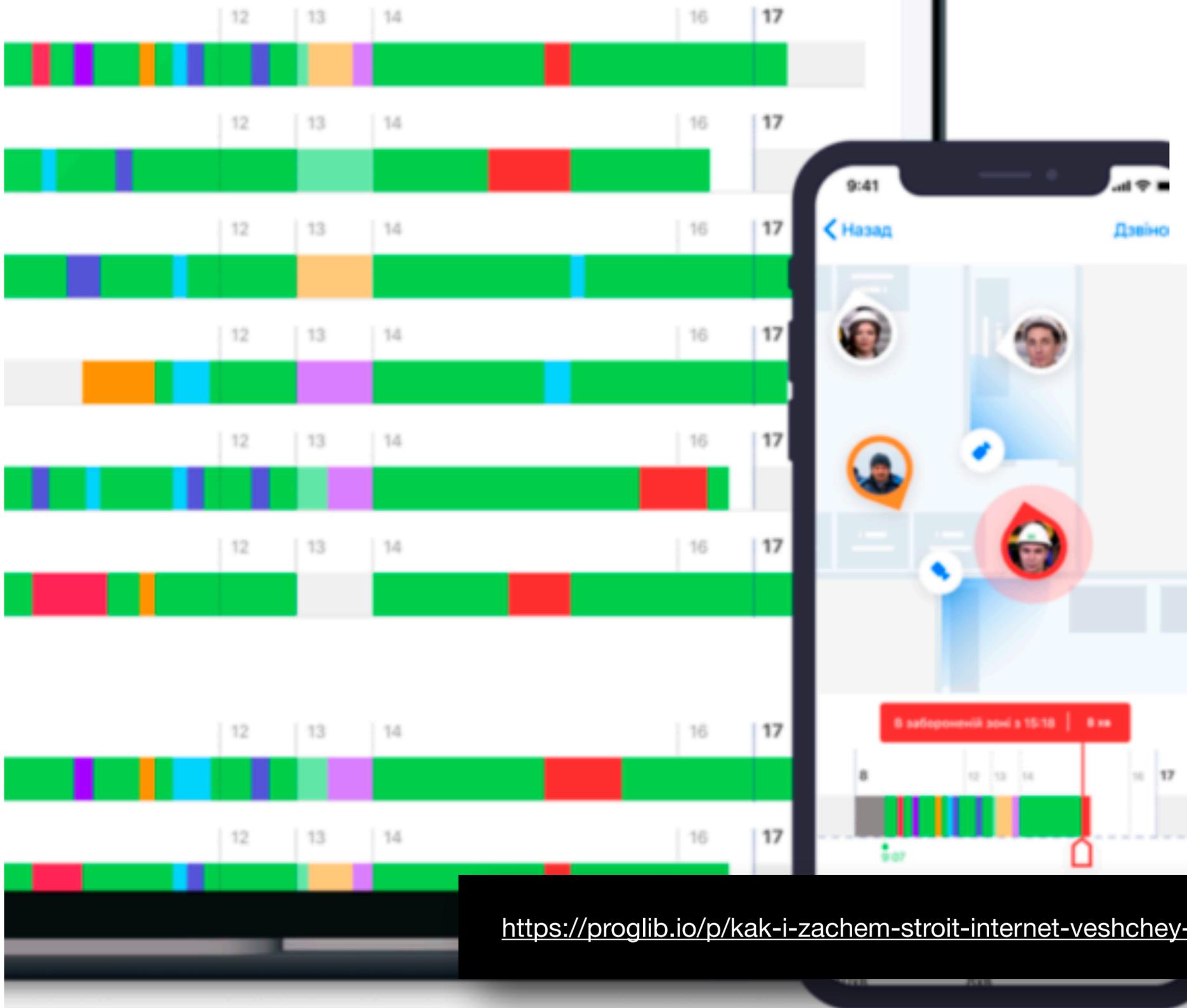
Лицензия: [Apache License 2.0](#)

gRPC

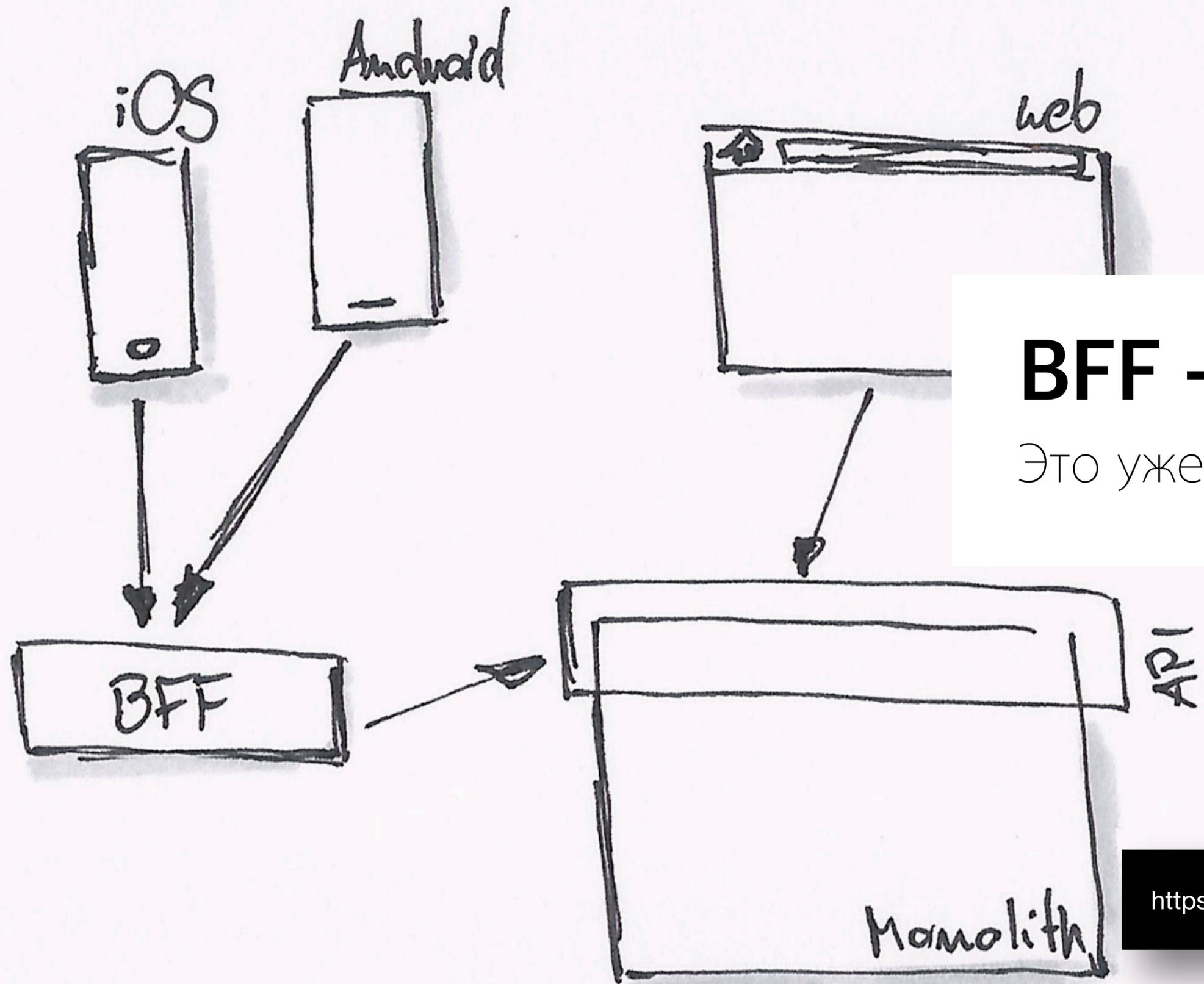
2016 год

IoT

Все еще делают какие то вещи



<https://proglib.io/p/kak-i-zachem-stroit-internet-veshchey-s-node-js-2020-02-18#comments>



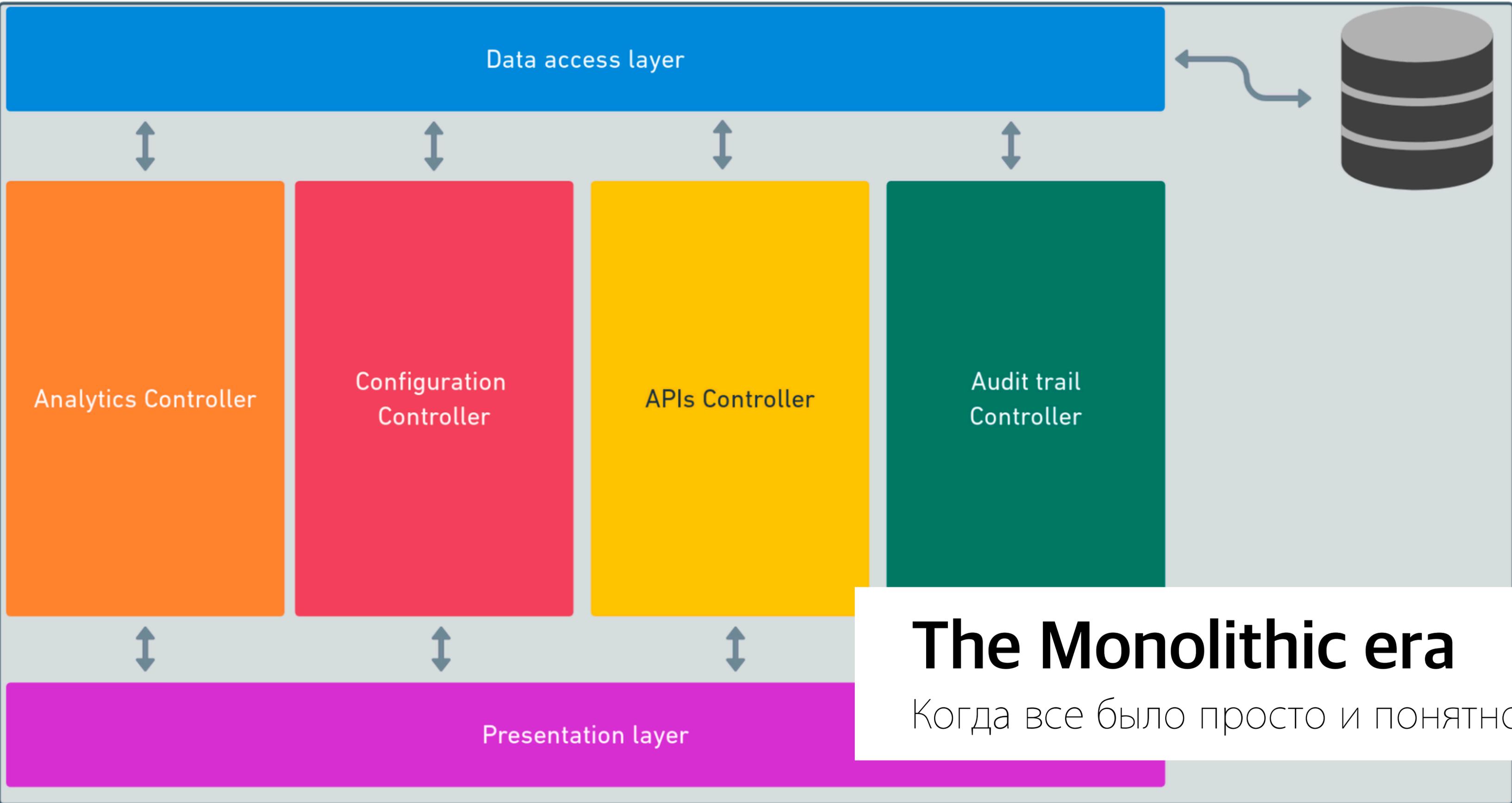
BFF - фронтальный бэк

Это уже де-факто стандарт

<https://samnewman.io/patterns/architectural/bff/>

На ЭТОМ Все?

Какая жопа ждет нас впереди? Реально ли с ней что то сделать?



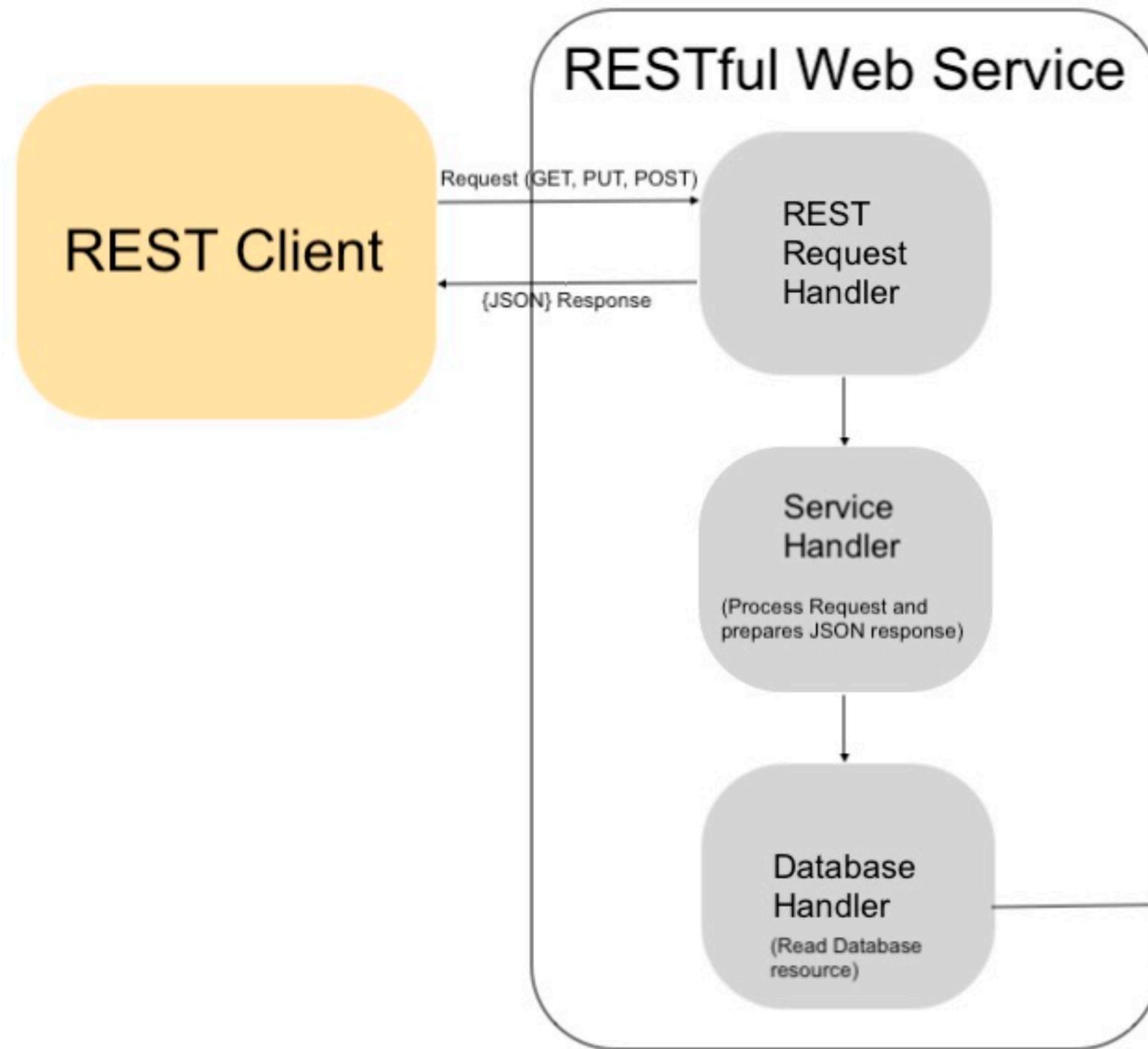
The Monolithic era
Когда все было просто и понятно

The Monolithic era

Минусы

- Continuous deployment (CD) difficulties
- Continuous integration (CI) difficulties
- Technological commitment
- Scaling

Getting yourself familiar with the code— Monolithic applications normally mean huge code bases. When working as a new developer on a huge code base, the onboarding process gets really complicated.



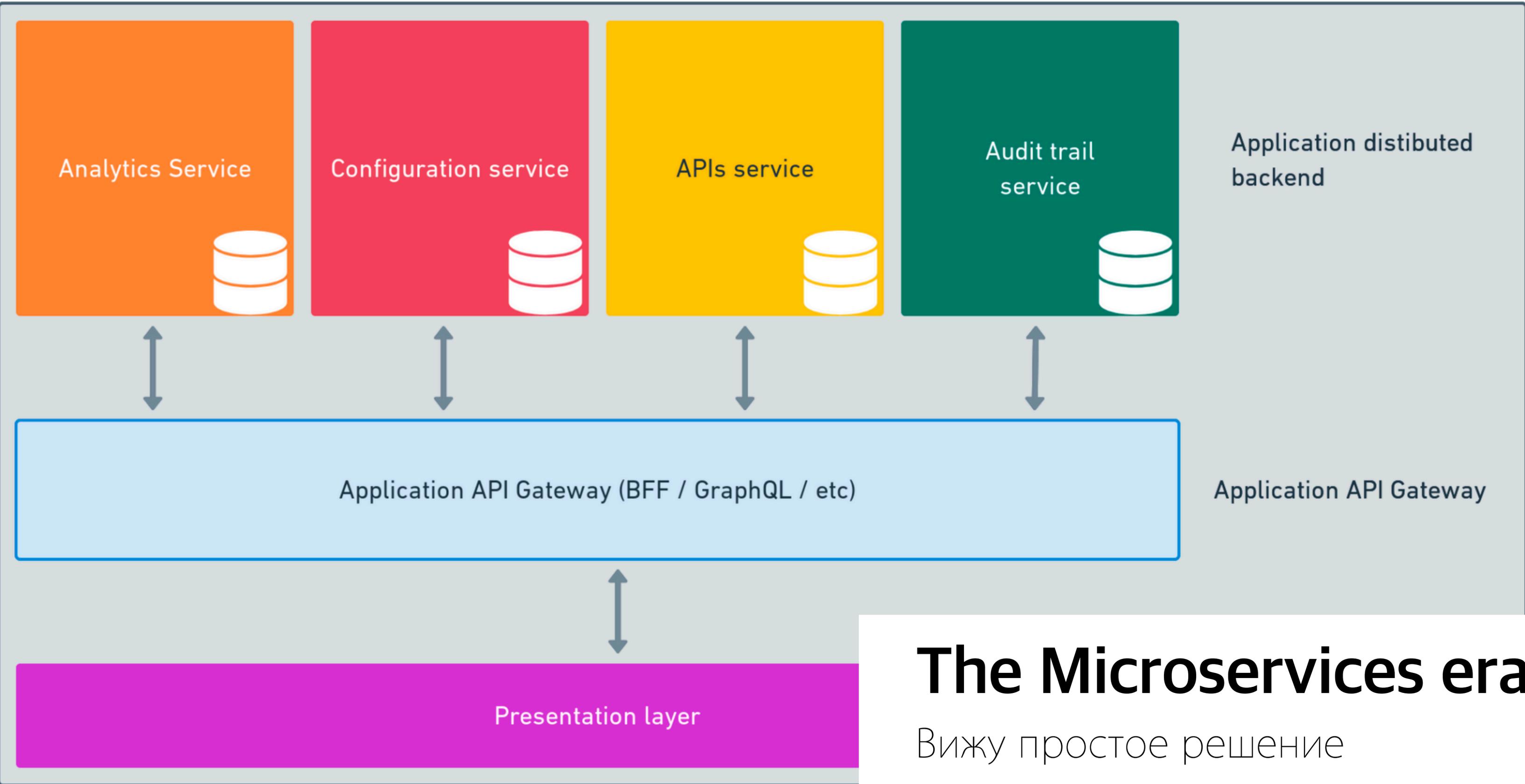
PoC

Все начали делать MVP

PoC

Минусы

- Прототип не продукт
- Дорабатывать в бою с живыми клиентами, очень и очень геморно и дорого



The Microservices era

Вижу простое решение

The Microservices era

Вопросы – как разделять?

- By domain
- By scale
- By use case

The Microservices era

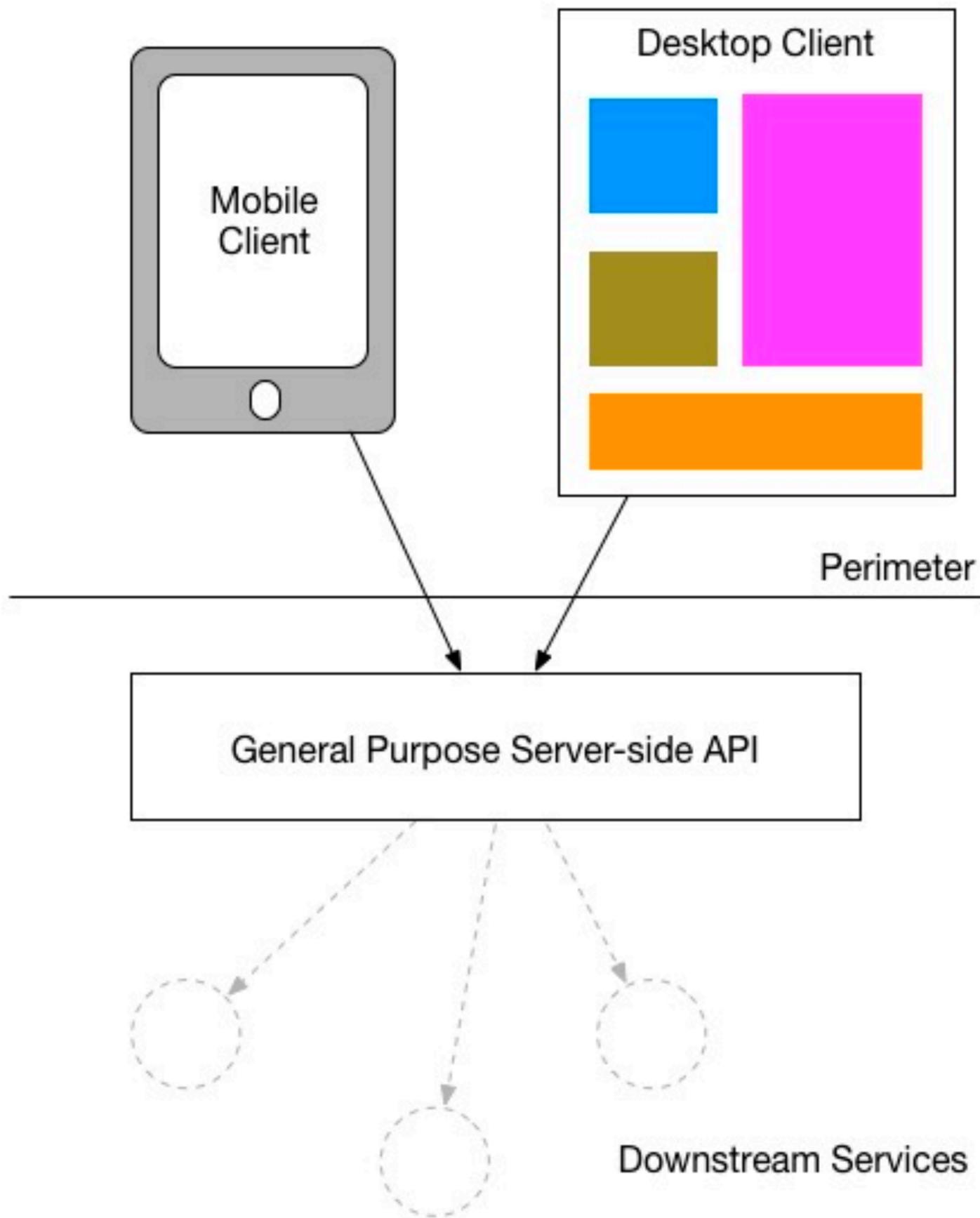
Плюсы

- Easier to maintain
- Faster CI/CD
- Easier to test
- Easier to scale

The Microservices era

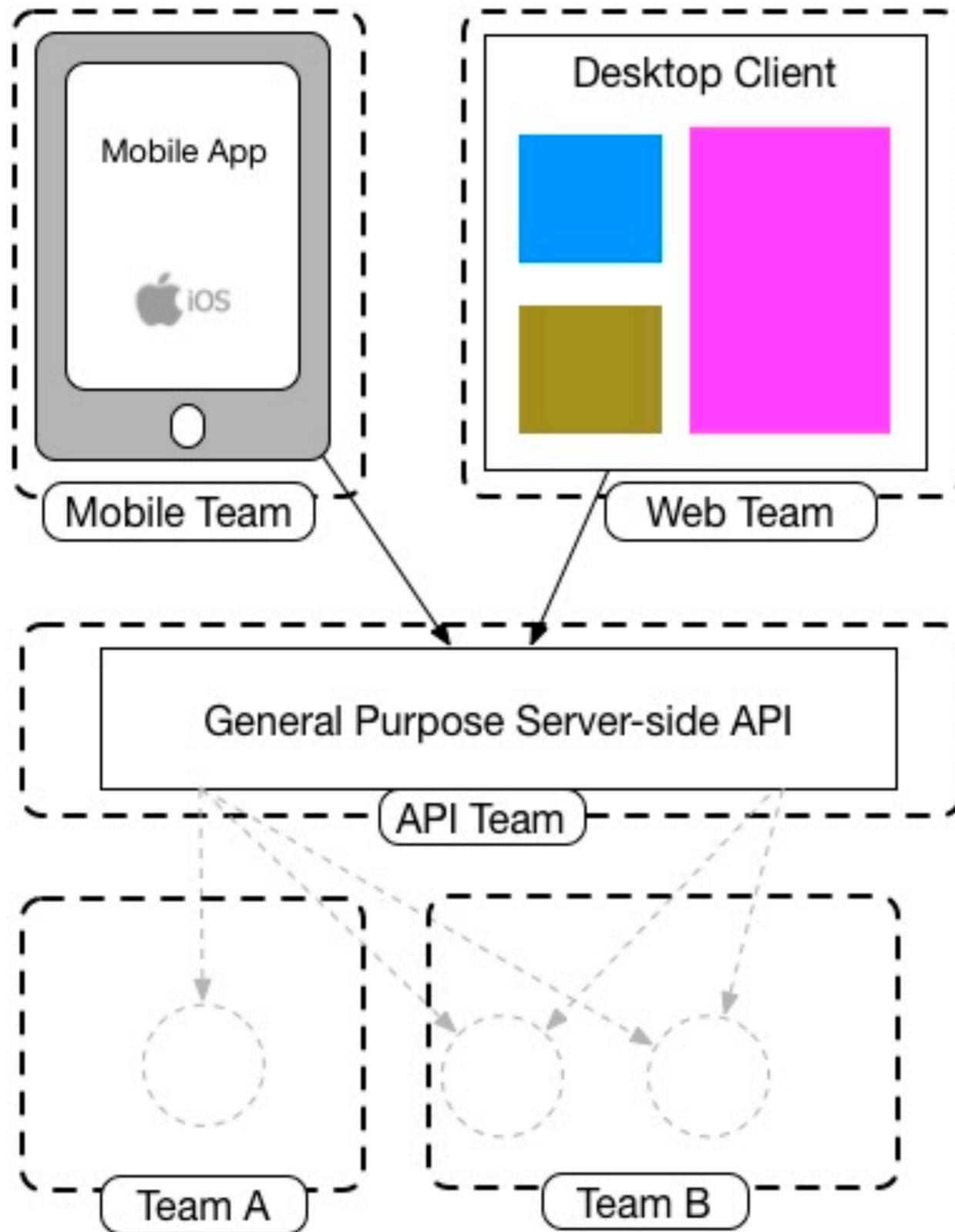
Минусы

- Если на сервере масштабируется хорошо, то на фронте все еще большой монолит
- Чем больше микросервисов на бэке, тем сложнее делать фронт



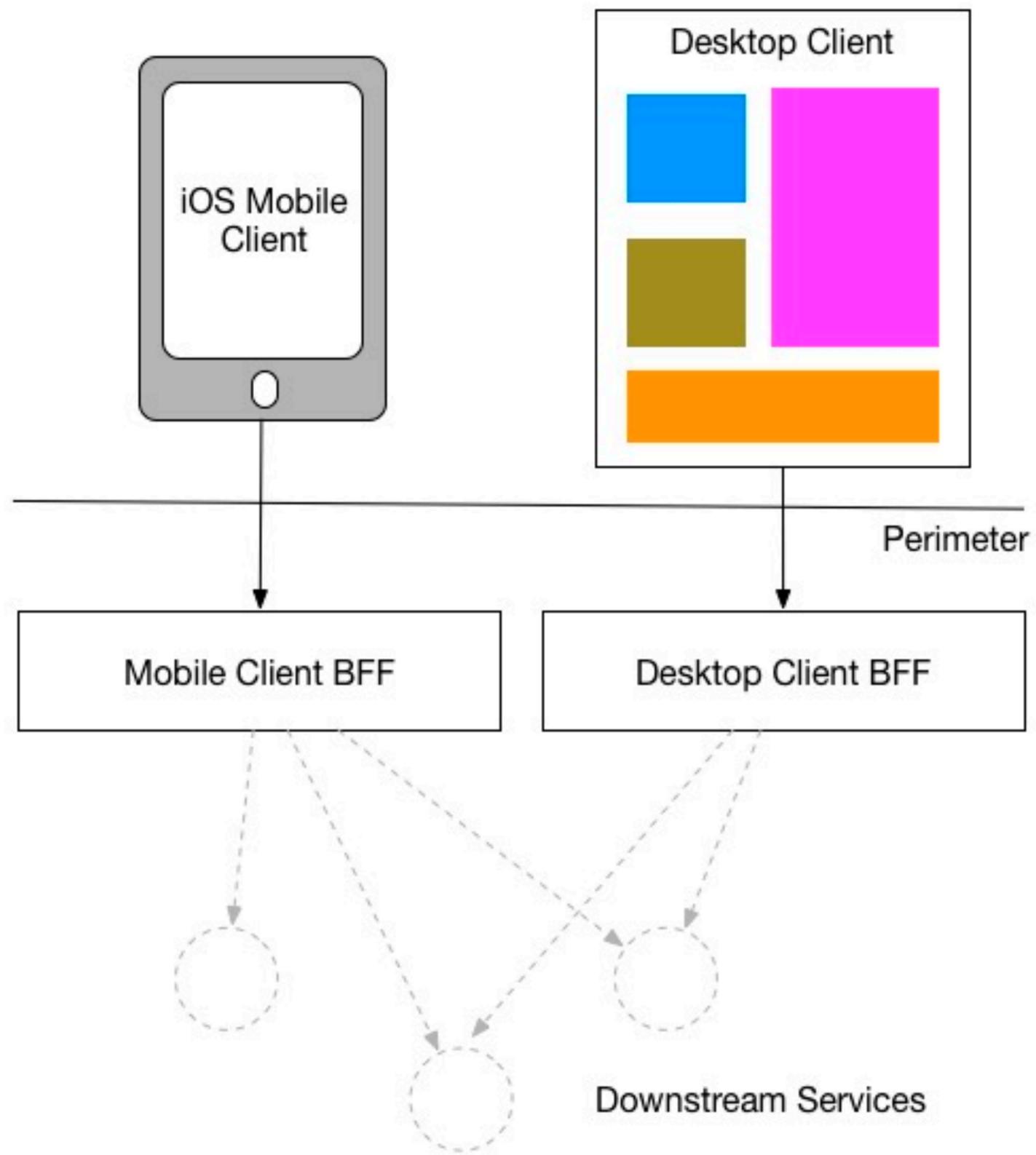
BFF

Да еще и гаджетов зоопарк



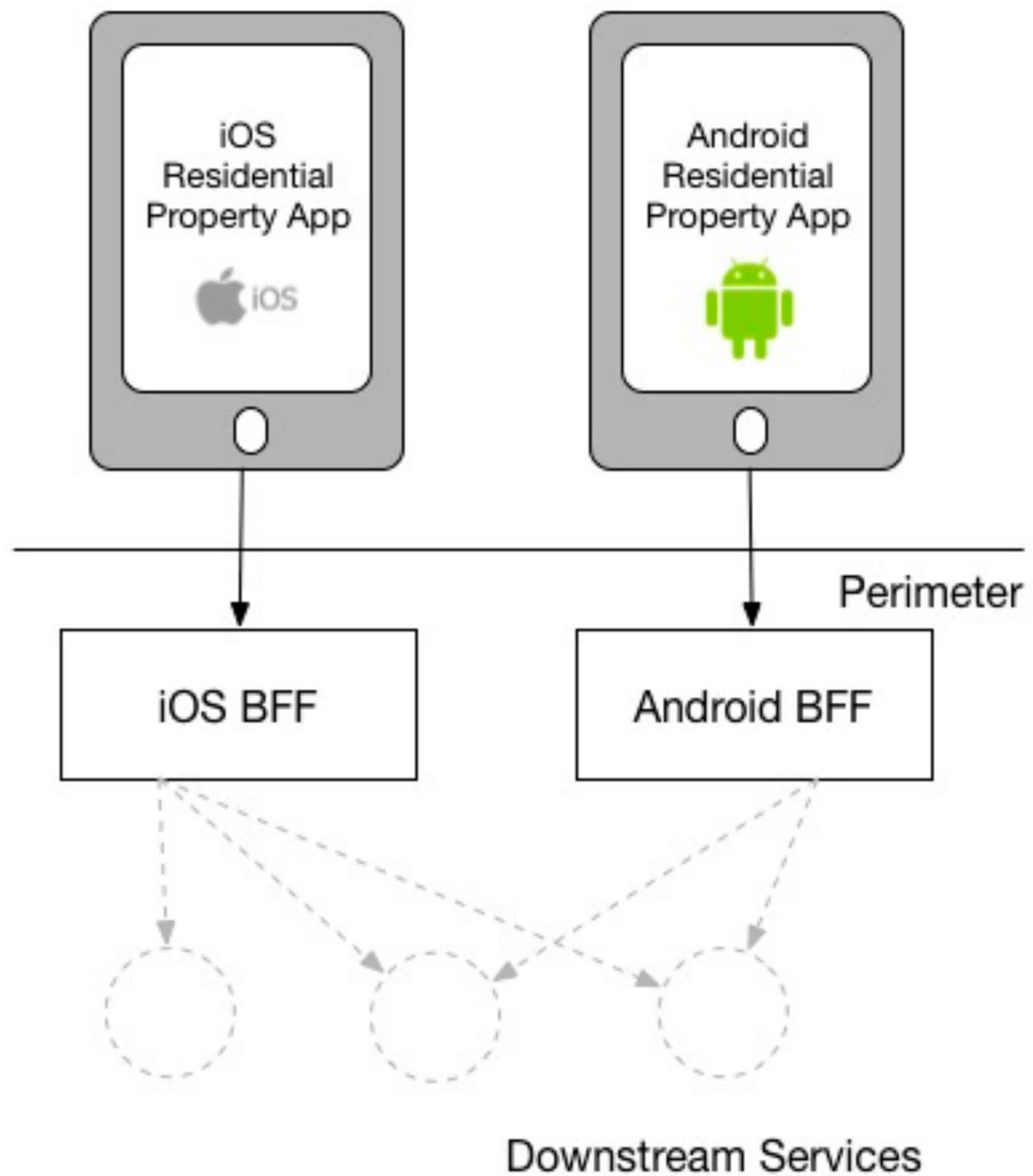
BFF

Да еще и гаджетов зоопарк



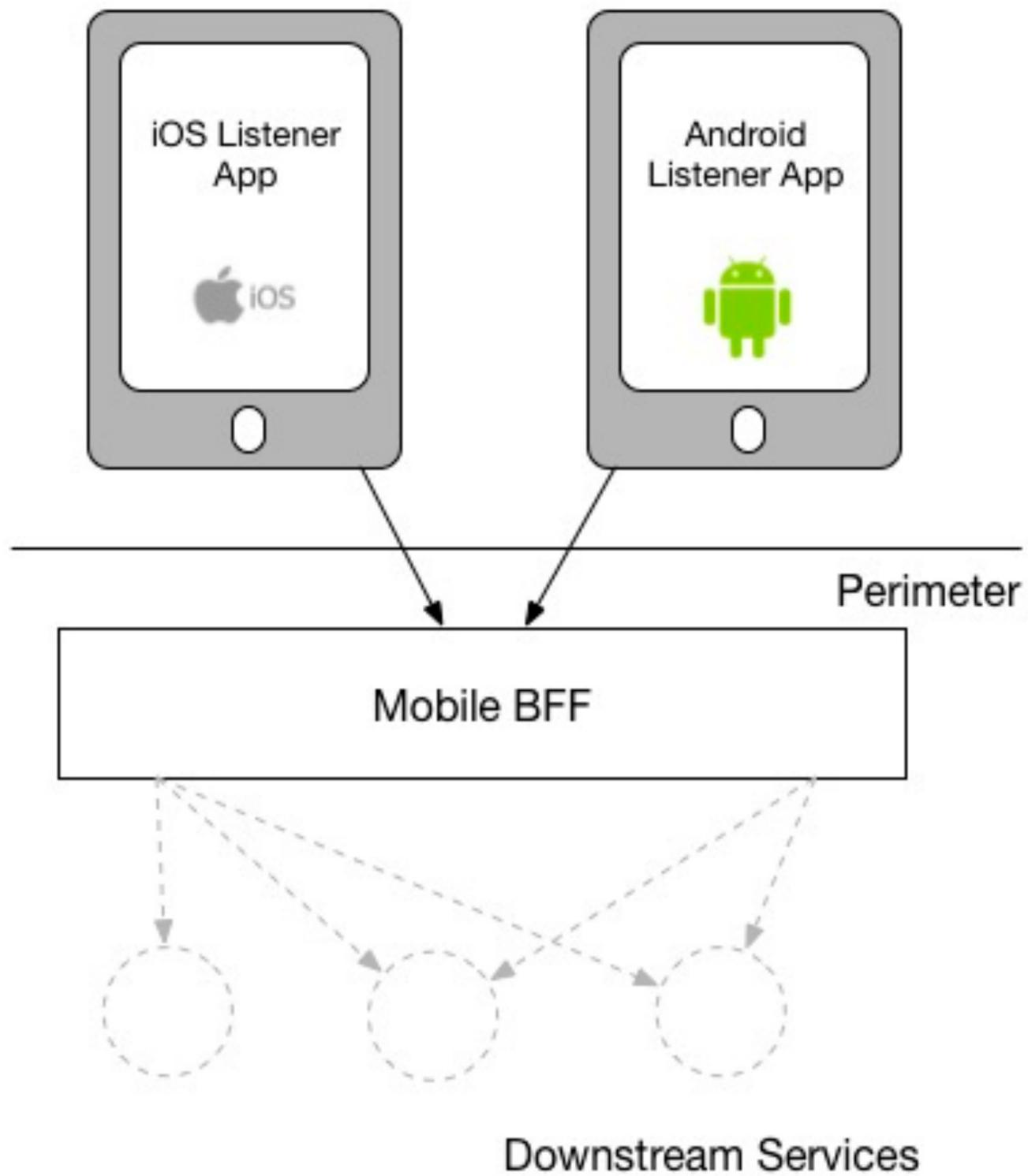
BFF

Да еще и гаджетов зоопарк



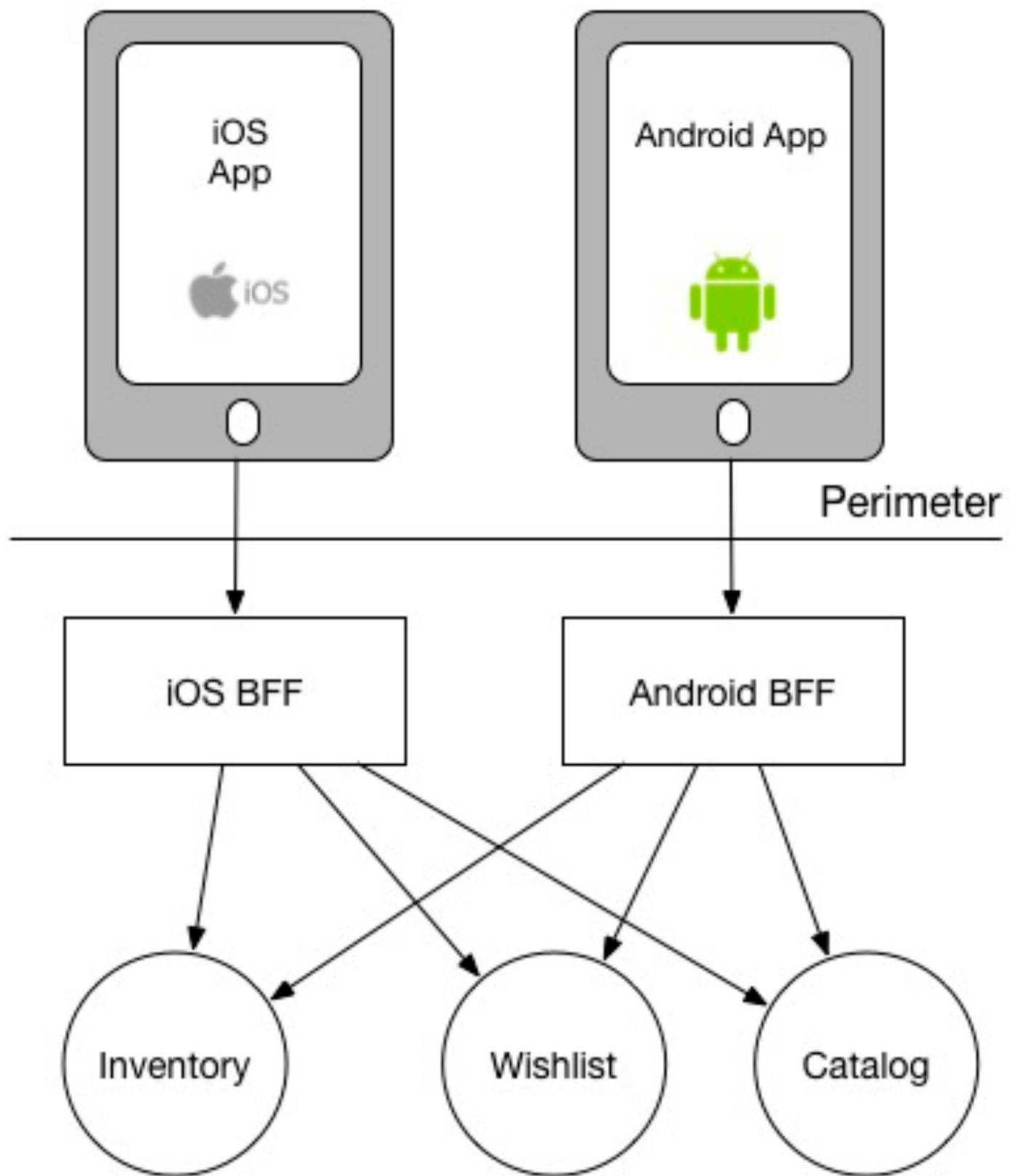
BFF

Да еще и гаджетов зоопарк



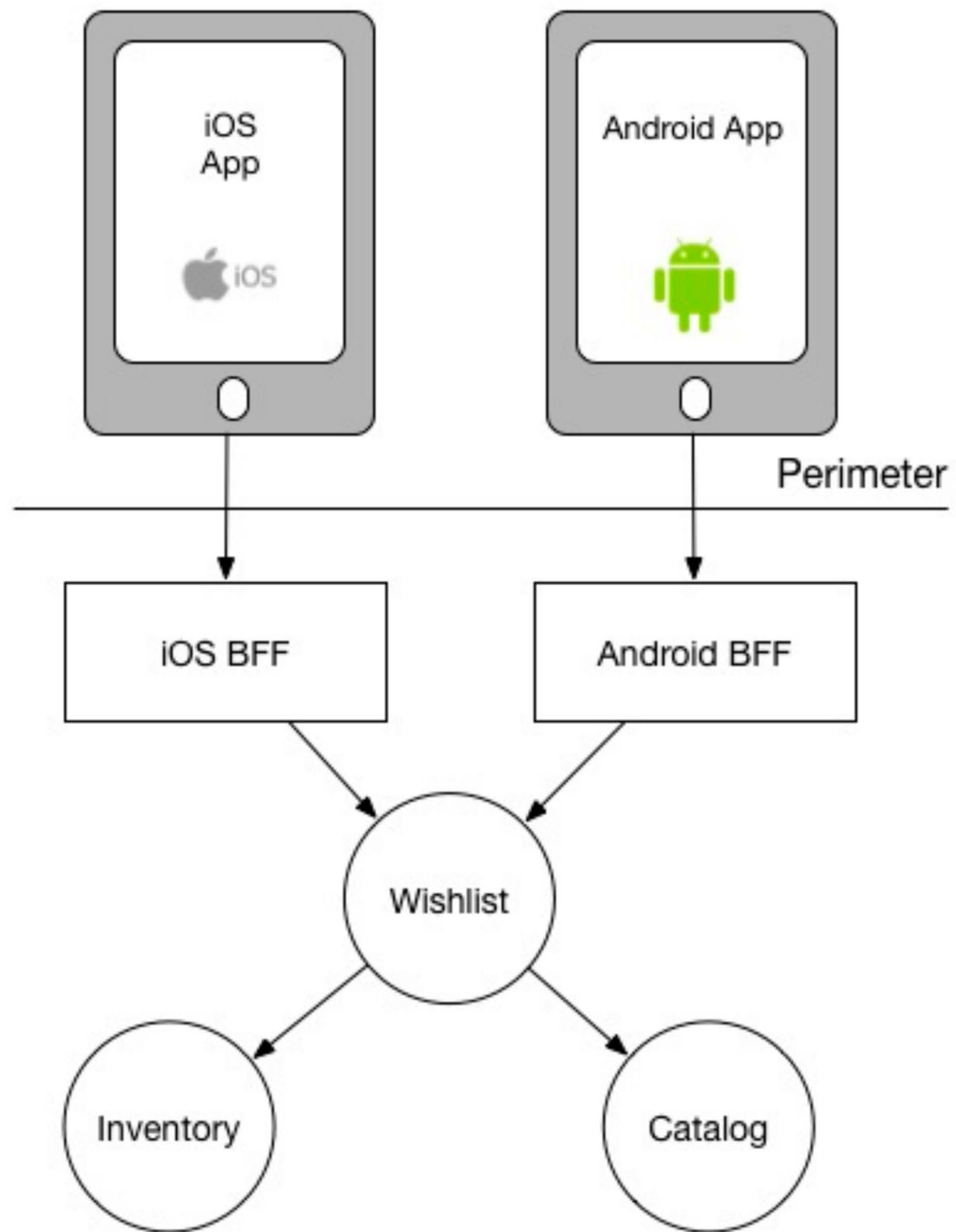
BFF

Да еще и гаджетов зоопарк



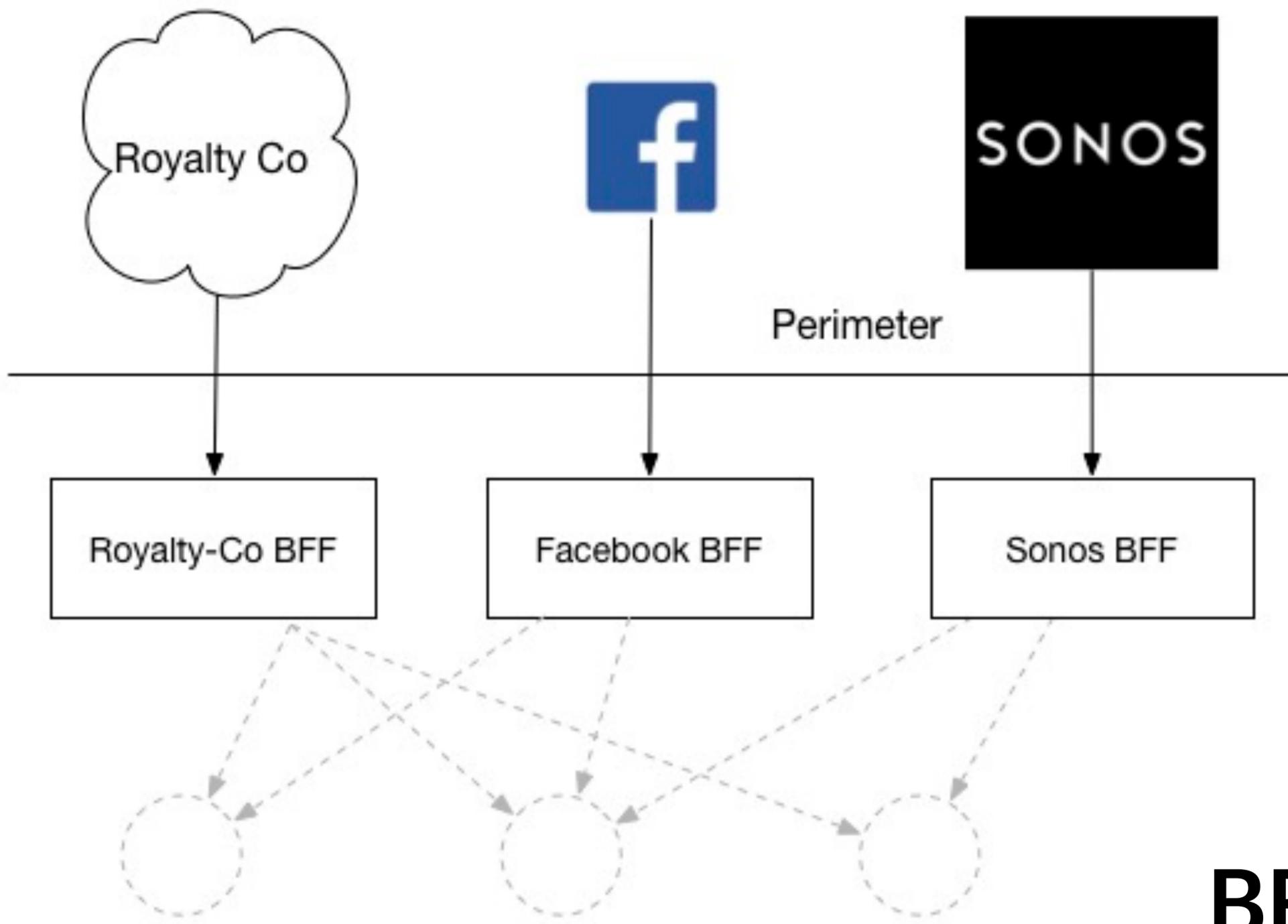
BFF

Да еще и гаджетов зоопарк



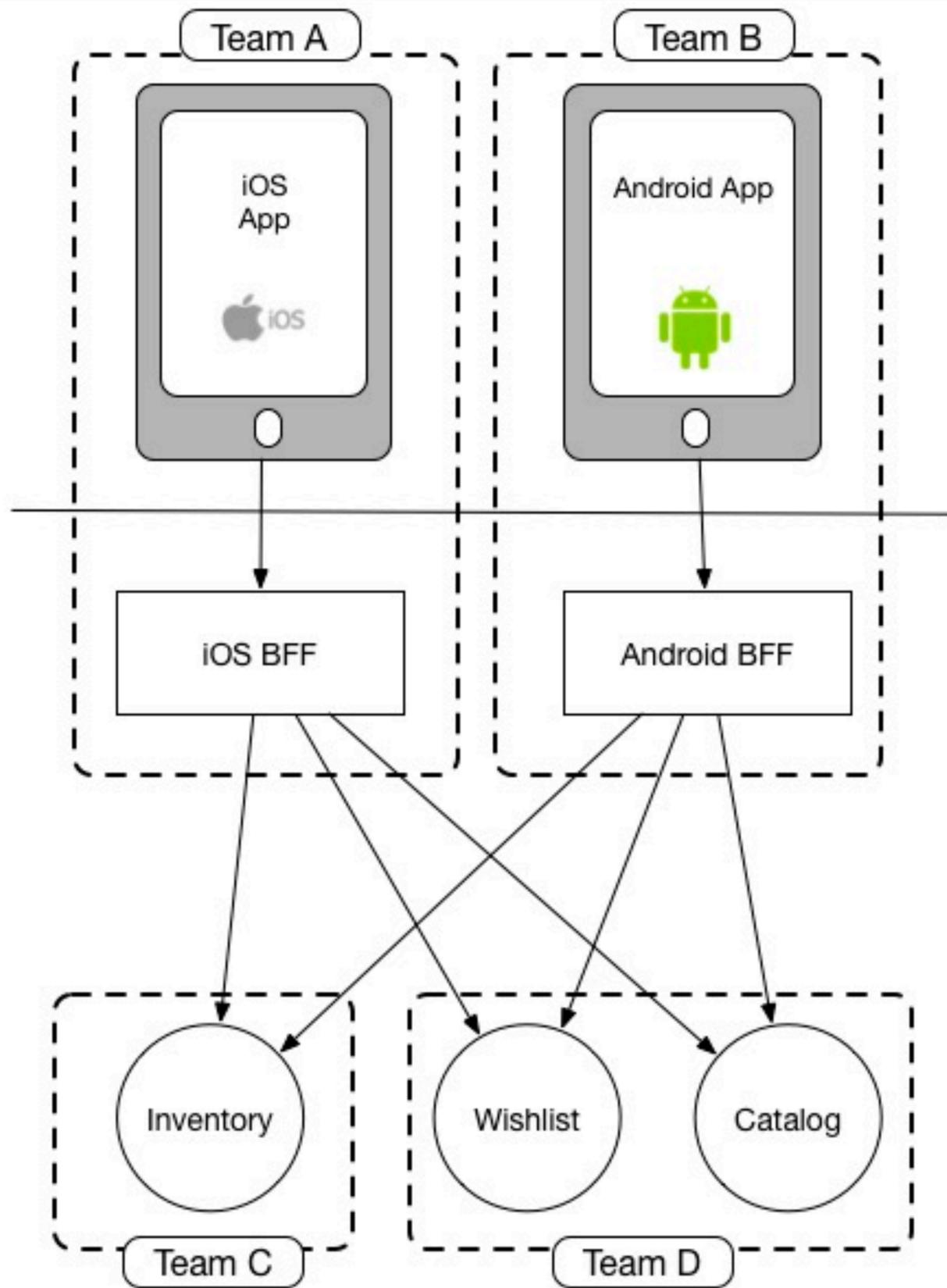
BFF

Да еще и гаджетов зоопарк



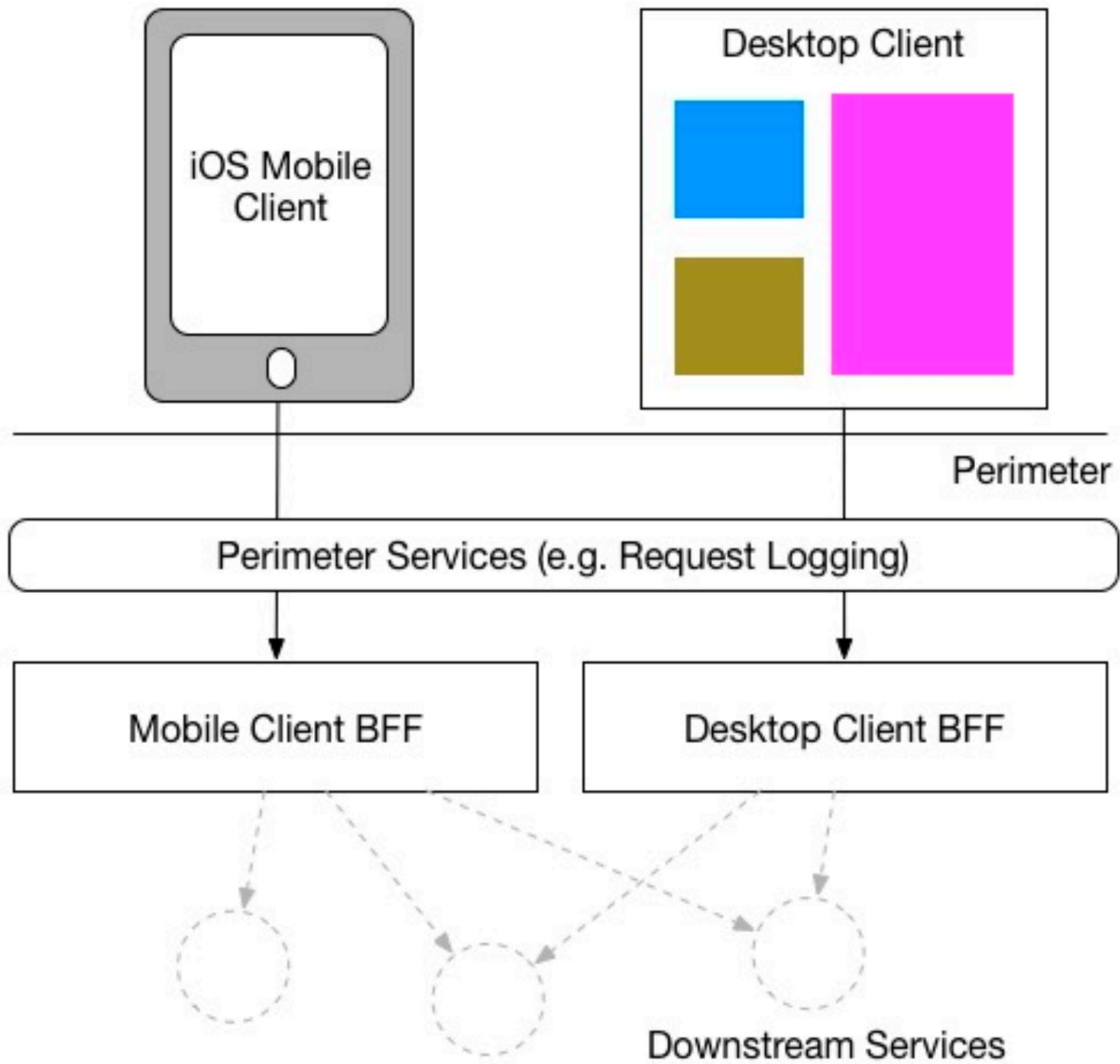
BFF

Да еще и гаджетов зоопарк



BFF

Да еще и гаджетов зоопарк



BFF

Да еще и гаджетов зоопарк

BFF

Плюсы

- Гибкость в разработке
- Свобода заточиться под определенную платформу, специфичными фичами

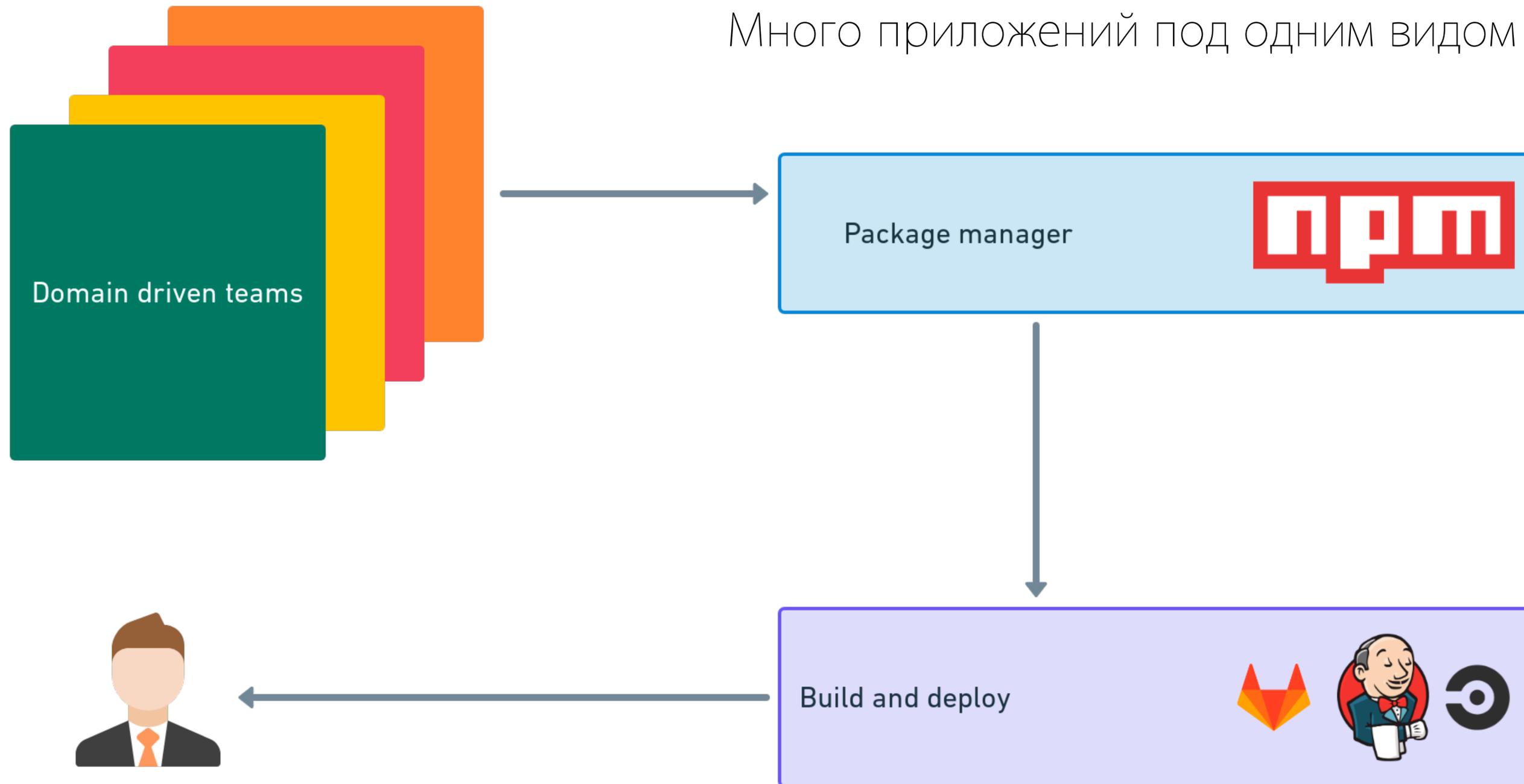
BFF

Минусы

- В цепочке появляется промежуточное звено
- Чем сложнее система и больше, тем сложнее это все синхронизировать, и может сильно вырасти команда

The Multi NPM Module approach

Много приложений под одним видом



The Multi NPM Module approach

The pros of the dynamic module resolving approach

- Individual teams
- Version control

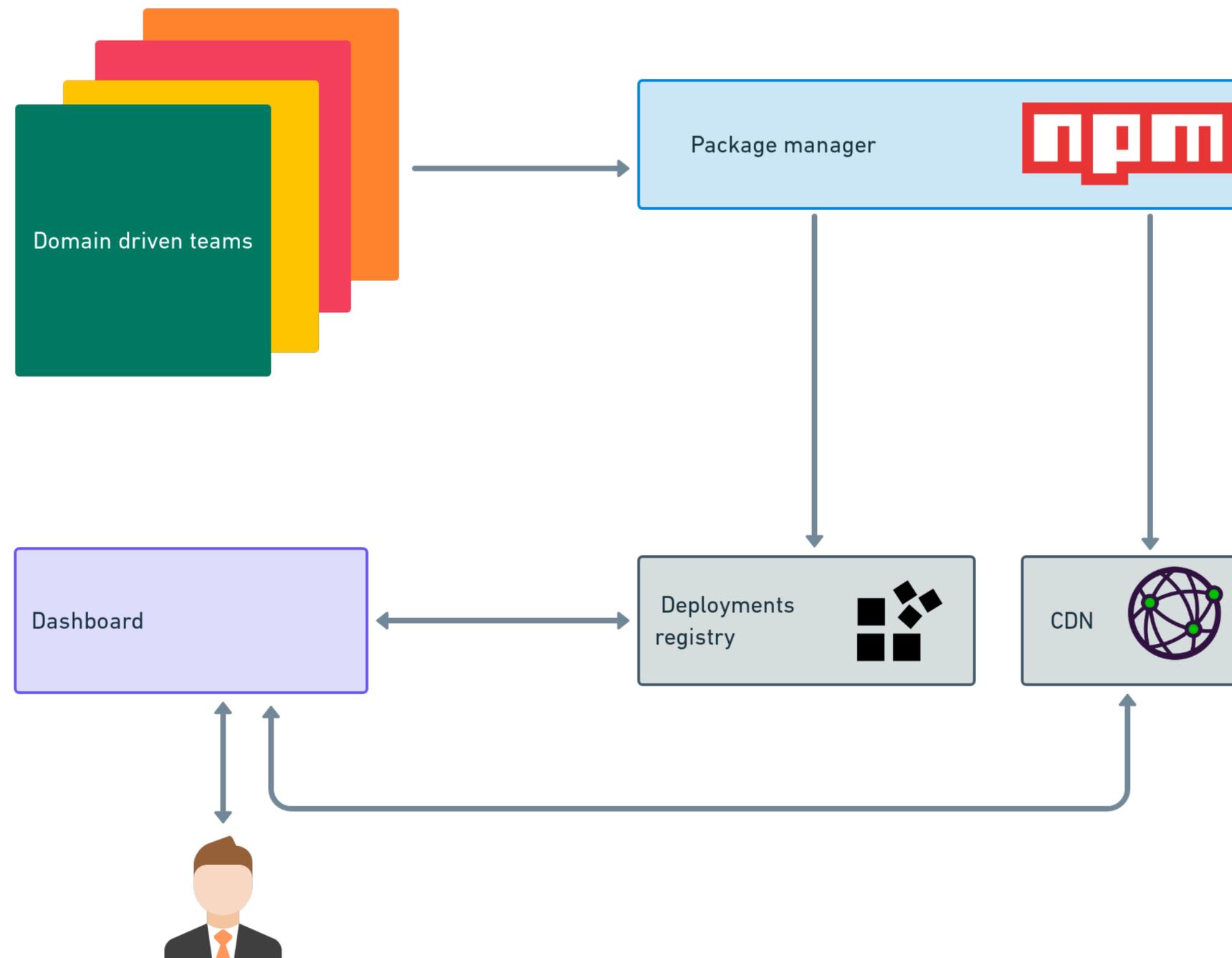
The Multi NPM Module approach

However, the cons of the dynamic module resolving approach

- Main build bottlenecks

The Dynamic Module Resolving approach

Перевозим кусками приложение в облака



The Dynamic Module Resolving approach

The pros of that approach

- The main UI dashboard repository can stay without any change where each of the teams takes care of FULL END TO END deployment including the CDN registry and the deployments registry.
- Rolling back a version can happen with a simple REST API call (just update the deployments registry with the previous version, and you're good to go).

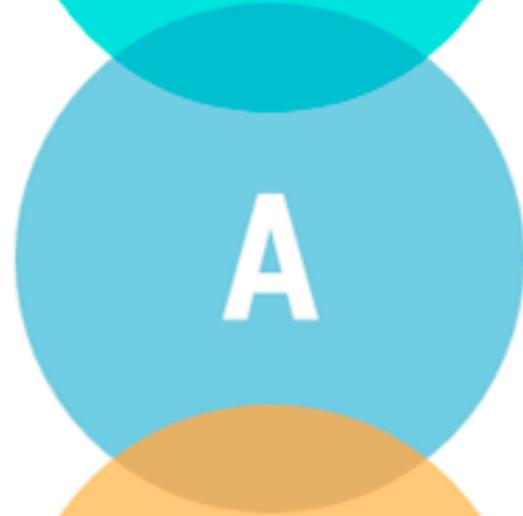
The Dynamic Module Resolving approach

However, the cons of that approach

- Having to build the infrastructure for loading bundles dynamically based on deployments registry.
- Having to build a dedicated release lifecycle based on dynamic bundles and deployments.



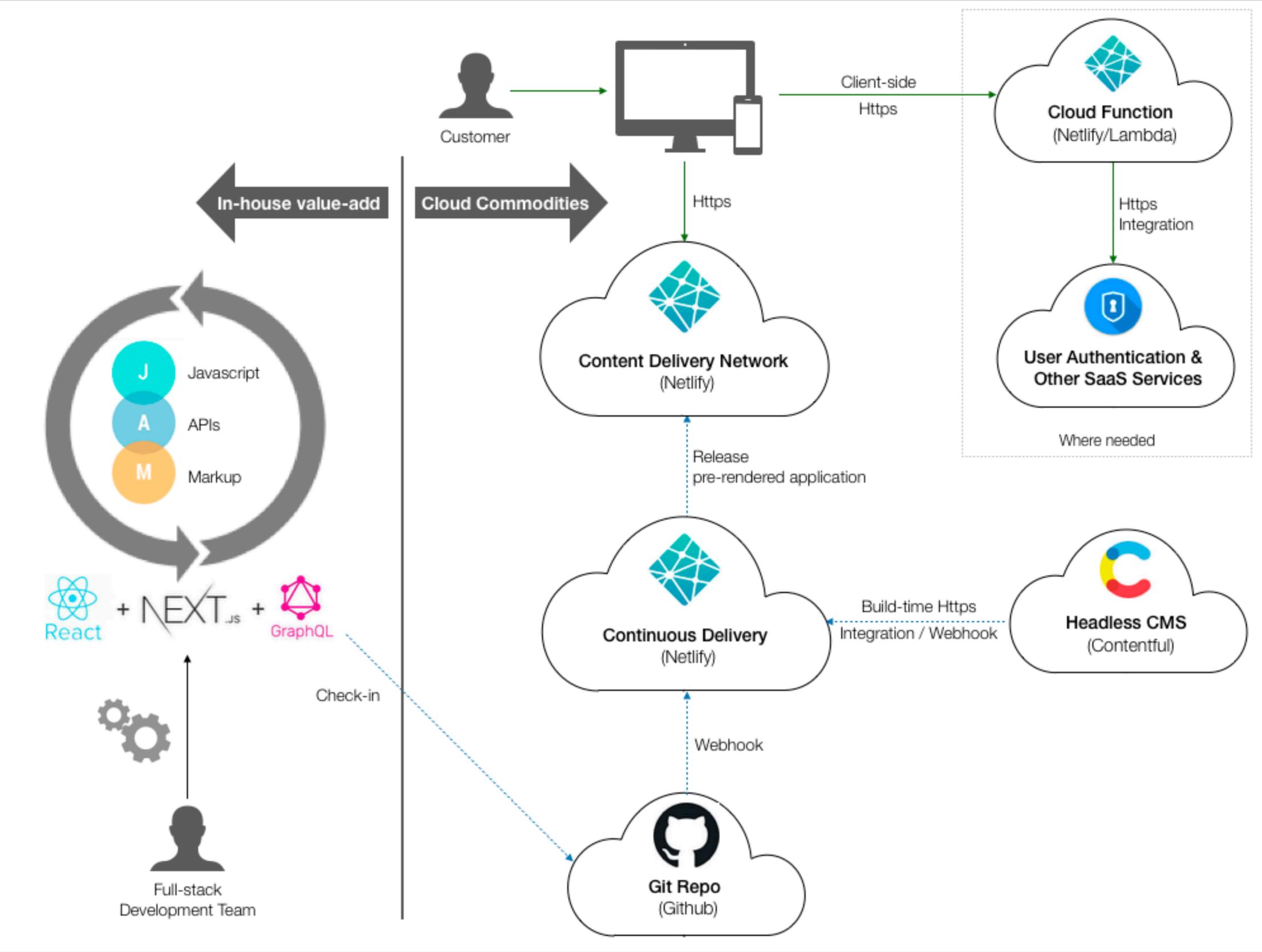
JavaScript



APIs



Markup



Jam Stack

Плюсы

- Можно оч быстро собирать устойчивые приложения
- Можно подключать сервисы по необходимости
- При соблюдении общих концепций, работает даже качественно

Jam Stack

Минусы

- Вы не владеете всеми виджетами
- Приходится платить \$ за каждый сервис

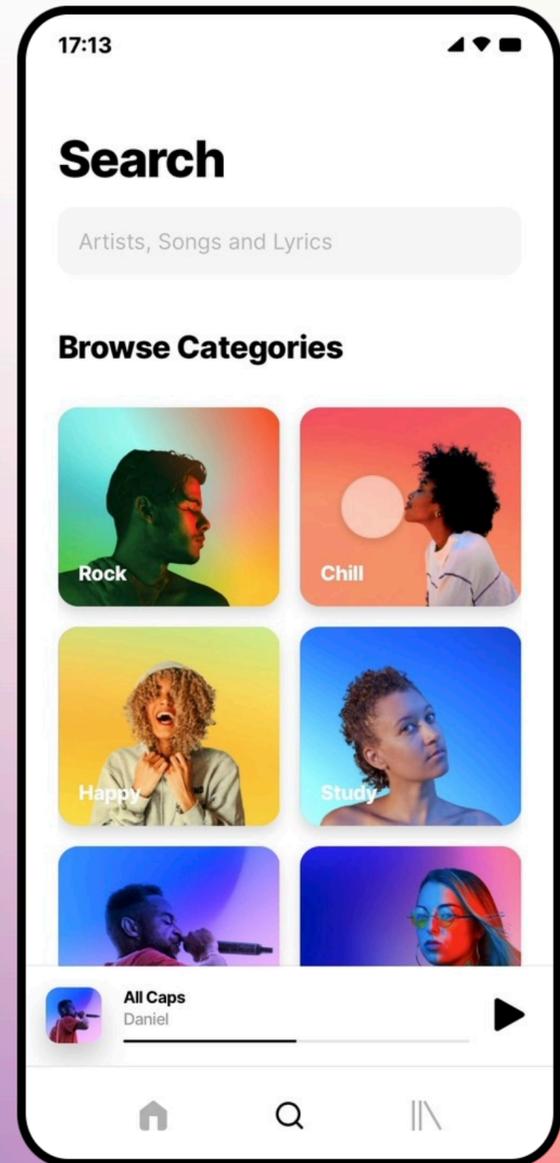
Что дальше?

Framer brings you closer to real.

Most design and prototyping tools today are just systems to paint your ideas on a canvas. Framer is the only tool built on web technologies and gives you a truly interactive and realistic output in less time.

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И?

<https://khalilstemmler.com/articles/enterprise-typescript-nodejs/when-crud-mvc-isnt-enough/>

<https://www.serverless.com/examples/>

<https://backstage.io/demos>

<https://opstrace.com/docs#opstrace-introduction>

<https://www.terraform.io/> → <https://>

www.pulumi.com/ → <https://>

terratest.gruntwork.io/

<https://vectorized.io/redpanda>

https://docs.greatexpectations.io/docs/tutorials/getting_started/intro

<https://playwright.dev/>

<https://github.com/automerge/automerge>





HOLLYWOOD