

Just a typo?

Drawing the line between data and logic

Aurelijus Banelis



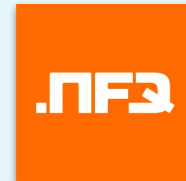


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PGP 0x320205E7539B6203
130D C446 1F1A 2E50 D6E3
3DA8 3202 05E7 539B 6203



Why fixing a typo is slow?

**Can content and dev teams
work together?**

Atsisiųsk turinio valdymo sistemą [tvs_v1.1.2.zip \(162.1KB\)](#) (naujausia versija).

Ką rasite naujausioje turinio valdymo sistemoje matote apačioje:

HTML redaktorių. Su juo galėsite lengvai ir patogiai redaguoti ar kurti straipsnius. HTML redaktoriuje bus visos populiariausios funkcijos pvz.: pastorinti, pabraukti, palenkti, atšaukti (undo), pakartoti (redo), lygiavimas, sąrašai, nuorodos, paveiksliukai, lentelės ir daug kito..

Naujausioje versijoje galėsite įdėti dizaino lenteles ar paprastus meniu. Dizaino lentelės pavyzdys - šis sąrašas, o meniu pavyzdį matote kairėje.

Failų nusiuntėją ("uploaderi") su kurio pagalba galėsite įkelti į svetainę bet kokią darbo kiekį failų. Nusiųstus failus galėsite pervadinti, ištrinti, sužalotųjų dydį ir statusą žiūrėti.

Patogų skyrių administravimą. Galėsite keisti skyriaus poziciją, pavadinimą, ištrinti, išvalyti, pasirinkti pagrindini puslapį.

Lengva keičiama dizaina. Dizaino nereikės įdiegti, dizainus skirtus šiai turinio valdymo sistemai vėliau rasite **Dizainas** skyriuje.

Galėsite kurti šaltinius, puslapius, idonius ir naujas lenteles, lentelės ir sąrašus. Jus galėsite kurti naudodami HTML redaktorių ar įdėdami HTML kodą.

Galėsite keisti administratoriaus slaptažodį ar vartotojo vardą. Administratoriaus slaptažodis failuose serveryje yra užšifruotas, tačiau administratoriaus slaptažodis keičiamas visais atvejais, kai krikp. išnuo ir išnuo duomenų serveria.

Įdiegtas turinio valdymo sistema su nauja funkcija - administravimas. Ši funkcija yra patvirtintas atnaujinimas. Pakeltas įdus serverio turinio valdymo sistema atnaujins automatiškai, jums paleidus savo puslapį.

Įdėta ten.lt ir 100webpace.com antireklama. Užsiregistravus ten.lt adresu, turinio valdymo sistema ten.lt baneri pakeis savu, t. y. jūsų parašytu baneriu. 100webpace.com serveryje įdėję šią turinio valdymo sistemą, ji pašalins nuo jūsų puslapio (t. y. turinio valdymo sistemos) pridėtą reklamą. Visa tai leidžia susikurti interneto puslapį visiškai nemokami ir be prikišamų reklamų.

Paiešką tavo puslapiui. Lankytojai galės ieškoti frazių ar atskirų žodžių, pasirinktinai skiriant ar neskiriant didžiųjų raidžių nuo mažųjų, ignoruojant arba neignoruojant lietuviškų simbolių. Surastuose straipsniuose ieškomi žodžiai bus paryškinti. Lankytojas taip pat galės ieškoti informacijos visame internete, naudojant surask.lt duomenų bazę.

Visos versijos

Atsisiųsti	Versija	Atnaujinimai naujoje versijoje
	1.1.2	

It was trendy To create your own Content management system

[Symfony Components](#)[Case Studies](#)[Symfony Releases](#)[Security Policy](#)[Logo & Screenshots](#)[Trademark & Licenses](#)[symfony1 Legacy](#)

CMS projects using Symfony

Content Management Systems and Content Management Frameworks.



Drupal



Joomla!



eZ Platform



Grav



Symfony CMF

Now

TYPO3



SULU

Sulu

Bolt

Bolt



concrete5



Roadiz



Contao



init CMS



Pico

Pico CMS

Reusing for More complex systems



Find the best Symfony & PHP experts with SensioLabs.



Take the exam at home

we'll have a look. right now I'm not sure if it's a `technical or a data issue`

OK thanks. It also takes longer to charge than the other products.

the `options` and `options` options are missing images which is causing the configuration options to disappear. we'll take a look if we can handle such issues more graceful

More data

The same thing happened on the web when a product without price was being returned. I guess `there's a faulty product` in the first page on the default sorting

More people

there seems to be a `bad coordination between data and tech`. The new scale is adopted but in theory it was only available for kitchens.

morning, `commercial` is already on it to fix it and update it.

`undefined is not iterable`

we'll have a look. right now I'm not sure if it's a `technical or a data issue`

OK thanks. It also takes longer to charge than the other products.

the `image` and `options` are missing images which is causing the configuration options to disappear. we'll take a look if we can handle such issues more gracefully

More

“Data or logic”

The same thing happened on the web when a product without price was being returned. I guess `there's a faulty product` in the first page on the default sorting

issues

there seems to be a `bad coordination between data and tech`. The new scale is adopted but in theory it was only available for kitchens.

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we'll have a look. right now I'm not sure if it's a technical or a data issue

OK thanks. It also takes longer to charge than the other products.

the [redacted] and [redacted] options are missing images which is causing the configuration options to disappear. we'll take a look if we can handle such issues more graceful

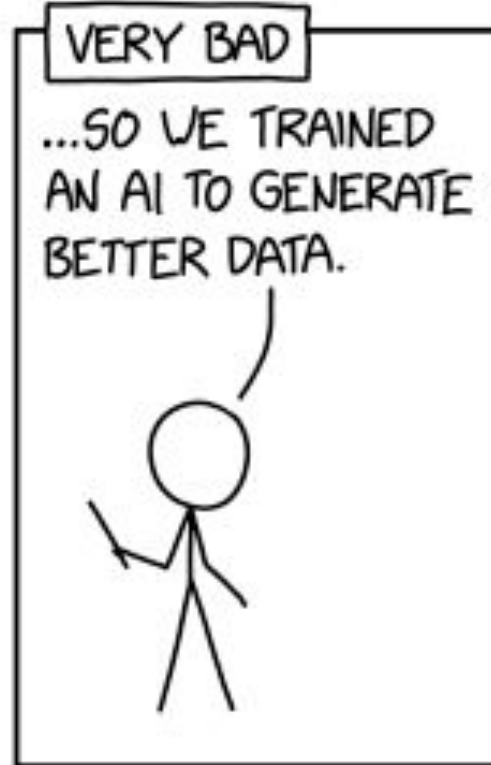
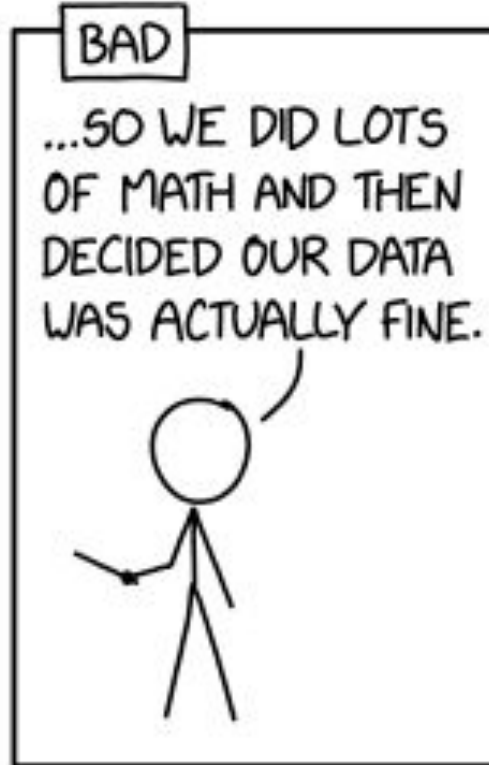
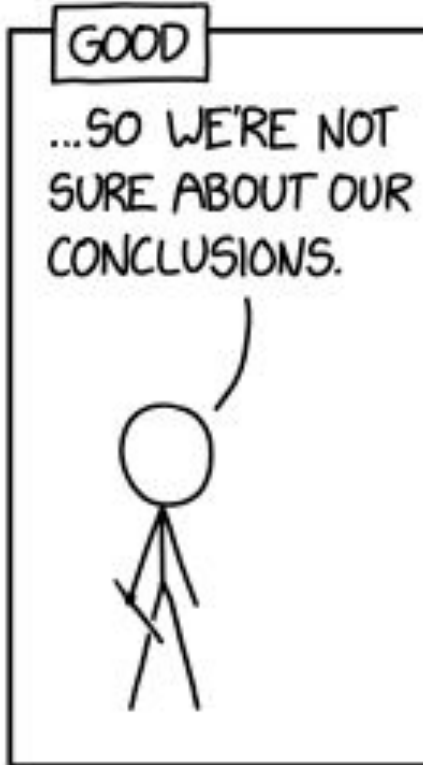
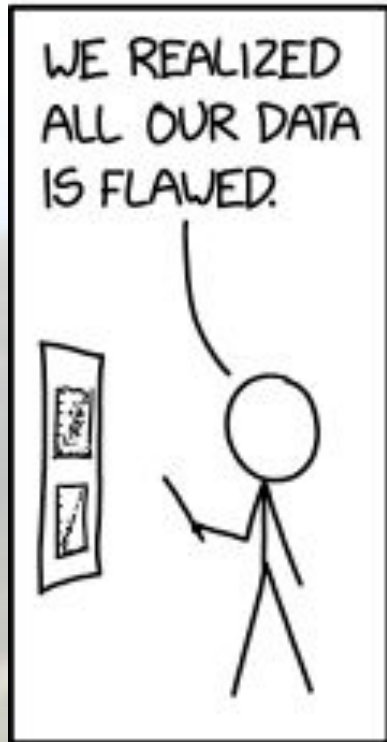
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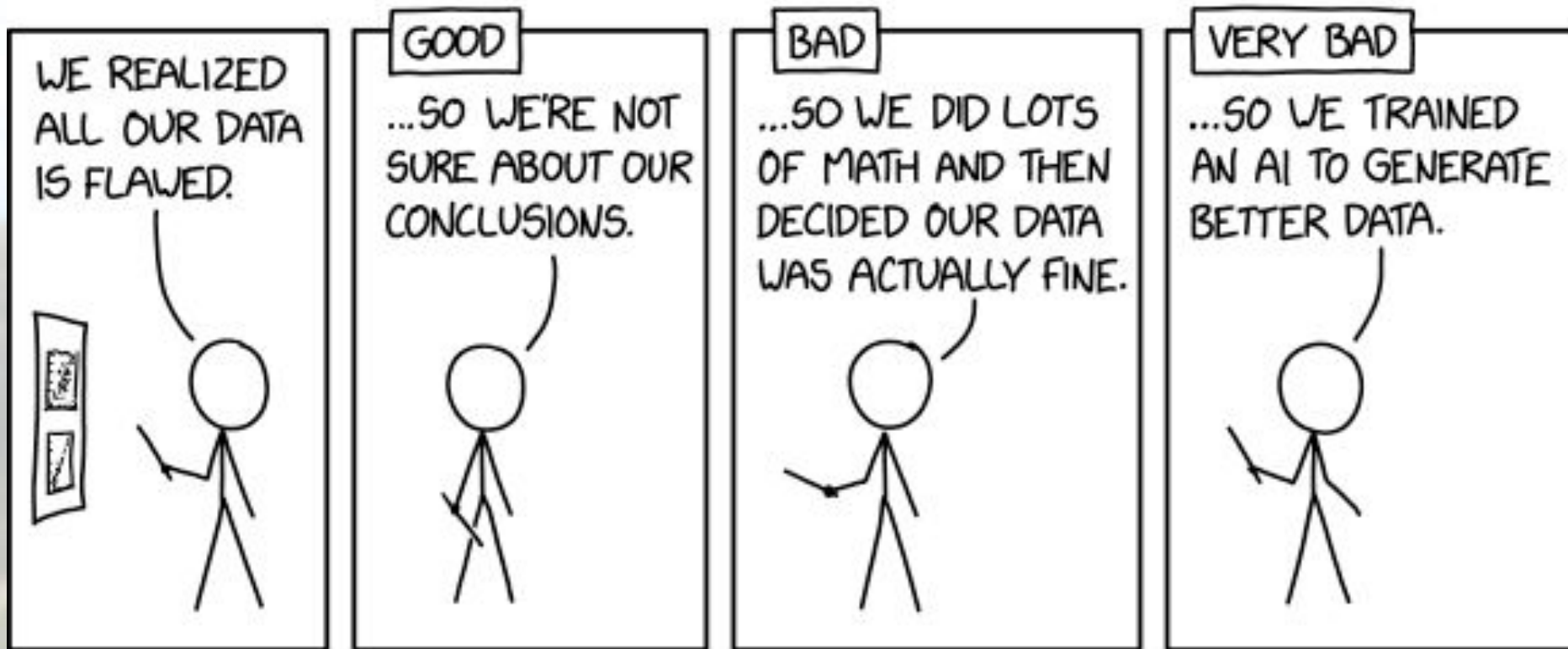
morning, commercial is already on it to fix it and update it.

undefined is not iterable

Keeping valid data **on scale** is hard



Keeping valid data on scale is hard



But we **can try**

Free form data

Structured data

Personal data

Data as a code

Scoped risk

**“Just” a typo
in a content?**

Impactful change



Main + Add a new tab

Free form data

page API ID: uid

title API ID: title

Structured data

content API ID: content

preview

Personal data

preview

title API ID: title

API ID: uid

description API ID: description

Data as a code

Slice zone

Scoped risk

“Just” a typo in a content?

Impactful change

- UID
SEO-friendly unique identifier for URLs
- Title
A heading field from h1 to h6
- Rich Text
A rich text field with formatting options
- Image
A responsive image field with constraints
- Content relationship
Define content relationships & internal links
- Link
link to web, media and internal content
- Link to media
link to files, documents and media
- Date
A calendar date picker
- Timestamp
A calendar date picker with time
- Color
A color picker
- Number
Numbers



Unpopular opinion: why required fields lead to terrible UX

Written by [Renaud Bressand](#) in [Concept](#) on November 05, 2018

Validation mechanisms and required fields are a hotly debated topic in our team and throughout our community. These two features stand amongst the top requested features and yet they have never been implemented. (Which might seem especially strange given how relatively simple it is to build them.)

In this article, we want to describe why we don't have any validation rules in our content editor and what we recommend instead. This blog post aims to lay the groundwork for a broader discussion and debate on these topics.



Main

+ Add a new tab

page API ID : uid 🗑️ ⚙️ =

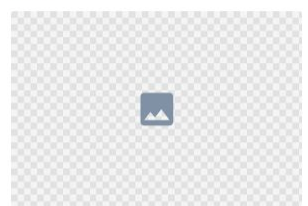
title API ID : title 🗑️ ⚙️ =

...

content API ID : content 🗑️ ⚙️ =

preview 🗑️ ⚙️

preview



Title API ID : title1 🗑️ ⚙️

...

slides link API ID : slides_link 🗑️ ⚙️

🔗 Select a link

description API ID : description 🗑️ ⚙️

...

Slice zone ?Off On

Build mode JSON editor

 **UUID**
SEO-friendly unique identifier for URLs =

 **Title**
A heading field from h1 to h6 =

 **Rich Text**
A rich text field with formatting options =

 **Image**
A responsive image field with constraints =

 **Content relationship**
Define content relations & internal links =

 **Link**
Link to web, media and internal content =

 **Link to media**
Link to files, documents and media =

 **Date**
A calendar date picker =

 **Timestamp**
A calendar date picker with time =

 **Color**
A color picker =

 **Number**
Numbers =



Tag this document...

Main

Edited by Aurelijus Banelis
5 minutes ago

page

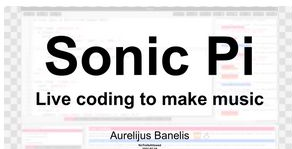
lt-presentations

title

Pranešimai

content

preview 1457 x 821px



Alt text

Title

Sonic Pi: Live coding to make music

slides link

<https://aurelijus.banelis.lt/presentations/nta-2021/SonicPi.pdf> ×

description

Gūdžiais pandemijos žiemos vakarais su draugais sugalvojome pasidaryti talentų vakarą. Kiti mokejo groti įvairiais instrumentais ar šiaip kažką įdomaus suvaidinti, bet iš dalykų, ką galima būtų parodyti netechniniems žmonėms per video susitikimą, man (programuotojui) sugalvoti buvo sunku.

Ir tada prisiminiau pusiau juokais pasakytą posakį jis groja kompu.

Savaitę pasigilinus ir gimė mano pirmieji [Live Coding Music Sync](#).

Title

Fargate

slides link

<https://aurelijus.banelis.lt/presentations/vilniusphp-2021/Fargate-v1.pdf> ×

Section Header



Main body of text, likely a description or code snippet, containing several lines of text and a blue link.



Text at the bottom of the page, including a blue link and additional text.



DEMO

```
foreach (glob( pattern: "$prismicExport/*.json") as $file) {
```

```
    $data = json_decode(file_get_contents($file), associative: true);
```

```
    $docName = $data['prismic_document_name'] ?? '';
```

Import/Export BETA

```
    $published = $data['publishing_date'] ?? '';
```

```
    $lang = $data['lang'] ?? '';
```

```
    $robots = $data['robots'] ?? '';
```

Export your documents

```
    if ($type == 'content' && $robots != 'index,follow' && $docName && $published) {
```

```
        $hash1 = false;
```

All your documents has been successfully snapshotted. Click [here](#) to download the archive.

```
        $slices = $bodies['value'] | 'non-repeat' | 'text_content' | ?? [];
```

```
        foreach($slices as $slice) {
```

```
            if ($slice['type'] == 'heading1') {
```

```
                $hash1 = true;
```

```
            }
```

```
        if (!$hash1 && $i == 0) {
```

```
            echo "Do not have H1:\t\t$docName\t\tPublished: $published\t\tLang: $lang\t\t$file\n";
```

```
        }
```

```
    }
```

```
}
```

Main + Add a new tab

Free form data

page API ID : uid

title API ID : title

Structured data

content API ID : content

preview

Personal data

preview

description API ID : description

Data as a code

Slice zone

Scoped risk

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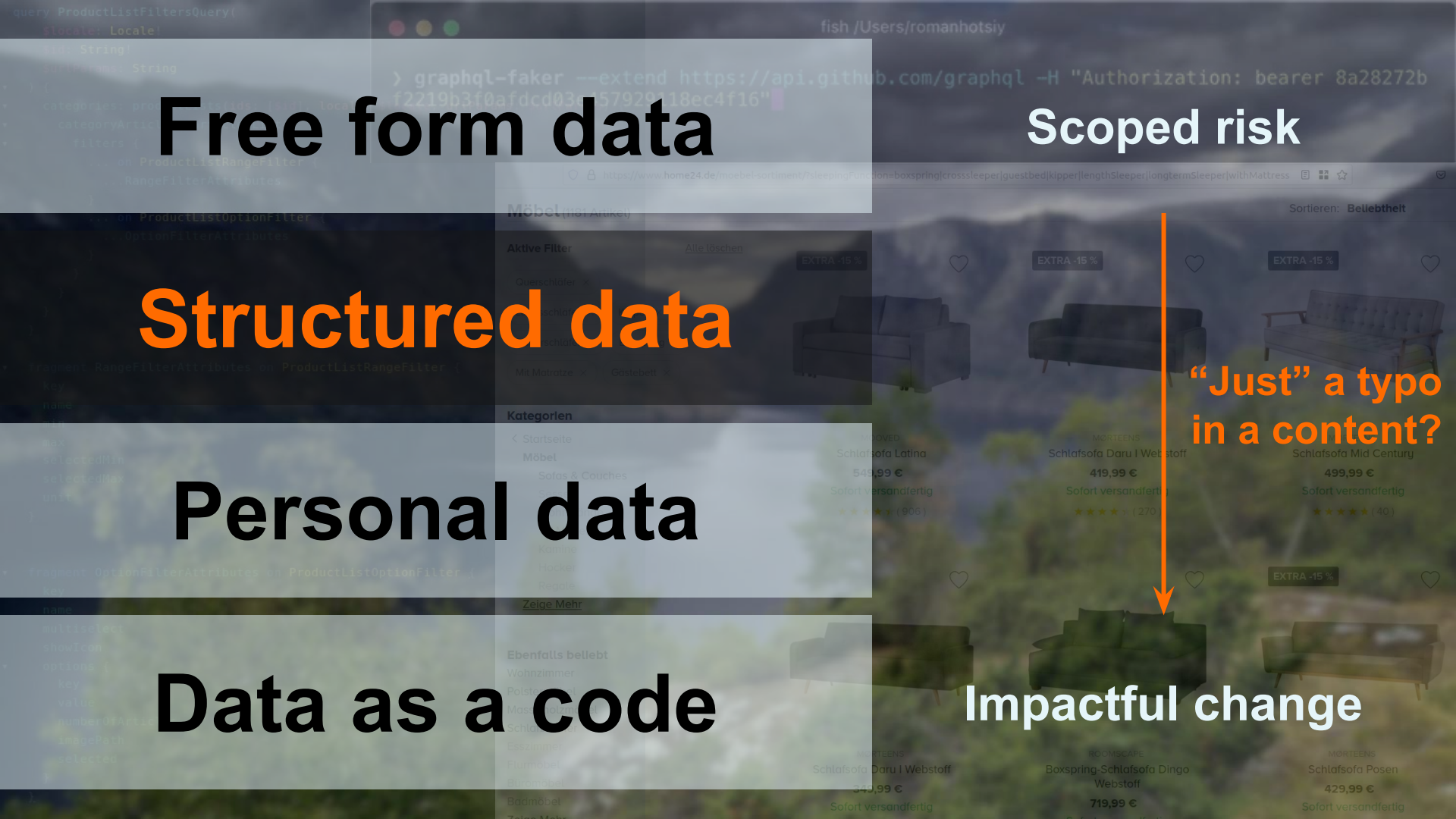
Structured data

Personal data

Data as a code

Impactful change

“Just” a typo
in a content?



```

query ProductListFiltersQuery(
  $locale: Locale!
  $id: String!
  $urlParams: String
) {
  categories: productListFiltersQuery(
    ids: [$id], locale: $locale, urlParams: $urlParams
  ) {
    categoryArticles: articlesList {
      filters {
        ... on ProductListRangeFilter {
          ... RangeFilterAttributes
        }
        ... on ProductListOptionFilter {
          ... OptionFilterAttributes
        }
      }
    }
  }
}

fragment RangeFilterAttributes on ProductListRangeFilter {
  key
  name
  min
  max
  selectedMin
  selectedMax
  unit
}

fragment OptionFilterAttributes on ProductListOptionFilter {
  key
  name
  multiselect
  showIcon
  options {
    key
    value
    numberOfArticles
    imagePath
    selected
  }
}

```

https://www.home24.de/moebel-sortiment/?sleepingFunction=boxspring|crossleeper|guestbed|kipper|length Sleeper|longterm Sleeper|withMattress

Möbel (1181 Artikel)

Sortieren: **Beliebtheit**

Aktive Filter [Alle löschen](#)

Querschläfer x Längsschläfer x Kipper x Dauerschläfer x Boxspring x Mit Matratze x Gästebett x

Kategorien

- Startseite
- Möbel
 - Sofas & Couches
 - Sessel
 - Wohnwände
 - TV-Möbel
 - Kamine
 - Hocker
 - Regale
 - [Zeige Mehr](#)

Ebenfalls beliebt

- Wohnzimmer
- Polstermöbel
- Massivholzmöbel
- Schlafzimmer
- Esszimmer
- Flurmöbel
- Büromöbel
- Badmöbel
- [Zeige Mehr](#)

MOOVOED
Schlafsofa Latina
549,99 €
Sofort versandfertig
★★★★☆ (906)

MORTEENS
Schlafsofa Daru I Webstoff
419,99 €
Sofort versandfertig
★★★★☆ (270)

MORTEENS
Schlafsofa Mid Century
499,99 €
Sofort versandfertig
★★★★☆ (40)

MORTEENS
Schlafsofa Daru I Webstoff
349,99 €
Sofort versandfertig

ROOMSCAPE
Boxspring-Schlafsofa Dingo Webstoff
719,99 €
Sofort versandfertig

MORTEENS
Schlafsofa Posen
429,99 €
Sofort versandfertig

```
query ProductListFiltersQuery(  
  $locale: Locale!  
  $id: String!  
  $urlParams: String  
) {  
  categories: productLists(ids: [$id], locale:  
    categoryArticles: articlesList {  
      filters {  
        ... on ProductListRangeFilter {  
          ... RangeFilterAttributes  
        }  
        ... on ProductListOptionFilter {  
          ... OptionFilterAttributes  
        }  
      }  
    }  
  }  
}  
  
fragment RangeFilterAttributes on ProductListRangeFilter {  
  key  
  name  
  min  
  max  
  selectedMin  
  selectedMax  
  unit  
}  
  
fragment OptionFilterAttributes on ProductListOptionFilter {  
  key  
  name  
  multiselect  
  showIcon  
  options {  
    key  
    value  
    numberOfArticles  
    imagePath  
    selected  
  }  
}
```

```
fish /Users/romanhotsiy  
  
> graphql-faker --extend https://api.github.com/graphql -H "Authorization: bearer 8a28272b  
f2219b3f0afdcd03e457929118ec4f16"
```

https://www.home24.de/moebel-sortiment/?sleepingFunction=boxspring|crossleeper|guestbed|kipper|length Sleeper|longterm Sleeper|with Mattress

Möbel (1181 Artikel)

Sortieren: **Beliebtheit**

Aktive Filter [Alle löschen](#)







- Querschläfer ×
- Längsschläfer ×
- Dauerschläfer ×
- Mit Matratze ×
- Kipper ×
- Boxspring ×
- Gästebett ×

Kategorien

- Startseite
- Möbel**
- Sofas & Couches
- Sessel
- Wohnwände
- TV-Möbel
- Kamine
- Hocker
- Regale
- [Zeige Mehr](#)

Ebenfalls beliebt

- Wohnzimmer
- Polstermöbel
- Massivholzmöbel
- Schlafzimmer
- Esszimmer
- Flurmöbel
- Büromöbel
- Badmöbel
- [Zeige Mehr](#)

 <p>EXTRA -15 %</p>	 <p>EXTRA -15 %</p>	 <p>EXTRA -15 %</p>
<p>MOOVED</p> <p>Schlafsofa Latina</p> <p>549,99 €</p> <p>Sofort versandfertig</p> <p>★★★★★ (906)</p>	<p>MORTEENS</p> <p>Schlafsofa Daru I Webstoff</p> <p>419,99 €</p> <p>Sofort versandfertig</p> <p>★★★★★ (270)</p>	<p>MORTEENS</p> <p>Schlafsofa Mid Century</p> <p>499,99 €</p> <p>Sofort versandfertig</p> <p>★★★★★ (40)</p>
 <p>MORTEENS</p> <p>Schlafsofa Daru I Webstoff</p> <p>349,99 €</p> <p>Sofort versandfertig</p>	 <p>ROOMSCAPE</p> <p>Boxspring-Schlafsofa Dingo Webstoff</p> <p>719,99 €</p> <p>Sofort versandfertig</p>	 <p>EXTRA -15 %</p> <p>MORTEENS</p> <p>Schlafsofa Posen</p> <p>429,99 €</p> <p>Sofort versandfertig</p>

Unknown argument **invalidArgument** on field **Query.productLists**.

```

1 query VilniusPHPTest {
2   productLists(invalidArgument: "some") {
3     name
4   }
5 }

```

MESSAGE	COUNT
syntax error input: variable. must be defined	
syntax error input: variable.query cannot use slice as	
syntax error input: variable.s must be defined	
syntax error input:3: Cannot query field "undefined" on type " ".	
syntax error input: variable.d must be defined	
syntax error input:37: Variable "\$selectors" of type "[!]" used in position expecting type "[;!]".	
syntax error input:37: Variable "\$ Url" of type "String" used in position expecting type '!'.	
syntax error input:2: Unknown type "Stringu0021".	1
syntax error input:2: Variable "\$code" of type "Stringu0021" used in position expecting type "String!".	1
syntax error input: variable. must be defined	1

Unknown argument `Stringu0021` on field `Stringu0021`

```
query {  
  profile {  
    name  
  }  
}
```

error 1	error 2
syntax error input: variable <code>...</code> must be defined	10
syntax error input: variable query cannot use <code>...</code> as <code>...</code>	10
syntax error input: variable <code>...</code> must be defined	1
syntax error input: Cannot query field <code>'undefined'</code> on type <code>'User'</code> .	1
syntax error input: variable <code>...</code> must be defined	1
syntax error input: variable <code>'selections'</code> of type <code>'[...]'</code> used in position expecting type <code>'[...]'</code>	1
syntax error input: variable <code>'Stringu0021'</code> of type <code>'String'</code> used in position expecting type <code>'String'</code>	1
syntax error input: unknown type <code>'Stringu0021'</code> .	1
syntax error input: variable <code>"\$code"</code> of type <code>"Stringu0021"</code> used in position expecting type <code>"String"</code>	1
syntax error input: variable <code>...</code> must be defined	1

» '\u0021'

« "!"


```
{
  "data": {
    "categories": [
      {
        "categoryArticles": {
          "filters": [
            {
              "key": "FunctionalityTables",
              "name": "Funktionalität",
              "multiselect": true,
              "showIcon": false,
              "options": []
            },
            {
              "key": "functionUpholstery",
              "name": "Funktion",
              "multiselect": true,
              "showIcon": false,
              "options": [
                {
                  "key": "sleepingfunctionGuest",
                  "value": "Schlaffunktion",
                  "numberOfArticles": 426,
                  "imagePath": null,
                  "selected": false
                },
                {
                  "key": "sleepingfunctionPermanent",
                  "value": "Schlaffunktion für dauerhafte Nutzung",
                  "numberOfArticles": 323,
```

Realistic test data as documentation (e.g. from Staging environment)

```
{
  "data": {
    "categories": [
      {
        "categoryArticles": {
          "filters": [
            {
              "key": "Sample1",
              "name": "Name A",
              "multiselect": true,
              "showIcon": false,
              "options": []
            },
            {
              "key": "Sample2",
              "name": "Name B",
              "multiselect": true,
              "showIcon": false,
              "options": [
                {
                  "key": "Sample3",
                  "value": "Name C",
                  "numberOfArticles": 123,
                  "imagePath": null,
                  "selected": false
                },
                {
                  "key": "Sample4",
                  "value": "Name D",
                  "numberOfArticles": 456,
```

min • Edited

it seems that the `requestedUrl` is wrong, a concatenation of 2 or more url, e.g.

`https://www. &q &`
`utm_price= &organic,https://www. ?c &`
`&utm_price= &organic,https://www.`
`/?q . logs: https://`

why would that break schema though?

Aurelijus Banelis

And it correlates with deployment time: `https://`

```
{
  "errors": [
    {
      "message": "Expected type Locale!, found lt_LT. Did you mean the enum value it_IT?",
      "locations": [
        {
          "line": 2,
          "column": 21
        }
      ],
      "extensions": {
        "code": "GRAPHQL_VALIDATION_FAILED"
      }
    }
  ],
  "data": null
}
```

```
if (isValidatationError($resonse[0]['message'])) {
  // ... treating like free-form data
}
if (isValidatationError($resonse[0]['extensions']['code'])) {
  // ... treating like structured data
}
```

Data duplication, but different purpose

Free form data

Scoped risk

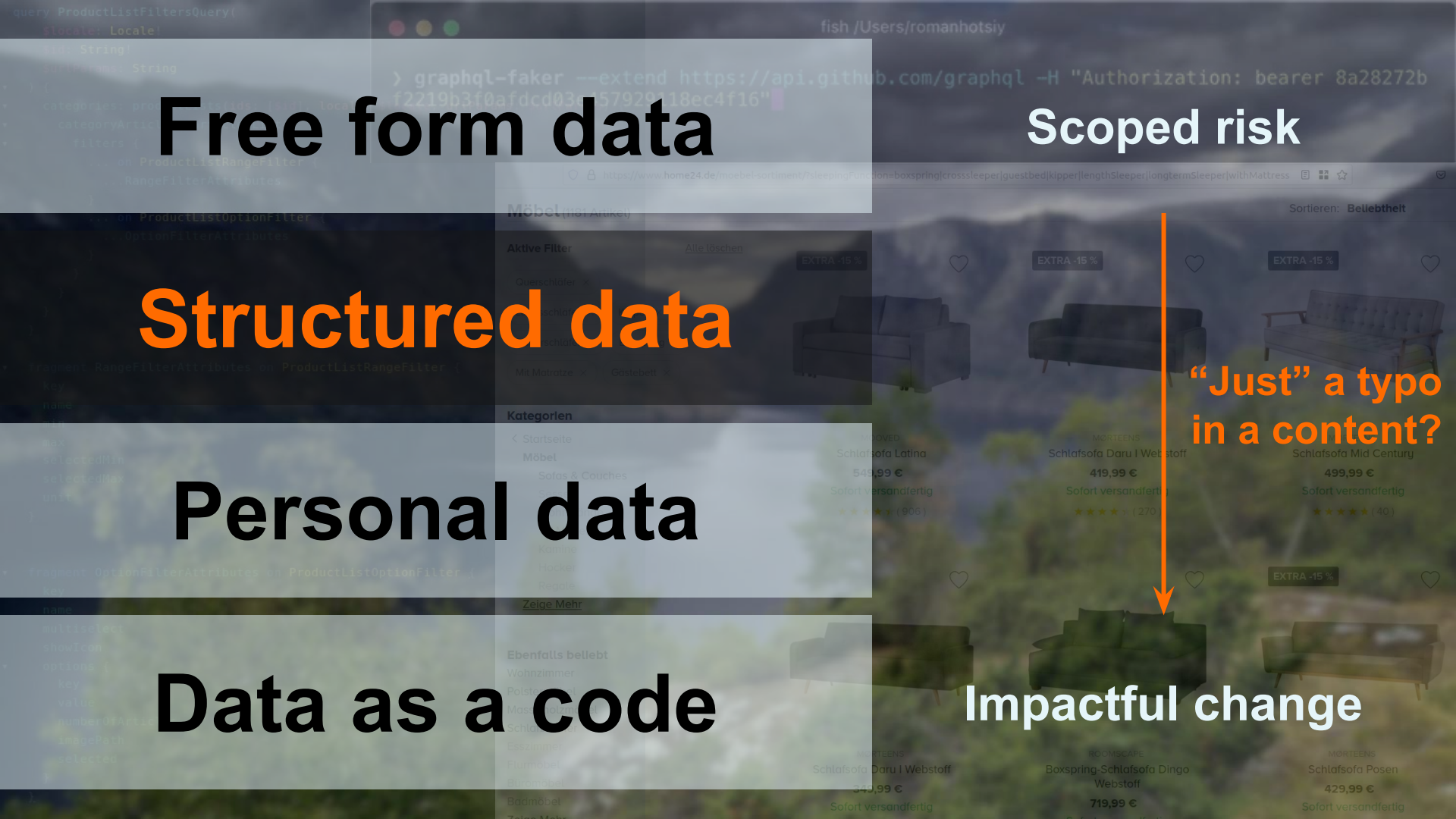
Structured data

Personal data

Data as a code

Impactful change

“Just” a typo
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Data as a code

Impactful change



live mysql

```
4 import argparse
5 import time
6
7 class Refresh:
8     """
9     Script to move customer numbers from
10    deleting mysql datab
11    This is done to prevent accidental overlaps of
12    and the live database users
```



DELETE

`{id}` Anonymizes customer data

DELETE

`{id}` Deletes customer from

POST

`/` `{id}/` | opt out

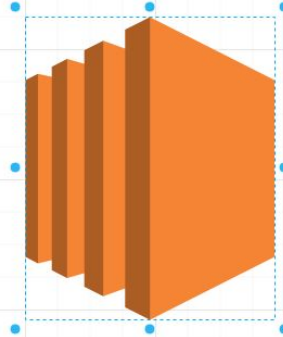
```
4 import argparse
5 import time
6
7 class Refresh:
8     """
9     Script to move customer numbers from live mysql
10    to the staging mysql database.
11    This is done to prevent accidental overlaps of tagging test users
12    and the live database users
```

Why we need micro services?



System dealing with
free form data

**Release
change
fast?**



System dealing with
personal data

**Special
data storage
requirements**



Other systems
dealing with structured data

**Stability for
Black Friday
is critical for business?**



Free form data

Scoped risk

Structured data

Personal data

**“Just” a typo
in a content?**

Data as a code

Impactful change



live mysql

```

4 import argparse
5 import time
6
7 class Refresh:
8     """
9     Script to move customer numbers from
10    deleting mysql datab
11    This is done to prevent accidental overlaps of
12    and the live database users

```


Free form data

Structured data

Personal data

Data as a code

Scoped risk

**“Just” a typo
in a content?**



Impactful change

📄 infrastructure/preview/ [redacted]-service-parameters.yml

📄 infrastructure/staging/ [redacted]-service-parameters.yml

📄 infrastructure/staging/ [redacted]-security-parameters.yml

📄 infrastructure/production/ [redacted]-service-parameters.yml

📄 infrastructure/production/ [redacted]-security-parameters.yml

Secret name		Last retrieved (UTC)	Created on
M	4GT79pw1Y	9/ /2021	1/ /2021
N	i3PBCT5	9/ /2021	6/ /2020
M	GQcLq	/9/2021	/9/2019
N	rZx6S	9/ /2021	5/ /2021
N	yWKW	/8/2021	/27/2021
S	:ZnMQ	9/ /2021	8/ /2021
L	13D1		11/ /2020

📄 infrastructure/preview/ [redacted]-service-parameters.yml

📄 infrastructure/staging/ [redacted]-service-parameters.yml

📄 infrastructure/staging/ [redacted]-security-parameters.yml

📄 infrastructure/production/ [redacted]-service-parameters.yml

📄 infrastructure/production/ [redacted]-security-parameters.yml

Secret name	Last retrieved (UTC)	Created on
M [redacted] 4GT79pw1Y	9/ [redacted] /2021	1/ [redacted] /2021
N [redacted] i3PBCT5	9/ [redacted] /2021	6/ [redacted] /2020
M [redacted] GQcLq	[redacted] /9/2021	[redacted] /9/2019
N [redacted] rZx6S	9/ [redacted] /2021	5/ [redacted] /2021
N [redacted] yWKW	[redacted] /8/2021	[redacted] /27/2021
S [redacted] :ZnMQ	9/ [redacted] /2021	
L [redacted] i3D1		

Retrieve secret value



Search or jump to...



Pulls



/ **AB-Testing**

Private

<> **Code**

Issues

Pull requests

3

Cache Storage

Cookies

https://

AB

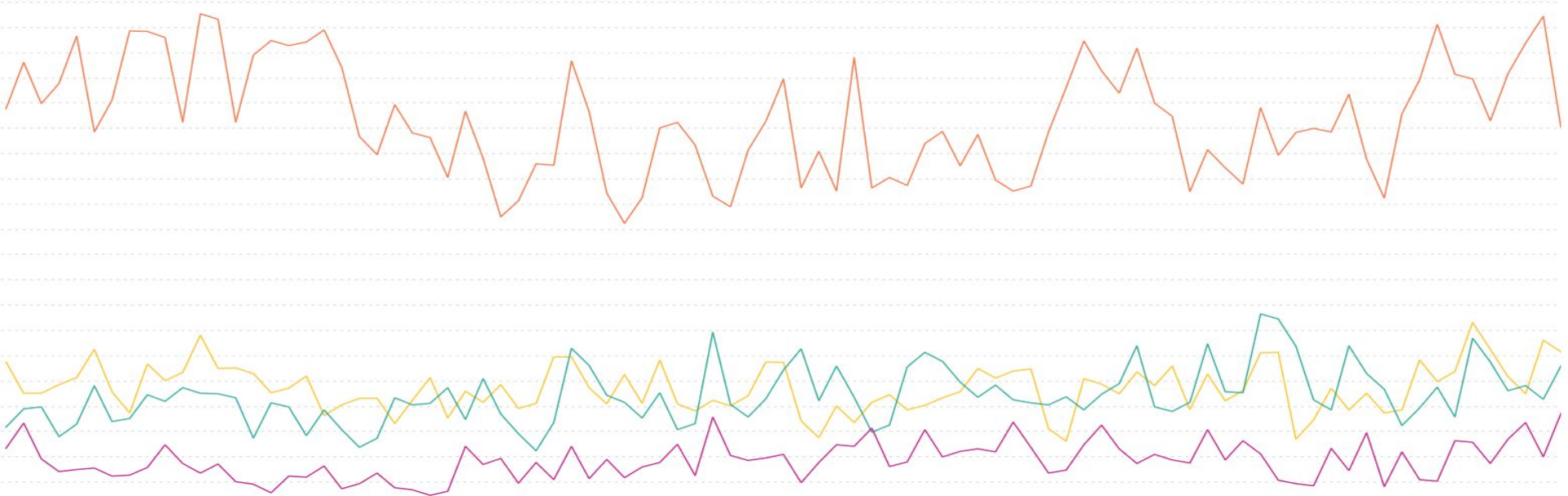
Name	Value
------	-------

AB	galleryorder c olapic a order-status a plplabel c ranking a search a
----	--

Since 60 minutes ago



AB	BACKEND	REQUEST.URI	COUNT
order-status c ranking d	https://[redacted]-production-internal[redacted].app.[redacted]/	/ilmic[redacted]-dini	[redacted]
order-status a ranking c	https://origin-[redacted].[redacted]/	/ilmic[redacted]-dini	[redacted]
order-status a ranking d	https://origin-[redacted].[redacted]/	/ilmic[redacted]-dini	[redacted]
order-status b ranking c	https://[redacted]-production-internal.[redacted]/	/ilmic[redacted]-dini	[redacted]
order-status d ranking d	https://[redacted]-production-internal.[redacted]/	/ilmic[redacted]-dini	[redacted]



Free form data

Structured data

Personal data

Data as a code

Scoped risk

**“Just” a typo
in a content?**



Impactful change

A scenic view of a fjord or deep valley with steep, dark mountains and a body of water, overlaid with the text "Why fixing a typo is slow?". The text is in a bold, white, sans-serif font, centered horizontally and slightly above the middle vertically. The background shows a wide, deep valley with a body of water in the center, surrounded by steep, dark mountains. The sky is overcast with grey clouds. In the foreground, there are green trees and a rocky outcrop.

Why fixing a typo is slow?

A scenic landscape with mountains and a lake under a cloudy sky. The text is overlaid on this background.

Why fixing a typo is slow?

**Architecting not by data.
Or choosing stability over speed.**

*Applies to typos in field names as well

A scenic view of a fjord with steep mountains and green trees in the foreground. The text is overlaid on the image.

**Can content and dev teams
work together?**

A scenic landscape featuring a calm lake in the foreground, surrounded by lush green trees and rolling hills. In the background, dark, rugged mountains rise against a sky filled with heavy, grey clouds. The overall atmosphere is serene and somewhat somber due to the overcast weather.

**Can content and dev teams
work together?**

**Personally, it is like
Dev and ops teams**

O'REILLY®



Effective DevOps

BUILDING A CULTURE OF COLLABORATION,
AFFINITY, AND TOOLING AT SCALE

Jennifer Davis & Ryn Daniels

Collaboration

Applies to
Data vs Logic
problem

Scaling

Just a typo?

Thank you

Drawing the line between

data and logic

Discussion?

Aurelijus Banelis

VilniusPHP
2021-10-07