

Happyr

@tobiasnyholm

Logging & Monitoring

Knowing your shit
by Tobias Nyholm

Logging

Logging?

Logging

Composer?

Logging

Jordi Boggiano @seldaek



Overview

About me

- Organizer of PHP Stockholm
- CTO at Happyr.com
- Certified Symfony developer
- Maintainer of PHP-Cache, HTTPPlug, Guzzle, PHP-Geocoder, Mailgun, JMSTranslator, LinkedIn PHP client and 50+ smaller projects
- Twitter: @tobiasnyholm

Happyr

@tobiasnyholm

Google analytics

User statistics

What pages visited

Time spent on the site

How the users moves

Where they come from

etc....

We want to log more

Comment was created

Call to API

Media uploaded

Plugins activated

Data fetched

Example logging

```
<?php
```

```
echo "<pre>$var";
```

Example logging

```
<?php
```

```
echo "<pre>$var";
```

```
die(print_r($array, true));
```

Example logging

```
<?php
```

```
echo "<pre>$var";
```

```
die(print_r($array, true));
```

```
var_dump($data); exit();
```

Example logging

```
<?php

function log($message) {
    $file = __DIR__ . '/app.log';
    $entry = sprintf("[%s] %s\n", date('Y-m-d H:i:s'), $message);

    file_put_contents($file, $entry, FILE_APPEND);
}
```

Example logging

```
<?php

function log($message) {
    return;
    $file = __DIR__ . '/app.log';
    $entry = sprintf("[%s] %s\n", date('Y-m-d H:i:s'), $message);

    file_put_contents($file, $entry, FILE_APPEND);
}
```

Example logging

```
<?php

/**
 * @param string $message
 * @param int $level 0-10 Higher is more serious.
 */
function log($message, $level) {
    if ($level < LOG_LEVEL) {
        return;
    }
    $file = __DIR__ . '/app.log';
    $entry = sprintf("[%s] %s\n", date('Y-m-d H:i:s'), $message);

    file_put_contents($file, $entry, FILE_APPEND);
}

define('LOG_LEVEL', 2);
```

Use monolog



Use monolog

<https://github.com/Nyholm/workshop-logging-with-wordpress>

Demo

Demo

- Show the current git commit
- Add JSON format to your logs
- Make sure the logs shows in Chrome console
- Log only errors
- Send emails with your logs
- Notify Slack with alerts
- Write your own processor
- Use BufferHandler
- Use FingersCrossedHandler

Happyr

@tobiasnyholm

Use Wordpress hooks

https://codex.wordpress.org/Plugin_API/Action_Reference

Or...

Exceptions

Your setup



Your setup



Your setup



Your setup



Your setup

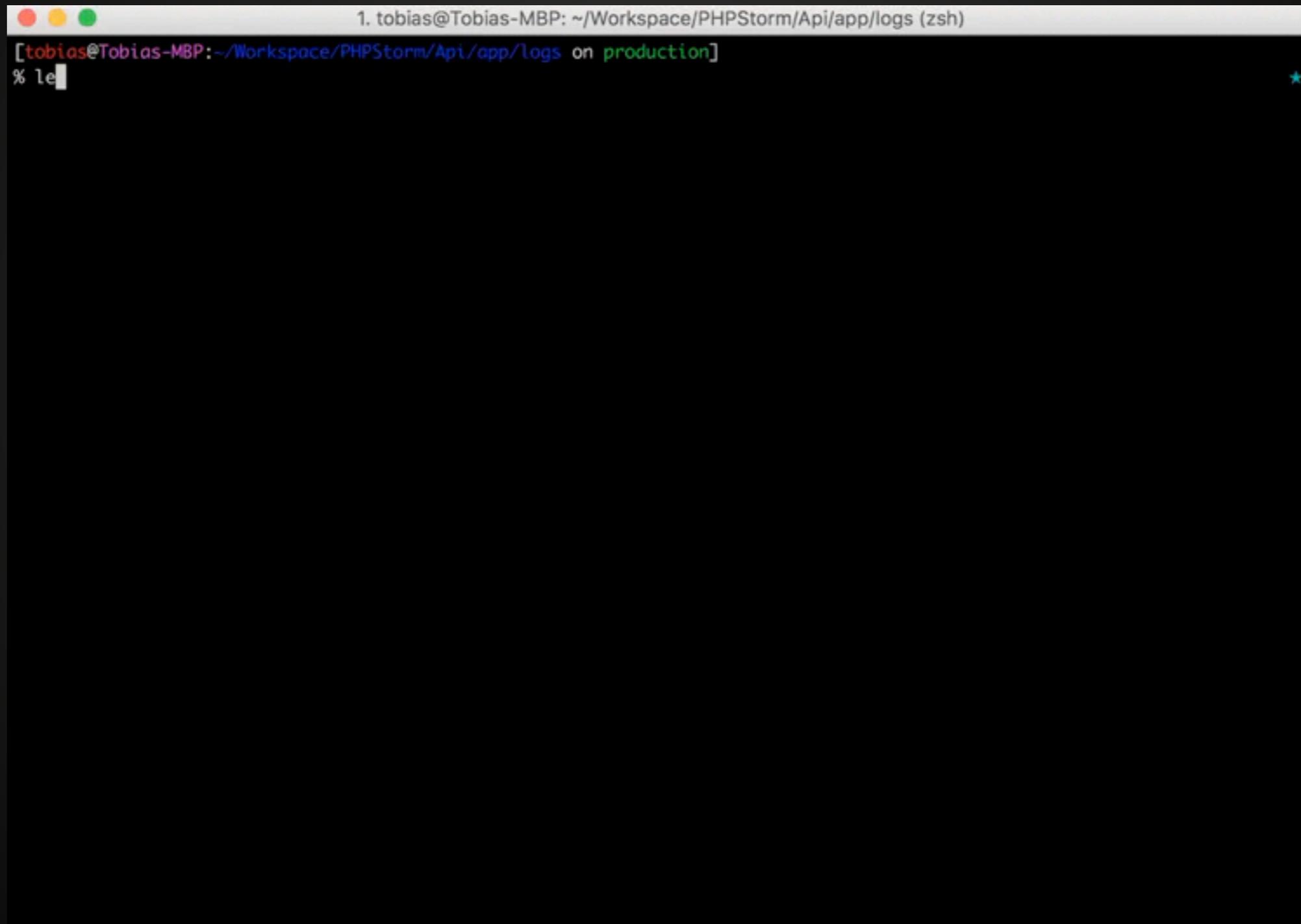


We got tons of entries



```
1. tobias@Tobias-MBP: ~/Workspace/PHPStorm/Api/app/logs (zsh)
[tobias@Tobias-MBP:~/Workspace/PHPStorm/Api/app/logs on production]
% le
```

We got tons of entries



```
1. tobias@Tobias-MBP: ~/Workspace/PHPStorm/Api/app/logs (zsh)
[tobias@Tobias-MBP:~/Workspace/PHPStorm/Api/app/logs on production]
% le
```

Log files

`/var/www/my_site/log.txt`

`/var/log/php5-fpm.log`

`/var/log/php5-fpm/access.log`

`/var/log/php5-fpm/errors.log`

`/var/log/php5-fpm/slow.log`

`/var/log/apache2/access.log`

`/var/log/apache2/error.log`

`/var/log/syslog`

I introduce to you: A logging server!

Happyr

@tobiasnyholm

Logging server

graylog



elastic

Search in the last 5 minutes

Saved searches

Type your search query here and press enter. ("not found" AND http) OR http_response_code:[400 TO 404]

Search result

Found **4,091 messages** in 11 ms, searched in 1 index.

Add count to dashboard

Save search criteria

More actions

Fields

Default All None Filter fields

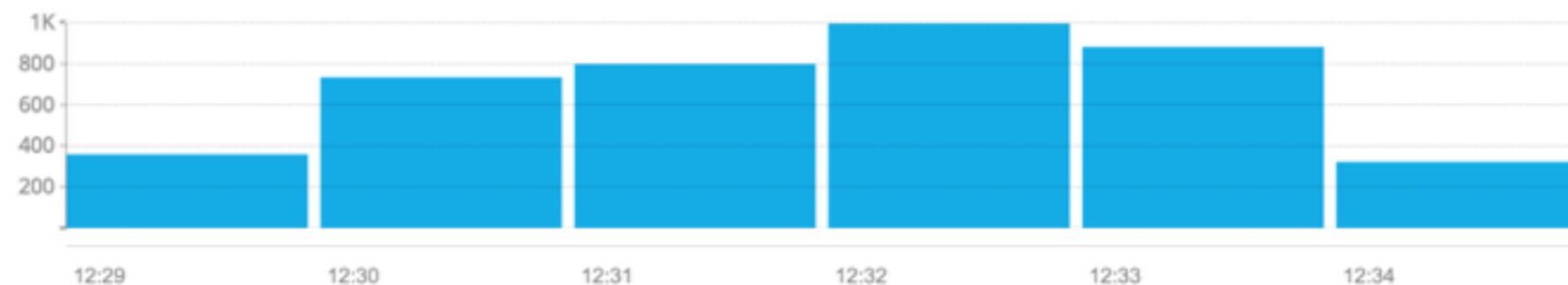
- application_name
- ctxt_advert
- ctxt_apiKey
- ctxt_applicant
- ctxt_category
- ctxt_externalAdvert
- ctxt_host
- ctxt_job
- ctxt_query_string
- ctxt_request_uri
- ctxt_route_parameters
- ctxt_service
- ctxt_uri
- ctxt_user
- facility
- http_method
- ip
- level
- message
- process_id
- referrer
- request
- server
- session
- source
- ...

List fields of [current page](#) or [all fields](#).

Histogram

Add to dashboard

Year, Quarter, Month, Week, Day, Hour, Minute



Messages

Previous 1 2 3 4 5 6 7 8 9 10 Next

Timestamp	source
2016-04-13 12:34:21.413	happyr 85.140.0.181 GET /static/js/translations-ru.js HTTP/1.1 - HTTP/1.1 200 OK
2016-04-13 12:34:21.395	api.happyr.com Matched route "user_context_hash".
2016-04-13 12:34:21.238	happyr 85.140.0.181 POST /user/potential/test/daefb-nupqgnu/question HTTP/1.1 - HTTP/1.1 200 OK
2016-04-13 12:34:21.189	happyr 2.60.133.184 GET /static/js/translations-ru.js HTTP/1.1 - HTTP/1.1 200 OK
2016-04-13 12:34:21.155	api.happyr.com Matched route "user_context_hash".
2016-04-13 12:34:21.133	happyr 173.203.37.138 POST /public/mailgun/webhook HTTP/1.1 - HTTP/1.1 200 OK
2016-04-13 12:34:21.125	api.happyr.com Populated the TokenStorage with an anonymous Token.
2016-04-13 12:34:21.004	api.happyr.com API request
2016-04-13 12:34:20.977	api.happyr.com Matched route "rawls_mailer_mailgun_webhook".
2016-04-13 12:34:20.971	api.happyr.com Matched route "_api_assessment_create".

Streams

You can route incoming messages into streams by applying rules against them. If a message matches all rules of a stream it is routed into it. A message can be routed into multiple streams. You can for example create a stream that contains all SSH logins and configure to be alerted whenever there are more logins than usual. Read more about streams in [the documentation](#).

Create Stream

 Take a look at the [Graylog stream dashboards](#) for wall-mounted displays or other integrations.

Commands

This is commands that run on the machine

0 messages/second, 1 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Errors

This stream captures all errors on all apps.

0 messages/second, 5 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Errors on AWS external import

This will show all errors on aws ec2

0 messages/second, 2 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

External application import

This will show all users that has been imported

0 messages/second, 1 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Failed SSH loigns

Syslog messages

0 messages/second, 2 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Missing Style/Js

404 messages for missing styles and javascript

0 messages/second, 2 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Publication Channel errors

This shows all publication channel errors

0 messages/second, 2 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Updated jobs on External Application

Successfully updated jobs

0 messages/second, 2 configured stream rule(s). [Show stream rules](#)

Edit rules

Manage outputs

Manage alerts

Pause stream

More actions ▾

Configured alert conditions

Message count condition

Alert is triggered when there is less than 1 message in the last 1440 minutes. Grace period: 60 minutes. Not including any mes

Trigger alert when there are more less

than messages in the last minutes and

then wait at least minutes until triggering a new alert. (grace period)

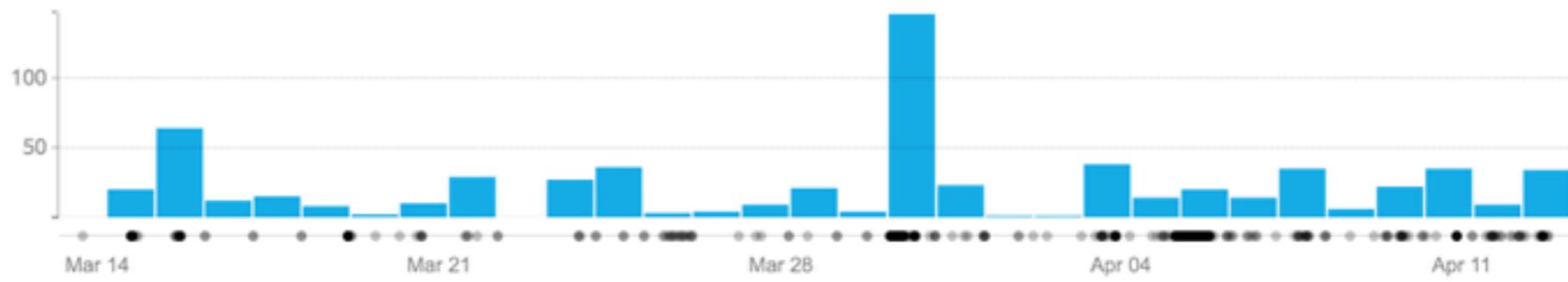
When sending an alert, include the last messages of the stream evaluated for this alert condition.

Update alert condition

Histogram

Add to dashboard ▾

⊙ Year, Quarter, Month, Week, Day, Hour, Minute



Messages

Previous 1 2 3 4 5 6 7 Next



Timestamp	source
-----------	--------

2016-04-13 13:34:32.343 api.happyr.com
A publication channel log was recored with an error.

DocumentReceipt:
-- type: Error

✉ b0f8e991-016b-11e6-aec1-040158fe4c01

Permalink Copy ID Test against stream ▾

Received by
Gelf UDP on [P 87b78263 / log.happyr.io](#)

Stored in index
graylog2_76

Routed into streams

- [Publication Channel errors](#)

ctxt_action	Update	🔍 ▾
ctxt_category	PublicationChannel	🔍 ▾
ctxt_publication_channel	jobnet	🔍 ▾
ctxt_recruitment_id	3439	🔍 ▾
facility	app	🔍 ▾
level	3	🔍 ▾
message	A publication channel log was recored with an error.	🔍 ▾
DocumentReceipt:	-- type: Error -- JobPostingID: -- Errors: ---- Error: ----- @attributes: ----- type: error ----- ErrorNumber: 552 ----- Description: Invalid data ----- OriginalData: JobPositionPostingId is missing or empty	
request	570e2ec85409b	🔍 ▾
session		🔍 ▾

Demo

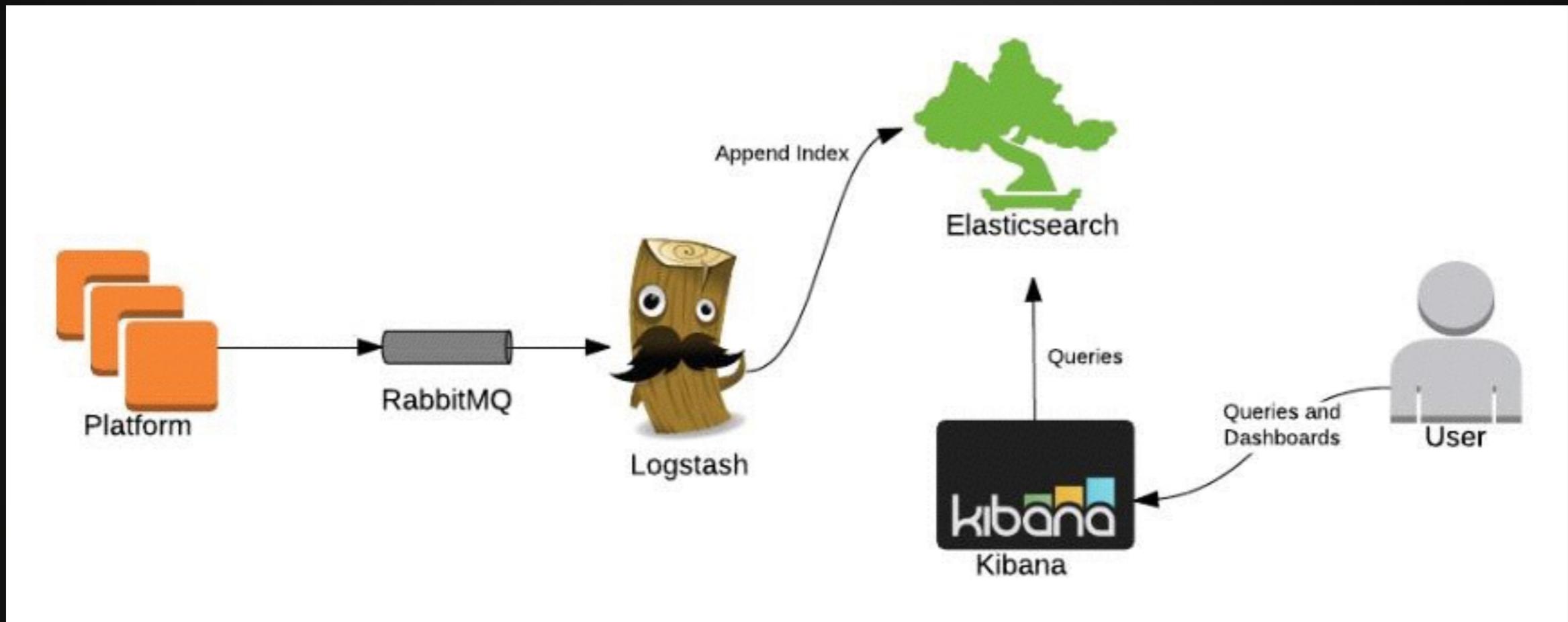
Try ElasticStack

<http://twitter.happyr.io:5601>

Try ElasticStack

- How many tweets about Symphony?
- Who are the top user?
- How tweets most about X?
- What cities are most active?
- What times do people tweet?

ElasticStack



Try it yourself

- Use UDP socket port 4711 temp.happyr.io
- Format with Logstash version 2

I introduce to you: New Relic

New Relic APM BROWSER SYNTHETICS MOBILE SERVERS PLUGINS INSIGHTS

Alerts New Tools Help Happyr

Applications Service maps Key transactions Alerts

APPS Happyr.com

TIME PICKER Last 7 days ending now

Web transactions response time

600 ms 500 ms 400 ms 300 ms 200 ms 100 ms

193 ms APP SERVER 2.08 s BROWSER

Apr 7 Apr 8 Apr 9 Apr 10 Apr 11 Apr 12 Apr 13

PHP MySQL Redis Web external

Add to custom dashboards Add to note Embed

Apdex score

1 0.9

0.98 [0.5] APP SERVER 0.99 [7.0] BROWSER

End User App Server

Throughput

400 200

154 rpm AVERAGE

Apr 7 Apr 8 Apr 9 Apr 10 Apr 11 Apr 12 Apr 13

Member of policy Production

Recent events

All 🔥 📄 🚫 ⚠️ 📧 📄 🔍 ⏪ ⏩ ⚙️

Today

HAPPYR.COM Error rate > 1.0% Critical problem 1:45

Two Days Ago

Transactions

Transaction	App server time
/Carlin\Application\ApplicationBundle\Api::importAction	4.79 sec
Transaction traces: 42.8 s 40.3 s 35.8 s	
devent/buffered_mail.send	1,210 ms
Transaction traces: 63.3 s 35.2 s 31.5 s	
/Rawis\MailerBundle\Mailgun::webhookAction	273 ms
Transaction traces: 9.5 s 2.8 s 2.3 s	
/Carlin\Integration\HappyrApiBundle\Test::questionAction	232 ms
Transaction traces: 10.2 s 10.2 s 10.1 s	
/user_context_hash	39.6 ms
Transaction traces: 5 s 2.3 s	

Error rate

2% 1.5% 1% 0.5%

0.0403%

Apr 7 Apr 8 Apr 9 Apr 10 Apr 11 Apr 12 Apr 13

Demo

Install NewRelic

User: tobias.nyholm+workshop@gmail.com

Pass: word&camp

License: b2ea97253df30fcde9438943237855d79dc5b0f5

MONITORING

Overview

Service maps

Transactions

Databases

External services

EVENTS

Error analytics NEW

Errors

Alerts

Deployments

REPORTS

SLA

Availability

Scalability

Web transactions

Database

Background jobs

SETTINGS

Application

Availability monitoring

Environment

Type: All transactions

Most time consuming

Transaction	Percentage
/Carlin\Application\ApplicationBundle\Api::importAction	36.2%
/Carlin\Integration\HappyrApiBundle\Test::questionAction	13.9%
/user_context_hash	8.21%
/Rawis\MailerBundle\Mailgun::webhookAction	8.13%
devent/buffered_mail.send	3.7%
/CarlinCoreBundle:Default:navigation	3.12%
/Carlin\Advert\RecruitmentBundle\Generic\Generic::showAction	1.78%
/Carlin\User\UserBundle\Authentication::loginAction	1.66%
/Carlin\Application\ApplicationBundle\UserApply::basicAction	1.55%
/CarlinAdvertRecruitmentBundle:Public:applyButton	1.54%
devent/carlin.advert.recruitment.recruitment.ended	1.22%
/CarlinUserCompanyBundle:Public:aboutUs	1.14%
/Carlin\User\CompanyBundle\Generic\Public::showAction	1.06%
/CarlinApplicationApplicationBundle:Manager:scorePlate	1.06%
/Carlin\CoreBundle\Default::javascriptAction	0.86%
/CarlinAdvertPositionBundle:PublicTemplate:description	0.86%
/Carlin\Application\ApplicationBundle\UserApply::resumeAction	0.83%
devent/carlin.application.application.application.submitted	0.79%
/Rawis\MediaUploadBundle\Default::uploadAction	0.57%
/Carlin\Application\ApplicationBundle\Manager::showAction	0.54%

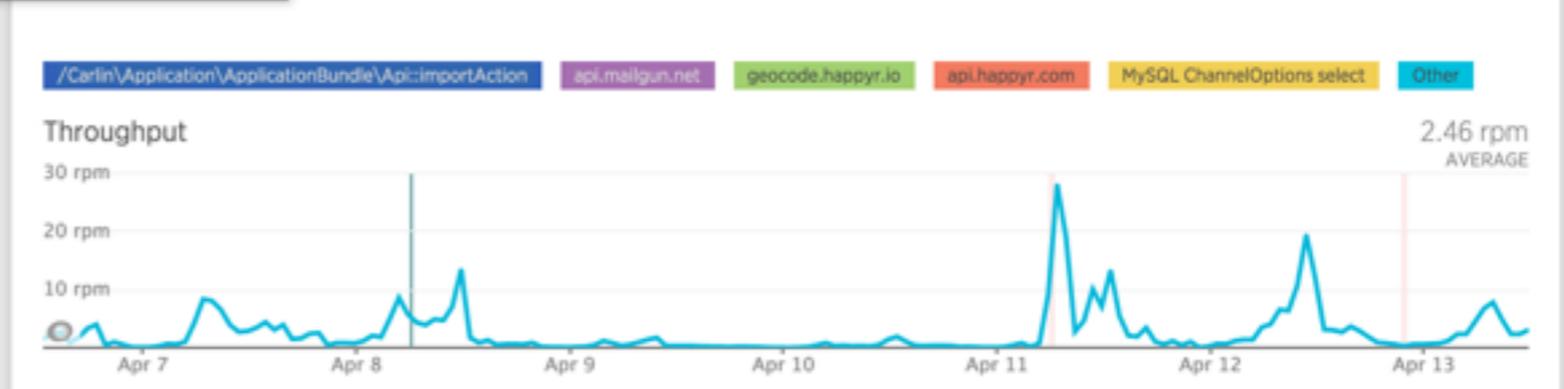
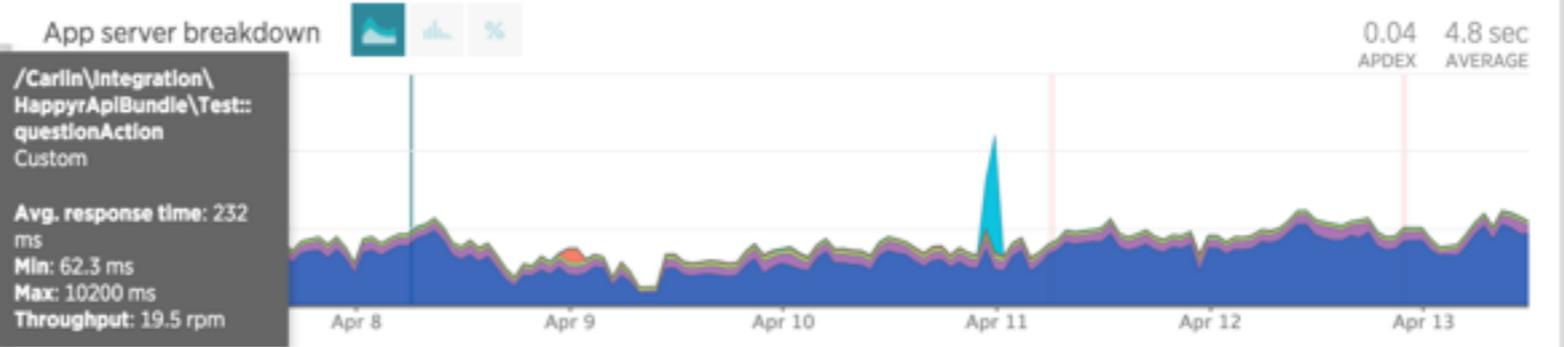
Show all transactions table...

Delete all traces

/Carlin\Application\ApplicationBundle\Api::importAction

Track as key transaction

App performance Historical performance Map Beta



Breakdown table

Category	Segment	% Time	Avg calls (per txn)	Avg time (ms)
WebTransaction	/Carlin\Application\ApplicationBundle\Api::importAction	82.6	1.0	3,960
External	api.mailgun.net	11.4	0.872	547
External	geocode.happyr.io	4.5	3.0	215
External	api.happyr.com	0.4	0.247	19.7
Database	MySQL ChannelOptions select	0.3	0.984	12.9
Database	MySQL AdvertPositionTemplate select	0.1	7.94	2.77

Breakdown table

Category	Segment	% Time	Avg calls (per txn)	Avg time (ms)
WebTransaction	/Carlin\Application\ApplicationBundle\Api::importAction	82.6	1.0	3,960
External	api.mailgun.net	11.4	0.872	547
External	geocode.happyr.io	4.5	3.0	215
External	api.happyr.com	0.4	0.247	19.7
Database	MySQL ChannelOptions select	0.3	0.984	12.9
Database	MySQL AdvertPositionTemplate select	0.1	7.84	2.73
Database	MySQL AdvertPosition select	0.1	9.63	3.29
Database	MySQL RecruitmentInvitation select	0.1	1.84	4.12

[Show all segments →](#)

Transaction trace

Track as Key Transaction



api.happyr.com(Happyr.com)

Delete this trace

Apr 11, '16 3:31 am

40,300 ms

2,060 ms (5.1%)

48 ms (0.119%)

TRACE TIME

RESP. TIME

USER CPU BURN

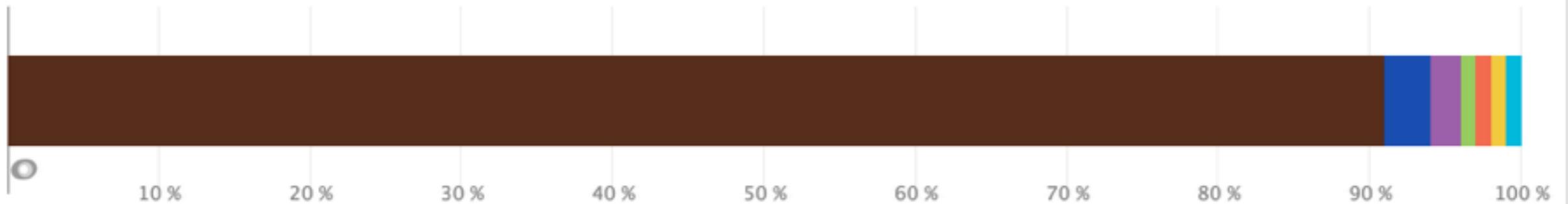
SYSTEM CPU BURN

Summary

Trace details

Map ^{Beta}

Database queries



Category	Slowest components	Count	Duration	%
Database	MySQL SubscriptionMailSettings insert	1	36,500 ms	91%
Custom	Doctrine\ORM\UnitOfWork::computeChangeSets	13	1,380 ms	3%
External	api.mailgun.net	1	695 ms	2%
External	api.happyr.com	2	308 ms	1%
Custom	Doctrine\ORM\Internal\Hydration\ObjectHydrator::hydrateAllData	2	298 ms	1%
External	geocode.happyr.io	3	287 ms	1%
Remainder	Remainder	1	847 ms	2%
Total time			40,300 ms	100%

URL /api/application/import

2016-04-11 03:00:00.000 +02:00 to 2016-04-11 04:00:00.000 +02:00

Saved searches

backup

Search result

Found 14 messages in 21 ms, searched in 3 indices.

Add count to dashboard

Save search criteria

More actions

Fields

Default All None Filter field

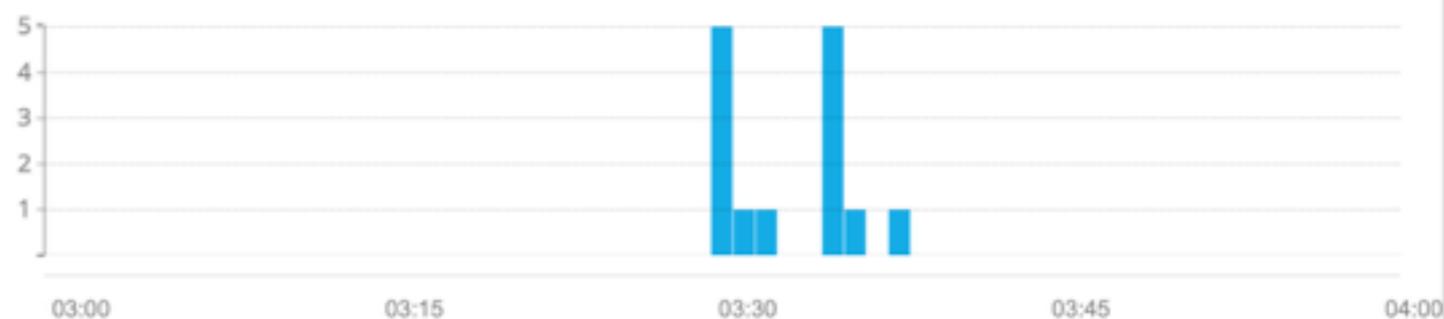
- application_name
- facility
- level
- message
- process_id
- request
- session
- source
- user
- version

List fields of [current page](#) or [all fields](#).

Histogram

Add to dashboard

Year, Quarter, Month, Week, Day, Hour, Minute



Messages

Previous 1 Next

Timestamp	source
2016-04-11 03:38:05.169	api.happyr.com [dizda-backup] Cleaning up after us.
2016-04-11 03:36:07.909	api.happyr.com [dizda-backup] Uploading to GoogleDrive
2016-04-11 03:35:32.350	api [uid:1003 sid:28073 tty:ERROR(ttyname_r->EUNKNOWN) cwd:/home/sites/com.happyr.api/sf/releases/20160329091029 filename:/bin/tar]: tar c -C /home/sites/com.happyr.api/sf/releases/20160329091029/app/cache/prod/backup/ .
2016-04-11 03:35:32.350	api [uid:1003 sid:28073 tty:ERROR(ttyname_r->EUNKNOWN) cwd:/home/sites/com.happyr.api/sf/releases/20160329091029 filename:/bin/tar]: tar c -C /home/sites/com.happyr.api/sf/releases/20160329091029/app/cache/prod/backup/ .
2016-04-11 03:35:32.346	api.happyr.com [dizda-backup] Compressing to archive using Tar
2016-04-11 03:35:32.345	api.happyr.com [dizda-backup] Copying folders.
2016-04-11 03:35:01.518	api.happyr.com [dizda-backup] Dumping MySQL database
2016-04-11 03:32:51.443	api.happyr.com [dizda-backup] Cleaning up after us.
2016-04-11 03:31:10.664	api.happyr.com [dizda-backup] Uploading to GoogleDrive
2016-04-11 03:30:44.574	api



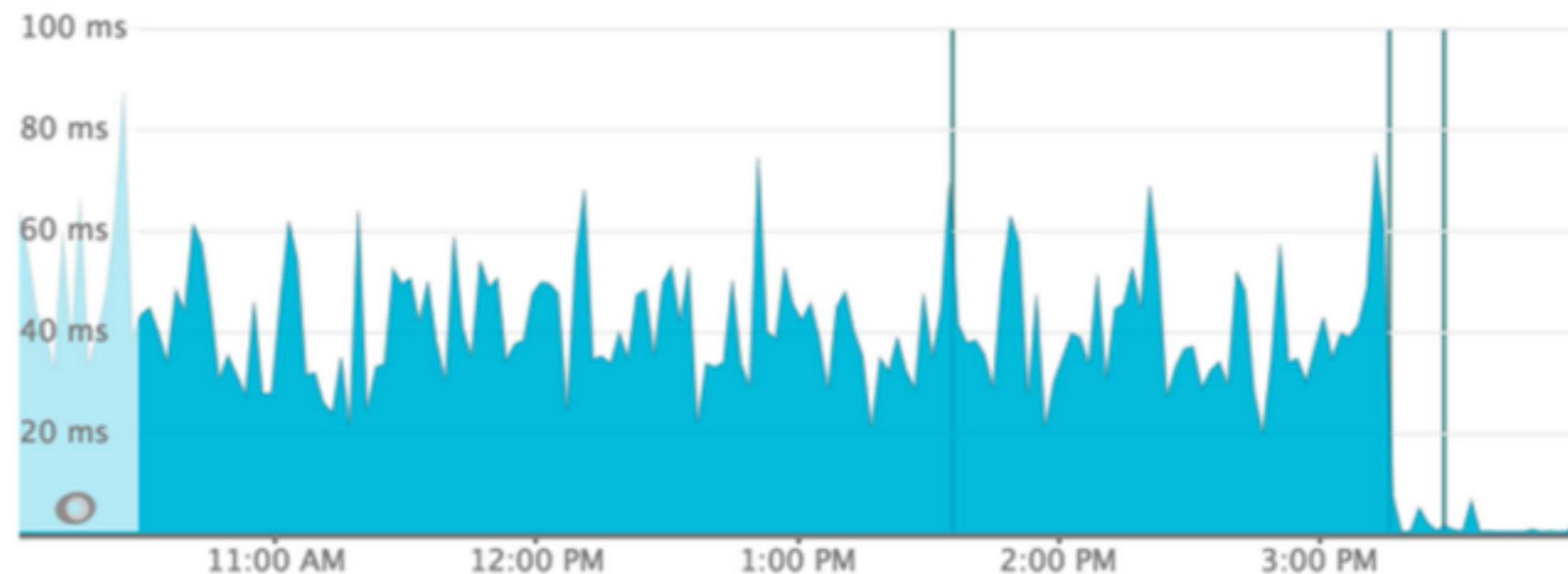
Tobias Nyholm @TobiasNyholm · 6 Aug 2015

I added a index on a MySQL table. Average response time went from 40ms to 1ms. #EasyFix

MySQL MailBufferLog select

36.9 ms 1 cpm
RESP. TIME THROUGHPUT

Response time



Throughput



« Errors

Symfony\Component\Debug\
Exception\UndefinedFunctionException
[/AppBundle\DataFetcher::fetchAction](#)

Apr 14, 2016, 10:29 AM

Error message

Symfony\Component\Debug\Exception\UndefinedFunctionException:
Uncaught exception 'Symfony\Component\Debug\Exception\UndefinedFunctionException' with message 'Attempted to call function "rout" from namespace "App\Service".' in /home/sites/io.happyr.stats/releases/20160414082458/src/App/Service/ResultFilterer.php:49

Error details

[Related tickets](#)

Stack trace

Symfony\Component\Debug\Exception\UndefinedFunctionException: Uncaught exception 'Symfony\Component\Debug\Exception\UndefinedFunctionException' with message 'Attempted to call function "rout" from namespace "App\Service".' in /home/sites/io.happyr.stats/releases/20160414082458/src/App/Service/ResultFilterer.php:49

Host	stats.happyr.io
Timestamp	1460622554000 (Apr 14, 2016, 10:29 AM)
URL	/api/fetch

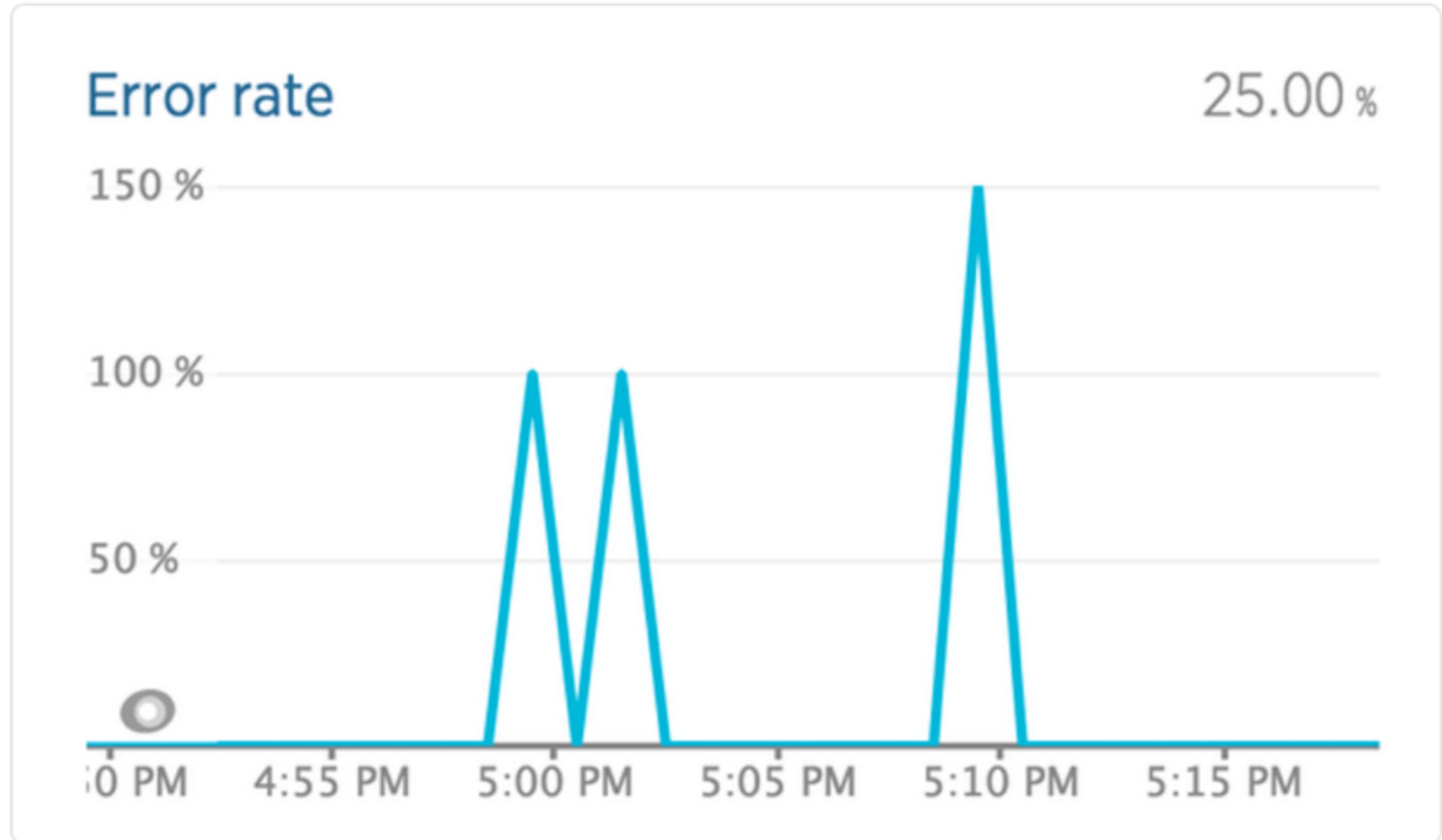
Error attributes

SERVER_NAME	stats.happyr.io
httpResponseCode	500
request.headers.User-Agent	Guzzle/5.3.0 curl/7.43.0 PHP/7.0.4
request.headers.host	stats.happyr.io
request.method	GET
url	/api/fetch



Tobias Nyholm @TobiasNyholm · 2 Oct 2015

You know it's bad when 150% of the incoming request results in an error.



Thank you

@tobiasnyholm

Bonus



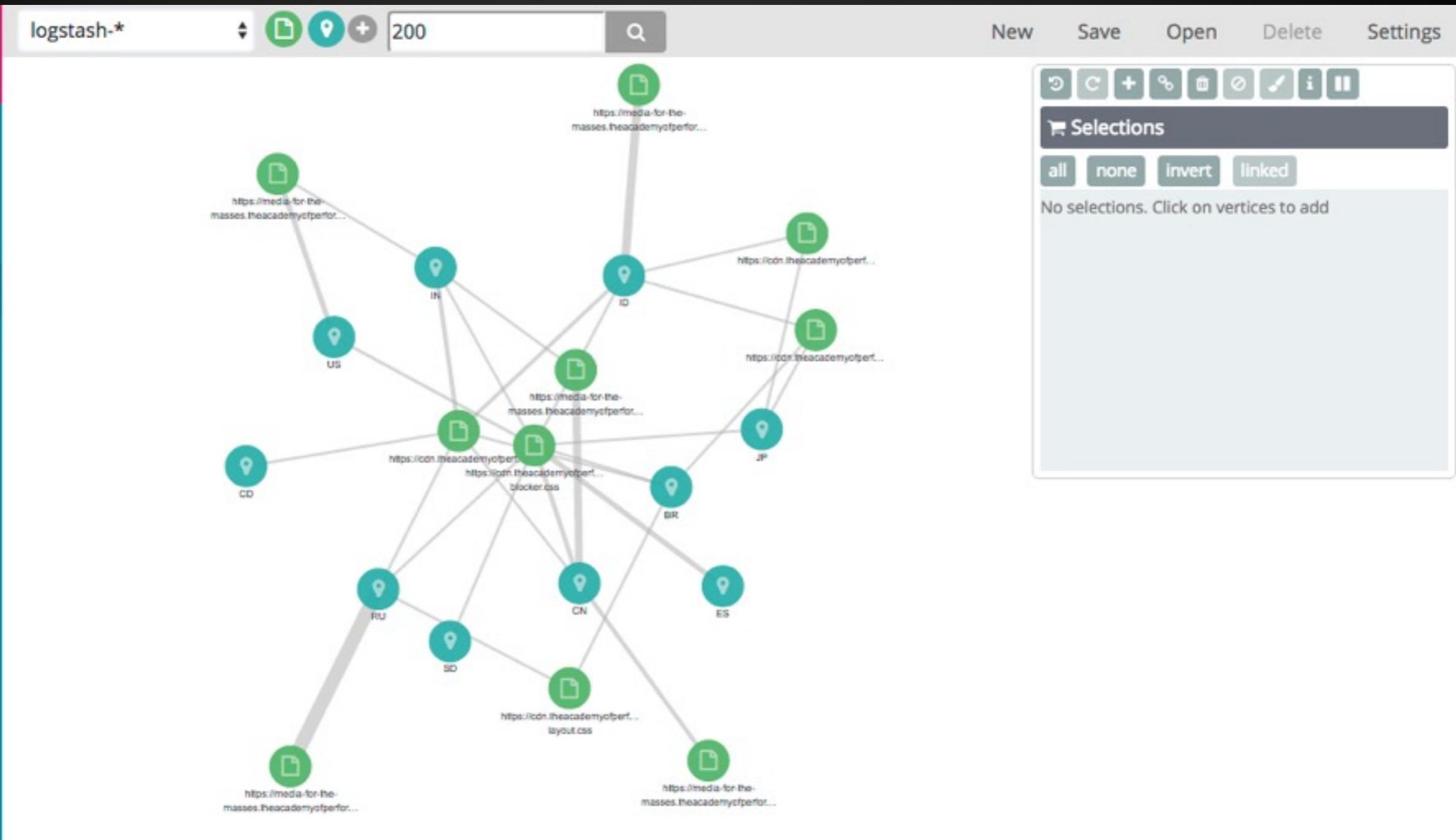
Bonus



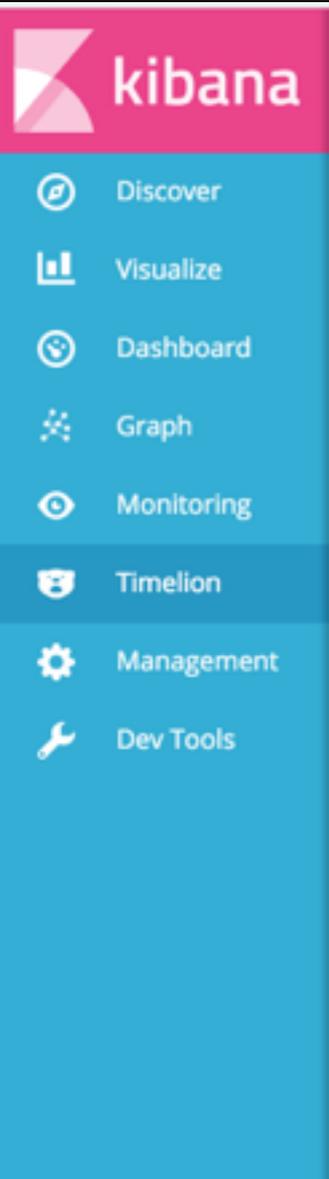
Bonus

kibana

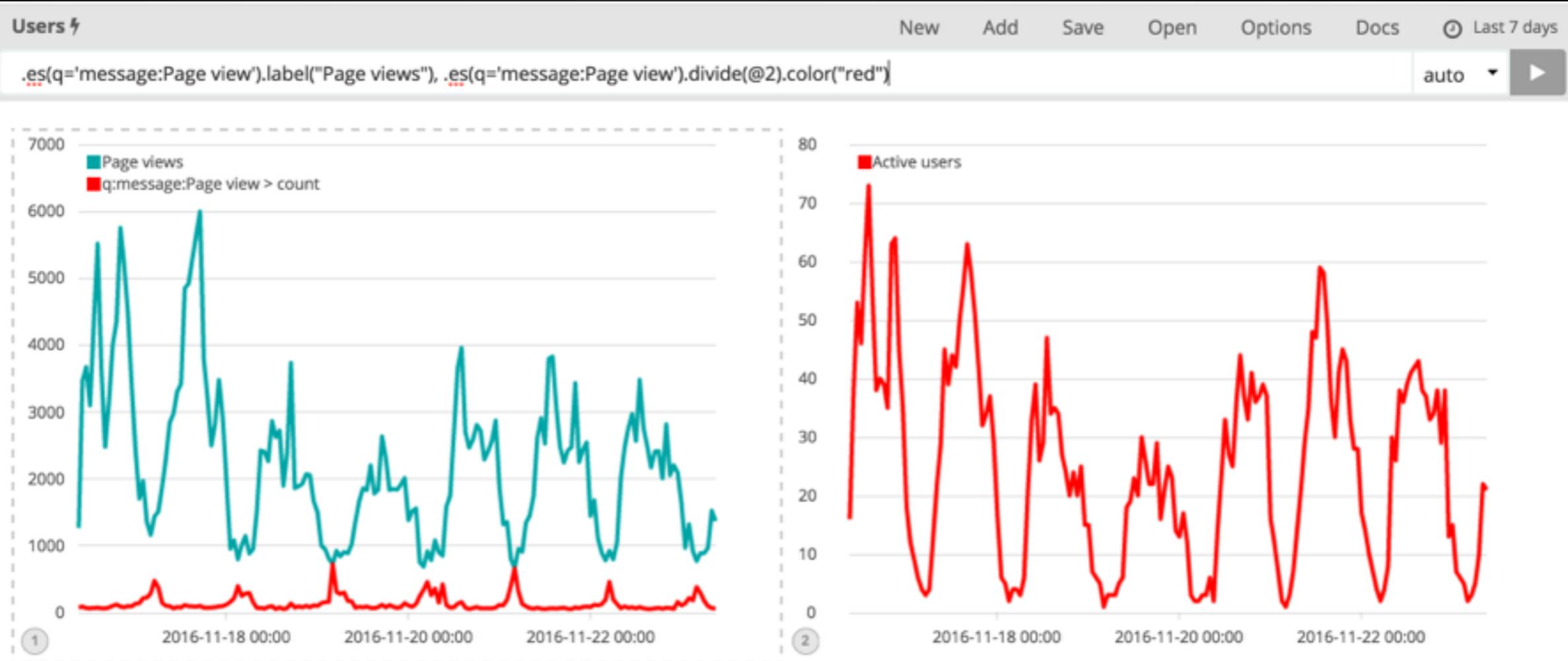
- Discover
- Visualize
- Dashboard
- Graph**
- Monitoring
- Timelion
- Management
- Dev Tools



Bonus



- Discover
- Visualize
- Dashboard
- Graph
- Monitoring
- Timelion
- Management
- Dev Tools



Thank you

@tobiasnyholm