

# Shared modules

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Андрей Гладков

# Немного про hh

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- Удаленная работа или офис

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- Обучение и развитие

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- Обучение и развитие
- Кроме бизнес-проектов, есть «технический налог» 30%

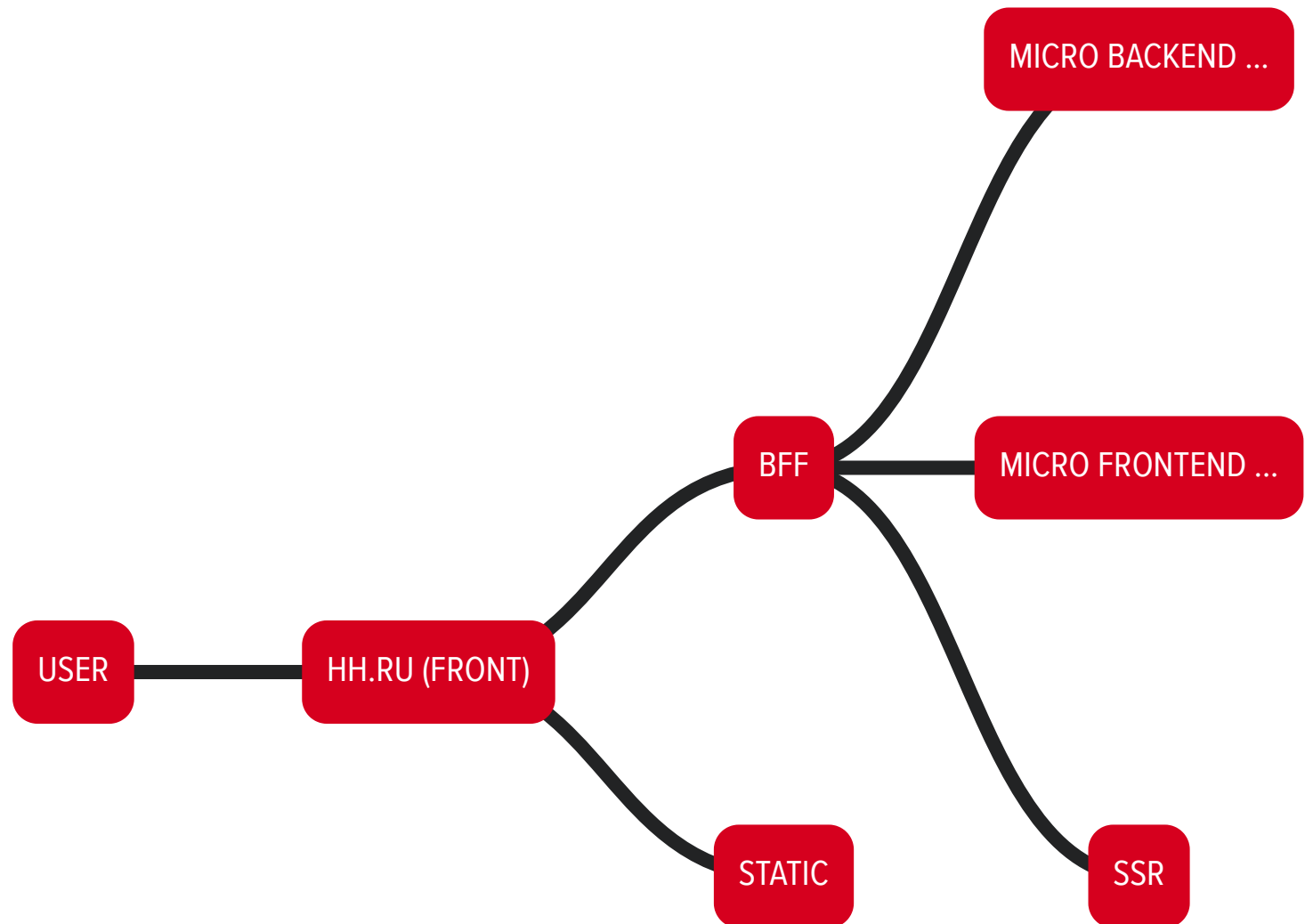
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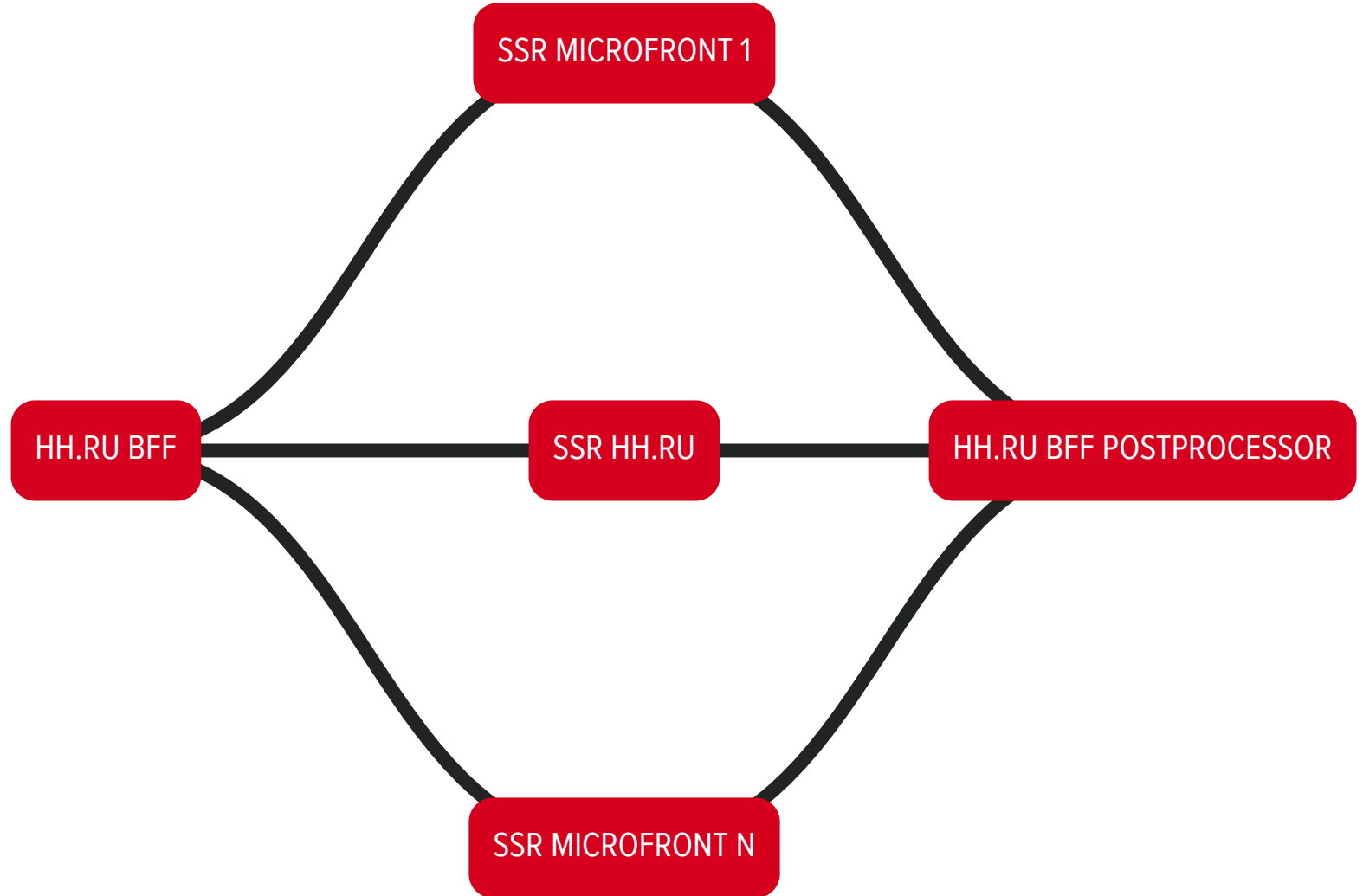
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- Удаленная работа или офис
- Обучение и развитие
- Кроме бизнес-проектов, есть «технический налог» 30%
- Работает 230 человек
- Разделен на 45 фича команд







# Типичный микрофронтенд

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- лежит в отдельной репе
- имеет свою webpack сборку
- независимо релизится
- может быть встроен в hh.ru, а может иметь отдельный домен, может и то и другое

# Проблемы



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- дублирование вендоров

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- дублирование вендоров
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- n виджетов одного сервиса на странице

## ▲ Reduce unused JavaScript

1.89 s ^

URL	Transfer Size	Potential Savings
...release/full-88ae85a....js (yastatic.net)	675.9 KiB	466.9 KiB
chrome-extension://fmkadmapgofadopljbjfkapdkoienihi/build/react_devtools_backend.js	514.8 KiB	303.0 KiB
/webpackBuild/vendors.f80a9f8....js (i.hh.ru)	231.8 KiB	161.8 KiB
/static/vendors.d0c4b1b....js?place=skills-view (skills-survey-front.hh.ru)	368.8 KiB	161.3 KiB
/static/vendors.ced8cd2....js?place=employerReviewsBig (employer-reviews-front.hh.ru)	153.4 KiB	152.5 KiB
/static/vendors.ced8cd2....js?place=employerReviewsWizard (employer-reviews-front.hh.ru)	153.4 KiB	152.5 KiB
/vendors.96d076f....js (chatik.hh.ru)	152.8 KiB	147.0 KiB
...620535/b06e7ab....js (yastatic.net)	108.7 KiB	107.7 KiB
/static/main.9c9b739....js?place=employerReviewsBig (employer-reviews-front.hh.ru)	96.4 KiB	96.2 KiB
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/webpackBuild/bloko.ea42eca....js (i.hh.ru)	94.7 KiB	68.9 KiB
/static/main.9c9b739....js?place=employerReviewsSmall (employer-reviews-front.hh.ru)	96.4 KiB	60.8 KiB
...system/context.js (yandex.ru)	76.8 KiB	54.6 KiB
/webpackBuild/anonymousUser.2eddc9f....js (i.hh.ru)	47.3 KiB	40.0 KiB
/webpackBuild/App.35b24df....js (i.hh.ru)	77.8 KiB	38.4 KiB
/webpackBuild/vendors.lux.9558d83....js (i.hh.ru)	75.0 KiB	30.5 KiB
/metrika/watch.js (mc.yandex.ru)	55.7 KiB	29.7 KiB
/gtag/js?id=G-44H5WGZ123&l=dataLayer&cx=c (www.googletagmanager.com)	71.0 KiB	28.3 KiB
/webpackBuild/38115.60de2b8....js (i.hh.ru)	48.1 KiB	28.2 KiB
/static/bloko.e1cb63b....js?place=skills-view (skills-survey-front.hh.ru)	44.1 KiB	26.5 KiB

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/gtag/js?id=G-44H5WGZ123&l=dataLayer&cx=c (www.googletagmanager.com)	71.0 KiB	28.3 KiB
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900 KiB

Opportunity	Estimated Savings	
<a href="https://i.hh.ru/webpackBuild/App.52dd8eb28c89ad22f828.js">https://i.hh.ru/webpackBuild/App.52dd8eb28c89ad22f828.js</a>	Script	1.6 s ^
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...release/full-88ae85a...js (yastatic.net)	675.9 KiB	466.8 KiB
chrome-extension://fmkadamgofadopljbjfkapdkoienih/build/react_devtools_backend.js	514.8 KiB	303.0 KiB
/webpackBuild/vendors.739495f...js (i.hh.ru)	236.5 KiB	169.7 KiB
...626673/3dbed3a...js (yastatic.net)	107.8 KiB	106.8 KiB
/webpackBuild/bloko.5bf544b...js (i.hh.ru)	106.5 KiB	75.5 KiB
...system/context.js (yandex.ru)	76.5 KiB	54.3 KiB
/static/280.4252b6f...js (employer-reviews-front.hh.ru)	88.9 KiB	43.8 KiB
/webpackBuild/anonymousUser.fdaf3a1...js (i.hh.ru)	47.4 KiB	40.4 KiB
/webpackBuild/App.52dd8eb...js (i.hh.ru)	102.8 KiB	37.3 KiB
/static/1392.764a9dd...js (skills-survey-front.hh.ru)	91.4 KiB	35.3 KiB
/static/875.dea9d7e...js (employer-reviews-front.hh.ru)	87.8 KiB	33.9 KiB
/metrika/watch.js (mc.yandex.ru)	55.8 KiB	29.8 KiB
/webpackBuild/40324.6c08e29...js (i.hh.ru)	49.0 KiB	29.2 KiB
/gtag/js?id=G-44H5WGZ123&l=dataLayer&cx=c (www.googletagmanager.com)	71.4 KiB	28.4 KiB
/webpackBuild/vendors.lux.db8bf7d...js (i.hh.ru)	76.4 KiB	26.9 KiB
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...api/openapi.js?169 (vk.com)	23.0 KiB	20.8 KiB

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<a href="https://i.hh.ru/webpackBuild/App.52dd8eb28c89ad22f828.js">https://i.hh.ru/webpackBuild/App.52dd8eb28c89ad22f828.js</a>	Script	1.6 s ^
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...api/openapi.js?169 (vk.com)	23.0 KiB	20.8 KiB

Opportunity

Estimated Savings

<https://i.hh.ru/webpackBuild/App.52dd8eb28c89ad22f828.js>

Script

1.6 s

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...api/openapi.js?169 (vk.com)	23.0 KiB	20.8 KiB

115 KiB

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# Как решали проблемы

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- hh.ru - контейнер, пусть и шарит vendors

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- hh.ru - контейнер, пусть и шарит vendors
- шарить ui-kit
- фронт-сервисы берут модуль из контейнера по semver



# Module Federation Plugin

Позволяет webpack сборке предоставлять или  
использовать модули других независимых сборок в  
РАНТАЙМЕ

# webpack(provide)

```
1  plugins: [  
2    new ModuleFederationPlugin({  
3      name: 'provide_app',  
4      shared: [  
5        'react',  
6        'react-dom',  
7        'redux': {  
8          version: '4.2.0',  
9        }  
10     ],  
11     remotes: {  
12       'consume_app': 'consume_app@url_to_remote_entry',  
13     },  
14   })),  
15 ]
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```



# webpack(consume)

```
1 plugins: [  
2   new ModuleFederationPlugin({  
3     name: 'consume_app',  
4     filename: 'remoteEntry.[chunkhash].js',  
5     exposes: {  
6       './App': './src/App',  
7     },  
8     shared: {  
9       react: { singleton: true },  
10      'react-dom': { singleton: true },  
11      redux: {  
12        requiredVersion: '^4.2.0',  
13        version: '4.2.0',  
14        strictVersion: true,  
15      },  
16    },  
17  })  
18 ]
```

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```

# Provide App

```
1 import React from 'react';
2
3 const ConsumeApp = React.lazy(
4   () => import('consume_app/App')
5 );
6
7 const App = () => (
8   <div>
9     <h1>Basic Host-Remote</h1>
10    <h2>Provide app</h2>
11    <React.Suspense fallback="Loading ConsumeApp">
12      <ConsumeApp />
13    </React.Suspense>
14  </div>
15 )
```

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14   </div>  
15 );  
16  
17 export default App;
```

# ConsumeApp

```
1 import Button from './Button';
2 import React from 'react';
3
4 const App = () => (
5   <div>
6     <h2>Consume App</h2>
7     <Button />
8   </div>
9 );
10
11 export default App;
```

# Demo

# Shared hints

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- `version(false | string)`

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- `version(false | string)`
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- `eager(boolean)`

# Особенности при шаринге модулей

```
1 let rootModuleDefinitionData = {};  
2  
3 const setMyAwesomeData = (data) =>  
4     rootModuleDefinitionData = data;  
5 const getMyAwesomeData = (data) => rootModuleDefinitionData;  
6  
7 export { setMyAwesomeData, getMyAwesomeData };
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```
1 import defaultExport from 'my-npm-package';
2 import someModule from 'my-npm-package/some-module';
3
4 //ModuleFederationPlugin
5 shared: {
6   'my-npm-package': {
7     version: '1.0.1',
8   },
9   'my-npm-package/some-module': {
10     requiredVersion: `^1.0.1`,
11     version: '1.0.1',
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3
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6 //my-npm-package/some-module
7 import foo from 'ui-kit-from-peer-deps/foo';
```

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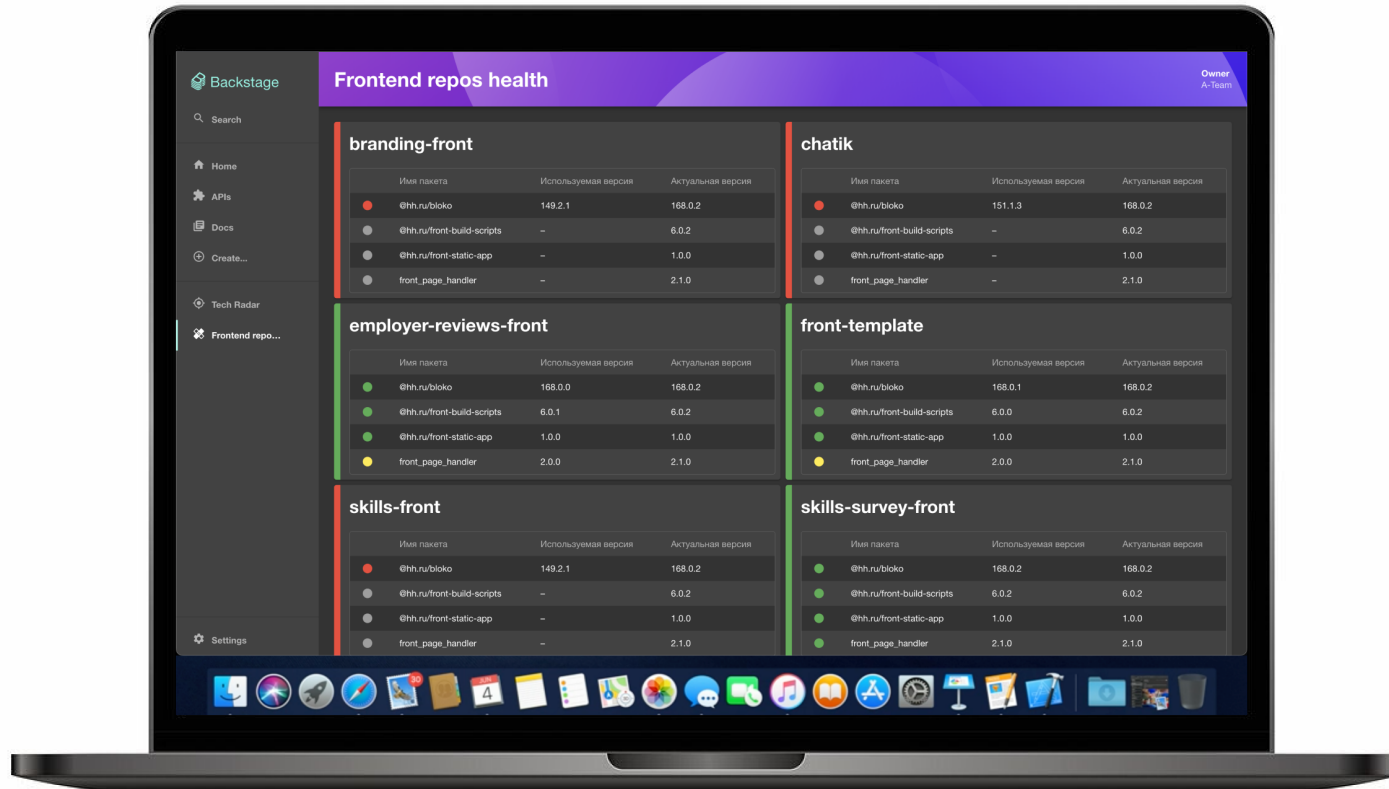
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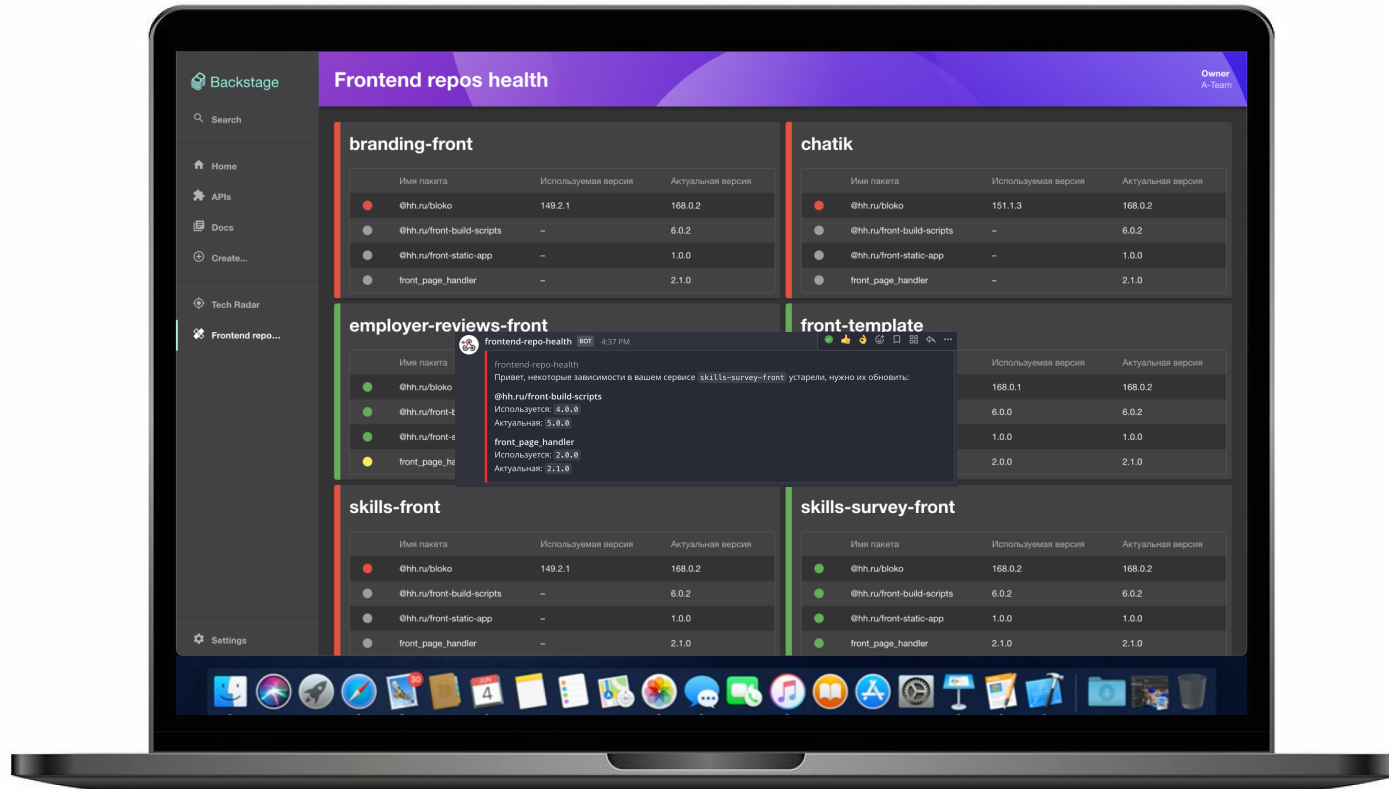
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# Успех



Het





# Спасибо! Вопросы?

- [module-federation-plugin](#)
- [examples](#)
- [concepts](#)

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