

КОДИШЬ 2.0

Docker для фронтендера

Алексей Авдеев, [Mish.Design](#)

Docker для фронтендера

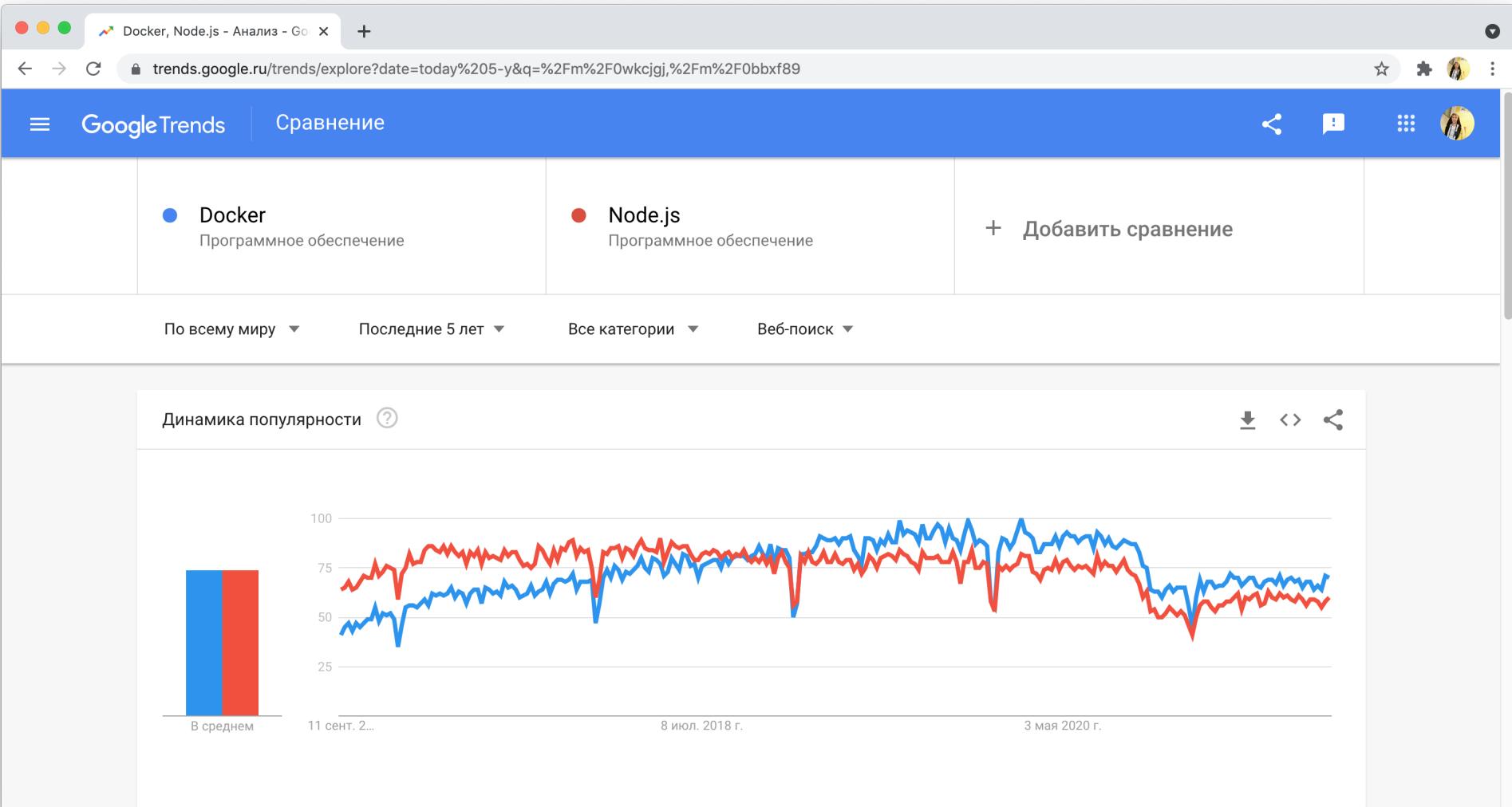
Алексей Авдеев, Mish.Design

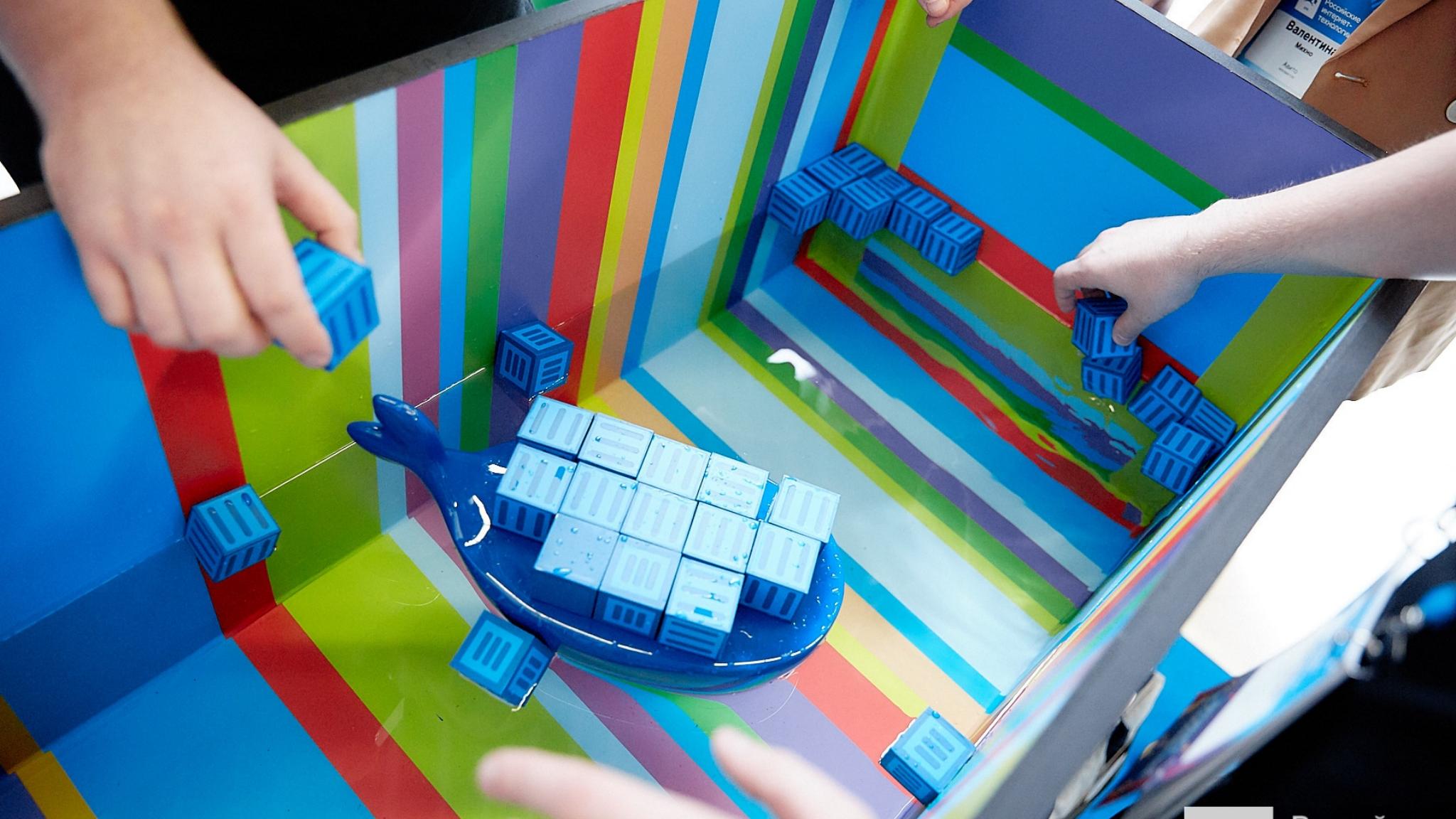


Frontend
Conf
2019

Профессиональная
конференция
фронтенд-
разработчиков





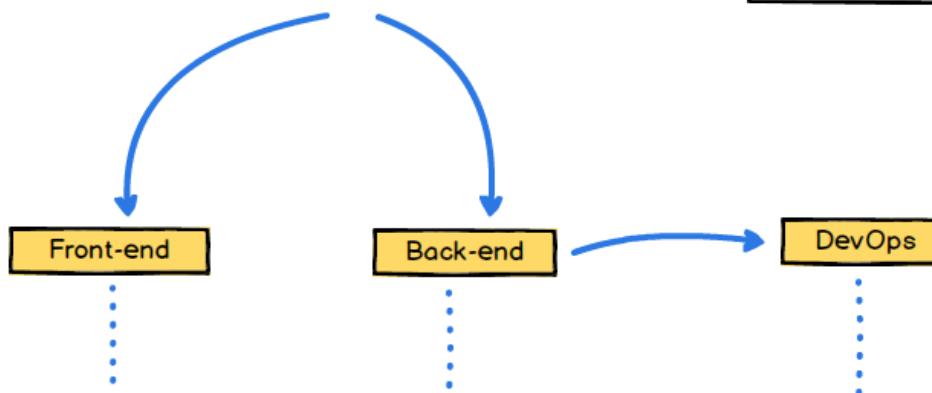


Required for any path

- Git - Version Control
- Basic Terminal Usage
- Data Structures & Algorithms
- GitHub
- Licenses
- Semantic Versioning
- SSH
- HTTP/HTTPS and APIs
- Design Patterns
- Character Encodings

Web Developer in 2021

Choose your path



Find the detailed version of this roadmap
along with resources and other roadmaps

<http://roadmap.sh>

Требования:

Docker

Работа и вакансии

Получать вакансии на почту

RSS

ВСЕ ВАКАНСИИ

ПОДХОДЯЩИЕ

Поиск



По соответствую



Выбранные вами фильтры: Фронтенд X

[Сохранить фильтры](#)

[Сбросить](#)

Найдено 473 вакансии

Работа и вакансии

Получать вакансии на почту

RSS

ВСЕ ВАКАНСИИ

ПОДХОДЯЩИЕ

docker



По соответству



Выбранные вами фильтры: Фронтенд X

[Сохранить фильтры](#) [Сбросить](#)

Найдено 66 вакансий

Frontend



Найти

Вакансии

Резюме

Компании

3 139 вакансий «Frontend»

Frontend docker



Найти

Вакансии

Резюме

Компании

718 вакансий «Frontend docker»

Каждая

пятая

Эра контейнеров



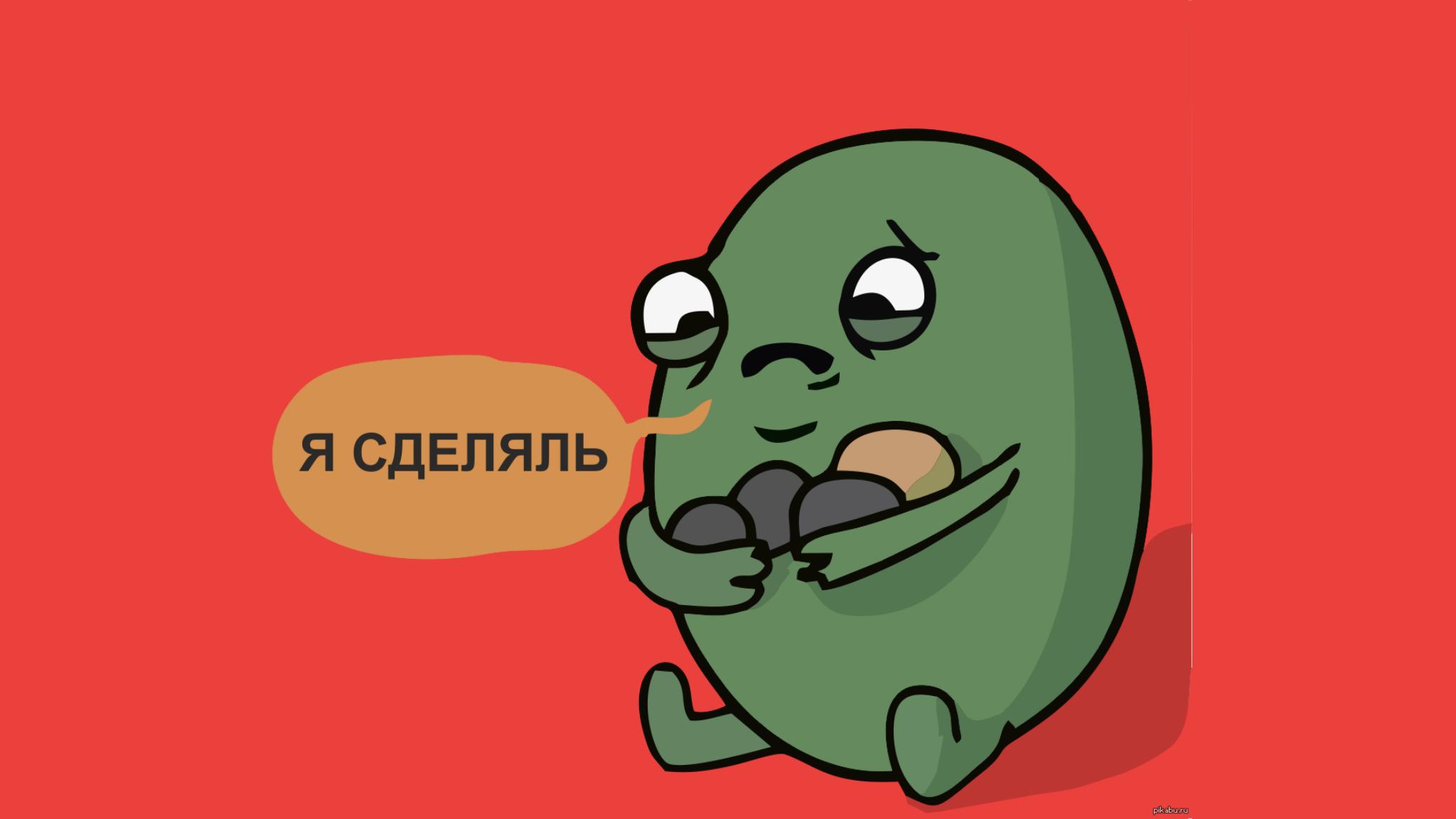
О себе

1. 🧑‍💻 Алексей Авдеев (<https://github.com/avdeev>)
2. 💼 Сеньор фронтенд, технический директор
3. 🏙 Из Нижнего Новгорода, работаю в Москве
4. 🌐 Mish.Design
5. 🤔 Программирую с 2002 года

Зачем?

Поднимаем

бэкенд



я сделяль



Без Docker

01. \$ brew update
02. \$ brew install mysql
03. ...
04. \$ \curl -sSL https://get.rvm.io | bash
05. ...
06. \$ rails s

Frontend

1. Node.js >= 6
2. npm >= 3

Backend

1. go1.11*
2. MySQL*
3. Redis*
4. Elasticsearch
5. Capistrano
6. Syslog
7. Postgresql (comments)

Настройка сервера

1. Установить GVM (<https://github.com/moovweb/gvm>)
2. `gvm install go1.11.13 --binary`
3. `gvm use go1.11.13 --default`
4. В папке с проектом создать ссылку на golang (`gvm linkthis`)
5. Установить `gb` `go get github.com/constabulary/gb/...`
6. Настроить авторизацию `git config --global url."git@git[REDACTED].insteadOf "https://gi[REDACTED]"`
7. Установить зависимости `gb vendor restore`
8. [Поднять БД](#)
9. Собрать ассеты `npm run build` (`npm run build:dev` для разработки)
10. Запустить сервер `npm start`

Elasticsearch

1. Скачать и установить Elasticsearch `brew install elasticsearch` - macOS (предложит установить дистрибутив java)
2. Установка плагина
3. выбери в <https://github.com/imotov/elasticsearch-analysis-morphology> из списка подходящий к твоей версии плагин, и запусти
`/usr/local/Cellar/elasticsearch/2.3.3/libexec/bin/plugin install http://dl.bintray.com/content/imotov/elasticsearch-plugins/org/elasticsearch/elasticsearch-analysis-morphology/2.3.3/elasticsearch-analysis-morphology-2.3.3.zip` - пример
4. потом перезапусти эластик `brew services restart elasticsearch`
5. в проекте админки `rake environment elasticsearch:import:model CLASS='Tag' FORCE=y` `rake environment elasticsearch:import:model CLASS='Post' FORCE=y` индексировать будет долго, но пользоваться можно сразу

Postgres comments db

1. `psql -U postgres -h localhost`
2. `create database comments_dev;`

Redis install and start

1. `brew install redis`
2. Перед запуском `brew services start redis`



C Docker

01. \$ docker-compose up api

02. ...

03. Listening localhost:8080



C Docker

Запуск композа

```
docker-compose up --build
```

Опционально можно запустить только необходимые сервисы, передав их названия через пробел

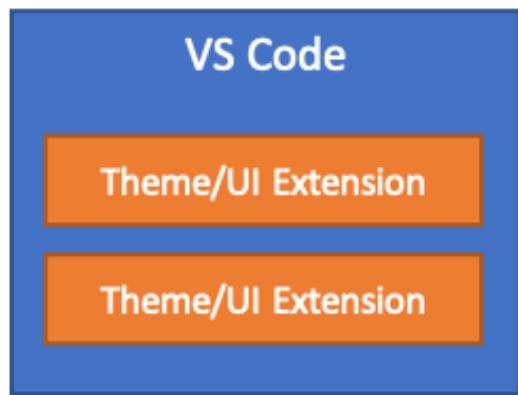
```
docker-compose up --build admin-api admin-nginx
```

Автоматизируй

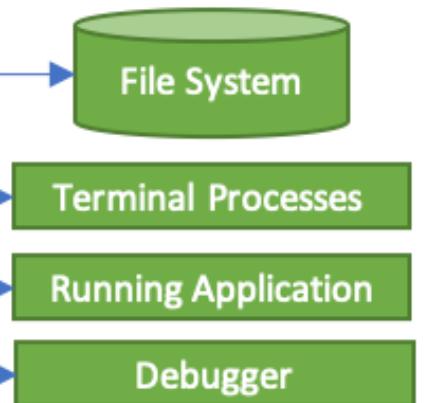
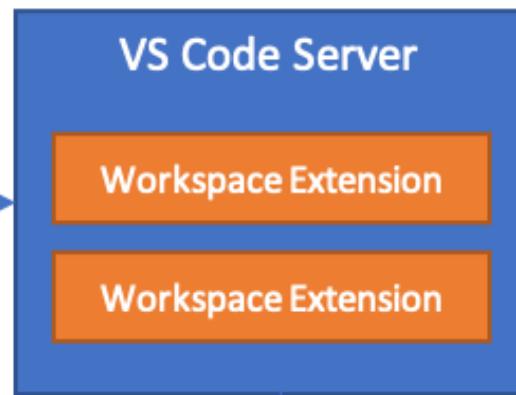
Разрабатываем

в контейнере

Local OS



Container



Exposed
Port

Volume
Mount



gtardif

Containers / Apps

Images

Volumes

Dev Environments PREVIEWDev Environments Feedback

Create

compose-dev-env-brave_poitras
RUNNING

compose-dev-env-brave_poitras_db_1 RUNNING

compose-dev-env-brave_poitras_backend_1 RUNNING

compose-dev-env-brave_poitras_proxy_1 RUNNING

single-dev-env-wizardly_ellis
RUNNING

relaxed_mclaren RUNNING



Устойчивость



A problem has been detected and Windows has been shut down to prevent damage to your computer.

The problem seems to be caused by the following file: SPCMDCON.SYS

PAGE_FAULT_IN_NONPAGED_AREA

If this is the first time you've seen this Stop error screen, restart your computer. If this screen appears again, follow these steps:

Check to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any Windows updates you might need.

If problems continue, disable or remove any newly installed hardware or software. Disable BIOS memory options such as caching or shadowing. If you need to use Safe Mode to remove or disable components, restart your computer, press F8 to select Advanced Startup Options, and then select Safe Mode.

Technical information:

*** STOP: 0x00000050 (0xFD3094C2,0x00000001,0xFBFE7617,0x00000000)





C Docker

```
$ docker rm --volumes api
```

```
$ docker system prune --all
```

Контролируем

эксплуатацию





Без Docker

1. nvm use 14
2. npm clean-install
3. npm run build
4. Раздаём папку /dist веб-сервером



C Docker

упаковано в

Docker



Available 18 Stopped 1

New environment

Environment	Deployment	Job	Commit	Updated
-------------	------------	-----	--------	---------

production	#65 by 	deploy_prod #109750	-o b9eeb387  Merge branch 'release-1.0.2'	a week ago	<input type="checkbox"/> Re-deploy
------------	--	---------------------	---	------------	--

staging 17

Deploy to...

		Re-deploy
---	---	---------------------------

staging/bugfix-...	#47 by 	deploy_stage #109322	-o 43a3b6be  added download file name	a week ago	  Re-deploy
--------------------	--	----------------------	---	------------	---

staging/deploy...	#24 by 	stop_staging #108452	-o b49141db  Merge branch 'dev' into deploy/api-r...	a week ago	 Re-deploy
-------------------	--	----------------------	--	------------	---

staging/deploy...	#18 by 	stop_staging #107752	-o 3ed60cf2  trying to fix requests to api	2 weeks ago	 Re-deploy
-------------------	--	----------------------	--	-------------	---

Show all





KEEP CALM
IT WORKS

ON ALL MACHINES

Пишите код для

продакшна

**ЧТО
ТЫ
ТАКОЕ?**





Dave Frenkel
@merr1k

Читать



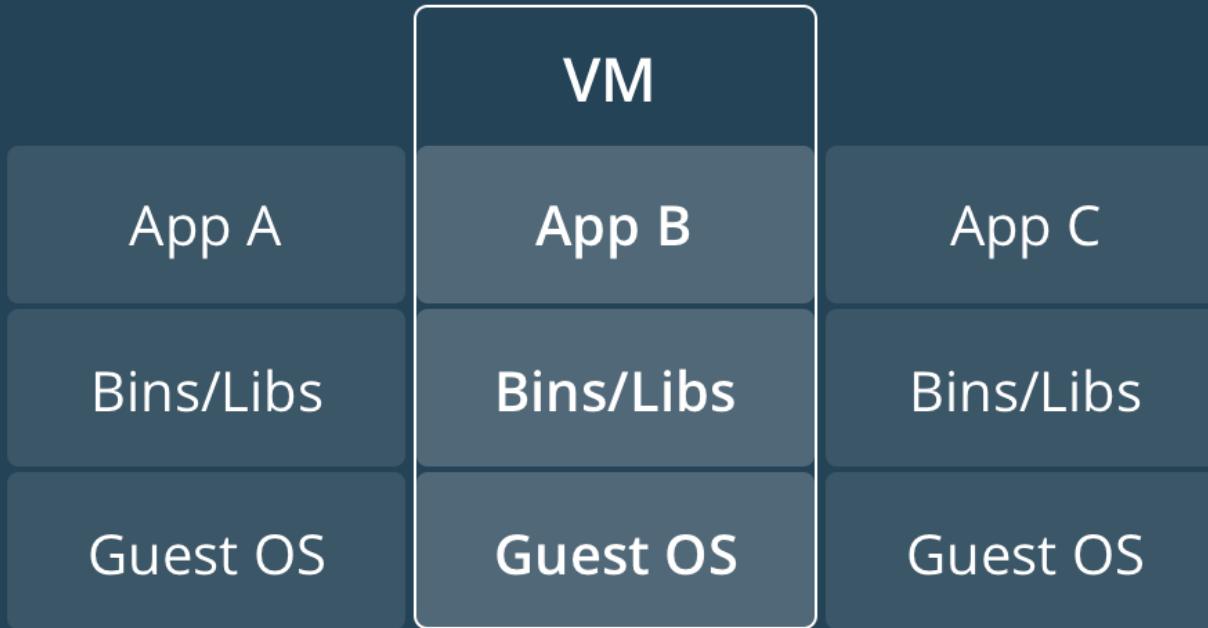
А знаете, как зовут игроков в доку 2?
Докерами. А знаете, что у них на
логотипе? Синий кит!



2:58 - 18 окт. 2018 г.

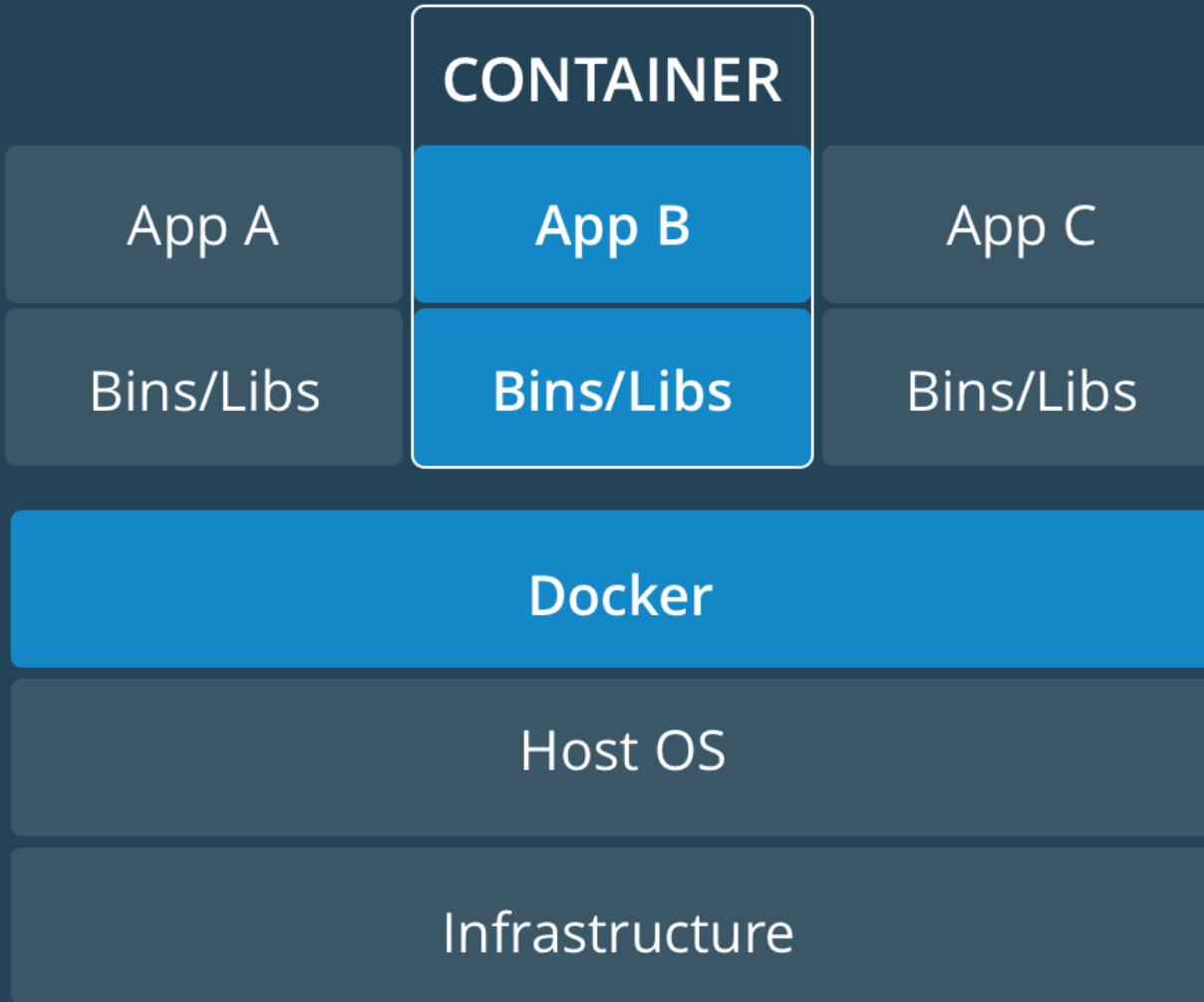


**Build safer, share wider, run
faster**



Hypervisor

Infrastructure



Установка

Docker

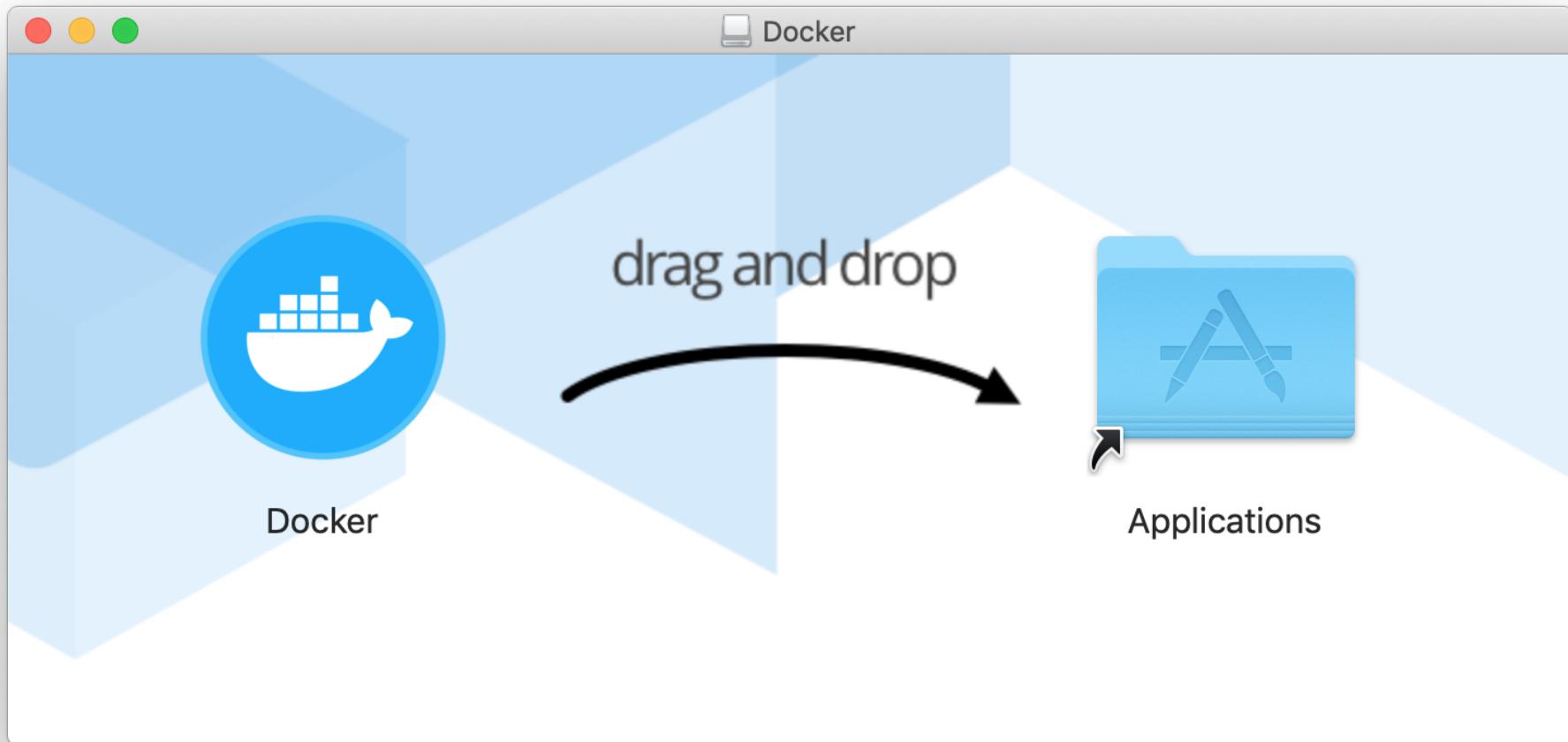


Platform	x86_64 / amd64	arm64 (Apple Silicon)
Docker Desktop for Mac (macOS)	✓	✓
Docker Desktop for Windows	✓	

Server

Docker provides `.deb` and `.rpm` packages from the following Linux distributions and architectures:

Platform	x86_64 / amd64	arm64 / aarch64	arm (32-bit)	s390x
CentOS	✓	✓		
Debian	✓	✓	✓	
Fedora	✓	✓		
Raspbian			✓	
RHEL				✓
SLES				✓
Ubuntu	✓	✓	✓	✓





Установка Docker через Homebrew

```
$ brew install --cask docker
```

Что входит в Docker Desktop

- Docker Engine
- Docker CLI client
- Docker Compose
- Docker Content Trust
- Kubernetes
- Credential Helper

0677fa68
dockercraft-dev
dockercraft-dev
latest

CHI usage: 704K / 1000K
304K / 1000K



Docker – это не

только для

админов

Что-то для админов

- docker run
- docker build
- Dockerfile
- Image
- DockerHub

Docker как NPM,

но для Ops

Знакомые понятия

- docker run  **npm start**
- docker build  **npm run build**
- Dockerfile  **package.json**
- Image  **Package**
- DockerHub  **NPM Registry**

Знакомые понятия

- Проект начал как проприетарная разработка
- Используется для всего подряд
- Есть альтернативы, призванные заменить

Explore Docker's Container Images

hub.docker.com/search?type=image

dockerhub Search for great content (e.g., mysql) Explore Repositories Organizations Help Upgrade avdeev

Docker Containers Plugins

Filters 1 - 25 of 8 238 640 available images. Most Popular

Images

- Verified Publisher i
- Official Images i
Official Images Published By Docker

Categories i

- Analytics
- Application Frameworks
- Application Infrastructure
- Application Services
- Base Images
- Databases
- DevOps Tools
- Featured Images
- Messaging Services
- Monitoring

Oracle Database Enterprise Edition Verified Publisher 0 Stars

By Oracle • Updated 4 years ago

Oracle Database 12c Enterprise Edition

Container Linux x86-64 Databases

Oracle WebLogic Server Verified Publisher 0 Stars

By Oracle • Updated 2 years ago

Oracle WebLogic Server

Container Linux x86-64 Application Frameworks Application Infrastructure

Oracle Java 8 SE (Server JRE) Verified Publisher 0 Stars

Registry - Official Image | Docker

hub.docker.com/_/registry

docker hub registry Explore Repositories Organizations Help Upgrade avdeev

Explore Official Images registry

 **registry** Official Image ☆

The Docker Registry 2.0 implementation for storing and distributing Docker images

↓ 1B+

Container Linux ARM 64 ARM x86-64 Featured Images Storage Application Services Official Image

Description Reviews Tags

Copy and paste to pull this image

`docker pull registry` Copy

[View Available Tags](#)

Quick reference

- Maintained by: Docker, Inc.
- Where to get help: the Docker Community Forums, the Docker Community Slack, or Stack Overflow

Ubuntu - Official Image | Docker

hub.docker.com/_/ubuntu

docker hub Search: ubuntu

Explore Repositories Organizations Help

Upgrade avdeev

Explore Official Images ubuntu



ubuntu Official Image ☆

Ubuntu is a Debian-based Linux operating system based on free software.

↓ 1B+

Container Linux ARM riscv64 PowerPC 64 LE ARM 64 x86-64 386 IBM Z Base Images

Operating Systems Official Image

Description Reviews Tags

Copy and paste to pull this image

```
docker pull ubuntu
```

[View Available Tags](#)

Quick reference

Maintained by Canonical and Tjanon (Debian Developer)

Hello World (1)

01. \$ docker run ubuntu:20.04 /bin/echo 'Hello world'

02.

03. Hello world

Hello-world - Official Image | +

hub.docker.com/_/hello-world

 docker hub

Explore Repositories Organizations Help ▾ Upgrade  avdeev ▾

Explore Official Images hello-world

>hello world

hello-world  

Hello World! (an example of minimal Dockerization)

↓ 1B+

Container Linux Windows IBM Z ARM 64 386 PowerPC 64 LE x86-64 ARM mips64le riscv64

Official Image

Description Reviews Tags

Copy and paste to pull this image

```
docker pull hello-world
```

[View Available Tags](#)

Quick reference

Maintained by the Docker Community

Hello World (2)

```
01. $ docker run hello-world
02. Unable to find image 'hello-world:latest' locally
03. latest: Pulling from library/hello-world
04. ...
05. ...
06. Hello from Docker!
07. This message shows that your installation appears...
08. ...
```

Containers / Apps

Images

Volumes

Dev Environments PREVIEW

Images on disk 13 images Total size: 2.6 GB IN USE UNUSED Clean up...

LOCAL REMOTE REPOSITORIES

avdeev ▾

	TAGS	OS	VULNERABILITIES	LAST PUSHED	SIZE
 avdeev/smisl-api	latest		 Not available	almost 4 years ago	286.89 MB
 avdeev/sense-coffee-bot	latest		 Not available	almost 4 years ago	267.58 MB
 avdeev/mk-1	latest		 Not available	over 1 year ago	760.85 KB
 avdeev/mk-2	latest		 Not available	over 1 year ago	761.05 KB
 avdeev/svelte-nginx	latest		 Not available	over 1 year ago	8.6 MB

Repositories per page: 5 ▾ 1-5 of 6 < >

62

кодишь 2.0

Немного рецептов

Sonarqube - Official Image | Docker

hub.docker.com/_/sonarqube

docker hub sonar

Explore Repositories Organizations Help ▾

Upgrade avdeev ▾

Explore Official Images sonarqube

 **sonarqube**  

SonarQube is an open source platform for continuous inspection of code quality.

500M+ 

Container Linux x86-64 DevOps Tools Official Image

Copy and paste to pull this image

`docker pull sonarqube` 

[View Available Tags](#)

Description Reviews Tags

Quick reference

- Maintained by: SonarSource
- Where to get help: the SonarSource Community forum, the Docker Community Forums, the Docker Community Slack, or Stack Overflow

Wordpress - Official Image | Docker

hub.docker.com/_/wordpress

docker hub search bar: wordp

Explore Repositories Organizations Help Upgrade avdeev

Explore Official Images wordpress



wordpress Official Image ☆

The WordPress rich content management system can utilize plugins, widgets, and themes.

500M+ Container Linux ARM 64 IBM Z mips64le ARM x86-64 PowerPC 64 LE 386 Application Services Official Image

Copy and paste to pull this image

`docker pull wordpress` copy icon

[View Available Tags](#)

Description Reviews Tags

Quick reference

Maintained by the Docker Community

itzg/minecraft-server - Docker

hub.docker.com/r/itzg/minecraft-server

dockerhub minecraft

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Explore itzg/minecraft-server

 itzg/minecraft-server ☆

By itzg • Updated 10 hours ago

Minecraft server with selectable version

Container

Overview Tags

docker pulls 274M docker stars 1.3k open issues 158 chat 137 online Donate Buy me a coffee

This docker image provides a Minecraft Server that will automatically download the latest stable version at startup. You can also run/upgrade to any specific version or the latest snapshot.

FULL DOCS
AVAILABLE AT
GITHUB

Docker Pull Command

```
docker pull itzg/minecraft-server
```

Owner

 itzg

Docker - Official Image | Docker +

hub.docker.com/_/docker

star gear user icon

docker hub search bar: docker

Explore Repositories Organizations Help ▾ Upgrade avdeev ▾

Explore Official Images docker

 docker Official Image ☆

Docker in Docker!

1B+ Container Linux Windows ARM 64 ARM IBM Z PowerPC 64 LE x86-64 Featured Images

Application Frameworks Official Image

Copy and paste to pull this image

`docker pull docker` 

[View Available Tags](#)

Description Reviews Tags

Quick reference

Maintained by Tianon (of the Docker Project)

Запускаем

Lighthouse



Без Docker

01. Установить Google Chrome for Desktop.
02. Установить текущую LTS-версию Node.
03. `$ npm install -g lighthouse`
04. `$ lighthouse http://frontendconf.ru`

femtopixel/google-lighthouse - +

hub.docker.com/r/femtopixel/google-lighthouse

 docker hub

Explore Repositories Organizations Help ▾ Upgrade  avdeev ▾

Explore femtopixel/google-lighthouse

 femtopixel/google-lighthouse ☆

By [femtopixel](#) • Updated a day ago

Google Lighthouse - Docker Image

Container

[Overview](#) Tags

[Github](#)

[Issues](#)

Google Lighthouse - Docker Image

release v0.6.0 docker pulls 481k docker stars 10   

Lighthouse analyzes web apps and web pages, collecting modern performance metrics and insights on developer

Docker Pull Command

```
docker pull femtopixel/google-lighthouse
```

Owner

femtopixel



C Docker

```
01. $ docker run \
02.   --rm \
03.   --name lighthouse \
04.   -it \
05.   --volume ~:/home/chrome/reports \
06.   --cap-add=SYS_ADMIN \
07.   femtopixel/google-lighthouse https://vpene.ru/
```

Нагрузка



C Docker

01. \$ docker service scale frontend=10

02.

03. frontend scaled to 10

Поиск

владельца

Dockerfile

```
LABEL org.opencontainers.image.authors="example@acme.com"
```

docker inspect

```
$ docker inspect NAME|ID
```

01. "Labels": {

02. "maintainer": "aad.jerry@gmail.com"

03. }

Выбираем технологию



Node - Official Image | Docker

hub.docker.com/_/node

docker hub node

Explore Repositories Organizations Help

Upgrade avdeev

Explore Official Images node

node

Official Image

Node.js is a JavaScript-based platform for server-side and networking applications.

1B+

Container Linux ARM 64 IBM Z x86-64 386 ARM PowerPC 64 LE Application Infrastructure

Official Image

Description Reviews Tags

Copy and paste to pull this image

`docker pull node`

[View Available Tags](#)

Quick reference

Maintained by The Node.js Docker Team

Dockerfile (1)

```
01. FROM      node:14-alpine as builder  
02. WORKDIR /app  
03. COPY      package*.json ./  
04. RUN       npm ci  
05. COPY      vue.config.js babel.config.js ./  
06. COPY      src src  
07. RUN       npm run build
```

Nginx - Official Image | Docker

hub.docker.com/_/nginx

docker hub nginx

Explore Repositories Organizations Help

Upgrade avdeev

Explore Official Images nginx

nginx

Official build of Nginx.

1B+

Container Linux mips64le 386 ARM PowerPC 64 LE IBM Z ARM 64 x86-64

Application Infrastructure Official Image

Description Reviews Tags

Quick reference

Maintained by the NGINX Docker Maintainers

Copy and paste to pull this image

`docker pull nginx`

View Available Tags

Dockerfile (2)

```
01. FROM    nginx:1.21-alpine
02. COPY    nginx /etc/nginx/conf.d
03. COPY    --from=builder /app/dist/ /usr/share/nginx/html/
04. EXPOSE  5000
```

Запускаем контейнер

```
01. docker build --tag my-app .
```

```
02. docker run -p 5000:5000 --tag my-app
```



Node - Official Image | Docker

hub.docker.com/_/node

docker hub node

Explore Repositories Organizations Help

Upgrade avdeev

Explore Official Images node

node

Official Image ★

Node.js is a JavaScript-based platform for server-side and networking applications.

1B+

Container Linux ARM 64 IBM Z x86-64 386 ARM PowerPC 64 LE Application Infrastructure

Official Image

Description Reviews Tags

Copy and paste to pull this image

`docker pull node`

[View Available Tags](#)

Quick reference

Maintained by The Node.js Docker Team

Dockerfile для Node.js

```
01. FROM node:14-alpine  
02. WORKDIR /app  
03. COPY package*.json ./  
04. RUN npm ci  
05. COPY . .  
06. EXPOSE 5000  
07. CMD ["node", "server.js"]
```

Python - Official Image | Docker +

hub.docker.com/_/python

docker hub python Explore Repositories Organizations Help Upgrade avdeev

Explore Official Images python

 python Official Image ☆

Python is an interpreted, interactive, object-oriented, open-source programming language.

1B+ ↓

Container Linux Windows PowerPC 64 LE ARM IBM Z ARM 64 386 mips64le x86-64

Programming Languages Official Image

Description Reviews Tags

Copy and paste to pull this image

`docker pull python` Copy

[View Available Tags](#)

Quick reference

Maintained by the Docker Community

Dockerfile для Python

```
01. FROM python:3-alpine  
02. WORKDIR /usr/src/app  
03. COPY requirements.txt ./  
04. RUN pip install --no-cache-dir -r requirements.txt  
05. COPY . .  
06. EXPOSE 5000  
07. CMD ["python", "./your-daemon-or-script.py"]
```

Универсальная

абстракция

Компонуемость



C Docker (docker-compose.yml)

```
01. services:  
02.   api:  
03.     build: ./api  
04.   front:  
05.     build: ./front  
06.   reverse-proxy:  
07.     image: caddy  
08.   ports:  
09.     - 80:80  
10.   volumes:  
11.     - ./Caddyfile:/etc/Caddyfile
```

Запускаем связку контейнеров

```
$ docker-compose up
```

Демо

Виртуализирай



Спасибо!

- 🧑‍🤝‍🧑 Алексей Авдеев
- 🌐 <https://github.com/avdeev>
- 🌐 https://twitter.com/avdeev_alexey
- 🌐 Mish.Design

