

# How to break Matomo and also some inputs on how to fix it

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**Digitalist**

<https://digitalist.se/matomo>



matomo camp

# Who I am



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Who we are

# Digitalist

a digital product agency

that loves Open Source

Because we know that good ideas multiply when shared



Oops... there was a problem during the request. Maybe the server had a temporary issue, or maybe you requested a report with too much data. Please try again. If this error occurs repeatedly please contact your Matomo administrator for assistance.

# **Breaking Matomo pro tips**

- 1. Give users in Matomo too much permissions without proper Matomo training**
- 2. Write bad applications and blame Matomo for the issues**
- 3. Let your IT department host Matomo without proper Matomo training**

# **Give users in Matomo too much permissions without proper Matomo training**

- **Creating reports, segments, dimensions, tag manager tracking etc requires skills.**
  - **often leading to bad data or reports**
- **Segments in particular should be handled carefully**
  - **They can kill your performance**
  - **Done wrong they will also make your reporting bad**

# **Write bad applications and blame Matomo for the issues**

**Matomo is just a “stupid” system**

- **If you send bad data into Matomo, you will get bad reports**
- **URL's and titles are the 2 most important things to manage properly**
  - **and too many URLs can affect your performance**

# **Let your IT department host Matomo without proper Matomo training**

**This often fails since**

- **You need to know Matomo to maintain it (and honestly this is not something that your IT department usually focus on)**
  - **Constant updates & testing**
  - **Constant monitoring**
  - **Constant optimization**
  - **Constant configuration**



**Users**

## **Segment, custom reports and aggregation**

**When you create a segment or a custom report**

- **You add a new job in Matomo (which will require more server power)**

**Avoid having more than 100 segments for a site**

# Avoid segments och custom reports with wildcards (contains)

These segments and reports create sql queries that cannot use indexes in the database (full table scan).  
For example:


```
SELECT * from TABLE where TITLE like %search_string%
```

Name: Visitors that read a blog post [edit](#)

Page URL		Contains	▼	/blogg/
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Instead try to create segments using “**Starts with**” if possible

Name: Visitors that read a blog post [edit](#)

Page URL		Starts with	▼	https://www.digitalist.se/blogg
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**Only give users with knowledge ability to create segments**

- **To avoid “bad configurations”**
- **To avoid having similar segments**
- **To avoid performance issues**

**Look into global.ini.php**

**adding\_segment\_requires\_access = "admin"**

- **Possible values are "view", "write", "admin", "superuser"**

# Bad applications

# Number of urls

The number of unique urls affects the performance of archiving.

## Tips:

- **Make sure all urls and searches are stored with lowercase.**
- **Delete url parameters (if you can)**
- **Remove any training slashes**
  - **/my-page “is not the same as” /my-page/**
- **Do you have pages for, for example, unique cases with ID in the url /**
- **/issue/123, /issue/124 etc**
  - **anonymize them: /issue/issuepage**



# Url structure

The URL structure is important to do good reporting

**Good**

**/section**

**/section1/page1**

**/section1/page2**

**/section2/page3**

**/section2/page4**

**Bad**

**/page1**

**/page2**

**/page3**

**/page3**



# A good url structure gives you this nice aggregations

Pages	
PAGE URL	▼ PAGEVIEWS
⊕ blogg	17,407
🔗 <a href="#">/index</a>	11,357
🔗 <a href="#">/om-oss</a>	2,532
⊕ kundcase	2,415

# Optimizing Matomo

# How do you know if you have problems?

## Common issues

- **Transition report is slow (especially over longer periods of time)**
- **Custom date ranges are slow**
- **Loading visitor log is slow**
- **No data for today (or data comes in late)**
- **Users get 500 errors (time outs)**

# Basic tips

## HOW TO CONFIGURE MATOMO FOR SPEED

<https://matomo.org/docs/optimize-how-to/>

Good general advices to start with

# Performance basics for Matomo (LAMP stack)

**Component**

APACHE

MySQL

PHP

**Hardware**

**CPU intensive**

**Memory &  
Disc**

**Memory**

**Optimize**

Threads

MySQL  
Variables

PHP cache

# Set up Queued Tracking

- **Will offload you Database significantly**
- **Will make it possible to restart Matomo (for updates etc) without loosing tracking data**

<https://plugins.matomo.org/QueuedTracking>

# Example of Matomo configs to look into

- **Review the number of allowed rows you allow in the reports (do not add more than necessary)**
- **Turn off auto-scan forms (if you have the Form Analytics plugin)**
- **Keep track of how long you store raw data (Visitor Logs)**
- **Turn off plugins you do not use - plugins consume resources!**

# MYSQL

**Use MySQL (not Maria DB)**

**Keep track of DB size** <https://matomo.org/docs/managing-your-databases-size/>

**MySQL tuning** (Use tools like `tuning-primer` or `MySQLTuner` for insights)

**Monitor number of tables over time** (Adjust `open_table_cache` + table definition cache)



# Matomo specific database Indexes

**WARNING - test first!!**

## Transition reports

[https://matomo.org/faq/how-to/faq\\_161/](https://matomo.org/faq/how-to/faq_161/)

## Visitor log

<https://forum.matomo.org/t/new-index-need-for-piwik-log-visit-table-and-code-change-for-php-as-well/31467/18>

## **Core achieving separation - Example 1**

**If you have several sites (usually one is larger than the other)**

**Separate archiving between sites.**

**- ./console core:archive --url="https://example.com/" --skip-idsites=1**

**- ./console core:archive --url="https://example.com/" --force-idsites=1**

## Core achieving separation - Example 2

### Run segments separately

- `./console core:archive --url="https://example.com/" -skip-all-segments`

- `./console core:archive --url="https://example.com/"  
--force-idsegments=1,2,3,4,5,6`

- `./console core:archive --url="https://example.com/"  
--force-idsegments=7,8,9,10`

## Core achieving separation - Example 2

### Run segments separately

- `./console core:archive --url="https://example.com/" -skip-all-segments`

- `./console core:archive --url="https://example.com/"  
--force-idsegments=1,2,3,4,5,6`

- `./console core:archive --url="https://example.com/"  
--force-idsegments=7,8,9,10`

## Core achieving separation - Example 3

### Optimize memory and threads

```
- ./console core:archive --url="https://example.com/" --php-cli-options="-d  
memory_limit=4G" --concurrent-requests-per-website=10  
--concurrent-archivers=10
```

**Warning:** Test and monitor this carefully

# Getting some help

<https://github.com/digitalist-se/DBHealth>

A Matomo plugin that will give you some help

Questions?