

DevOps in PHP environment

1

Hoje vamos falar sobre:

- ^ Ambientes semelhantes de 2 empresas diferentes
- ^ Maneiras diferentes de resolver o mesmo Problema

Who?!

Gabriel Koerich

Over 10 years of experience in PHP and 6 in Laravel

Founder of Bulldesk, responsible for finance and technology

gabriel@bulldesk.com.br

twitter.com/gabrielmkoerich

github.com/gabrielkoerich

Software completo de marketing digital para acelerar suas vendas

Encontre mais pessoas interessadas no seu negócio e organize as vendas da sua empresa.

3



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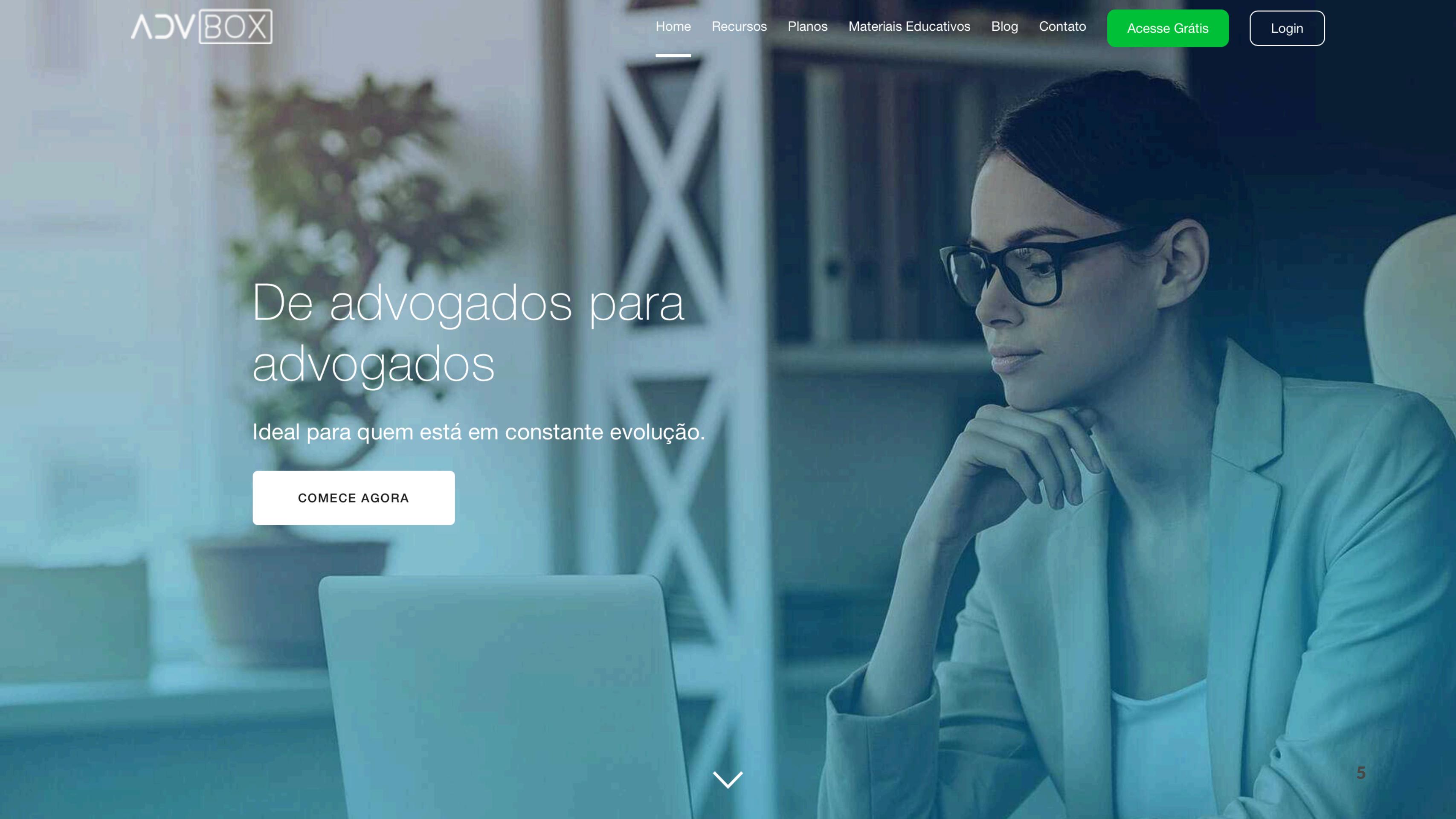
O Bulldesk é um software de automação de marketing e CRM, nele é possível criar formulários, landing pages, automações de marketing, e-mail marketing e ter uma visão geral de todas as negociações com seus clientes.

Aplicação multi tenant, com uns 1k users por mes
Lançamos o bulldesk em março do ano passado e temos uma média de 5M de requests por mês.

Who?!

Evaldo Felipe
Blackops @ Neoway
8 years of SysAdmin
2,5 years of DevOps

contato@valdofelipe.com
twitter.com/valdofelipe



De advogados para
advogados

Ideal para quem está em constante evolução.

COMECE AGORA

5

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Aplicação voltada para o meio jurídico, para gestão de processos, organização de tarefas do time, gestão do escritório, atualização automatizada dos processos em atividade (explicar alguns detalhes)

Versão free e versão com 9,4k escritorio
15,6k usuários, 5kk atualizações/dia com
9.000.000 de requests/mes

Agenda

- PHP Sucks?!
- Workflow
- Infrastructure
- Tools
- Issues and Fixes

6

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- Dev workflow / Source Management
- Continuous Integration
- Deploy Platforms
- Monitoring, Security & Optimization

-->

PHP Sucks?!

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PHP Sucks?!

- Easy for beginners
- Easy to "deploy"
- PHP mixed in HTML
- No conventions for function names
- Wordpress

8

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^ Pessoal, agora um assunto sério. Todo mundo aqui foi zoado pelo menos uma vez na vida por usar PHP. Que php é lixo, as funções não seguem nenhum padrão e que é realmente muito fácil ver código lixo em php. Mas será que o PHP é tão ruim assim? Na verdade, até a versão 5.2 era muito ruim mesmo. Nem namespace a gente tinha. Até a 5.3 a gente tinha que escrever array LITERALMENTE escrevendo array().

I don't know how to stop it, there
was never any intent to write a
programming language

– *Rasmus Lerdorf*

PHP Evolution

Version	Evolution
< 5.3	💩
5.3	Namespaces, closures
5.4	Traits, [] for arrays
5.5	OPCache, finally on try blocks
5.6	Argument unpacking (...\$args)
6.0	👏
7.0	Performance (thanks to HHVM), return and scalar types, improved exceptions
7.1	Nullable types (?int), catch multiple exceptions

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- ^ A OO do PHP foi totalmente reescrita na versão 5.
- ^ A verdade é que o PHP é muito simples e deixa fazer o que você quiser. Quem tem que ser bom é você. Quem tem que usar os padrões é você. Com o laravel é a mesma coisa, ele te deixa fazer um MONTE de merda. Eu já vi código em Laravel pior que código em Wordpress.
- ^ Mas sério, muita coisa mudou de lá pra cá, e a partir da versão 7 eu finalmente acho que os desenvolvedores PHP serão cada vez mais respeitados/valorizados.

I have absolutely no idea how to
write a programming language, I just
kept adding the next logical step on
the way.

– *Rasmus Lerdorf*

Community Evolution

Autoloaders, Composer & Packagist
Frameworks (Zend, Symfony, Laravel)
PHP FIG and PSRs

Standards

PSR-1: Basic Coding

PSR-2: Coding Style Guide

PSR-3: Logger Interface

PSR-4: Autoloader

PSR-5: Caching Interface

Modern PHP

```
/**  
 * Create a new instance.  
 */  
public function __construct(AutomationRepository $automations)  
{  
    $this->automations = $automations;  
}  
  
/**  
 * @Get("automation", as="automation.index")  
 */  
public function index(Request $request): Response  
{  
    if ($request->expectsJson()) {  
        return $this->automations->getActive()->pluck('name', 'id');  
    }  
  
    $automations = $this->automations->categorized($request->input('categories'))  
        ->orderBy('name')  
        ->paginate(50);  
  
    return new Response(view('pages.automation.index')->with(compact('automations')), 200);  
}
```

Laravel Features

- Routes & Controllers
- Service Container & Dependency Injection
- Migrations & ORM
- Artisan command line
- Queues (beanstalkd, redis, amazon sqs)
- Broadcasting (Pusher or socket.io)

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^ Falar que usamos laravel e
estas são as features

Development Workflow & Source Management

Development Workflow & Source Management

- People
- Workflow
- Rules, code patterns, PSRs
- Local environment
- ~~Database dump~~ Migrations / Seeds

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Um projeto é feito por pessoas, por isso os indivíduos e suas interações são a parte mais importante de todo o desenvolvimento de software. Claro que não podemos esquecer dos processos, são eles que nos fazem continuar no caminho certo, mas as pessoas sempre vêm em primeiro lugar.

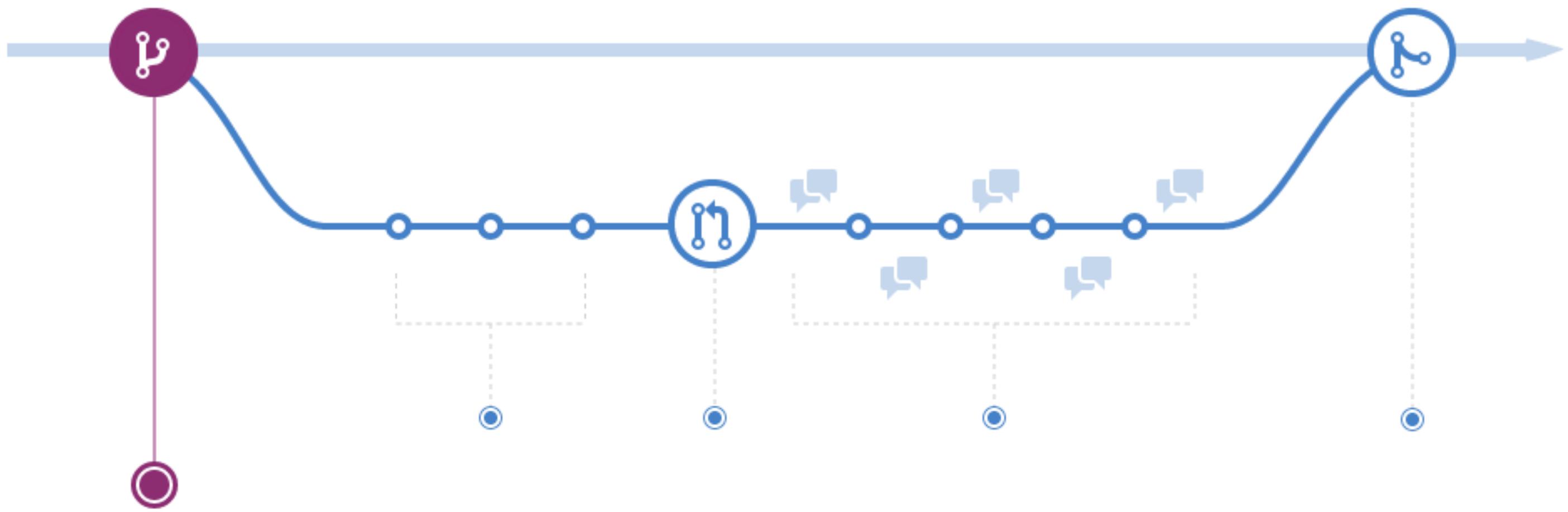
Nós vamos falar também sobre as diretrizes de desenvolvimento, como cada dev deve se portar ao desenvolver e comitar códigos novos para sua aplicação.

Como configurar seu ambiente local, o modo como vão instalar o repositório e rodar todos os migrations e seeds. Nenhum dev deve receber o dump de seu banco de dados de produção. Uma dica interessante é ao criar um novo model/migration, criar também um factory e um novo seed. Tudo isso deve estar bem definido para qualquer dev novo entrar e não perder muito tempo configurando o projeto em sua máquina.

Github Flow

- Anything in master is deployable
- Every new branch should be created off of master
- Branches must have descriptive names (create-cache-manager, improve-auth, refactor-acl)
- Pull requests must be reviewed by at least 2 people
- When ready, you should merge and deploy immediately

Github Flow



Bulldesk Guidelines

Bulldesk

 >= 7.0  build 

Guidelines

- Contributions must follow the [GitHub Flow](#) with slightly modifications. Create a new branch and pull request it to **develop**. Never directly to **master**.
- All contributions must have tests. Remember to verify the Code Climate and Travis CI status.
- Use the present tense ("Add feature" not "Added feature") and the imperative mood ("Move class to..." not "Moves class to...") on commits and pull requests.
- Pull requests must be reviewed before merged.
- Done is better than perfect. Does it work as expected? Ship now, iterate later.
- Deployes are automatically handled via [Envoyer](#) when fresh code are pushed to **master**.

PHP Coding Style

We must follow the [PSR-2](#) coding standard and the [PSR-4](#) autoloading standard.

You also should read the [PHP The Right Way](#).

PHPDoc

Below is an example of a valid documentation block. Note that the `@param` attribute is followed by two spaces, the argument type, two more spaces, and finally the variable name:

```
/**  
 * Register a binding with the container.  
 *  
 * @param string|array $abstract  
 * @param \Closure|string|null $concrete  
 * @param bool $shared  
 * @return void  
 */  
public function bind($abstract, $concrete = null, $shared = false)  
{  
    //  
}
```

Local Environment

Laravel Valet

```
# Install PHP/Composer/MySQL/Redis local  
  
# On MacOS  
$ composer global require laravel/valet  
  
# On Linux  
$ composer global require cpriego/valet-linux  
  
$ valet install  
  
$ cd ~/Projects && valet park  
  
# All directories in ~/Projects will be accessible at http://{folder}.test
```

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^ Falar da evolução do ambiente local
^ engineX

Vessel (Docker)

PHP 7.2, MySQL 5.7, Redis & NodeJS with NPM, Yarn & Gulp

```
# Install docker  
  
$ composer require shipping-docker/vessel  
  
# Register Vessel\VesselServiceProvider if not on Laravel 5.5  
  
$ php artisan vendor:publish --provider="Vessel\VesselServiceProvider"  
  
$ bash vessel init  
  
$ ./vessel start  
  
# Accessible at http://localhost
```

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^ Esse cara que fez o Vessel é o fideloper...

Continuous Integration

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Continuous Integration

- Tests
- Code coverage
- Code quality

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- ^ Falar sobre Travis CI, Clode Climate, Scrutinizer
- ^ Explicar sobre testes automatizados, cobertura de testes, qualidade de código, integração contínua e mostrar as ferramentas que podem ser utilizadas para ver qualidade, coverage e rodar os testes.

```
5 Migrating: 2017_10_27_140351_add_fee_to_invoices_table
6 Migrated: 2017_10_27_140351_add_fee_to_invoices_table
7 Migrating: 2017_10_31_232431_add_subscribers_to_kpi_table
8 Migrated: 2017_10_31_232431_add_subscribers_to_kpi_table
9 Migrating: 2017_11_03_173641_add_tenant_id_field_to_statuses_table
10 Migrated: 2017_11_03_173641_add_tenant_id_field_to_statuses_table
11 Migrating: 2017_11_03_195532_add_subscribers_diff_to_kpi_table
12 Migrated: 2017_11_03_195532_add_subscribers_diff_to_kpi_table
13 Migrating: 2017_11_08_170121_add_avg_to_kpi_table
14 Migrated: 2017_11_08_170121_add_avg_to_kpi_table
15 PHPUnit 5.7.21 by Sebastian Bergmann and contributors.
16
17 ..... 63 / 175 ( 36%)
18 ..... 126 / 175 ( 72%)
19 ..... 175 / 175 (100%)
20
21 Time: 1.11 minutes, Memory: 408.00MB
22
23 OK (175 tests, 1644 assertions)
24
25
26 The command "vendor/bin/phpunit -c phpunit-ci.xml --exclude-group slow" exited with 0.
27 store build cache
28
29
30 Done. Your build exited with 0.
```

cache.2



Travis CI APP 5:31 PM

Build #11583 (2e5a7bf) of gabrielkoerich/bulldesk@develop in PR #2968 by Lucas Leandro failed in 2 min 20 sec



Travis CI APP 5:58 PM

Build #11584 (5efcdc2) of gabrielkoerich/bulldesk@master in PR #3005 by Gabriel Koerich failed in 1 min 40 sec



Travis CI APP 6:06 PM

Build #11585 (28d5440) of gabrielkoerich/bulldesk@master in PR #3005 by Gabriel Koerich failed in 1 min 7 sec



Travis CI APP 6:23 PM ☆

Build #11586 (b00ee42) of gabrielkoerich/bulldesk@master in PR #3005 by Gabriel Koerich passed in 2 min 2 sec

Breakdown

1,475 FILES

 MAINTAINABILITY TEST COVERAGE

Codebase summary

MAINTAINABILITY

A 2 mos

TEST COVERAGE

D 67%

Repository stats

CODE SMELLS

274

DUPLICATION

67

OTHER ISSUES

1,466

Production/QA Environment

29

E.

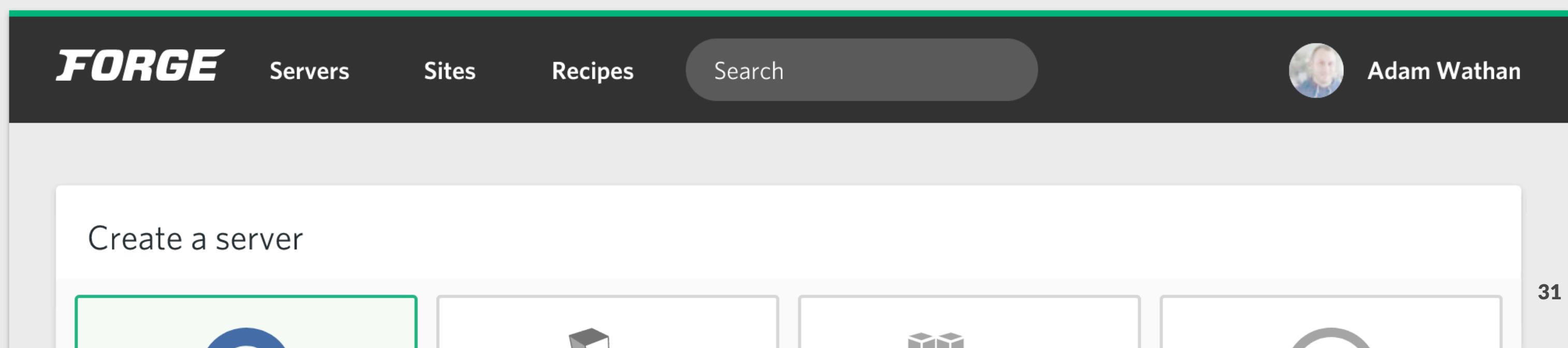
- ^ Falar sobre Forge, Envoyer, Let's Encrypt
- ^ Mostrar como funciona o provisionamento de máquinas para produção no Forge (sem xdebug, com opcache) e a integração com deploy contínuo com zero downtime no Envoyer, citando que é possível criar vários servidores em rede, cada um fazendo o seu papel para escalar a aplicação.

Provision/Deploy

- Multi Servers / Instances
- Continuous Deploy
- Zero downtime
- Database Replication
- PHP 7.2
- SSL & http2

Painless PHP Servers

Provision and deploy unlimited PHP applications on DigitalOcean, Linode, AWS, and more.

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E
Infrastructure automation as a
Service
^ PHP environment as a
Service



Numerous Cloud Providers

Choose between AWS, Digital Ocean, Linode, or even your own custom VPS. These are your servers, we just make it easy like Sunday morning.



SSL Certificate Management

Dealing with SSL certificates can ruin your day. Forge's control panel is so easy you'll almost look forward to configuring SSL.



Site / Sub-Domain Management

Easily configure unlimited domains, sub-domains, and even wild-card subdomains with Forge's simple control panel. Create one site or a hundred on your server.



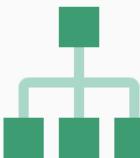
Manage Queue Workers

If you're using queues and workers in your application, you'll jump for joy. Forge configures Supervisor so your workers will run forever.



Cron Jobs Made Simple

Easily configure commands to run every minute, hour, day, month, or on your own custom schedule. Forge's scheduler works great with the powerful Laravel scheduler.



Load Balancing

Create and manage Nginx load balancing servers. Simple point-and-click interface to distribute traffic to your other application servers. You'll be amazed.



Horizontal Scaling

The Forge control panel provides a simple interface for configuring private networks. Easily grant your application servers access to your cache or database servers.



Up-To-Date Server Configuration

Take advantage of Ubuntu 18.04 LTS and our tailored server configurations, complete with Nginx, PHP 7, MySQL, Postgres, Redis, Memcached, and automated security updates.



Digital Ocean



Custom VPS

Credentials

Bulldesk



Name

fancy-meadow

Server Size

2GB RAM - 2 CPU Cores - 40GB SSD - \$0.03 / Hour - \$20 / Month



Region

New York 1



PHP Version

7.1



Post-Provision Recipe

None



Database

MySQL (5.7)



Database Name

forge

Provision As Load Balancer

Enable [DigitalOcean Weekly Backups](#)

 CREATE SERVER

CANCEL

Recipes

App server post-provision	root			
Database server post-provision	root			
Redis server post-provision	root			

Server Network

Below is a list of all of the other servers this server may access. In other words, this server's network! This makes it a breeze to use a connected server as a separate database, cache, or queue box.

Can Connect To

- bulldesk-app-1
- bulldesk-app-2
- bulldesk-app-3
- bulldesk-jobs-2
- bulldesk-legacy
- bulldesk-load-balancer
- bulldesk-mysql-1
- bulldesk-mysql-2
- bulldesk-mysql-3

UPDATE NETWORK

Firewall Rules

ACCEPT	tcp	--	10.132.103.204	anywhere	tcp dpt:mysql
ACCEPT	udp	--	10.132.103.204	anywhere	udp dpt:mysql
ACCEPT	tcp	--	10.132.103.204	anywhere	tcp dpt:postgresql
ACCEPT	udp	--	10.132.103.204	anywhere	udp dpt:postgresql
ACCEPT	tcp	--	10.132.103.204	anywhere	tcp dpt:11211
ACCEPT	udp	--	10.132.103.204	anywhere	udp dpt:11211
ACCEPT	tcp	--	10.132.103.204	anywhere	tcp dpt:6379
ACCEPT	udp	--	10.132.103.204	anywhere	udp dpt:6379
ACCEPT	tcp	--	10.132.103.204	anywhere	tcp dpt:11300
ACCEPT	udp	--	10.132.103.204	anywhere	udp dpt:11300

E
Portas liberadas 80, 22 e 443
22 pode ser trocada



Digital Ocean



Custom VPS

Credentials

Bulldesk



Name

fancy-meadow

Server Size

2GB RAM - 2 CPU Cores - 40GB SSD - \$0.03 / Hour - \$20 / Month



Region

New York 1



Post-Provision Recipe

None



Database Name

forge

Provision As Load Balancer

Enable DigitalOcean Weekly Backups

 CREATE SERVER

CANCEL

Balanced Servers

To add servers to the balancer, create a server on this provider and region.

Below is a list of all of the servers available for balancing, which includes all of the servers in the same private network as this server.

- | | | |
|---------|--|---|
| Balance | <input checked="" type="checkbox"/> bulldesk-app-1 |  |
| | <input checked="" type="checkbox"/> bulldesk-app-2 |  |
| | <input checked="" type="checkbox"/> bulldesk-app-3 |  |
| | <input type="checkbox"/> bulldesk-jobs |  |
| | <input type="checkbox"/> bulldesk-jobs-2 |  |
| | <input checked="" type="checkbox"/> bulldesk-legacy |  |
| | <input checked="" type="checkbox"/> bulldesk-mysql-1 |  |
| | <input type="checkbox"/> bulldesk-mysql-2 |  |
| | <input type="checkbox"/> bulldesk-mysql-3 |  |

 UPDATE BALANCED SERVERS

Beanstalkd queues + Supervisor

Active Workers							CHECK WORKER STATUS
Connection	Queue	Timeout	Processes	Tries	Daemon	Restart	
beanstalkd	sending	7100	3	1	✓ Yes		
beanstalkd	import	7100	3	1	✓ Yes		
beanstalkd	default	300	6	1	✓ Yes		
beanstalkd	export	1200	2	1	✓ Yes		
beanstalkd	sending_actions	300	4	1	✓ Yes		
beanstalkd	automation	300	4	1	✓ Yes		
beanstalkd	decision	300	4	1	✓ Yes		
beanstalkd	listeners	60	2	1	✓ Yes		

name	current-jobs-urgent	current-jobs-ready	current-jobs-reserved	current-jobs-delayed	current-jobs-buried	total-jobs
automation	0	0	0	513	0	118157

Actions: [▶ Kick 1 job](#) [▶ Kick 10 job](#) [⏸ Pause tube](#)

[➕ Add job](#) ▾

Next job in "ready" state

empty

Next job in "delayed" state

Stats:	
id	8625457
tube	automation
state	delayed
pri	1024
age	1471
delay	1860

Job data:

[➕ Add to samples](#) [➡ Move all delayed to](#) [🗑 Delete all delayed jobs](#) [✖ Delete](#)

```
{  
    "displayName": "Bulldesk\\\\\\Automation\\\\Job\\\\Action\\\\SendMail",  
    "job": "Illuminate\\\\Queue\\\\CallQueuedHandler@call",  
    "maxTries": 2,  
    "timeout": null,  
    "data": {  
        "commandName": "Bulldesk\\\\\\Automation\\\\Job\\\\Action\\\\SendMail",  
        "command": "0:39:\\\"Bulldesk\\\\\\Automation\\\\Job\\\\Action\\\\SendMail\\\":12:{  
            s:4:\\\"mail\\\";s:45:\\\"Illuminate\\\\\\Contracts\\\\Database\\\\ModelIdentifier\\\":2:{  
                s:5:\\\"class\\\";s:24:\\\"Bulldesk\\\\\\Mail\\\\Model\\\\Mail\\\";s:2:\\\"id\\\";i:324; 40  
            }s:5:\\\"tries\\\";i:2;s:6:\\\"action\\\";0:45:\\\"Illuminate\\\\\\Contracts\\\\Database\\\\ModelIdentifier\\\":2:{  
        }  
    }  
}
```

Issue

Laravel doesn't understand that the request
came from a client and not from the load
balancer

Trusted Proxy

```
$ composer require fideloper/proxy

# Register Fideloper\Proxy\TrustedProxyServiceProvider

$ php artisan vendor:publish --provider="Fideloper\Proxy\TrustedProxyServiceProvider"

// Http/Kernel.php
protected $middleware = [
    //...
    \Fideloper\Proxy\TrustProxies::class,
];

// config/trustedproxy.php
return [
    'proxies' => [
        '192.168.10.10', // Load balancer's IP address
    ],
//...
```

Issue

How to serve some files from a single server?

Nginx Websocket Proxy

```
upstream websocket {  
    least_conn;  
    server 10.xx.xx.xx:2095; #websocket server ip  
}  
  
location /socket.io {  
    proxy_pass http://websocket;  
    proxy_http_version 1.1;  
    proxy_set_header Upgrade $http_upgrade;  
    proxy_set_header Connection "upgrade";  
    proxy_set_header Host $host;  
  
    proxy_connect_timeout      300;  
    proxy_send_timeout        300;  
    proxy_read_timeout         300;  
    send_timeout               300;  
}
```

44

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^ Falar sobre Websocket node
e redis

Database Replication

Master/Slave Config

```
//...
'connections' => [
  'mysql' => [
    'write' => [
      'host' => env('DB_WRITE_HOST', env('DB_HOST', '127.0.0.1')),
    ],
    'read' => [
      'host' => [
        env('DB_WRITE_HOST', env('DB_HOST', '127.0.0.1')),
        env('DB_READ_HOST', env('DB_HOST', '127.0.0.1')),
      ],
    ],
    'backup' => [
      'host' => env('DB_BACKUP_HOST', env('DB_READ_HOST', '127.0.0.1')),
      'arguments' => '--single-transaction --skip-tz-utc',
    ],
  ],
//...
];
```

Zero Downtime PHP Deployment

Deployments you've only dreamed about. Zero downtime. Zero fuss.

[Start Now for \\$10/month](#)

[Watch The Laracasts](#)

Add Server

X

Name

IP Address

Port

Connect As

PHP Version

Receives Code Deployments 

Project Path 

 Save Server

🔍 Public SSH Key

X

This key **must** be added to the server's .ssh/authorized_keys file for **each** user you want to run tasks as.

ssh-rsa



Deployment Hooks

 Manage Linked Folders

Action	Before	After	
Clone New Release		Delete compiled file	
Install Composer Dependencies		Tests (legacy)	
Activate New Release	Migrations [mysql-1], Frontend [deprecated]	Cache / restart / update [all]	
Purge Old Releases		Notify Bugsnag	

.env

```
REDIS_HOST=  
BEANSTALKD_HOST=
```

```
DB_HOST=  
DB_WRITE_HOST=  
DB_READ_HOST=  
DB_BACKUP_HOST=
```

```
DB_NAME=  
DB_USER=  
DB_PASSWORD=
```

```
CACHE_DRIVER=redis  
SESSION_DRIVER=redis
```

```
forge@advbox-app-01:~/app.advbox.com.br/envoyer$ ls -la
total 24
drwxrwxr-x 4 forge forge 4096 Mar 29 17:48 .
drwxrwxr-x 4 forge forge 4096 Mar 21 03:53 ..
-rw-r--r-- 1 forge forge 772 Mar 29 17:46 .env
lrwxrwxrwx 1 forge forge 61 Mar 29 17:48 current -> /home/forge/app.advbox.com.br/envoyer/releases/20170329174624
drwxrwxr-x 6 forge forge 4096 Mar 29 17:48 releases
drwxrwxr-x 5 forge forge 4096 Mar 21 03:53 storage
```

</> Update Hook (Tests (legacy))

x

Bulldesk *PR*

Name

Tests (legacy)

Run As

forge

Script

```
1 cd {{ release }}  
2 vendor/bin/phpunit
```

+ Add Hook

</> Before Th

No hooks have been defined.



On Servers

- bulldesk-app-1
- bulldesk-app-2
- bulldesk-app-3
- bulldesk-jobs
- bulldesk-jobs-2
- bulldesk-legacy
- bulldesk-mysql-1

53

</> Update Hook (Frontend)

X

Bulldesk *PRO

Name

Frontend

Run As

forge

Script

```
1 cd {{ release }}  
2 ln -s {{ project }}/node_modules node_modules  
3 ln -s {{ project }}/public/build public/build  
4 ln -s {{ project }}/public/scripts public/scripts  
5 ln -s {{ project }}/public/styles public/styles  
6 ln -s {{ project }}/public/components public/components  
7  
8 npm install  
9 npm run production
```

+ Add Hook

Name

Migrations [my]

Frontend



On Servers

- bulldesk-app-1 (redacted)
- bulldesk-app-2 (redacted)
- bulldesk-app-3 (redacted)
- bulldesk-jobs (redacted)
- bulldesk-jobs-2 (redacted)
- bulldesk-legacy (redacted)
- bulldesk-mysal-1 (redacted)

54



</> Update Hook (Migrations [mysql-1])

X

Bulldesk *PR

Name

Migrations [mysql-1]

Run As

forge

Script

```
1 cd {{ release }}  
2 cp {{ project }}/.env .env  
3 php artisan migrate --force
```

+ Add Hook

</> Before The

Name

Migrations [my

Frontend

On Servers

- bulldesk-app-1 (1)
- bulldesk-app-2 (1)
- bulldesk-app-3 (1)
- bulldesk-jobs (1)
- bulldesk-jobs-2 (1)
- bulldesk-legacy (1)
- bulldesk-mysql-1 (1)

55



</> Update Hook (Cache / restart / update [all])

X

Bulldesk *PRO*

Name

Cache / restart / update [all]

Run As

forge

Script

```
1 cd {{ release }}  
2 php artisan config:cache  
3 php artisan deploy:notify  
4 php artisan queue:restart  
5  
6 echo {{ sha }} > public/build/deploy
```

+ Add Hook

</> Before The

Name

Migrations [my]

Frontend



On Servers

- bulldesk-app-1 (red bar)
- bulldesk-app-2 (red bar)
- bulldesk-app-3 (red bar)
- bulldesk-jobs (red bar)
- bulldesk-jobs-2 (red bar)
- bulldesk-legacy (red bar)
- bulldesk-mvsal-1 (red bar)

56



</> Update Hook (Notify Bugsnag)

X

Bulldesk *PRC

Name

Notify Bugsnag

Run As

forge

Script

```
1 cd {{ release }}  
2  
3 php artisan bugsnag:deploy --revision "{{ sha }}"
```

+ Add Hook

</> Before Th

No hooks have be



On Servers

- bulldesk-app-1 (red bar)
- bulldesk-app-2 (red bar)
- bulldesk-app-3 (red bar)
- bulldesk-jobs (1) (red bar)
- bulldesk-jobs-2 (red bar)
- bulldesk-legacy (red bar)
- bulldesk-mysql-1 (red bar)

57



Monitoring, Security & Optimization

Monitoring, Security & Optimization

- CDN
- Monitors
- Logs e exceptions centralized
- Backups
- Load tests

59

Falar sobre Cloudflare, Papertrail, Bugsnag, Newrelic, backup jobs and loader.io, beanstalkd console

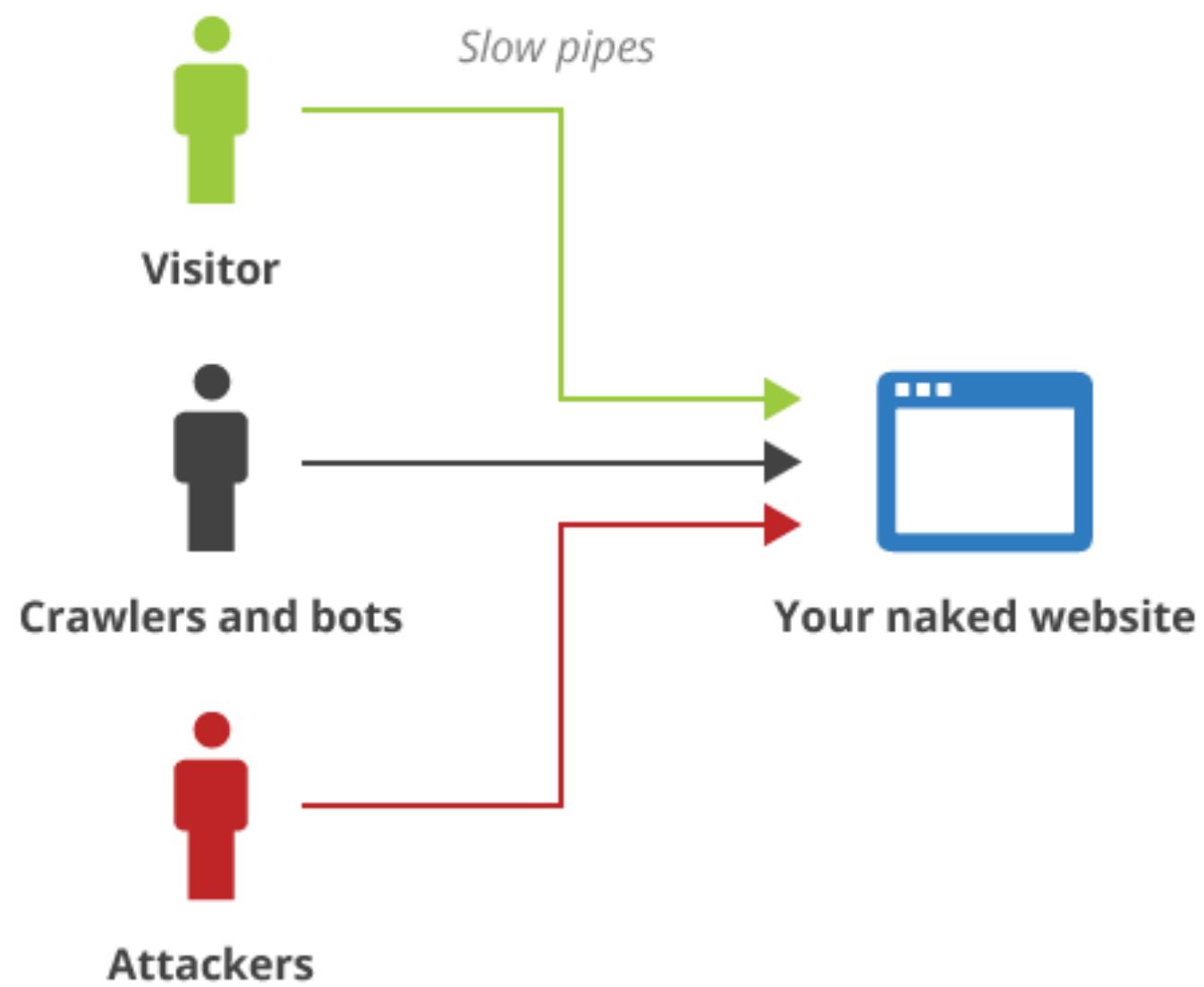
^ Explicar que os logs devem ser centralizados no mesmo serviço, já que eles vêm de várias máquinas diferentes. Dizer que é interessante logar tudo o que acontece no app para facilitar o debug. Falar sobre o monitoramento via Newrelic, logs via Papertrail e exceptions centralizadas no Bugsgnag. Testes de carga no loader.io

Cloudflare makes your
SaaS products
faster & safer.

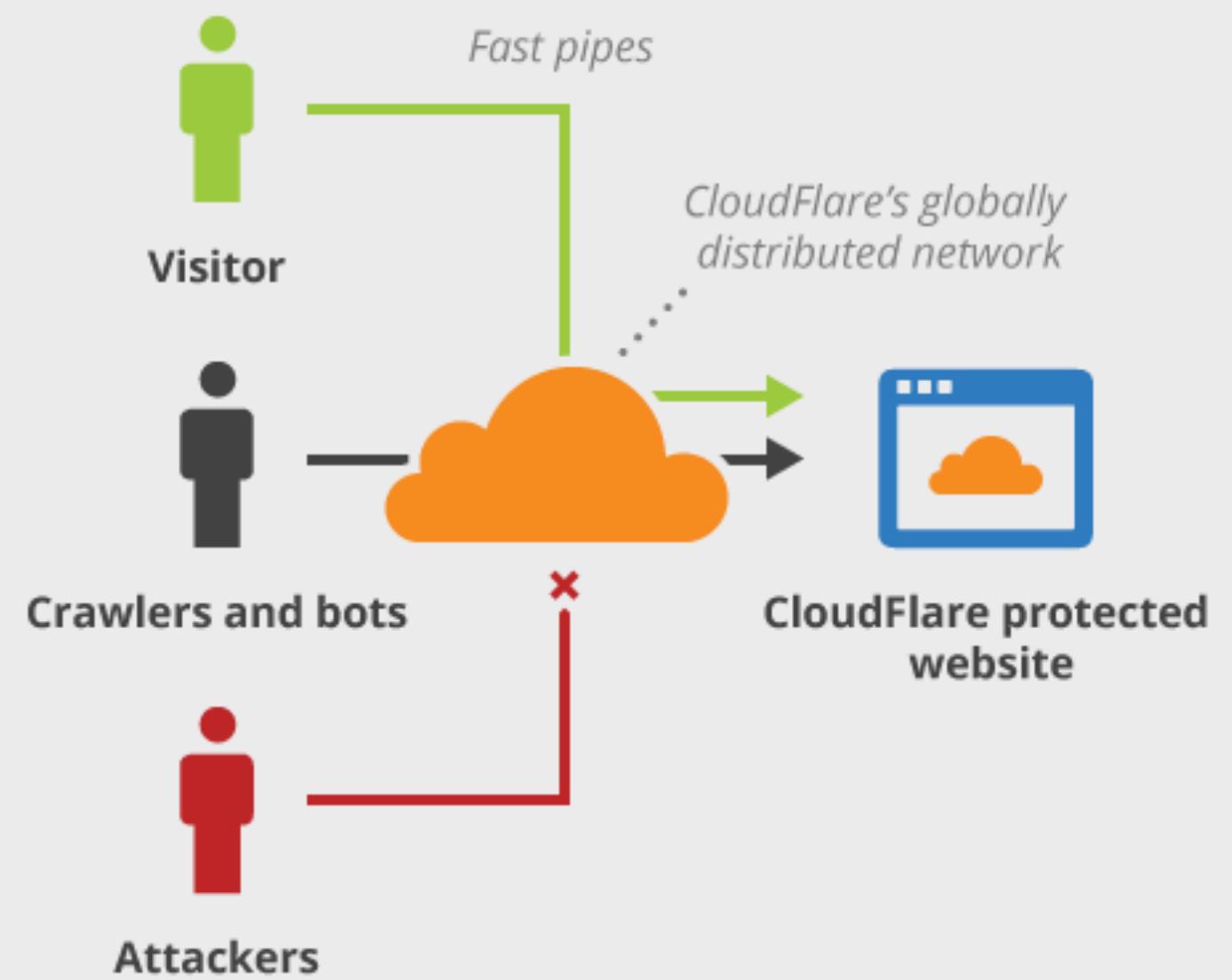


Learn how Cloudflare works

Without CloudFlare



With CloudFlare



```

/**
 * Set the CloudFlare connecting IP and https if applied.
 *
 * @param \Illuminate\Http\Request $request
 * @param Closure $next
 * @return mixed
 */
public function handle($request, Closure $next)
{
    if (! app()->environment('production')) {
        return $next($request);
    }

    if ($request->server->has('HTTP_CF_CONNECTING_IP')) {
        if ($request->isSecure()) {
            $request->server->set('HTTPS', true);
        }

        $request->server->set('REMOTE_ADDR', $request->server->get('HTTP_CF_CONNECTING_IP'));

        return $next($request);
    }

    logf('CF: Blocked request to %s from %s', [$request->fullUrl(), $request->ip()]);
}

return new Response('', 404);
}

```

62

E.

^ mesma issue do load
balancer

Page Rules

Control your Cloudflare settings by URL

Page Rules

You have used all of your Page Rules. [Buy More Page Rules](#).

[Buy More Page Rules](#)

Page Rules let you control which Cloudflare settings trigger on a given URL. Only one Page Rule will trigger per URL, so it is helpful if you sort Page Rules in priority order, and make your URL patterns as specific as possible.

URL/Description

#	URL/Description	Status	Actions
1	static.bulldesk.com.br/* Cache Level: Cache Everything, Edge Cache TTL: a month	On	↔️ 🔧 ✎
2	bulldesk.com.br/* Cache Level: Cache Everything, Edge Cache TTL: a month	On	↔️ 🔧 ✎
3	assets.bulldesk.com.br/* Forwarding URL: (Status Code: 301 - Permanent Redirect, Url: https://static.bulldesk.com.br/\$1)	On	↔️ 🔧 63 ✎

Issue

How to clear this cache automatically?

```

/**
 * Get the path to a versioned asset file.
 *
 * @param string $asset
 * @return string
 */
function versioned($asset)
{
    static $production, $base, $deploy, $sha;

    $production = app()->environment('production');

    if (is_null($base)) {
        $base = $production ? 'https://static.bulldesk.com.br/' : '/';
    }

    if ($production === false) {
        return $base.$asset . '?v=' . str_random(3);
    }

    if (is_null($deploy)) {
        $deploy = public_path('build/deploy');
    }

    if (is_null($sha) && file_exists($deploy)) {
        $sha = file_get_contents($deploy);
    }

    if (! empty($sha)) {
        return $base.$asset . '?v=' . $sha;
    }

    return $base.$asset;
}

<script src="{{ versioned('build/scripts/app.js') }}"></script> //https://static.bulldesk.com.br/build/scripts/app.js?v=fbe06e04c4f8ddd1c94c63f3a001807bace679e0

```

65

G.
^ E. Eu utilizei dentro do deploy
do envoyer via API com token

Monitoring

 Filter servers Off

Show labels

⊕ Add more



Recent events

No Events In The Last 24 Hours

	Name	CPU	Disk IO	Memory	Fullest disk	
	bulldesk-mysql-3	1.48%	0.18%	28.3% 281 MB / 992 MB	76.6% 7 GB free	
	bulldesk-mysql-2	0.67%	0.32%	24% 479 MB / 2 GB	32.2% 26 GB free	
	bulldesk-mysql-1	0.42%	0.18%	24.4% 488 MB / 2 GB	37.1% 24 GB free	
	bulldesk-load-balancer	0.46%	0.01%	16.6% 81 MB / 488 MB	40.1% 11 GB free	
	bulldesk-legacy bulldesk-1	0.46%	0%	52.3% 520 MB / 994 MB	50.4% 14 GB free	
	bulldesk-jobs-2	0.22%	0%	7.1% 142 MB / 2 GB	7.46% 35 GB free	
	bulldesk-jobs	0.56%	0.02%	58.7% 1 GB / 2 GB	20.6% 30 GB free	
	bulldesk-app-3	0.37%	0.02%	38.7% 189 MB / 488 MB	38.2% 12 GB free	
	bulldesk-app-2	0.8%	0.05%	21.7% 106 MB / 488 MB	49.4% 10 GB free	
	bulldesk-app-1 Bulldesk	0.37%	0.03%	12.3% 122 MB / 992 MB	52.5% 9 GB free	

67

G.



DATADOG

Events

Dashboards

Infrastructure

Monitors

Metrics

Integrations

APM

Notebooks

Logs

7 Hosts up / 7 total

Filter by name, tag, or app

Group by tags:

Showing all 7 entries.

Hostname	Status	CPU ↓	IOWait	Load 15	Apps
advbox-beanstalk	• UP	6%	0.04%	0.067	ntp system
advbox-app-01.localdomain	• UP	3%	0.03%	0	ntp system
staging.localdomain	• UP	1%	0.02%	0	ntp system
advbox-balancer-01.localdomain	• UP	0.3%	0%	0	ntp system
advbox-db-02.localdomain	• UP		ntp system
advbox-db-01.localdomain	• UP		ntp system
advbox-app-02.localdomain	• UP		ntp system

(Click any row for details)

[JSON API permalink →](#)

Triggered: take a look on CPU from db-01

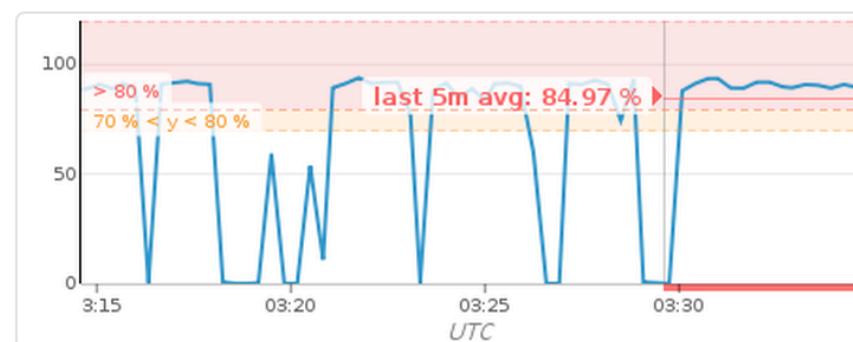
@slack-death-star

system.cpu.user over host:advbox-db-01.localdomain was > 80.0 on average during the last 5m.

Metric value: 84.967 (16 kB) ▾

Notified

@slack-death-star



Recovered: take a look on CPU from db-01

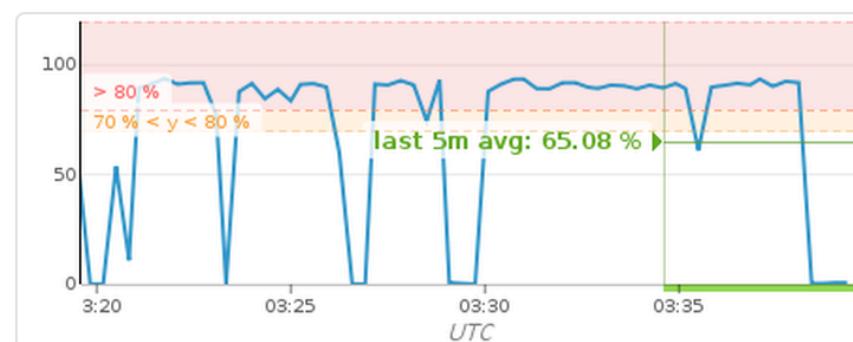
@slack-death-star

system.cpu.user over host:advbox-db-01.localdomain was <= 80.0 on average during the last 5m.

Metric value: 65.081 (17 kB) ▾

Notified

@slack-death-star



Let's Monitor

Status

Monitors

Contacts

Dashboards

Availability

Performance

Logs

Stations

LetsMonitor.org now has several advanced monitor types. Click here to see them all.

Operations Status

Monitors

 2  0
2 of 2 are up 0 disabled

Uptime

100.00% Last 24 Hours

Uptime

100.00% Last 60 Minutes

Incidents Last 24 Hours

 0 Confirmed Errors  0 Alerts

Current Issues

None

70

E.

Simple Cloud-based LOAD TESTING

Loader.io is a FREE load testing service that allows you to stress test your web-apps & apis with thousands of concurrent connections.

[Sign Up Now](#)

How it works

Amazingly easy

1

Add your target host

Use the web-interface or API to register your app for testing

2

Run a test

We'll simulate connections to your application for the duration

3

Watch the test in real-time

Monitor the test in real-time, then share the results with your team

71



Issue

How to centralize logs and exceptions?

Frustration-free log management. Get started in seconds.

Instantly manage logs from 2 servers... or 2,000.

Get a flight data recorder for your systems & apps. No credit card required.

Start Logging - Free Plan

Clicking "Start" agrees to [Terms](#).

MANAGING **BILLIONS** OF LOG MESSAGES FOR OPERATIONS-SAVVY COMPANIES

73

+ Nov 14 13:45:52 **bulldesk-jobs laravel:** production.INFO: Decision YES already applied to "rubianomflorence@gmail.com". Skipping decision NO of action "Enviar e-mail" from automation "Contato > Novo Negócio > Contactado" □
Nov 14 13:46:20 **bulldesk-app-1 laravel:** production.INFO: Queue decision "yes", action "Criar/atualizar negócio" from automation "Ebook Guia do Comprador" to andreasanavi@gmail.com □
Nov 14 13:46:22 **bulldesk-jobs laravel:** production.INFO: This automation can only run from 08:30 to 17:30 on [1,2,3,4,5,6] weekdays. □
Nov 14 13:46:22 **bulldesk-jobs laravel:** production.INFO: Allowing decision "mail.send-mail.delivered" of action "Criar/atualizar negócio" from automation "Ebook Guia do Comprador" lead "andreasanavi@gmail.com" □
Nov 14 13:46:23 **bulldesk-jobs laravel:** production.INFO: Action "Criar/atualizar negócio" from automation "Ebook Guia do Comprador" applied to "andreasanavi@gmail.com" □
Nov 14 13:46:37 **bulldesk-jobs laravel:** production.DEBUG: Apply automation "[Site] Atendimento personalizado e por e-mail" on lead "mateus.santana@bulldesk.com.br" □
Nov 14 13:46:37 **bulldesk-jobs laravel:** production.DEBUG: Event lead.automation.applied Bulldesk\Lead\Model\Lead:421916 {"subject": "[Site] Atendimento personalizado e por e-mail", "ip": "127.0.0.1"} □
Nov 14 13:46:37 **bulldesk-jobs laravel:** production.DEBUG: Event automation.applied Bulldesk\Automation\Model\Automation:525 {"subject": "Mateus de Santana", "lead_id": 421916, "ip": "127.0.0.1"} □
Nov 14 13:46:37 **bulldesk-jobs laravel:** production.INFO: Action "Criar/atualizar negócio" from automation "[Site] Atendimento personalizado e por e-mail" applied to "mateus.santana@bulldesk.com.br" □
Nov 14 13:46:38 **bulldesk-jobs laravel:** production.DEBUG: Event lead.automation.completed Bulldesk\Lead\Model\Lead:421916 {"subject": "[Site] Atendimento personalizado e por e-mail", "ip": "127.0.0.1"} □
Nov 14 13:46:38 **bulldesk-jobs laravel:** production.DEBUG: Event automation.completed Bulldesk\Automation\Model\Automation:525 {"subject": "Mateus de Santana", "lead_id": 421916, "ip": "127.0.0.1"} □
Nov 14 13:47:07 **bulldesk-jobs laravel:** production.DEBUG: Apply automation "[Contato Site] Departamento Vendas" on lead "mateus.santana@bulldesk.com.br" □
Nov 14 13:47:07 **bulldesk-jobs laravel:** production.DEBUG: Event lead.automation.applied Bulldesk\Lead\Model\Lead:421916 {"subject": "[Contato Site] Departamento Vendas", "ip": "127.0.0.1"} □
Nov 14 13:47:07 **bulldesk-jobs laravel:** production.DEBUG: Event automation.applied Bulldesk\Automation\Model\Automation:524 {"subject": "Mateus de Santana", "lead_id": 421916, "ip": "127.0.0.1"} □
Nov 14 13:47:07 **bulldesk-jobs laravel:** production.DEBUG: Lead mateus.santana@bulldesk.com.br already completed automation [Site] Atendimento personalizado e por e-mail □
Nov 14 13:47:07 **bulldesk-jobs laravel:** production.INFO: Action "Criar/atualizar negócio" from automation "[Contato Site] Departamento Vendas" applied to "mateus.santana@bulldesk.com.br" □
Nov 14 13:47:07 **bulldesk-jobs laravel:** production.INFO: Action "Adicionar tag" from automation "[Contato Site] Departamento Vendas" applied to "mateus.santana@bulldesk.com.br" □
Nov 14 13:47:08 **bulldesk-jobs laravel:** production.DEBUG: Event lead.automation.completed Bulldesk\Lead\Model\Lead:421916 {"subject": "[Contato Site] Departamento Vendas", "ip": "127.0.0.1"} □
Nov 14 13:47:08 **bulldesk-jobs laravel:** production.DEBUG: Event automation.completed Bulldesk\Automation\Model\Automation:524 {"subject": "Mateus de Santana", "lead_id": 421916, "ip": "127.0.0.1"} □

```
// LogServiceProvider.php

/**
 * The papertrail log format.
 *
 * @var string
 */
protected $papertrailFormat = '%channel%.%level_name%: %message% %extra%';

/**
 * Configure the application's logging facilities.
 *
 * @return void
 */
public function boot()
{
    if ($this->app->environment('production', 'staging')) {
        $syslog = new \Monolog\Handler\SyslogHandler('laravel');
        $formatter = new \Monolog\Formatter\LineFormatter($this->papertrailFormat);

        $syslog->setFormatter($formatter);

        $this->app['log']->getMonolog()->pushHandler($syslog);
    }
}
```

Edit Recipe (Install papertrail)

Name	Install papertrail
User	root
Script	<pre>1 echo -e "\n*.* @logs.papertrail-[REDACTED].com" >> /etc/rsyslog.conf 2 service rsyslog restart</pre>

CANCEL76 SAVE

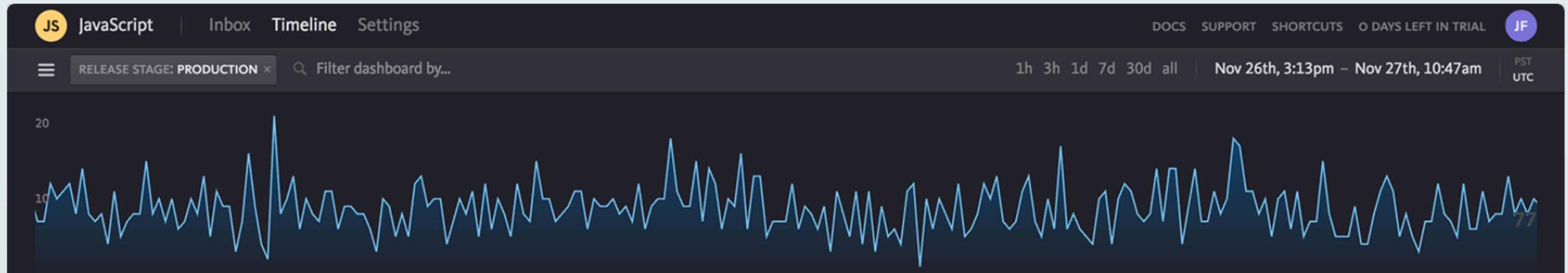
G.

Mission Control for Software Quality

Bugsnag monitors your website and mobile app for errors impacting your customers

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G.



Bugsnag APP 9:07 AM

New error in production from Bulldesk in /lead/yWKwLJ66oO (details)

Error

HierarchyRequestError: Uncaught HierarchyRequestError: Failed to execute 'appendChild' on 'Node': The new child element contains the parent.

Location

<https://app.bulldesk.com.br/tinymce/tinymce.min.js:4> - h.<anonymous>

[Mark as fixed](#)

[Snooze 1hr](#)

[Ignore](#)

S: OPEN x

Filter dashboard by...



1h 3h 1d 7d 30d all

Oct 8th, 17:25 – Nov 7th, 16:25

Errors

roduced Today (3)

n (13)

ogress (0)

signed to me (0)

signed to anyone (0)

ue created (0)

l (0)

ized (0)

red (0)

7d

<input type="checkbox"/> ERROR ▾		EVENTS	USERS	LAST TWO WEEKS	STAGE	SEVI
<input type="checkbox"/> Illuminate\Auth\Access\AuthorizationException POST /api/conversion	— about 6 minutes ago – 3 days ago	546	1		P	
<input type="checkbox"/> Aws\S3\Exception\S3MultipartUploadException app\Console\Backup\...	An exception occurred while uploading parts to a multipart upload. The following parts ... about 1 hour ago	1	-		P	
<input type="checkbox"/> Illuminate\Queue\MaxAttemptsExceededException Bulldesk\Automatio...	A queued job has been attempted too many times. The job may have previously timed o... about 5 hours ago – 6 days ago	26	-		P	
<input type="checkbox"/> Pheanstalk\Exception\ServerException Bulldesk\Automation\Job\Action...	Server reported NOT_FOUND about 5 hours ago – 6 days ago	26	-		P	
<input type="checkbox"/> Symfony\Component\Debug\Exception\FatalThrowableError app/Billin...	Call to undefined method Bulldesk\Billing\Command\IuguCheckSubscriptionCycle::get... about 15 hours ago	1	-		P	
<input type="checkbox"/> Symfony\Component\Debug\Exception\FatalThrowableError Bulldesk\...	Call to a member function setLeadsLocation() on null about 18 hours ago	1	-		P	
<input type="checkbox"/> RangeError /mail/809	Uncaught RangeError: Maximum call stack size exceeded about 1 day ago	1	1		P	
<input type="checkbox"/> RangeError /lead/R4qXQ7rxKE	Uncaught RangeError: Maximum call stack size exceeded about 3 days ago	1	1		7P	



[Bulldesk](#) · New error

Illuminate\Database\QueryException `Bulldesk\Automation\Job\Send`

`SQLSTATE[40001]: Serialization failure: 1213 Deadlock found when trying to get lock; try restarting transaction (SQL:...`

Nov 7th 17:21:35 UTC

P



`app/Automation/Model/Automation.php:298` · `Bulldesk\Automation\Model\Automation::forceRestartLeadRelation`

`app/Automation/Model/Automation.php:268` · `Bulldesk\Automation\Model\Automation::applyTo`

`app/Automation/Job/Automate.php:174` · `Bulldesk\Automation\Job\Automate::apply`

`app/Automation/Job/Automate.php:138` · `Bulldesk\Automation\Job\Automate::handle`

`app/Automation/Job/Send.php:130` · `Bulldesk\Automation\Job\Send::Bulldesk\Automation\Job\{closure}`

Backups

```
$ composer require backup-manager/backup-manager
```

OR

```
$ composer require backup-manager/laravel
```

OR

```
$ composer require spatie/laravel-backup
```

81

G.

^ Na época instalei o backup-manager e não queria ficar refém de um package laravel por causa das atualizações / precisava de umas opções a mais para o backup do innnoDB.

Mas hoje acho que o melhor e mais configurável é o laravel-backup

^ E. uso bash.sh coloco senha no arquivo e mando pro S3

```

(...)

/***
 * Execute the backup command.
 */
@return void
public function handle()
{
    $database = $this->option('database') ?: 'mysql';
    $destination = $this->option('destination') ?: 's3';
    $destinationPath = 'dump_'.(new Carbon)->format('Y_m_d_H_i_s').'.sql';
    $compression = 'gzip';

    $this->info('Dumping database and uploading...');

    $destinations = [new Destination($destination, $destinationPath)];

    $this->backupProcedure->run($database, $destinations, $compression);

    $completePath = 'database/' . $destinationPath;

    $this->info(sprintf('Successfully dumped %s, compressed with %s and store it to %s at %s',
        $database,
        $compression,
        $destination,
        $completePath
    ));

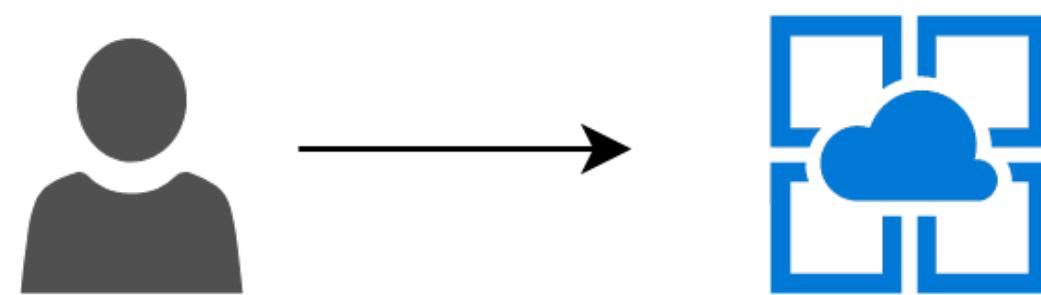
    $last = new Carbon('last day of this month');

    // Delete file in 10 days if this not the last
    if ((new Carbon)->isSameAs('d/m/Y', $last)) {
        $this->info('Scheduled job to delete the backup file ' . $completePath . ' in 10 days.');

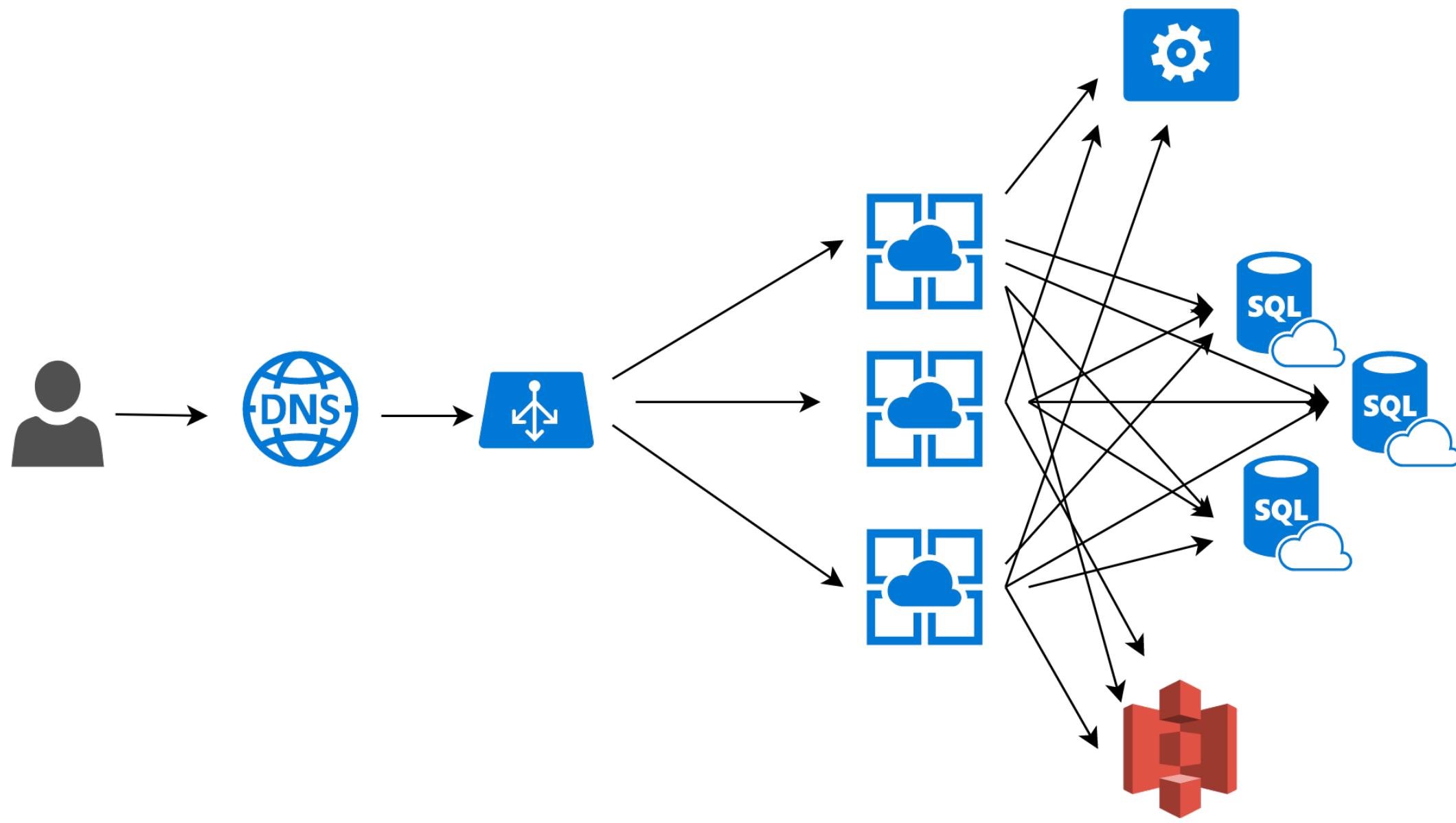
        dispatch((new DeleteFile($completePath . '.gz', 's3_backup'))->delay(24 * 60 * 60 * 10));
    }
}

```

Then



Now



Lessons Learned

1. Don't optimize or escale prematurely, but be prepared for this.

2. Time is money.

3. Use microservices only if you can maintain them.

4. Study/learn and enjoy everything
the internet gives you for free.

TEACH AND LEARN BETTER, TOGETHER

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90



Thanks!

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Questions?

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Ref

en.wikiquote.org/wiki/Rasmus_Lerdorf

guides.github.com/introduction/flow

github.com/gabrielkoerich/guidelines

vessel.shippingdocker.com

docs.spatie.be/laravel-backup

gabrielkoerich.com/talks/infra

php-fig.org