



dropsolid
AI



High volume mautic
Mauticon London 2025



inagro 

ONDERZOEK & ADVIES IN LAND- & TUINBOUW

Mijn nieuwsbrief



Dear [First Name],

Below you will find the weekly news and planned activities of Inagro.

On the agenda

15/09/2021 [Event 1 test2](#)

16/08/2021 [Exploratory conversation with Aardappelhoeve for the cultivation of robust early potatoes 2022](#)

25/09/2021 [Tool days Oudenaarde](#)

News



Nutriman shares knowledge about nutrient recovery

Nutriman shares knowledge about nutrient recovery



A well-kept soil

A well-maintained soil is insurance for extreme seasons.

[More info](#)



How do I get the work done on my dairy farm? Part 5: IBO trajectory

Dairy farmers are under increasing pressure due to the rapid growth of livestock and increased competitiveness. Rising labor demand is affecting lives

[More info](#)





12+ years of
non-stop
growth



€ 1.5M
ARR from
platform



+25% ARR
growth
yoy



€ 7.5M
service
revenue



Building
Partnerships in
3 continents



EU based
team of 80



5M€ in funding



Enterprise

Sleeplife

beObank



boost[®] shopper
activation



acerta

Organisation



IOS
Press



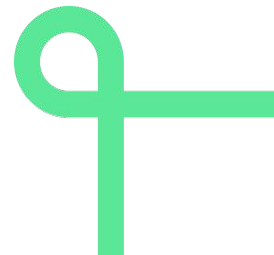
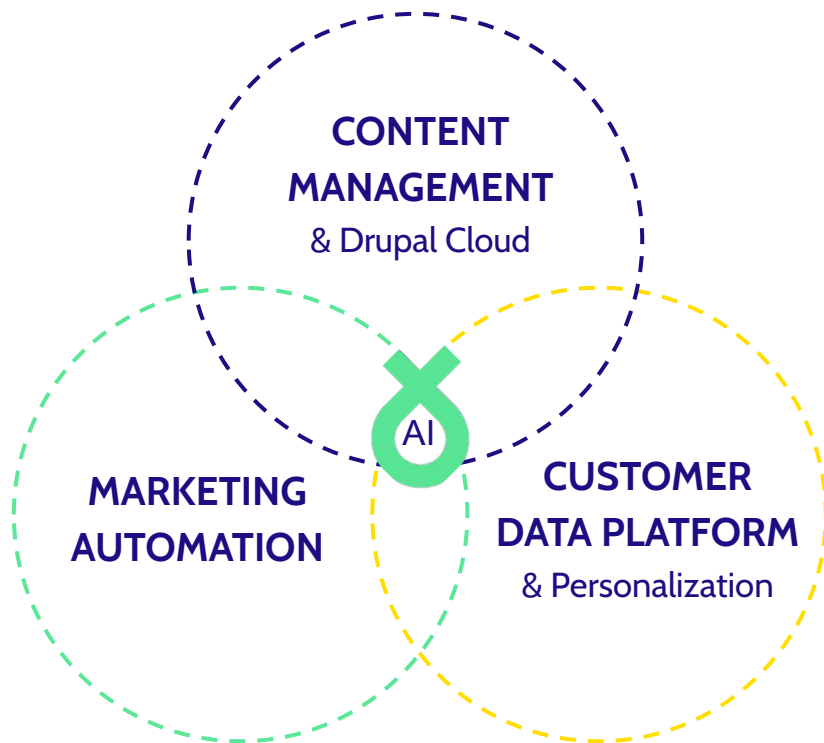
Government

BEDRIJFSAFVAL
IVAGO





Open Digital Experience Platform







More expectations





Edit



Insert token

AI Assistant

Evaluate

Fix spelling

Fix tone of voice

Summarize

Elaborate

If you received this e

You won't be subscribed if you don't clic

For questions about

email.com

No more spelling errors

All emails in same Tone





The screenshot shows a software interface with a modal window. At the top, there is a toolbar with icons for a bell, help, settings, and user profile. A green circle highlights an 'AI Console' icon (a square with a starburst) in the toolbar. Below the toolbar, a dark grey tooltip labeled 'AI Console' points to the icon. The modal window contains a toolbar with the following elements: 'Builder' with a grid icon, an orange 'Save' button with a checkmark, a 'Save & Close' button with a lock icon, and a 'Cancel' button with an 'x' icon. Below the toolbar, there are two form fields: 'Subject *' and 'Internal Name *', both containing the text 'Test email'. In the bottom left corner of the modal, there is a white box with the text 'Confirm Me'.

Dashboard

/version

5.2.4 contacts

who am I?
Companies

You are Frederik Wouters.

Segments

How (and where) do i create a campaign?

Components

To create a campaign in Mautic: 1. Navigate to </s/campaigns/new>. 2. Fill out the necessary details and design your campaign flow. 3. Save your settings to launch the campaign.

Campaigns

create a contact for Fred Dummy fred@dummy.com

Channels

****create_contact**** executed successfully: Contact created successfully with fred@dummy.com, Fred, Dummy. [View contact](#)

Marketing Messages

what can you do?

Emails

I can assist with several tasks within Mautic. My capabilities include:

- Creating contacts and segments for you.
- Finding the correct paths to Mautic features.
- Answering questions about Mautic's functionality based on the documentation.
- Executing quick actions using slash commands.

How can I be of service?

Reports

Edit Email - Test email

CONTEXT

Save

Save & Close

Cancel

Documentation & URLs

Theme

Advanced

Theme

Code Mode

Blank

Brienz

Confirm Me

Subject *

Test email

Internal Name

Test email

Preheader Text ?

Category

Uncategorized

Language *

English

Is a translation of ?

Specific Actions in AI

Enter your AI command...



You are Frederik Wouters.

Dashboard

Add widget +

Quick filters ▾

> How (and where) do i create a campaign?

To create a campaign in Mautic: 1. Navigate to </s/campaigns/new>. 2. Fill out the necessary details and design your campaign flow. 3. Save your settings to launch the campaign.

> create a contact for Fred Dummy fred@dummy.com To Oct16,2025 Save

✓ ****create_contact**** executed successfully: Contact created successfully with fred@dummy.com, Fred, Dummy. [View contact](#)

> what can you do?

Contacts Created

I can assist with several tasks within Mautic. My capabilities include:

- Creating contacts and segments for you.
- Finding the correct paths to Mautic features.
- Answering questions about Mautic's functionality based on the documentation.
- Executing quick actions using slash commands.

All contacts

> How can I be of service?

> what can you do?

I can help you with your marketing automation tasks in Mautic. For example, I can create contacts or segments, find the path to a specific feature, or answer questions about Mautic's documentation. You can also use slash commands for quick actions. Type ``/help`` to see a list of available commands.

> /version

5.2.4

Page Visits

Form Submissions

> hoe moet ik in mautic een mail sturen?

To send an email, you can create a new one by navigating to </s/emails/new>. If you prefer me to respond in a different language, you can adjust the language settings in your user configuration. That will also set the default language for our conversations.

What d

🔍



Control



Do not depend
on one vendor

Dropsolid & Open Source AI

Deploy anywhere. Full control.



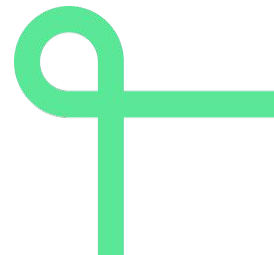
On Prem



In your secure cloud



As a service



Sustainability

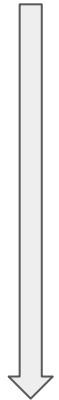
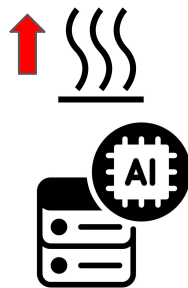
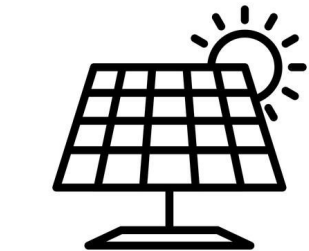
Green energy (and servers)

We only choose hosting providers and services that act consciously and take sustainable use into account. In concrete terms, we host this solution in **Low CO₂** data centers at Google, or in **100% green energy** data centers at other partners.

Smart calculations and AI

We use **efficient models for each specific purpose** (e.g. a different model for chat than for) and also choose these based on the necessary hardware (and therefore resource use). In this way we act smartly without sacrificing quality for end users

👉 Ask us about sustainable AI 👉





Privacy / Legal

01 The AI does not retain your data

02 No training on your data

03 Comprehensive compliance





GDPR and data processing

GDPR compliant

The solutions we provide within this project offer the necessary guarantees to be compliant with legislation such as GDPR and EU AI Act.

- The Chatbot is hosted and processed within Europe, with Belgium (St. Ghislain) as the primary location, and Germany (Frankfurt) and the Netherlands (Eemshaven) as alternative locations for geographic redundancy.

Clear DPA

To provide clarity, we provide a **comprehensive Data Processing Agreement** for this project between our two parties, in which all agreements are recorded regarding data processing, subprocessors, etc.



Security

ISO 27001 certified

We are proud to announce that we are **ISO 27001 certified**.

We have had an active **Information Security Management System (ISMS)** since the beginning of 2024, which we have certified according to the ISO 27001 standard under the guidance of an external party.

This certification underlines the importance we attach to information security at all levels within the organization and provides a solid foundation of trust. Because both our ISMS and the scope of our ISO 27001 certification encompass our entire company, we have a dedicated Information Security Officer.

Together with the compliance team, he monitors the implementation and compliance of the ISMS.





Provider

Develops AI systems and releases them under their brand name



Importer

Brings AI systems to the EU market



Representative

Represents third-party AI systems (and is not an importer)



Deployer

Determines the manner of usage of AI systems



Distributor

Acts as the link in the chain from providers to developers



Affected persons

Are impacted by AI systems

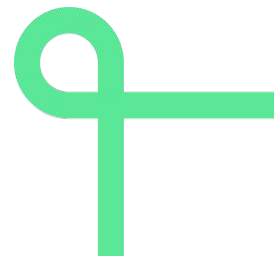




High volume Mautic



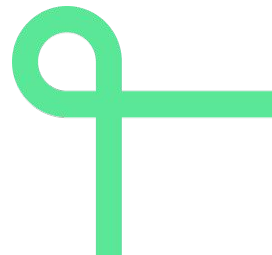
I am not the expert





Assumptions

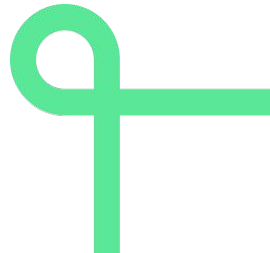
1. Sending out a mailing to *Millions* of recipients.
2. Real world use cases

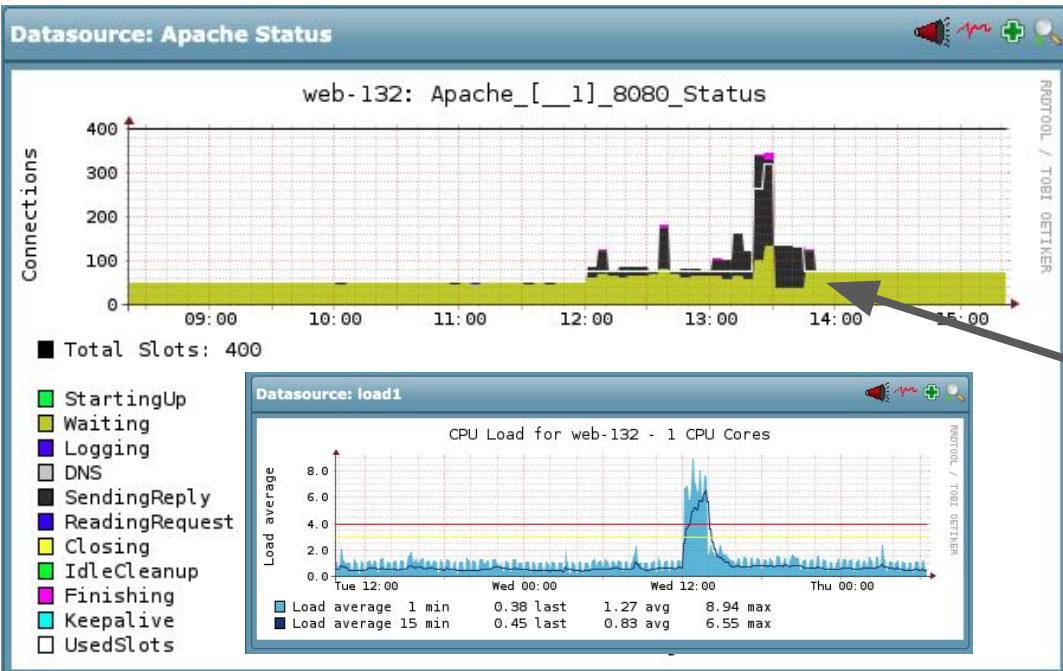




Potential issues

- Opening an Email
- Clicking a Link
- Post Email backlash
- Invalid Emails
- Contact selection & creation times x mio
- Dirty data

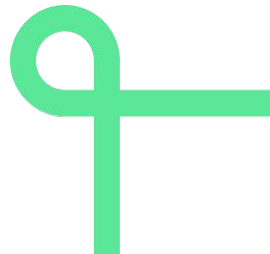
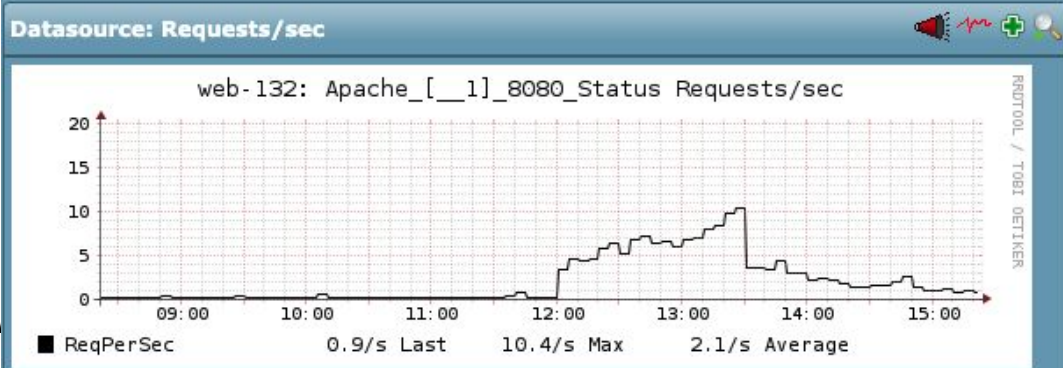




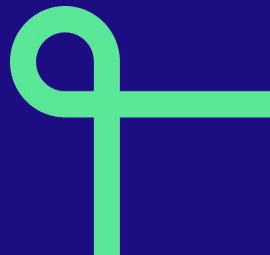
Mautic OOT
Experiencing Load

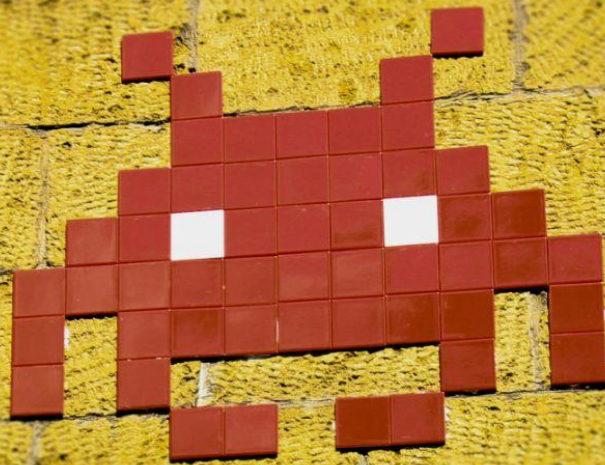
Black bars = slow requests

** This is a tiny server



Solutions



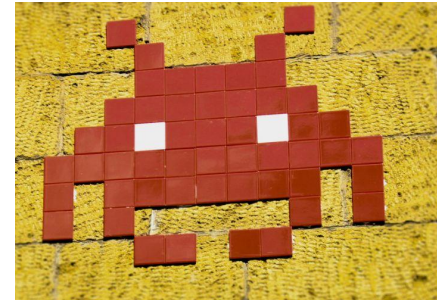




The tracking pixel

Processed by Mautic

- Overwhelms the database
- Server becomes unresponsive or crashes

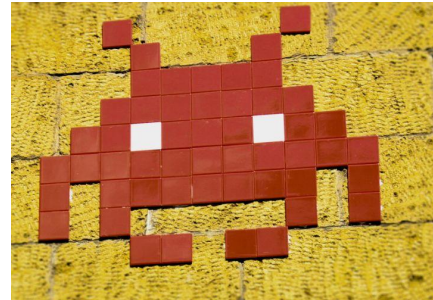




The tracking pixel

Our current solution (not ideal)

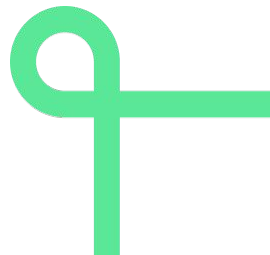
- Upscaling infrastructure







Click Tracking as is



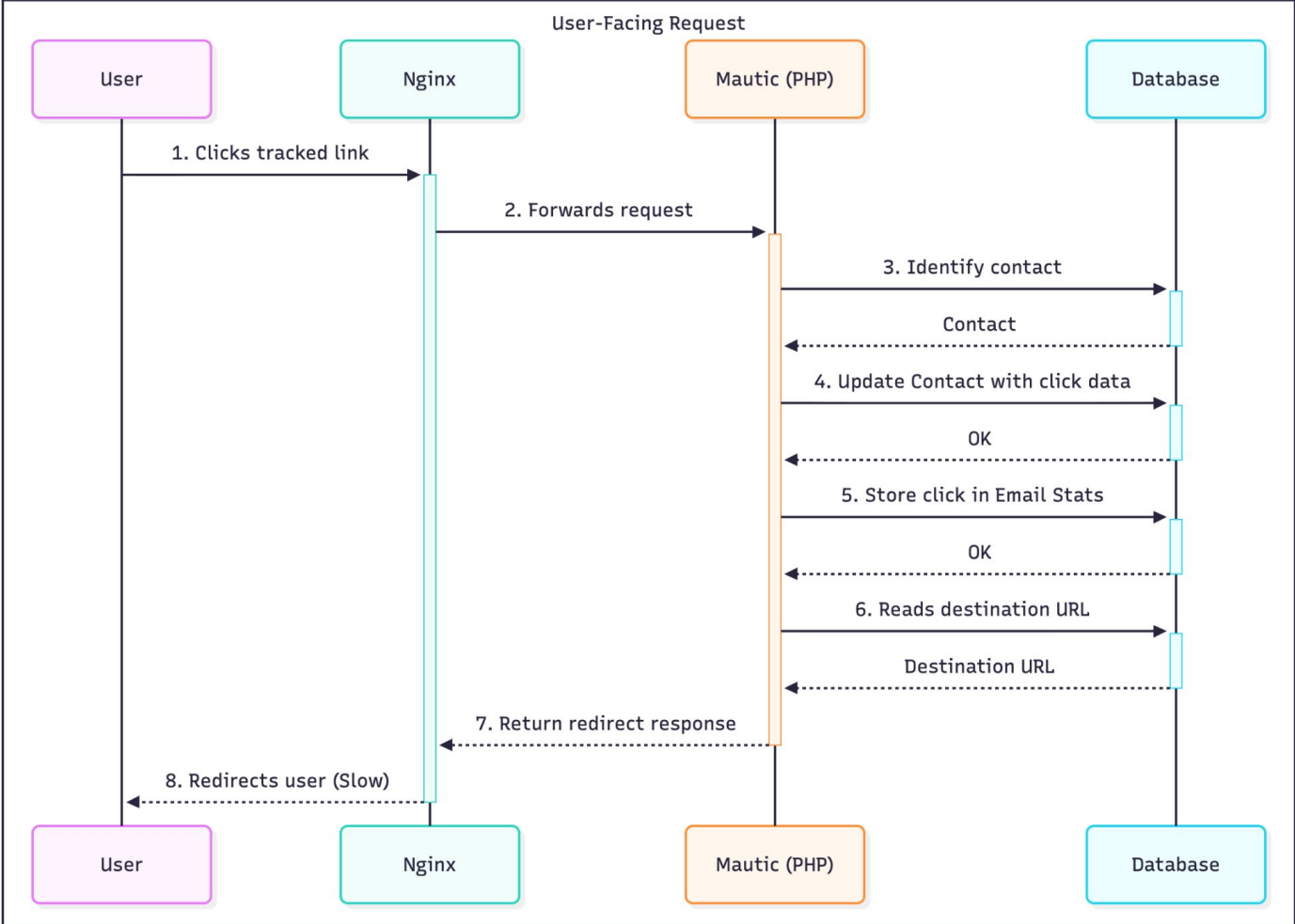


Clicking a Link

Processed synchronously

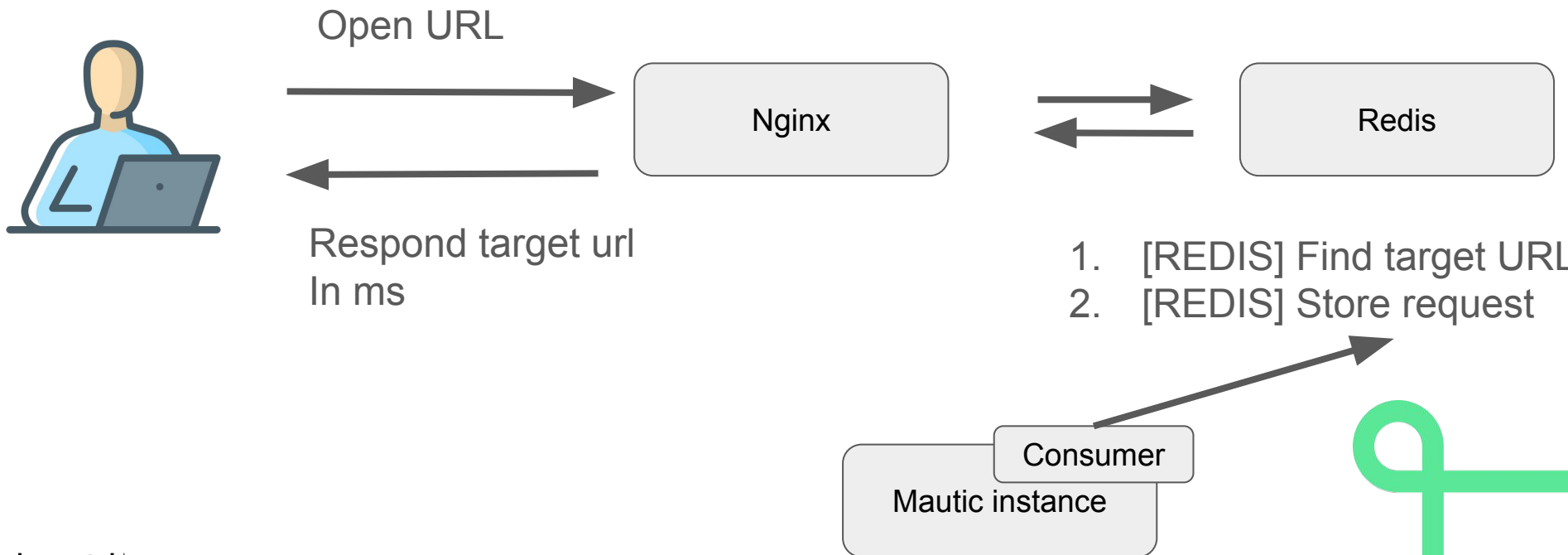
- **Email providers' servers click links automatically to scan for malicious links. This, besides causing incorrect tracking unless you account for it, causes massive traffic spikes as trigger your campaign**
- Each one locks php process
- Overwhelms the database
- Server becomes unresponsive or crashes



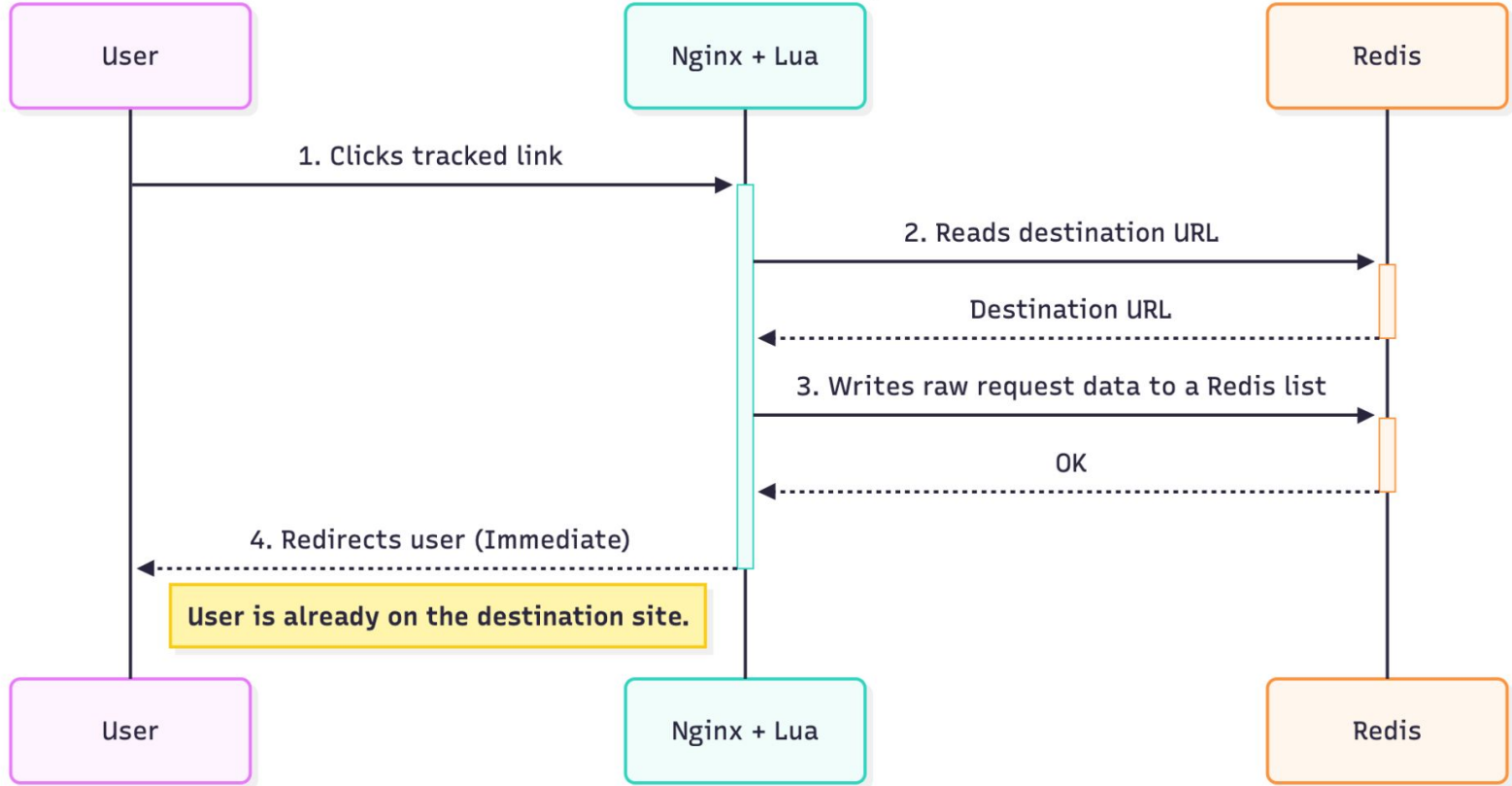




Asynchronous Click Tracking with Nginx and Lua



User-Facing Request (Fast & Synchronous)



**ASYNC
CLICK TRACKING**

**MAUTIC DATABASE
(GOING DOWN)**

**MILLIONS
CLICKING
ON LINKS**



processing
link
synchronously



Decoupling
click
tracking





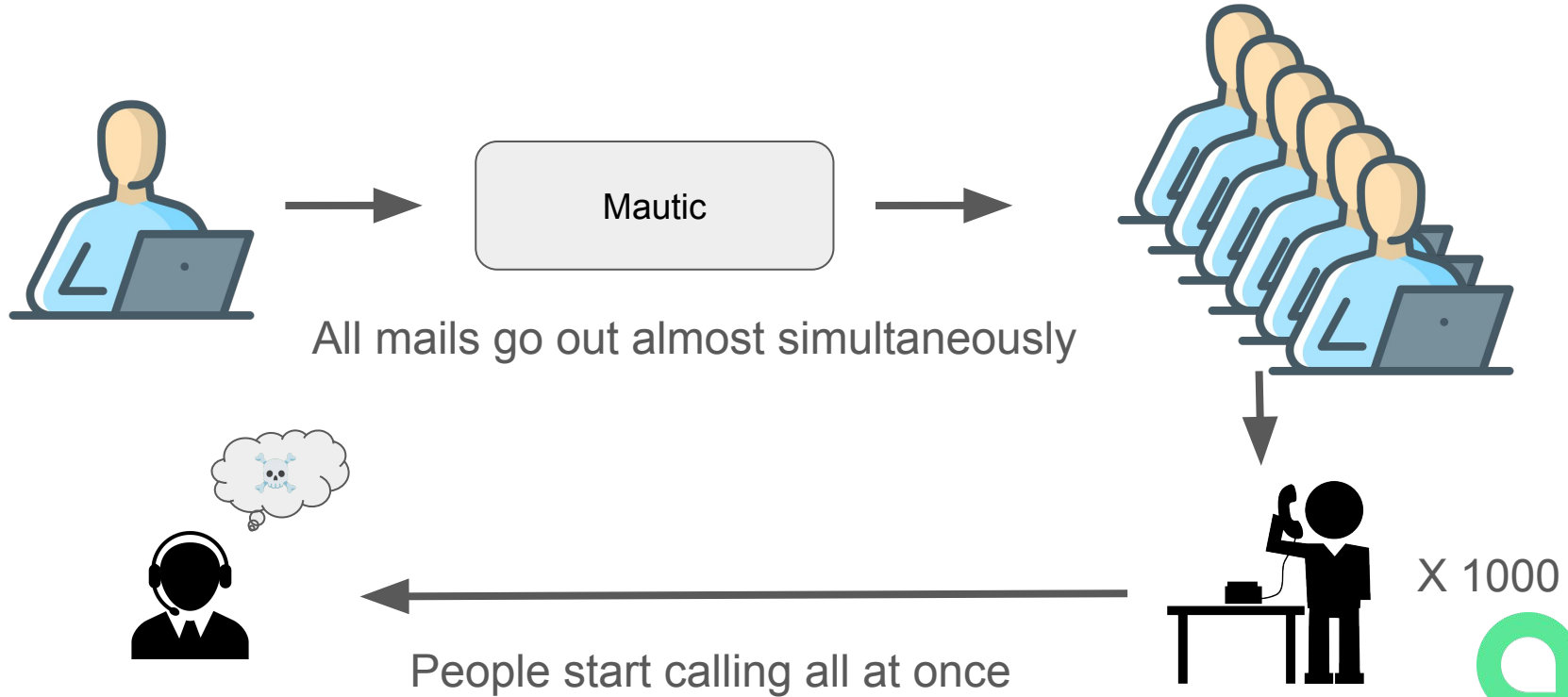
Post Email backlash (telco problem)

Many people open their Email

- **Call the contact centre**
- The contact centre is overwhelmed
- People have a bad experience



As is





Sending Emails in Waves

The possibility to send segment e-mails in waves

Wave type

- Continuous (As is)
- Wave type Percentage
- Wave type Absolute number

Wave Interval

- Interval time (eg. every 60m)

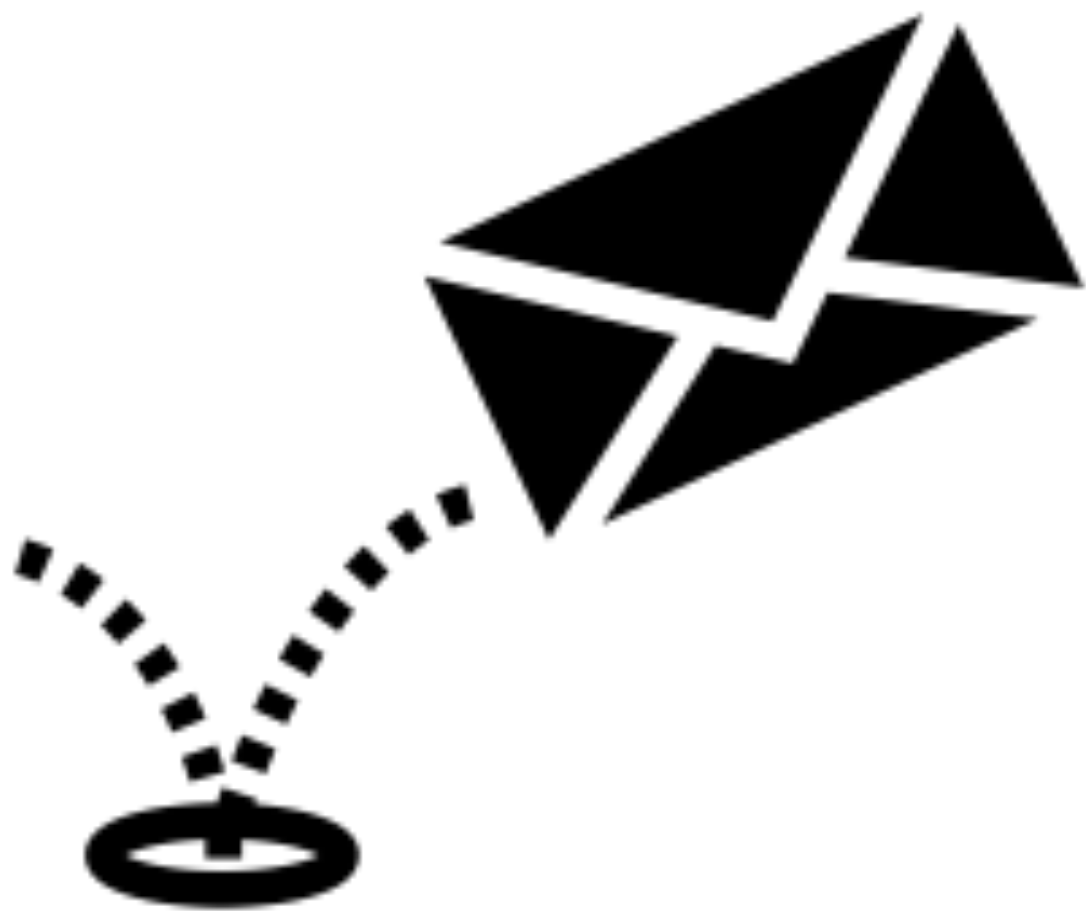
Available for use
 No

Start sending at (date/time)
📅

Stop sending at (date/time)
📅

Send in waves
 Yes

Wave types ⓘ
Choose one...
percentage 🔍

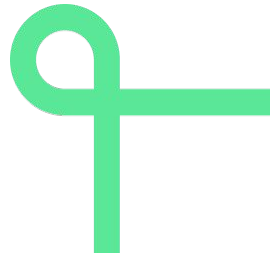
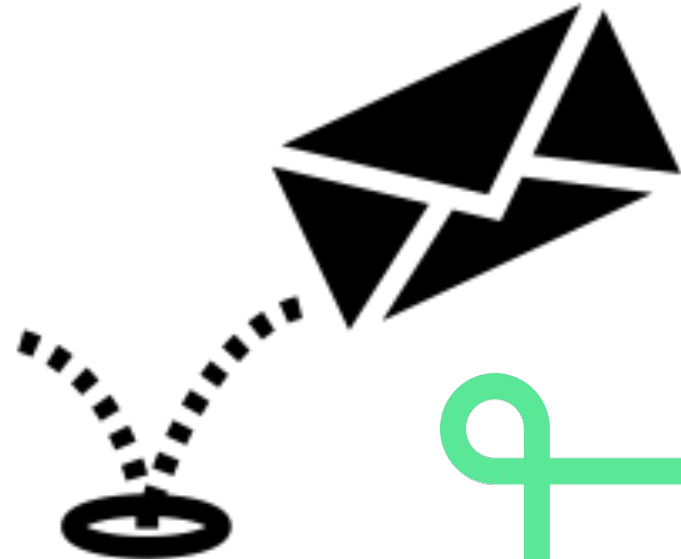




The problem

Some contacts give you an invalid Email address.
Your mausic is trying to send them Emails.

Your Email provider does not like this.





Mautic Email check

Only checks
Valid domain.

Has valid email address
Attempt to validate contact's email address. This may not be 100% accurate.

Name

Execute this event... ⓘ

immediately at a relative time period at a specific date/time

Add + Cancel x

checkdnsrr

(PHP 4, PHP 5, PHP 7, PHP 8)

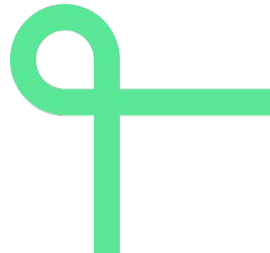
checkdnsrr — Check DNS records corresponding to



Working solution

Configure **Webhook** -> put contact on DNC

(Sendgrid provides this).





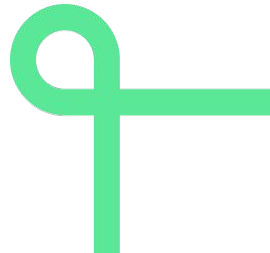
Other solution

Add field on user “**valid_email**”

- 0 Not checked
- 1 checked: valid
- 2 checked: invalid

Campaign: Every contact with `valid_email == 0`

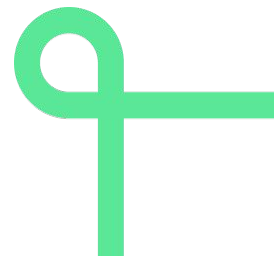
1. Do (proper) email validation check
2. Update `valid_email` with result (or put DNC)





Proper Email validation API - you say?

1. SES
2. Sendgrid
3. NeverBounce
4. ZeroBounce
5. Kickbox
6. BriteVerify



ONE DOES NOT SIMPLY SEND MILLIONS OF EMAILS



WITHOUT A PROPER BOUNCE CHECK



Adobe
Campaign

Advanced targeting

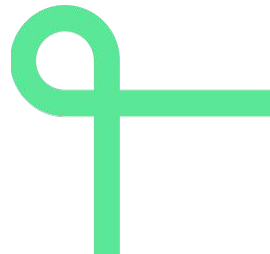
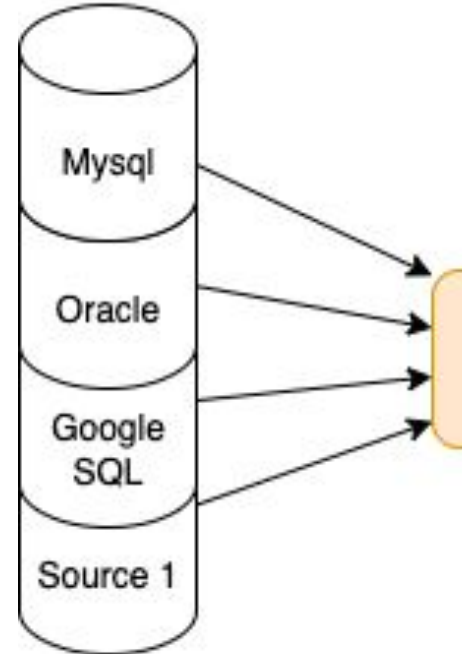


Problem 1

Source data lives/stays in remote Systems

- Oracle SQL
- Mssql
- Bigquery

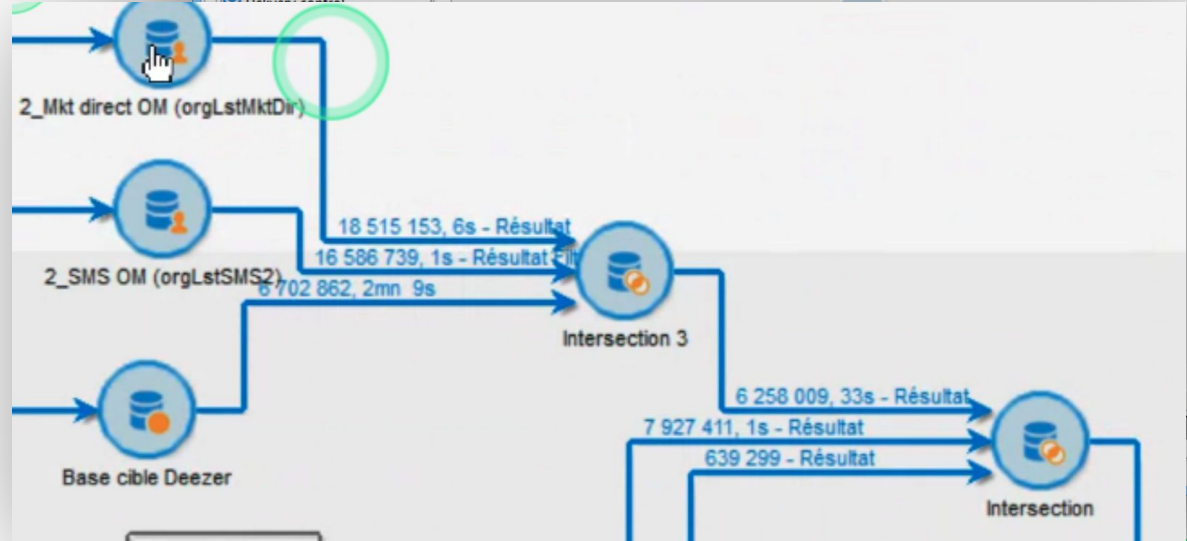
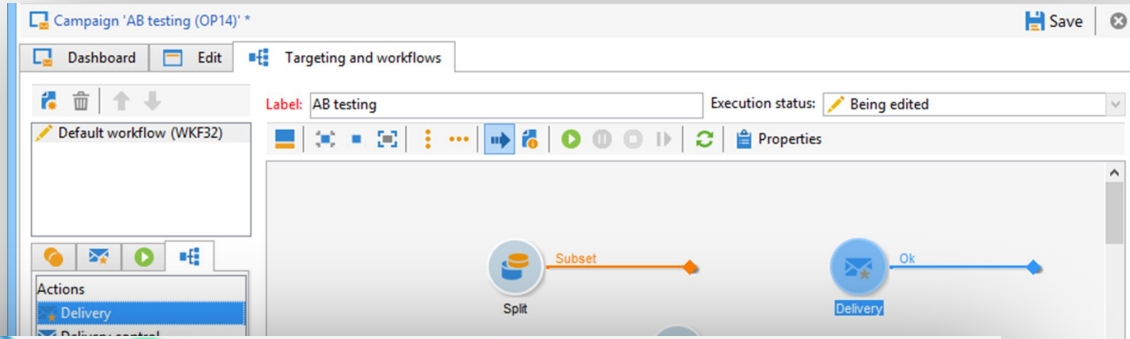
Querying/Targeting on the fly





Problem 2

Incredible
targeting
Capabilities





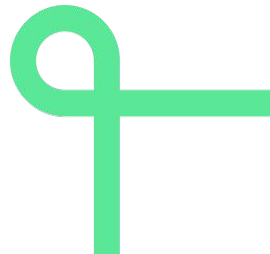
Building this in Mautic?

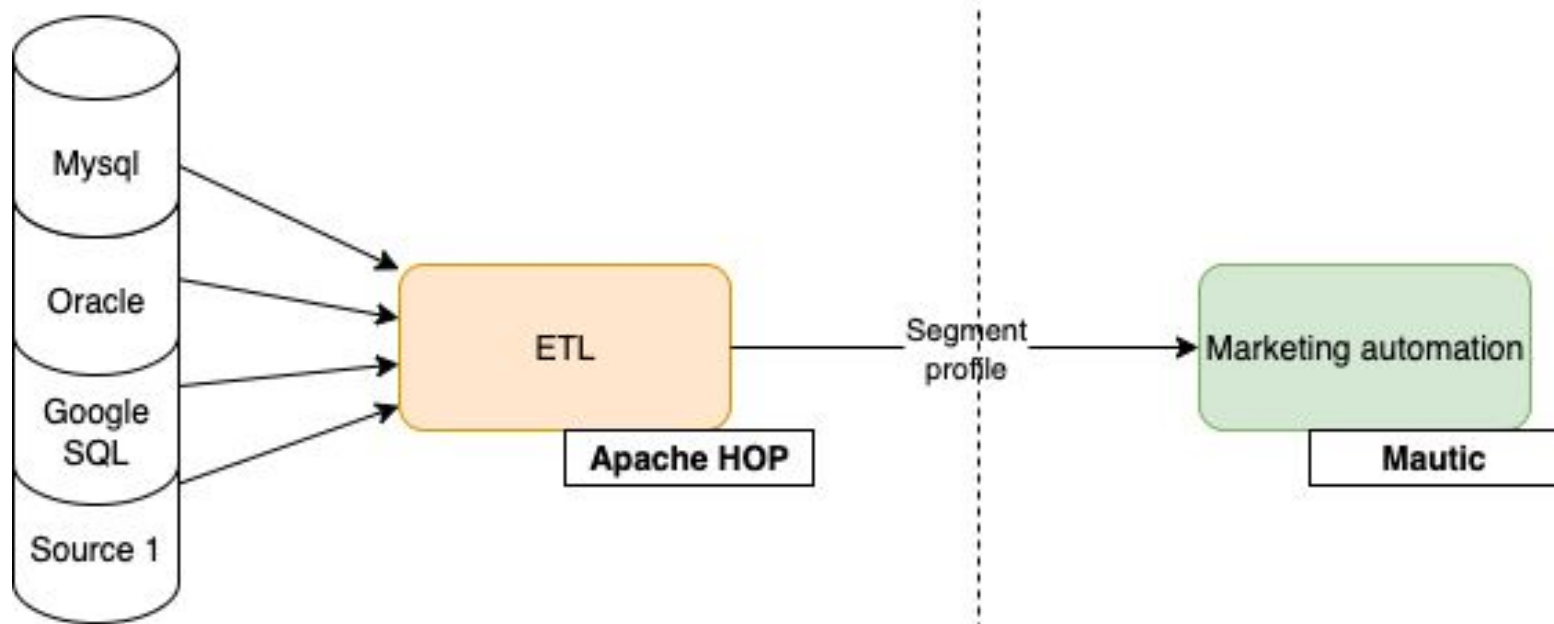
Would take us a year with multiple people.

Client says no.

Risks

- Volume
- Guardrails
- Parallelism
- Reinvent the wheel



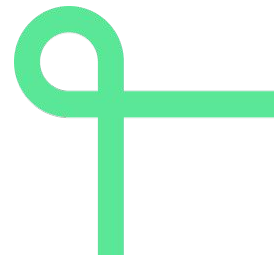
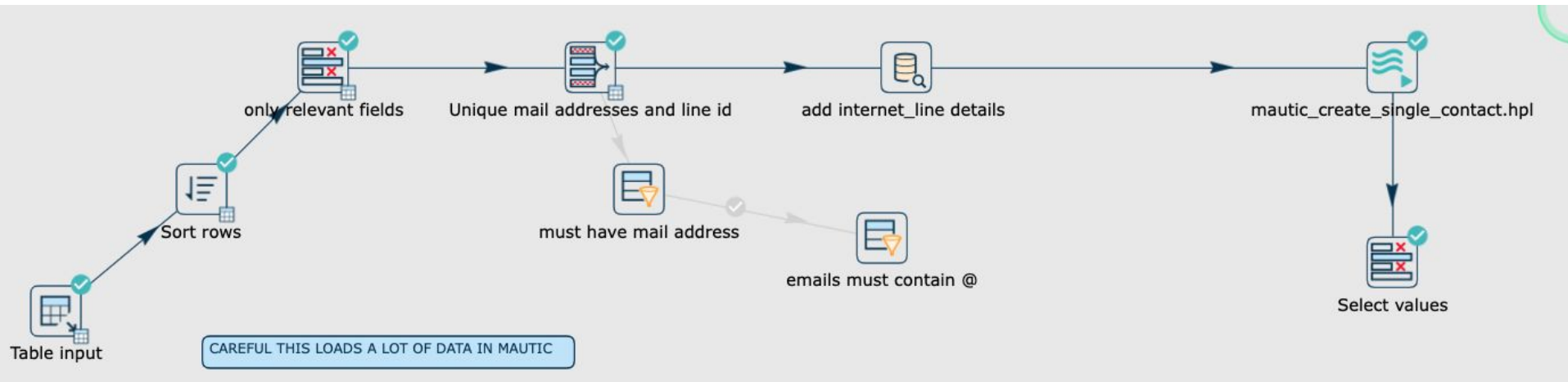


Data massaging happens in HOP, is then pushed to Mautic

Users select customers and create segments from them



Apache HOP

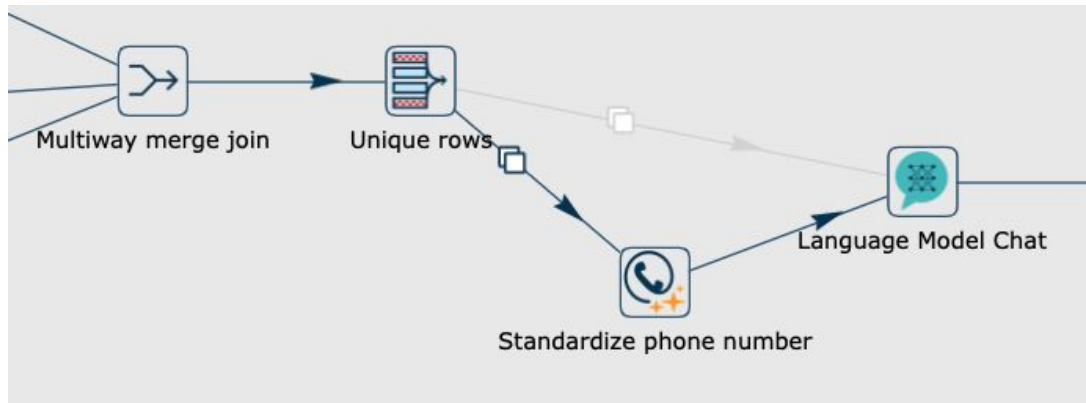




Inspired by Hop maintainer Bart Maertens

After more than a decade of senior experience with the Pentaho open source BI platform, Bart co-founded and is a core contributor to Apache Hop (Incubating).

Developers: Belgium / Germany / France

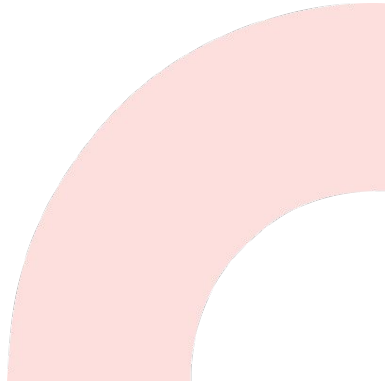


Goal: OSS Replacement for Pentaho / Talend



Started as a Fork of Pentaho, but evolved into a

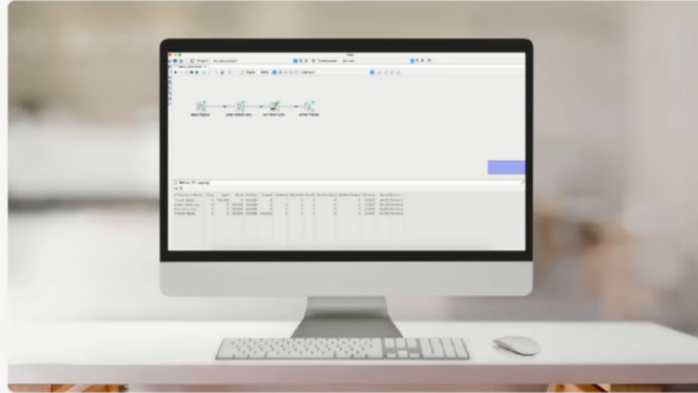
- Desktop client
- Web UI



Replacement for Pentaho / Talend



Why choose Apache Hop?



- Pentaho Community Edition gone.
- Talend Community Edition gone.
- Apache Hop: Open, active, and evolving.
- Modern data engineering: Integration with modern platforms, scalable workflows for streaming and batch processing.

Replacement for Pentaho / Talend



Open-source: True open source as part of the ASF, not owned, managed or controlled by a single company.



Visual development: Intuitive interface.



Flexibility: Compatible with cloud, on-premise, and hybrid environments.



Scalable: Handles large-scale data pipelines efficiently.



Community support: Strong, growing global community for help and updates.

Replacement for Pentaho / Talend




Apache Hop engine


Hop GUI Hop Run Hop Server




Project

Metadata

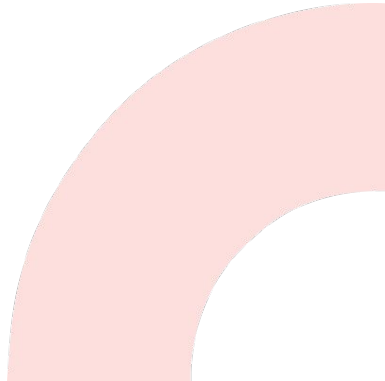
JDBC NoSQL Probe Test ...

Workflows  **Actions**

Pipelines  **Transforms**

 Run Configuration  

Development **Testing** **Production**



Apache Hop development roadmap

VFS refactoring

Upgrades for improved performance
Multi-account support for all providers

Marketplace

Dedicated marketplace for extensions

Improved Kubernetes support

Enhanced deployment and management capabilities

Improved Metadata management

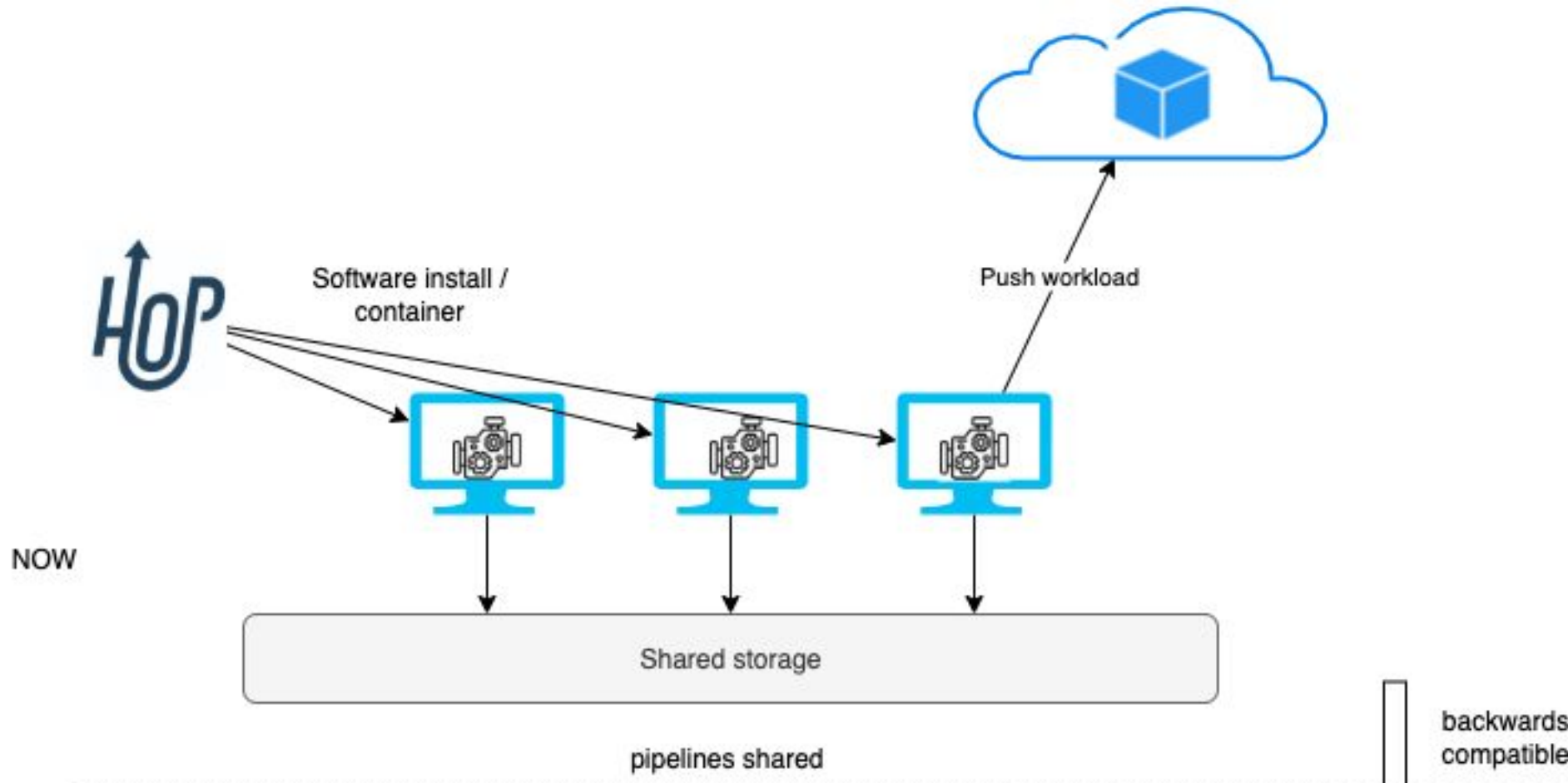
Focus on dependencies, refactoring, lineage tracking, and more

Generic Graph Database support

Broader compatibility with various graph databases

Improved Apache Beam integration

Enhanced functionality and integration



NOW

Software install /
container

Push workload

Shared storage

pipelines shared

backwards
compatible

work in progress

HOP

Software install /
container



Push workload

Server

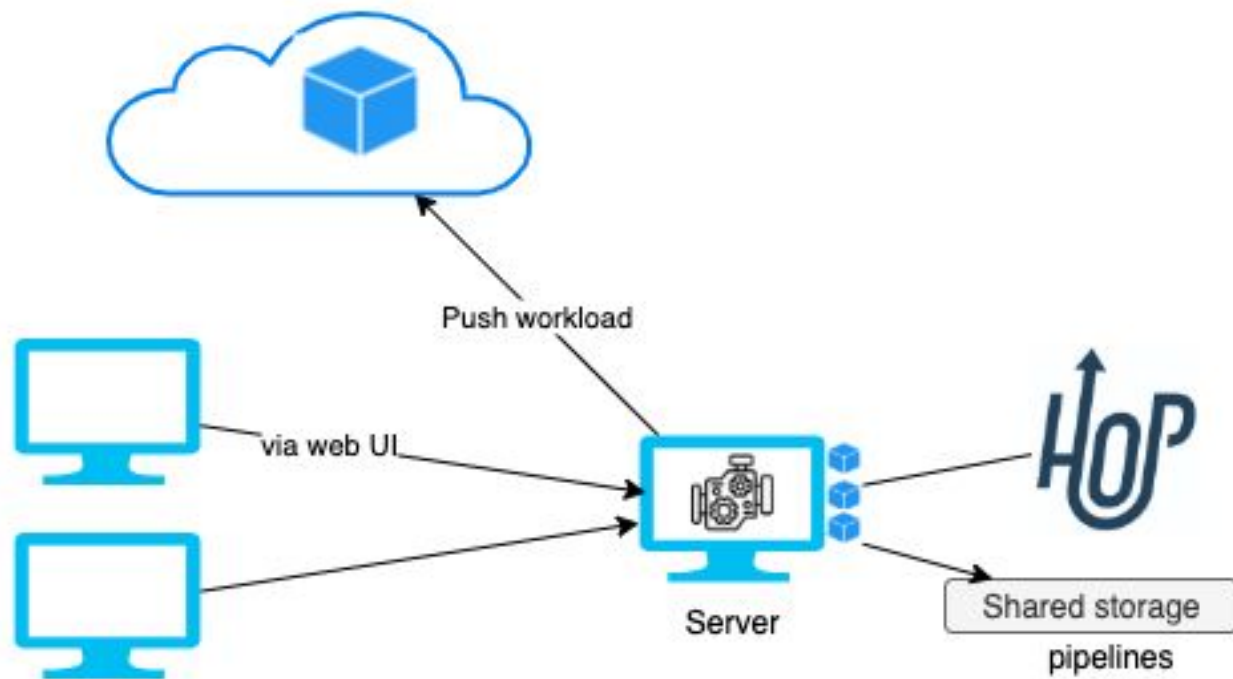
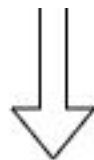
Shared storage

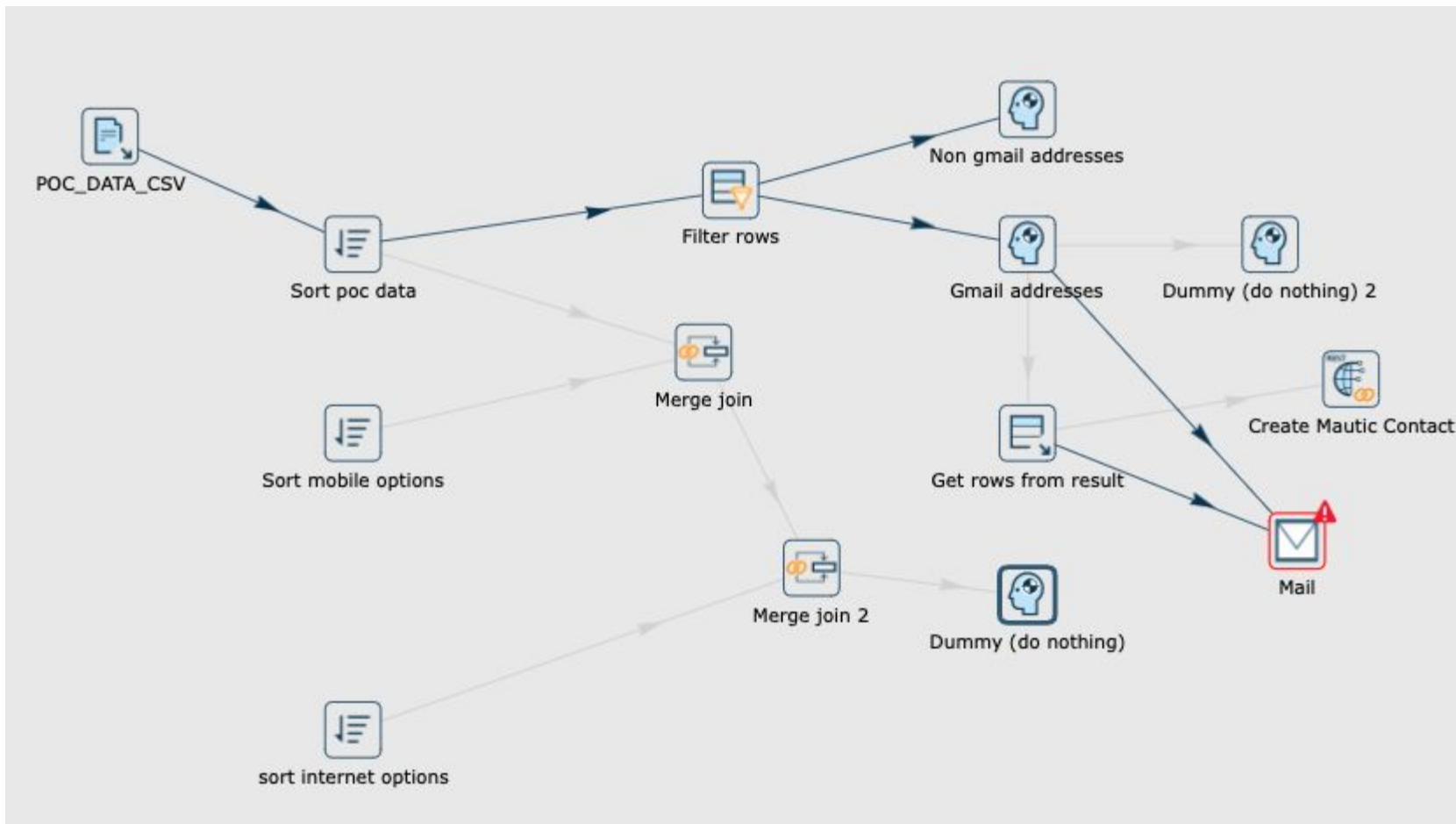
pipelines

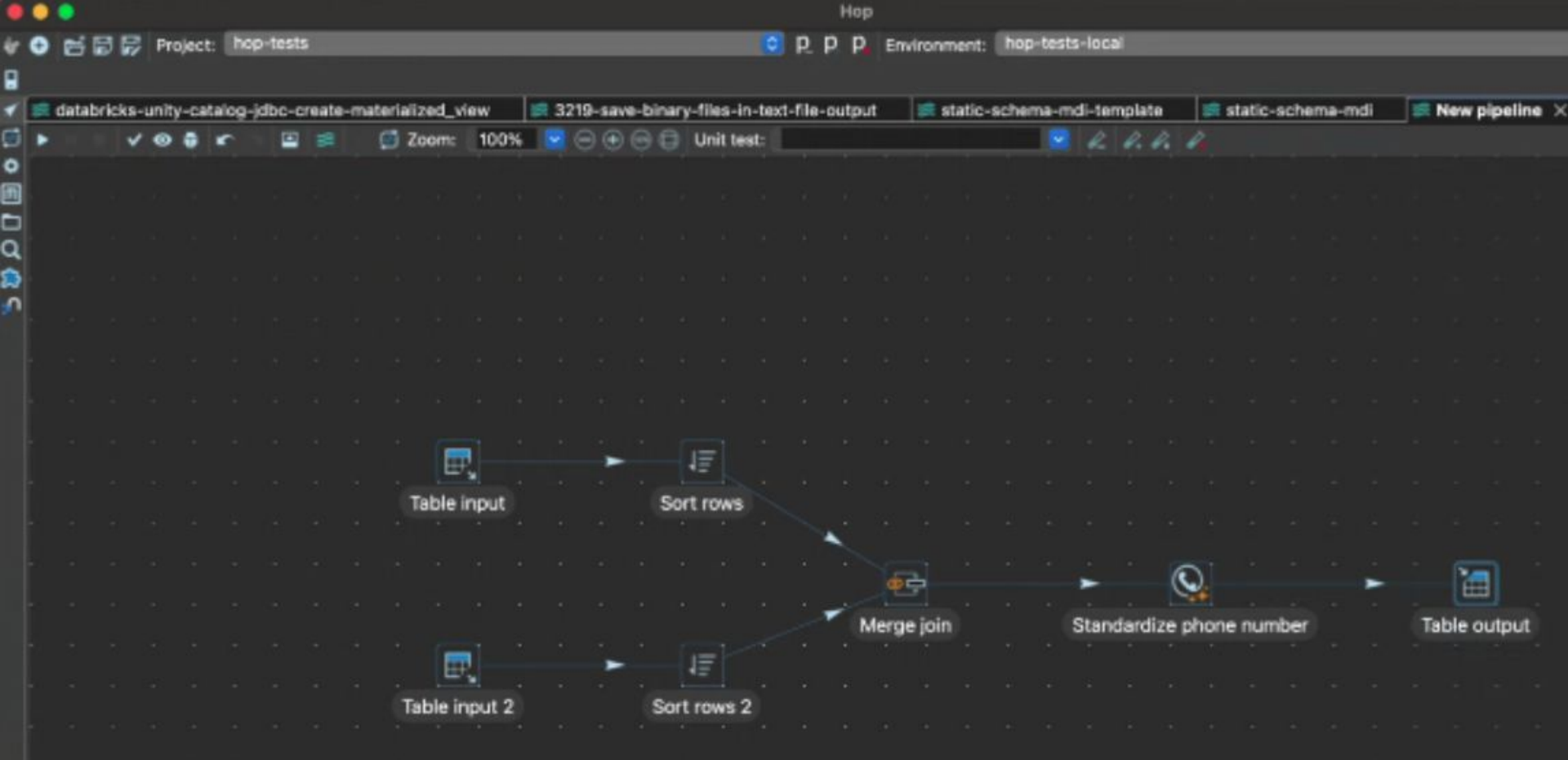


backwards
compatible

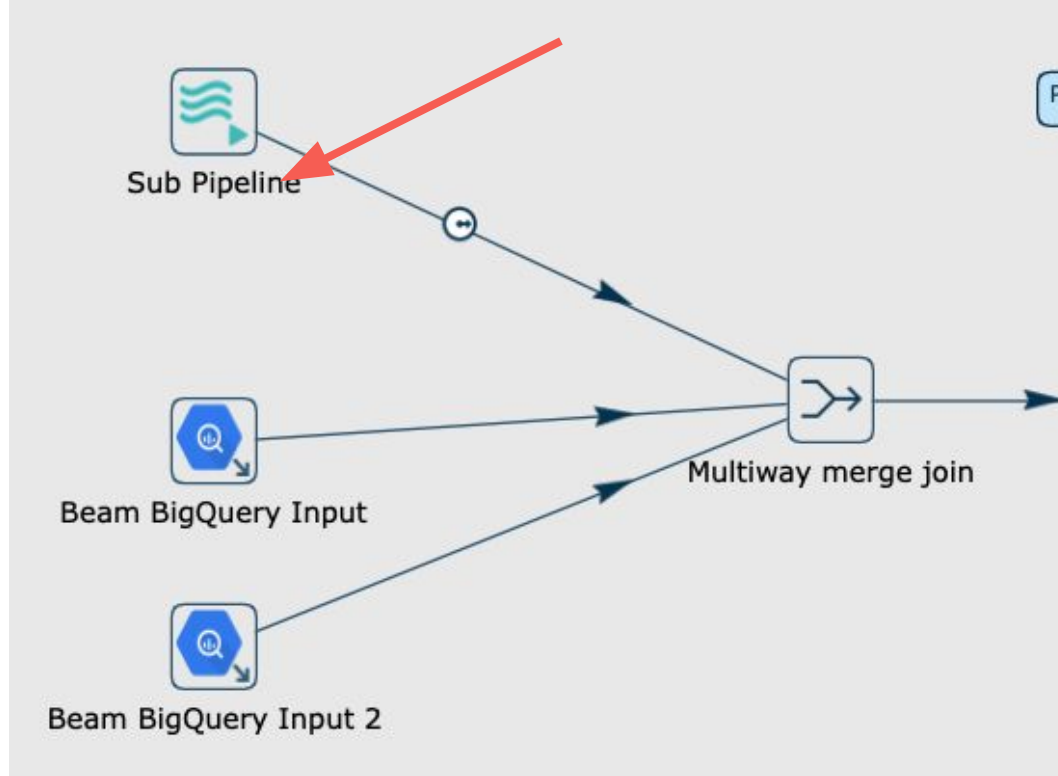
2026







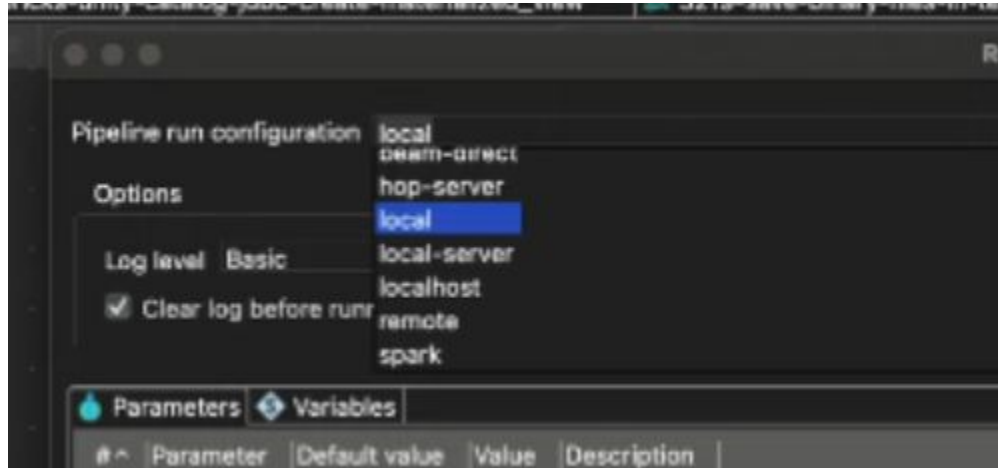
Works as a Desktop APP, and as a Web APP



Sub pipelines

Reduce duplication in many flows

Clear flows



Workloads can run locally, or in the different clouds

Easy scheduling

Create Schedule

Edit Schedule

Close

* Name

Hourly at :15

* Type

Hourly

* Minute (0-59)

15

Save

Cancel

Schedules

Hourly at :15

Every hour at :15

Edit

Duplicate

Delete

Daily at 02:30

Every day at 02:30

Edit

Duplicate

Delete

Weekly on Monday 09:00

Every Monday at 09:00

Edit

Duplicate

Delete

Every Friday at 17:45



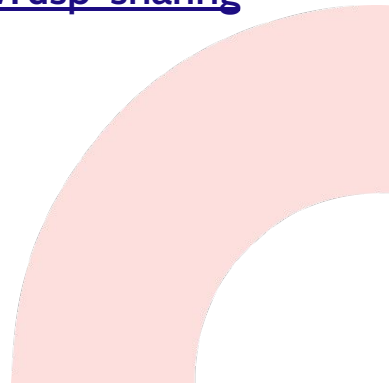
Test it out

Apache HOP Local

<https://hop.apache.org/download/>

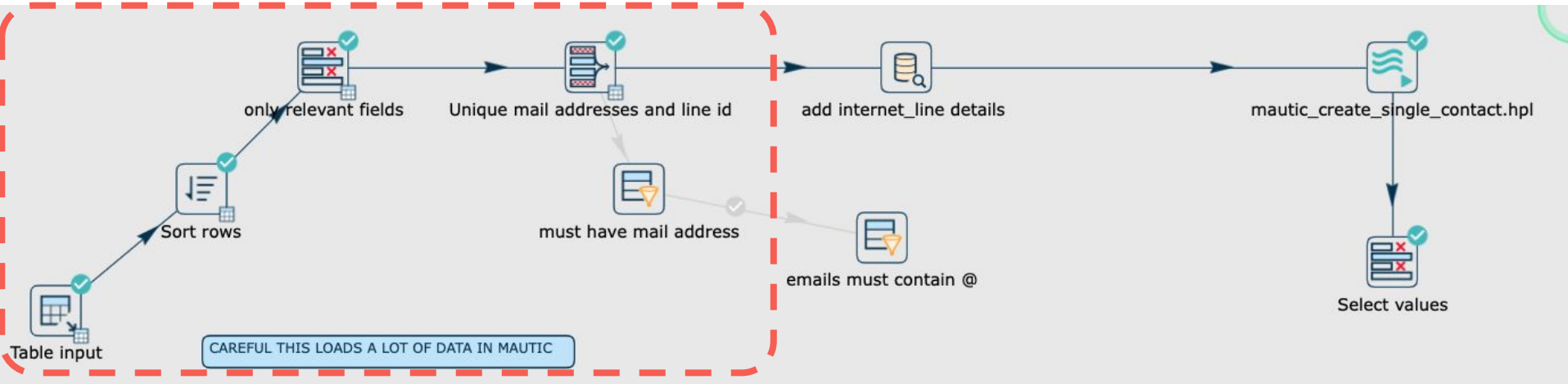
Hop Presentation (From partner):

<https://drive.google.com/file/d/19x-uCUP0kUyDcsOijzAfjdtYOMg7I1tP/view?usp=sharing>





Contact selection



- Load data from tables with queries
- Use the transforms for filtering or sorting or unique or ...
- Use oracle / mariadb / bigquery / ...

<https://hop.apache.org/manual/latest/database/databases.html>



THE FORCE OF OPEN SOURCE

IS THE PATH TO MANY ABILITIES SOME CONSIDER IMPOSSIBLE



Get in touch!

Frederik.wouters@dropsolid.com

[linkedin.com/in/woutersfrederik/](https://www.linkedin.com/in/woutersfrederik/)

<https://Dropsolid.com>





12+ years of
non-stop
growth



€ 1.5M
ARR from
platform



+25% ARR
growth
yoy



€ 7.5M
service
revenue



Building
Partnerships in
3 continents



EU based
team of 80



5M€ in funding



Enterprise

Sleeplife

beObank



boost[®] shopper
activation



acerta

Organisation



Government

