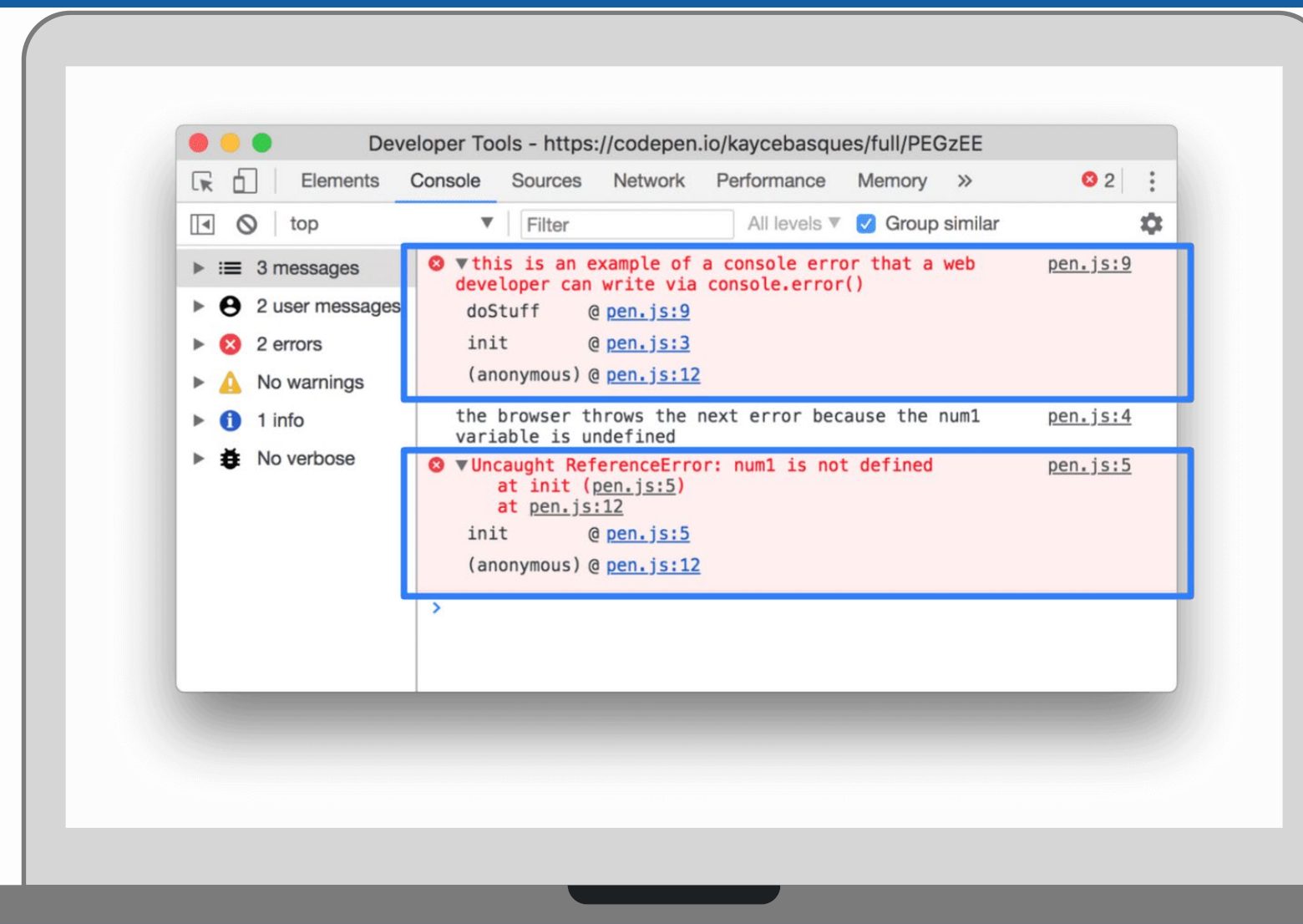


# L'observabilité en pratique

pour que les problèmes n'aient nulle part où se cacher






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November 26th, 2024





# Mathieu Lamiot

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**group.one**

{ **wpm**media }





# Agenda

- ▶ Les logs en pratique
- ▶ Qu'attend-on d'un système de monitoring ?
- ▶ Quelques outils d'observabilité
  - ▶ Plateforme de monitoring d'erreurs
  - ▶ Alertes orientées data
- ▶ Le monitoring "end-to-end"
  - ▶ Monitoring de requêtes
  - ▶ Non-regression visuelle



# Les logs en pratique



# Tout va bien jusqu'à...

```
device x
D:/git/HSCRMDS/project-nexthink/model/device.py:1: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-
"""
In[65]: tstdf['content.monitors_count'] = tstdf['content.monitors'].apply(len)
D:/git/HSCRMDS/project-nexthink/model/device.py:1: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-
"""
In[66]: tstdf['content.monitors_count'] = tstdf['content.monitors'].apply(len)
Traceback (most recent call last):
  File "C:\Python36\lib\site-packages\IPython\core\interactiveshell.py", line 3326, in run_code
    exec(code_obj, self.user_global_ns, self.user_ns)
  File "<ipython-input-66-c9df762b6ee5>", line 1, in <module>
    tstdf['content.monitors_count'] = tstdf['content.monitors'].apply(len)
  File "C:\Python36\lib\site-packages\pandas\core\generic.py", line 5274, in __getattr__
    return object.__getattr__(self, name)
AttributeError: 'Series' object has no attribute 'apply'

In[67]:
```

```
Developer Tools - https://codepen.io/kaycebasques/full/PEGzEE
Elements Console Sources Network Performance Memory >>
top Filter All levels Group similar
3 messages
2 user messages
2 errors
No warnings
1 info
No verbose
this is an example of a console error that a web developer can write via console.error() pen.js:9
doStuff @ pen.js:9
init @ pen.js:3
(anonymous) @ pen.js:12
the browser throws the next error because the num1 variable is undefined pen.js:4
Uncaught ReferenceError: num1 is not defined pen.js:5
at init (pen.js:5)
at pen.js:12
init @ pen.js:5
(anonymous) @ pen.js:12
```

There has been a critical error on this website. Please check your site admin email inbox for instructions.

[Learn more about troubleshooting WordPress.](#)



```
wp-content > debug.log
166 [20-Oct-2024 16:54:10 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
167 [20-Oct-2024 16:54:25 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
168 [20-Oct-2024 16:54:55 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
169 [20-Oct-2024 16:55:13 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
170 [20-Oct-2024 16:56:03 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
171 [20-Oct-2024 16:59:18 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
172 [20-Oct-2024 17:02:53 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
173 [20-Oct-2024 17:05:21 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
174 [20-Oct-2024 17:05:56 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
175 [20-Oct-2024 17:15:19 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
176 [20-Oct-2024 17:19:27 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
177 [20-Oct-2024 17:20:01 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
178 [20-Oct-2024 17:23:17 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
179 [20-Oct-2024 17:27:20 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
180 [20-Oct-2024 17:29:38 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
181 [20-Oct-2024 17:30:56 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
182 [20-Oct-2024 17:31:05 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
183 [20-Oct-2024 17:31:27 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
184 [20-Oct-2024 17:32:04 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
185 [20-Oct-2024 17:32:40 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
186 [20-Oct-2024 17:33:39 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
187 [20-Oct-2024 17:35:43 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
188 [20-Oct-2024 17:36:51 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
189 [20-Oct-2024 17:37:08 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
190 [02-Nov-2024 12:57:44 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or directory in /Users/mathieu/Documents/Websites/...
191 [02-Nov-2024 12:57:46 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or directory in /Users/mathieu/Documents/Websites/...
192 [02-Nov-2024 12:57:46 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or directory in /Users/mathieu/Documents/Websites/...
193 [02-Nov-2024 12:58:15 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
194 [06-Nov-2024 10:33:29 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or directory in /Users/mathieu/Documents/Websites/...
195 [06-Nov-2024 10:33:31 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or directory in /Users/mathieu/Documents/Websites/...
196 [06-Nov-2024 10:33:31 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or directory in /Users/mathieu/Documents/Websites/...
197 [06-Nov-2024 10:36:22 UTC] PHP Deprecated: Optional parameter $search declared before required parameter $table is implicitly treated as a
198 [06-Nov-2024 10:36:22 UTC] PHP Deprecated: Optional parameter $replace declared before required parameter $table is implicitly treated as a
199 [06-Nov-2024 10:40:02 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack) of type string is deprecated in /Users/mathieu/...
200 [06-Nov-2024 10:42:08 UTC] Admin bar could not init properly.
201 [06-Nov-2024 10:42:08 UTC] Admin bar could not init properly.
202 [06-Nov-2024 10:42:10 UTC] Requirements are missing, aborting.
203 [06-Nov-2024 10:42:11 UTC] Admin bar could not init properly.
204 [06-Nov-2024 10:42:11 UTC] Admin bar could not init properly.
205 [06-Nov-2024 10:42:13 UTC] Requirements are missing, aborting.
206 [06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
207 [06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
208 [06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
209 [06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
210 [06-Nov-2024 10:42:16 UTC] Requirements are missing, aborting.
211 [06-Nov-2024 10:42:16 UTC] Requirements are missing, aborting.
212 [06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
213 [06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
214 [06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
```

On s'en sort, mais :

- Approche réactive,
- Manque de contexte,
- Manque de données consolidées,
- Ne passe pas à l'échelle,
- Problèmes de sécurité et de performance.



```

*/
public function treeshake( string $html ): string {
    error_log("Hello! I'm here.");
    if ( ! $this->context->is_allowed() ) {
        error_log("Exit 1");
        return $html;
    }

    $clean_html = $this->hide_comments( $html );
    error_log("clean_html:");
    error_log($clean_html);
    $clean_html = $this->hide_noscripts( $clean_html );
    error_log("clean_html:");
    error_log($clean_html);
    $clean_html = $this->hide_scripts( $clean_html );
    error_log("clean_html:");
    error_log($clean_html);

    if ( ! $this->html_has_title_tag( $clean_html ) ) {
        error_log("Exit 2")
        return $html;
    }

    global $wp;
    $url = untrailingslashit( home_url( add_query_arg(
    error_log("url:");
    error_log($url);
    $is_mobile = $this->is_mobile();

```


On s'en sort, mais :

- Approche réactive,
- Manque de contexte,
- Ne passe pas à l'échelle.

# Les limites des fichiers de logs

- Approche réactive / Pas de temps réel
- Manque de contexte : logs simultanés, stack trace, contexte,...
- Manque de données consolidées : fréquence, utilisateurs,...
- N'observe que ce qui a lieu
- Impact sur la performance
- Risque de sécurité
- Nécessite une gestion des fichiers





Qu'attend-on d'un  
système de monitoring ?

# Qu'attend-on d'un système de monitoring ?

- **Monitoring proactif & temps réel**
- **Information contextuelle** : stack traces, sessions utilisateur, variables, ...
- **Analyse de l'historique**
- **Collection de sources multiples** : erreurs/warnings/logs, métriques de performance, métriques d'utilisation, ...
- **Peu d'impact sur la performance**
- **Simple d'utilisation et stable**





# Quelques outils d'observabilité





# Plateforme de monitoring d'erreurs



# Analyse des logs

```
[02-Nov-2024 12:58:15 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack)
[06-Nov-2024 10:33:29 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or di
[06-Nov-2024 10:33:31 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or di
[06-Nov-2024 10:33:31 UTC] PHP Warning: mysqli_real_connect(): (HY000/2002): No such file or di
[06-Nov-2024 10:36:22 UTC] PHP Deprecated: Optional parameter $search declared before required
[06-Nov-2024 10:36:22 UTC] PHP Deprecated: Optional parameter $replace declared before required
[06-Nov-2024 10:40:02 UTC] PHP Deprecated: stripslashes(): Passing null to parameter #1 ($haystack)
[06-Nov-2024 10:42:08 UTC] Admin bar could not init properly.
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[06-Nov-2024 10:42:11 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:13 UTC] Requirements are missing, aborting.
[06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:14 UTC] Admin bar could not init properly.
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[06-Nov-2024 10:42:16 UTC] Requirements are missing, aborting.
[06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:17 UTC] Admin bar could not init properly.
[06-Nov-2024 10:42:19 UTC] Requirements are missing, aborting.
[06-Nov-2024 10:42:19 UTC] Requirements are missing, aborting.
```

- Plus de contexte
- Stack trace
- Variables
- Environnement
- Grouper les évènements similaires
- Grouper les évènements par process



Vue d'ensemble  
des erreurs,  
warnings, logs

<input type="checkbox"/>	↑ Last Seen	GRAPH:	24h 7d	EVENTS	USERS	PRIORITY	ASSIGNEE
<input type="checkbox"/>	<b>ServiceUnavailableError</b> /api/receiver/ ... ● (No error message) 📄 Unhandled ⌚ 37min ago   10mo old		2	6	5	High	
<input type="checkbox"/>	<b>User.DoesNotExist</b> /api/receiver/... ● User matching query does not exist. 📄 Unhandled ⌚ 3hr ago   23mo old wp-media/im		3	28	10	High	
<input type="checkbox"/>	<b>RequestsAPIError</b> /api/users/ ● \API response 500 (Internal Server ... 📄 Unhandled ⌚ 16hr ago   19mo old		198	209	195	High	
<input type="checkbox"/>	<b>'RequestsAPIError</b> /account/re... ● API response 500 (Internal Server ... 📄 Unhandled ⌚ 16hr ago   6d old		125	128	34	High	
<input type="checkbox"/>	<b>Exception</b> /api/receiver/... ● Could not create invoice due to invalid payl... 📄 Unhandled ⌚ 4d ago   9mo old		28	63	6	High	
<input type="checkbox"/>	<b>ConnectionError</b> /api/upload/ ● Error 1 connecting to ... 📄 Unhandled ⌚ 23hr ago   5d old		400	489	196	High	
<input type="checkbox"/>	<b>ConnectionError</b> celery in set_ti... ● Error 1 connecting tc ... 📄 Unhandled ⌚ 23hr ago   6d old celery.utils.disp		66	91	0	High	
<input type="checkbox"/>	<b>ConnectionError</b> health_check... ● Error 1 connecting tc ... 📄 Unhandled ⌚ 23hr ago   6d old		17	22	0	High	



## KeyError

'order'

```
140
141 # Source and resources are set in the headers
142 if source and sources_map[source] and resource and resources_map[resource]:
143     data = JSONParser().parse(request)
144     try:
145         _id = data[resource]["id"]
146     except KeyError as e:
147         if "id" not in data:
148             sentry_sdk.capture_exception(e)
149             return Response({"success": True})
150     _id = data["id"]
```

data	<pre>∨ {   code: "woocommerce_rest_shop_order_invalid_id",   ∨ data: {     status: 404   },   message: "Invalid ID." }</pre>
e	KeyError('order')
request	<rest_framework.request.Request: POST '...'>
resource	"order"
resources_map	<pre>∨ {   customer: "customers",   order: "orders",   subscription: "subscriptions",   track: "tracks" }</pre>
self	<machine.api.views.MachineWebHookView object at 0x7f2be0e2e070>



# Métriques de performance

php mathieulamiot-com-php ▾ All Envs ▾ 14D ▾

### Slow HTTP Ops ▾

Found in the following transactions

<a href="#">/wp-cron.php</a>	13.81s ▾
<a href="#">/xmlrpc.php</a>	643ms ▾
<a href="#">/wp-login.php</a>	625ms ▲

<a href="#">/wp-comments-post.php</a>	216ms ▾
---------------------------------------	---------

### Slow DB Ops ▾

Found in the following transactions

<a href="#">/wp-cron.php</a>	172ms ▲
------------------------------	---------

<a href="#">/{pagename}</a>	151ms ▾
<a href="#">/category/{category_name}</a>	144ms ▾
<a href="#">/{name}</a>	140ms ▾

### Apdex ▾

Compared to last 14d

0,332

### Transactions Per Minute ▾

Compared to last 14d

0,94

### Failure Rate ▾

Compared to last 14d

1%





# Alertes en temps réel

# ops

**Sentry** APPLI 11 sept. à 21 h 30  
**Warning: Number of Payment Error on [redacted] per hour**

57 events in the last hour  
Started: 11 septembre at 20 h 30

(13 ko) ▾

1 réponse il y a 2 mois

---

# ops

**Sentry** APPLI 8 sept. à 17 h 36  
**InvalidRequestError**

[redacted]

Request req\_[redacted]: No such source: '[redacted]'

Events: 96 Users Affected: 11 State: Ongoing First Seen: 2022-11-22

Resolve Archive Select Assignee... ▾

Project: [redacted] Alert: Slack Notification - All issues - Production Short ID: [redacted]-4G6



# Alertes orientées data

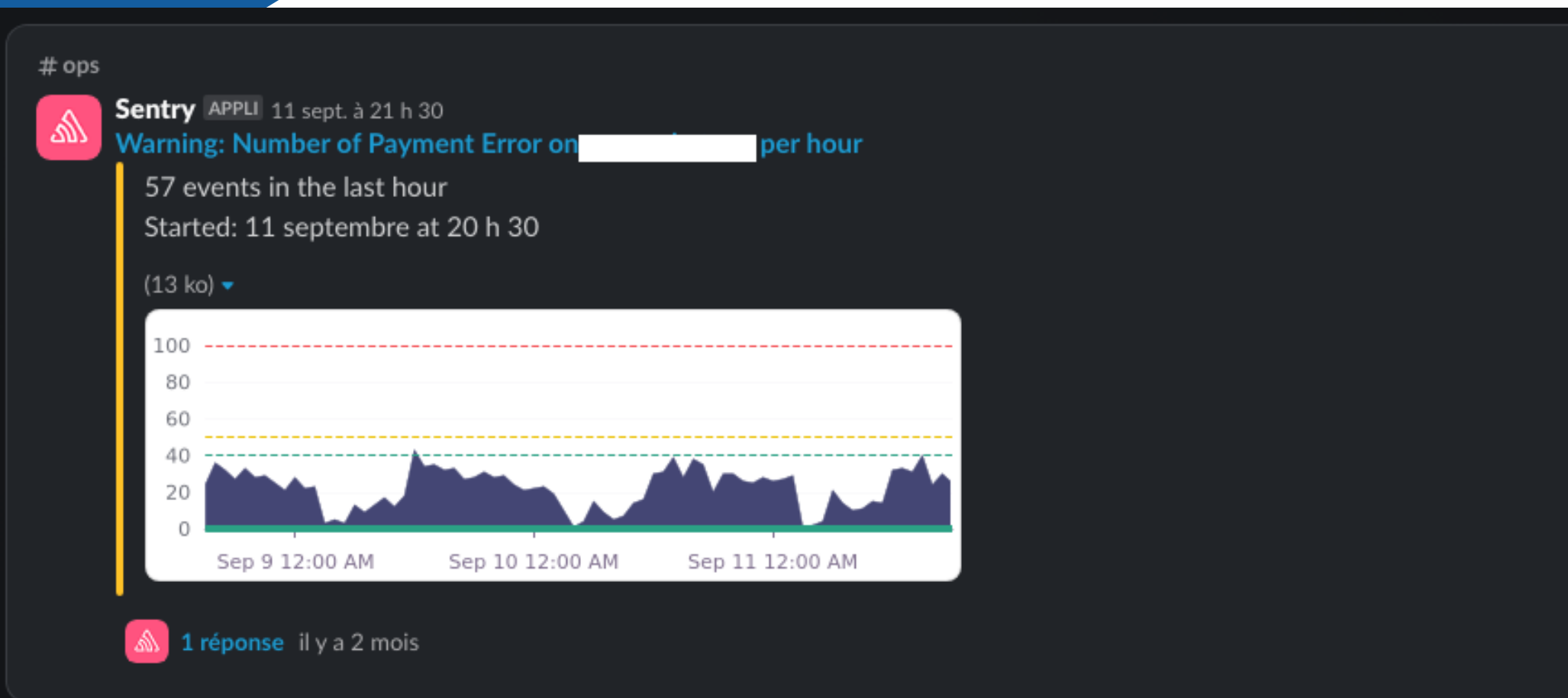


# Une limite des alertes orientées erreurs

On est alerté uniquement pour les erreurs qui ont lieu.

Qu'en est - il de ce qui n'arrive pas, mais qui devrait ?

- Volume de ventes bas
- Nombre d'inscriptions bas
- etc.



# ops

Sentry APPLI 8 sept. à 17 h 36

InvalidRequestError

[redacted]

Request req\_[redacted]: No such source: '[redacted]'

Events: 96 Users Affected: 11 State: Ongoing First Seen: 2022-11-22

Resolve Archive Select Assignee...

Project: [redacted] Alert: Slack Notification - All issues - Production Short ID: [redacted]-4G6

# Principe des alertes orientées data

Observer des métriques business.

SQL

```
SELECT
    DATE(user_registered) AS registration_date,
    COUNT(*) AS user_count
FROM
    wp_users
GROUP BY
    DATE(user_registered)
ORDER BY
    registration_date;
```





# Principe des alertes orientées data

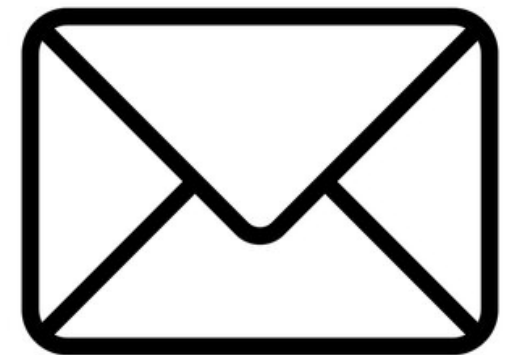
Chaque jour, vérifier le nombre d'utilisateurs inscrits en 24 heures, et alerter si besoin.



CRON

SQL

```
SELECT
    DATE(user_registered) AS registration_date,
    COUNT(*) AS user_count
FROM
    wp_users
WHERE
    user_registered >= NOW() - INTERVAL 1 DAY
GROUP BY
    DATE(user_registered)
HAVING
    user_count BETWEEN 300 AND 800
ORDER BY
    registration_date;
```



# Metabase for BI & Alerting



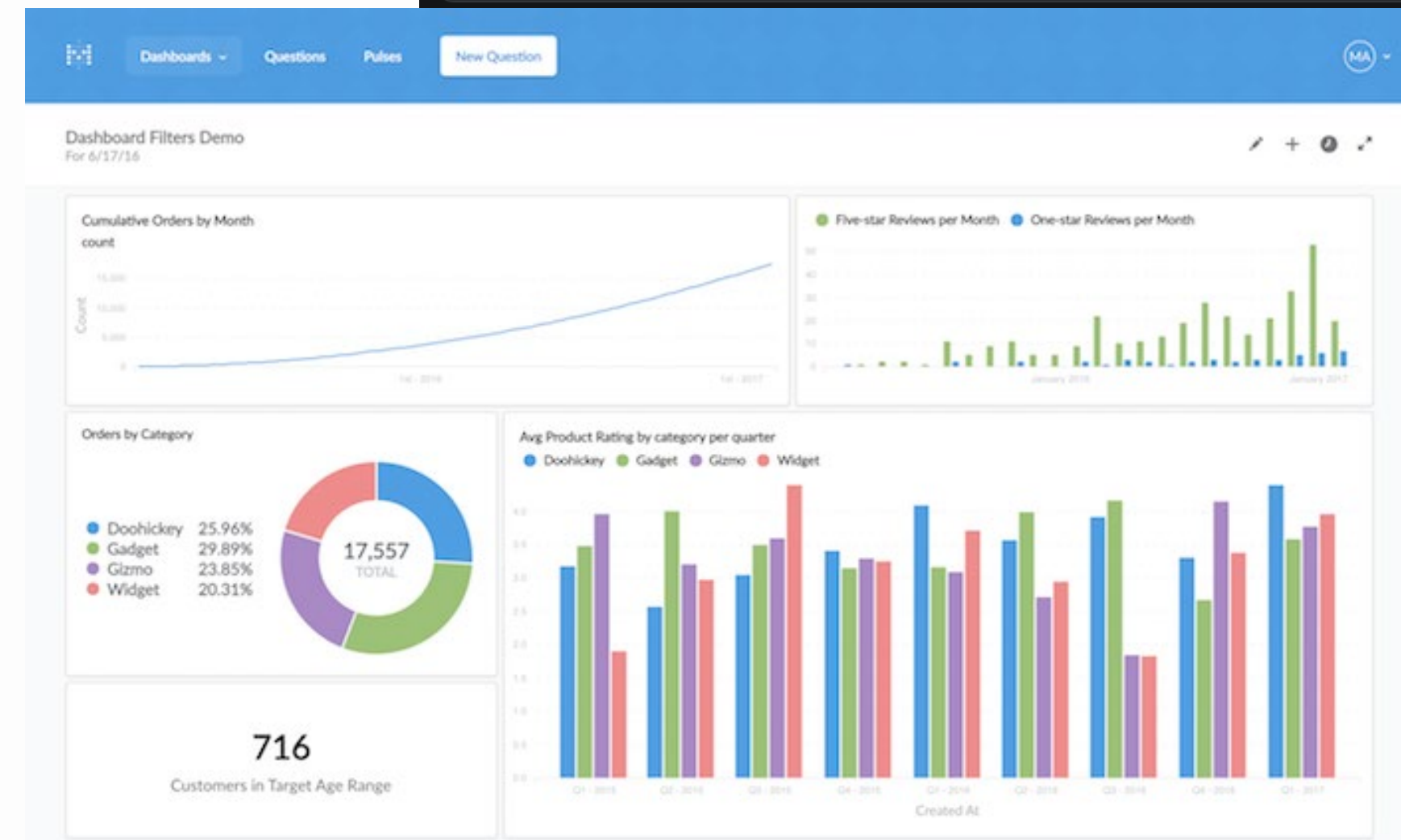
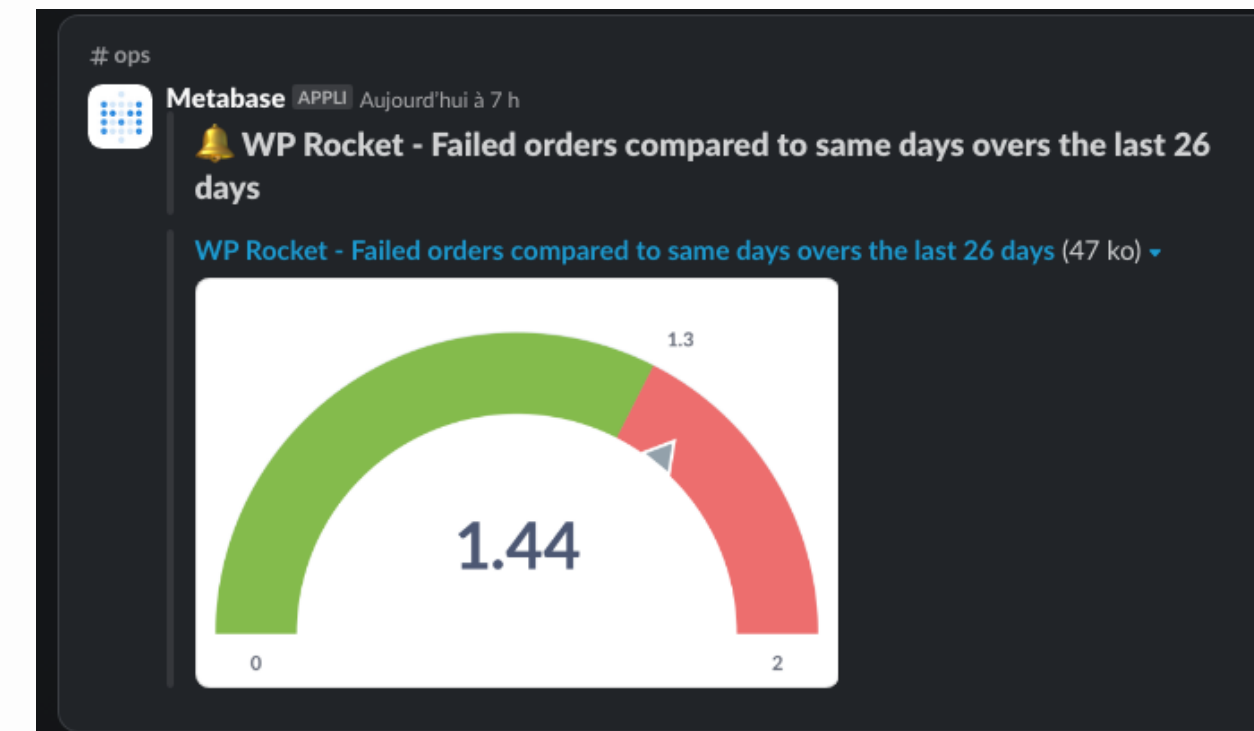
# Metabase pour l'alerting & la BI

<https://www.metabase.com>

Application self-hosted: Gratuit & Open Source

Outils d'alerting

Outils BI & Data exploration







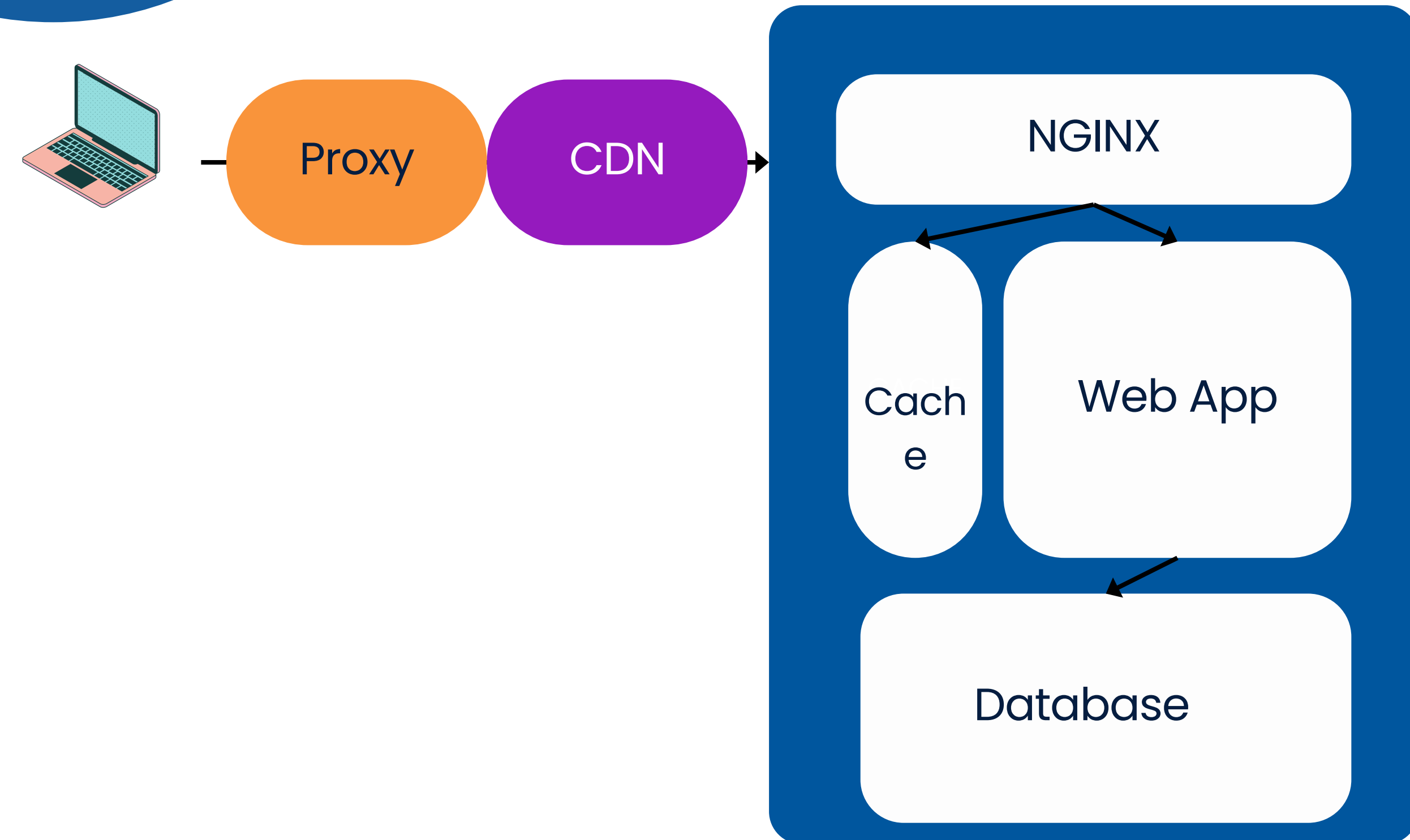
# Le monitoring “end-to-end”





# Monitoring de requêtes

# Monitoring de requêtes



- Focus “User experience” via le end - to - end.
- Validation des requêtes HTTP (code, payload, etc.)

Plein de services existent :

⚡ *updown.io*



**Better Stack**

**UptimeRobot**





# Non-regression visuelle

# Tests de non-regression visuelle

- Définir les tests (URLs, format d'écran, actions / clics, etc.),
- Prendre un snapshot de référence,
- Appliquer des changements,
- Relancer le test et comparer à la référence.

# BackstopJS

```
1  npm install -g backstopjs
2  backstop init
```

```
{} backstop.json > ...
1  {
2    "id": "backstop_default",
3    "viewports": [
4      {
5        "label": "tablet",
6        "width": 1024,
7        "height": 768
8      }
9    ],
10   "scenarios": [
11     {
12       "label": "BackstopJS Homepage",
13       "cookiePath": "backstop_data/engine_scripts/cookies.json",
14       "url": "https://sandbox.local/this-is-another-post-on-github-because-this-is-all-i-do/"
```

```
4  backstop test
5  backstop approve
```

```
1265 1265 .h1 {
1266    — font-size: 36px;
1266+  font-size: 40px;
1267 1267 }
```

```
7  backstop test
```



# R a p p o r t B a c k s t o p J S



# Agenda

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# Merci !

## Mathieu Lamiot

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WP Media

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**group.one**

**{wpmedia}**

 **RankMath**