



EUROPE'S LEADING AEM DEVELOPER CONFERENCE
28th – 30th SEPTEMBER 2026

From Cache Invalidation to Continuous Materialisation
Paweł Sobolewski · Marek Czajkowski

Why we need cache

WITHOUT A CACHE



Every request rebuilds the page from all of these.

Why we need cache

WITHOUT A CACHE



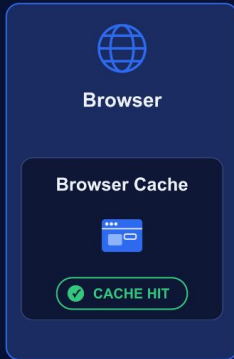
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WITH A CACHE

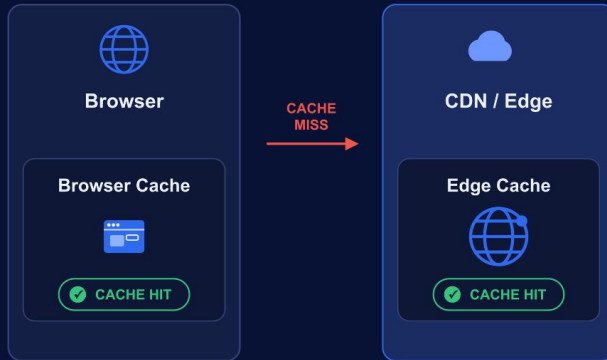


One stored copy, served as it is.

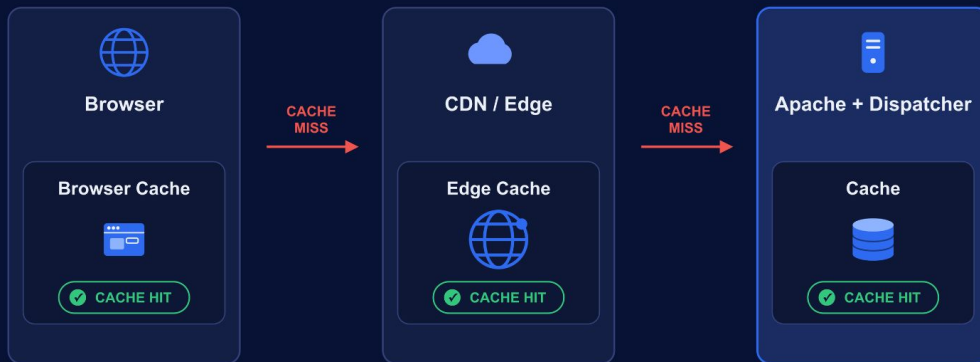
How AEM caches a page



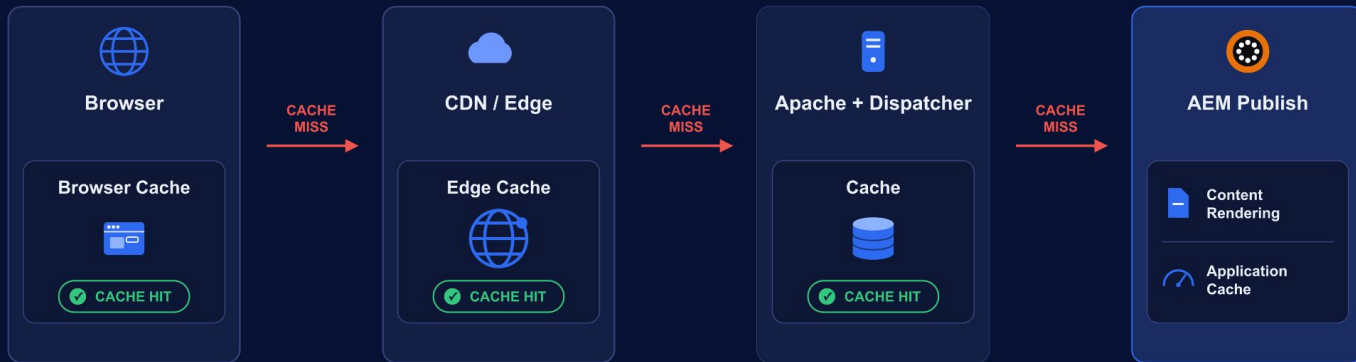
How AEM caches a page



How AEM caches a page



How AEM caches a page



When the content changes: Warmth

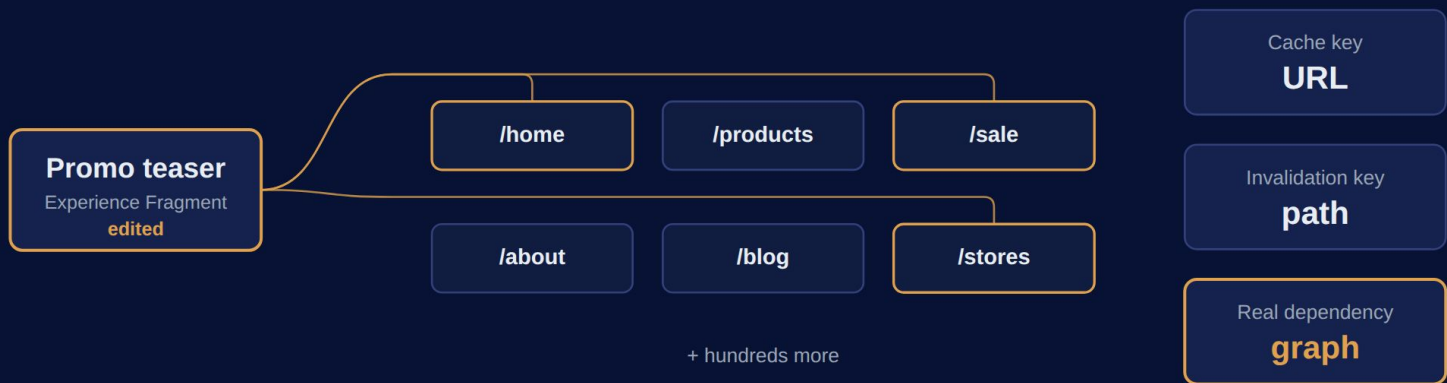
AFTER A DEPLOY, FLUSH OR LARGE PUBLISH



Every request rebuilds the page, and the full load lands on Publish.

When the content changes: Correctness

ONE SHARED FRAGMENT CHANGES



One edit, many stale pages. Which ones?

When the content changes: Correctness

THE SAFE FALLBACK



Full-site purge: every good entry is thrown away to catch the stale ones.

Manual · error-prone · hard to reproduce

What the cache actually stores

WHAT THE CDN AND THE DISPATCHER STORE



What the cache actually stores

WHAT THE CDN AND THE DISPATCHER STORE

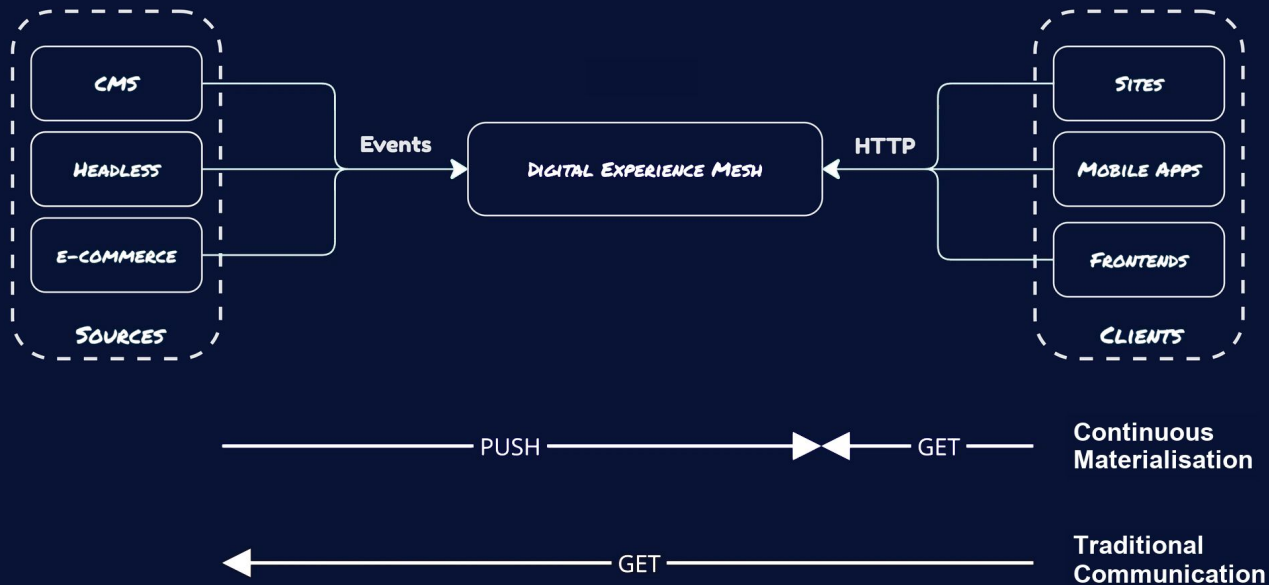


THE ROOT

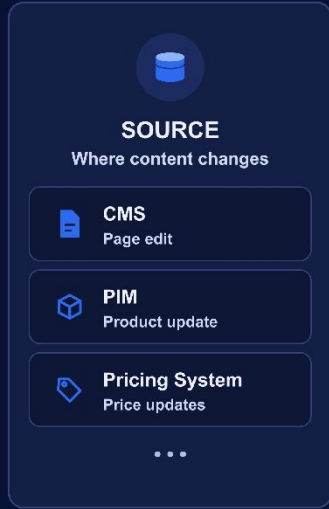
Built only when someone asks
the warmth problem

Doesn't know what it was built from
the correctness problem

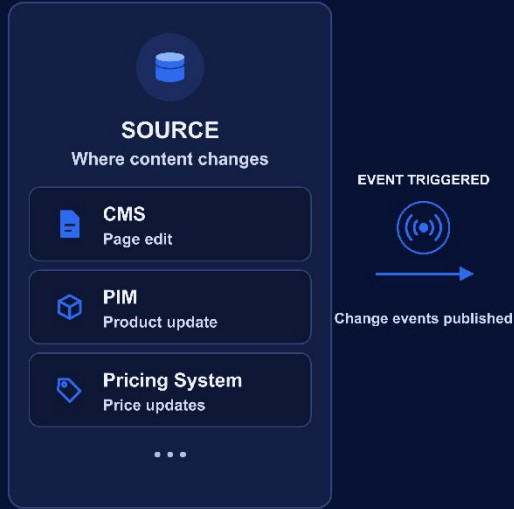
Push vs Pull model



Continuous Materialisation architecture



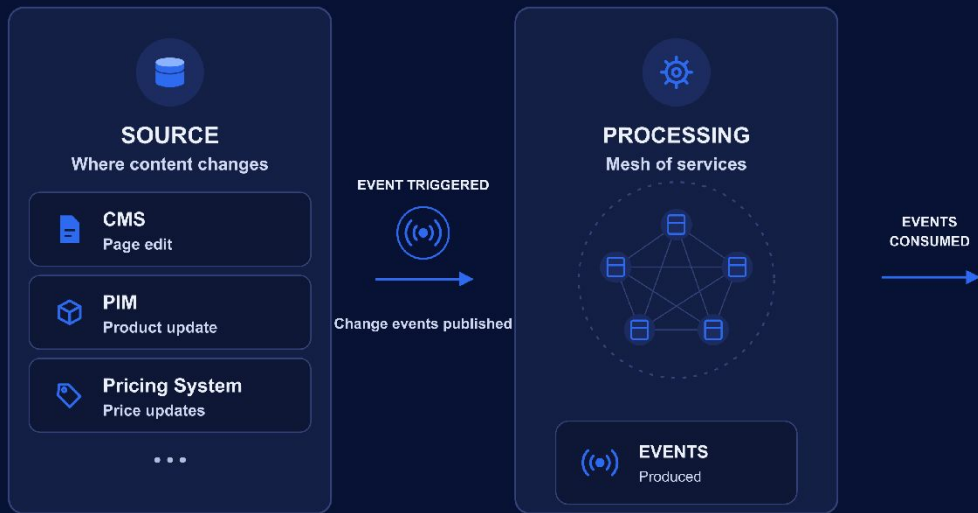
Continuous Materialisation architecture



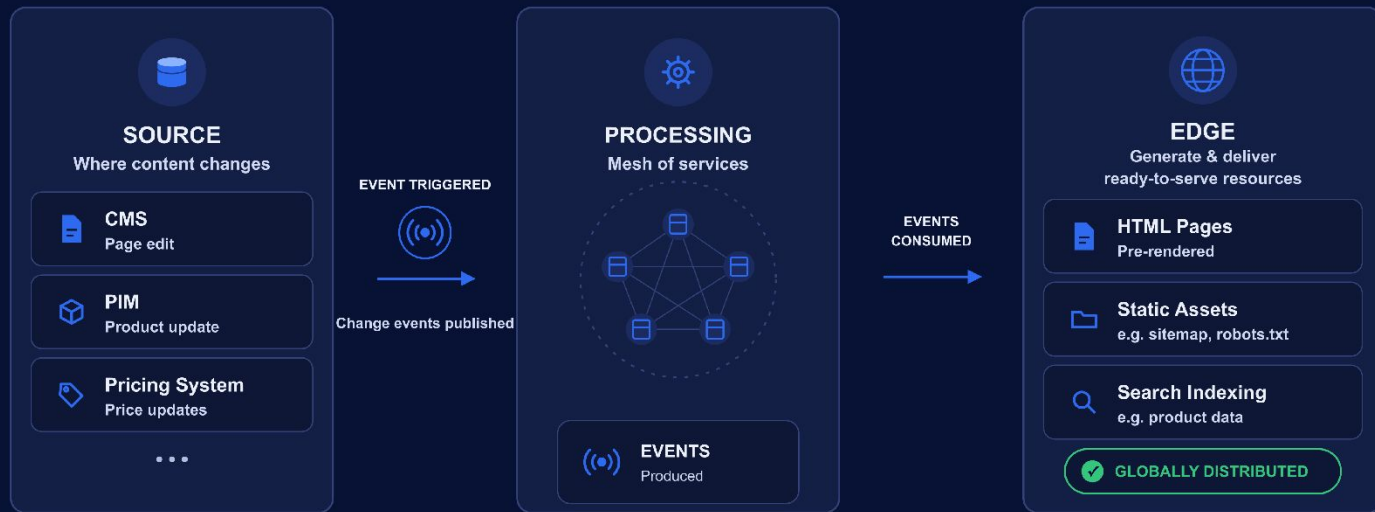
Continuous Materialisation architecture



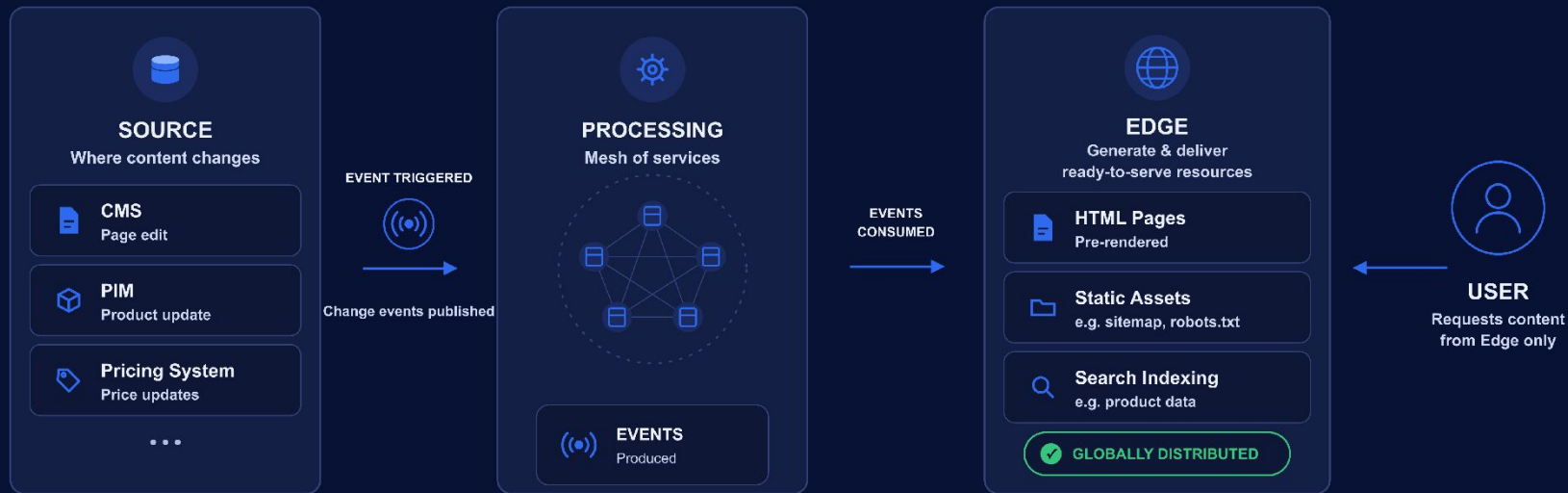
Continuous Materialisation architecture



Continuous Materialisation architecture



Continuous Materialisation architecture



Continuous Materialisation architecture



Compute
happens
before the
user requests

Continuous Materialisation architecture



Compute
happens
before the
user requests



Always
up-to-date
content at
the Edge

Continuous Materialisation architecture



Compute
happens
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Always
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Fast,
predictable
global
delivery

Continuous Materialisation architecture



Compute
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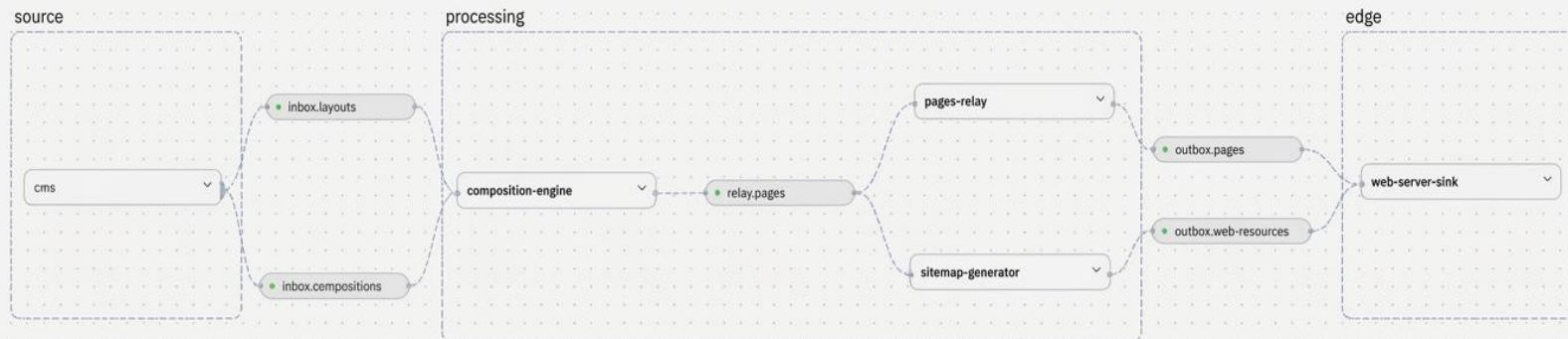
Always
up-to-date
content at
the Edge



Fast,
predictable
global
delivery

we control when content is produced... at change time

Example mesh in details



 PureSight

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[Inspiration](#)
[Blog](#)

Products

Rivet Ray Mid-Century Modern Kitchen Dining Room Chairs, Set of 2, 34.3"H, Brown Faux Leather



Pure Sight co.
B07SVV7V1P

Type: Chair
Brand: Rivet
Weight: 9.9kg
Size: 34.3x17.7x20.9 cm

Rivet Ray Mid-Century Modern Kitchen Dining Room Chairs, Set of 2, 34.3"H, Brown Faux Leather

from **500€**

Buy now 

Dining chair, Brown, Dining chairs set of 4, Chair, Dining room chairs, Accent chair, Mid century, Modern, Chairs, Kitchen chairs, Dining chairs, Dining table set, Rivet, Dining-chairs, Accent chair set of 2



Template
from CMS

 PureSight

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Template
from CMS

Product
data
from PIM

 PureSight

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Template
from CMS

Product
data
from PIM

Price
from pricing
system


Products Spaces Inspiration Blog

New Collection

Embrace the journey, and let your personality shine through.

Explore products



Dynamic fragment
(cms + pim + pricing)

Cheapest products



Rivet Ray Mid-Cen...
500€



Roland X-Frame Co...
520€

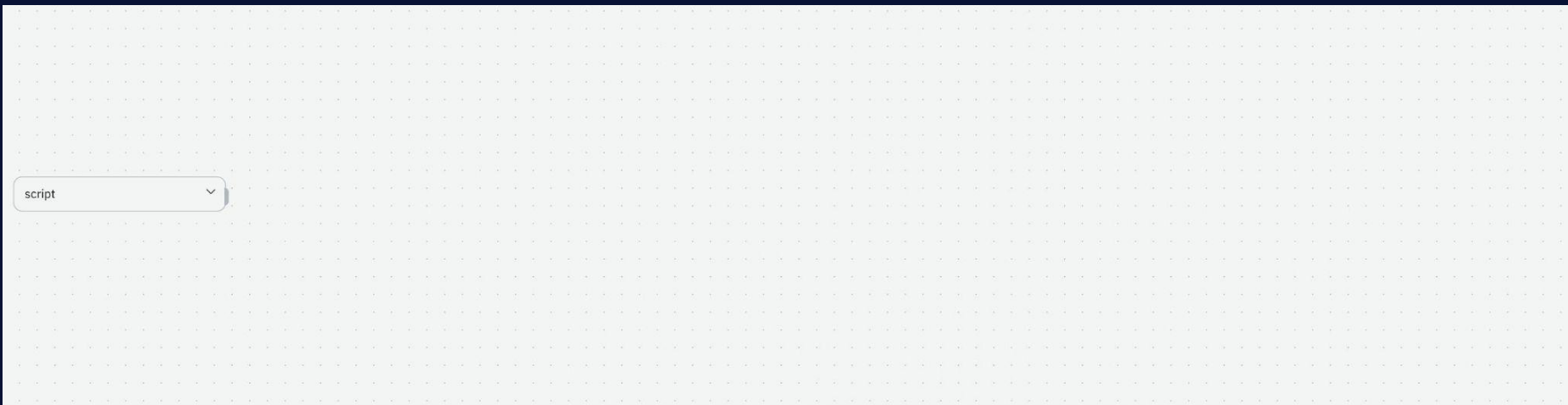


Morgan Faux Leath...
530€

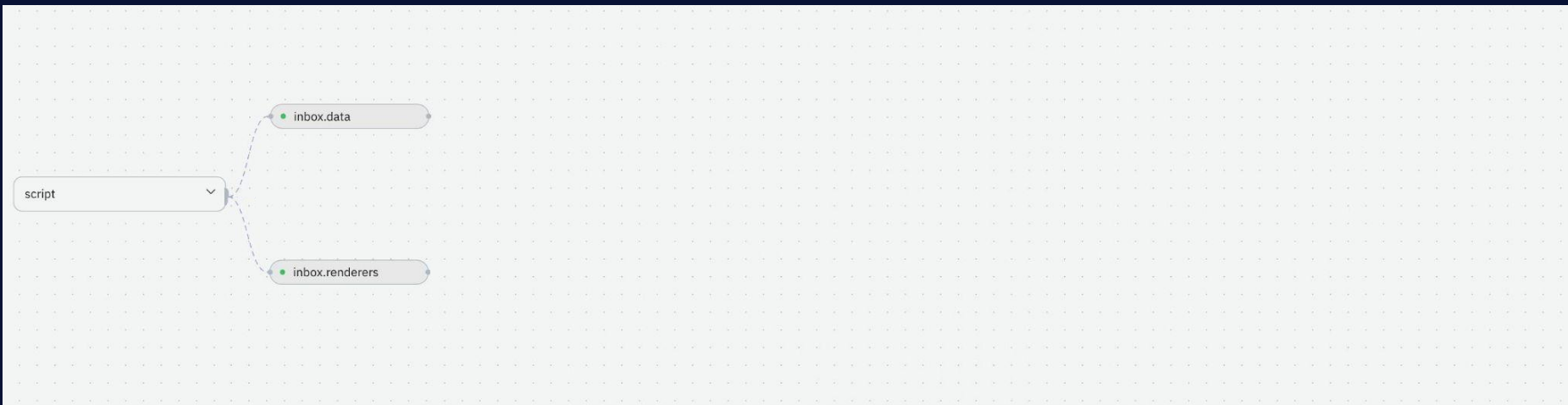


Solimo Karen Soli...
550€

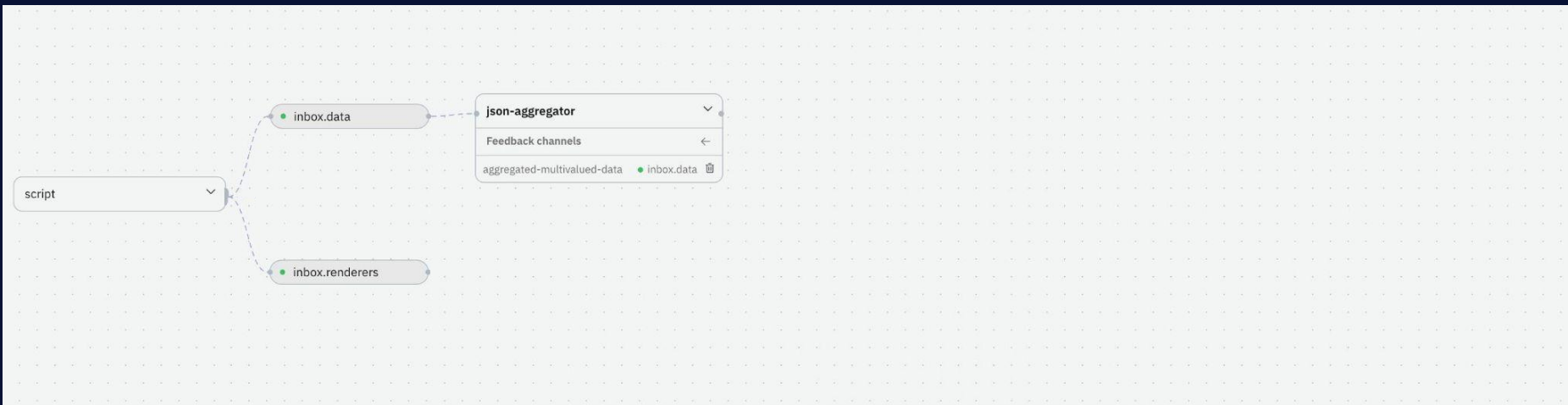
Example mesh in details



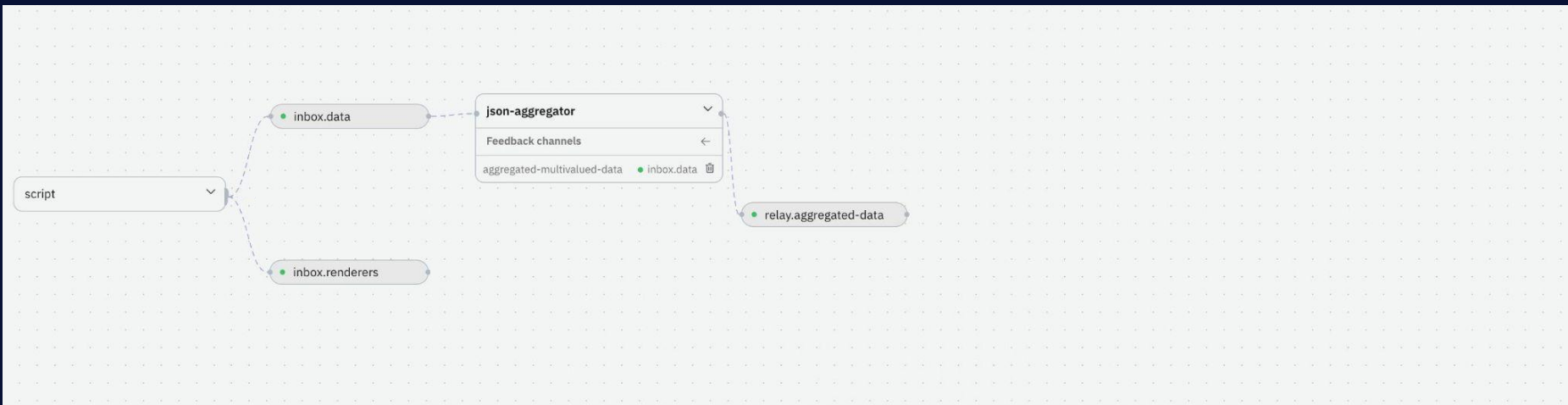
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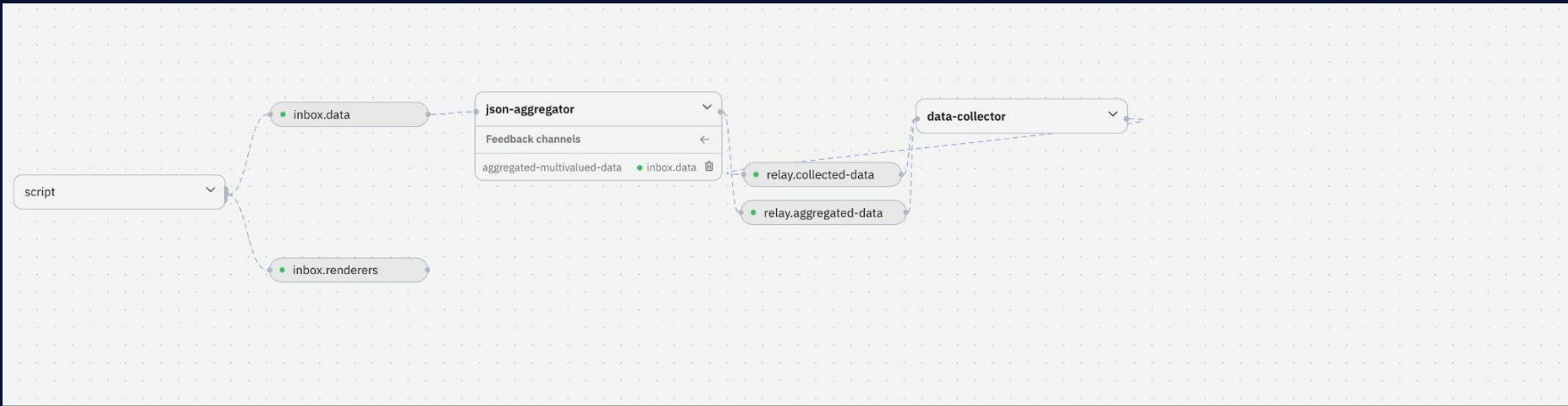
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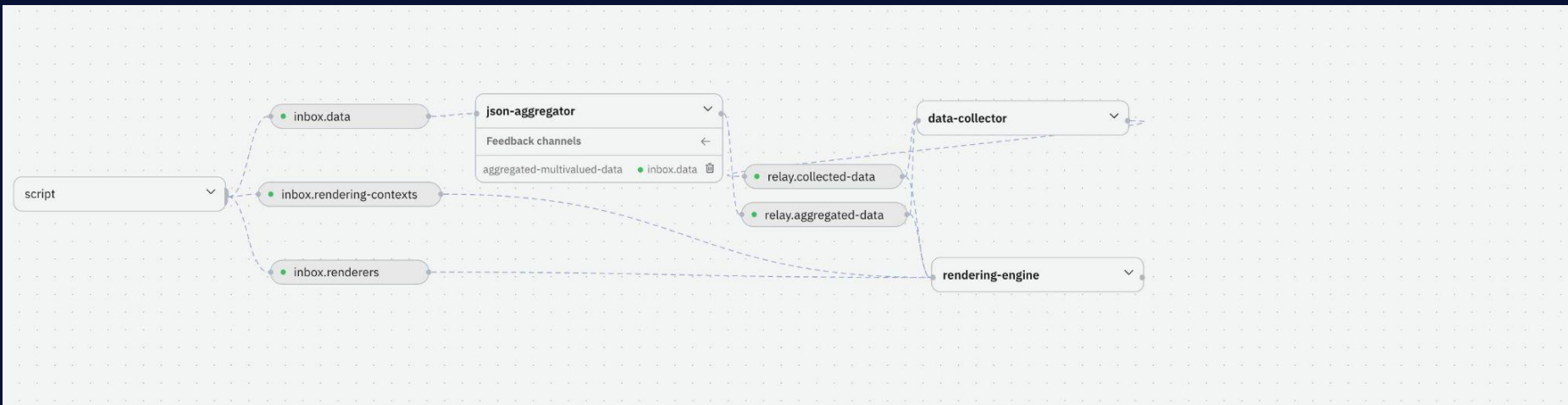
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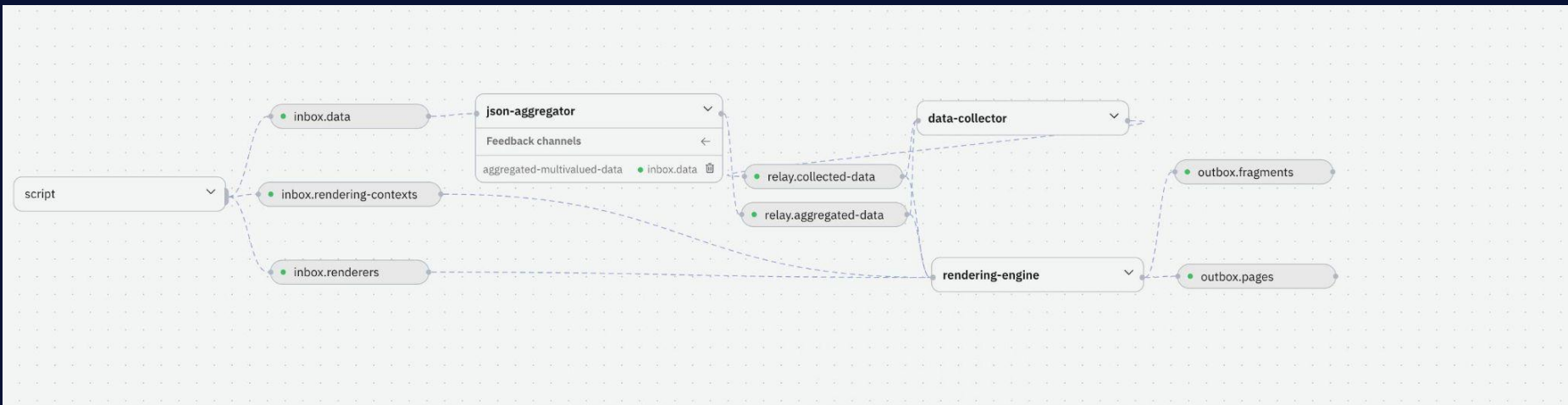
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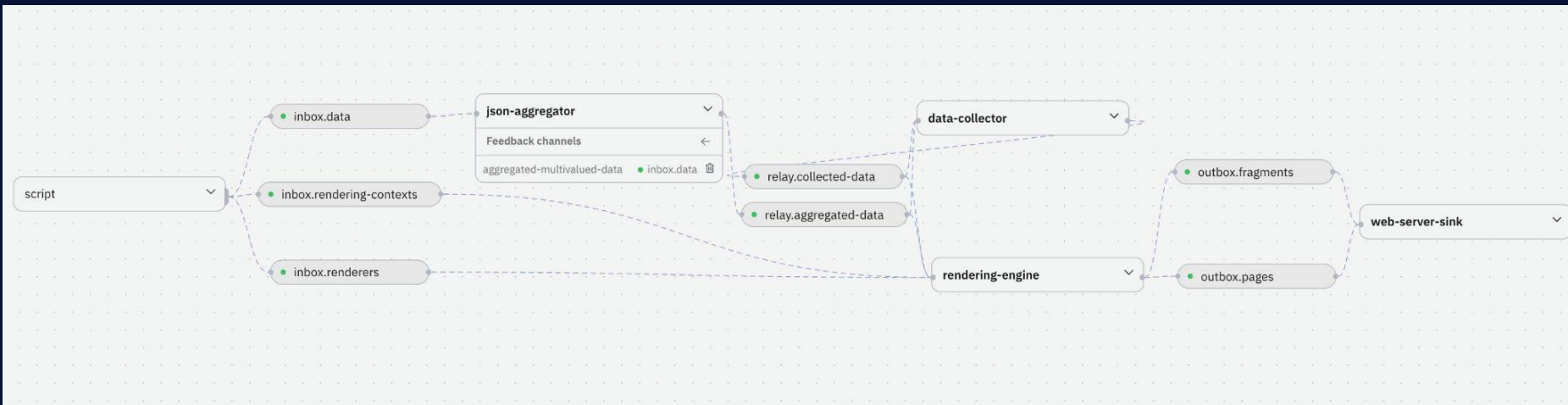
Example mesh in details



Example mesh in details



Example mesh in details



Continuous Materialisation

Continues materialization is a standing process, not
pre-rendering step



adaptTo()

Demo

Benefits

- Low latency
- Global distribution
- Scalability
- A backend outage does not break the page

Build it before they ask.

*Continuous Materialisation: work at change time, not request time
visit us at StreamX.com*

Paweł Sobolewski · Marek Czajkowski

Questions welcome