



adaptTo()



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

Comparador: Spot the Difference

Surviving AEM Migrations & Deployments Without Going Blind

Who are these guys?



- **The Brain:**
Krystian Panek
Principal Software Engineer
- **The Enthusiastic Partner:**
Tomasz Sobczyk
Senior Technical Architect

New Year: New Name!*



WPP Enterprise Solutions



a.k.a. 'The Poznań



Dudes'



We had our small contribution to adaptTo() over the last 8 years...

A better Developer Experience for Sling-based adaptTo() Conference - powered by diva-e



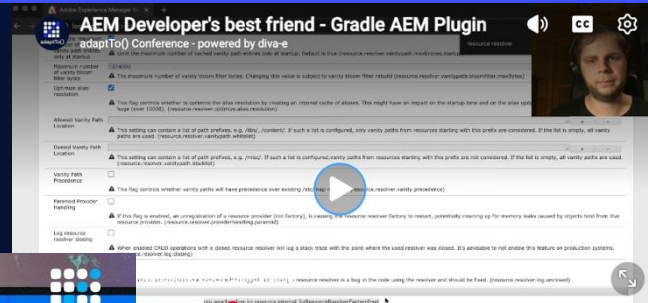
adaptTo()
2023



Lightning Talk:
**How to 10X your
DevEx with ephemeral
environments?**



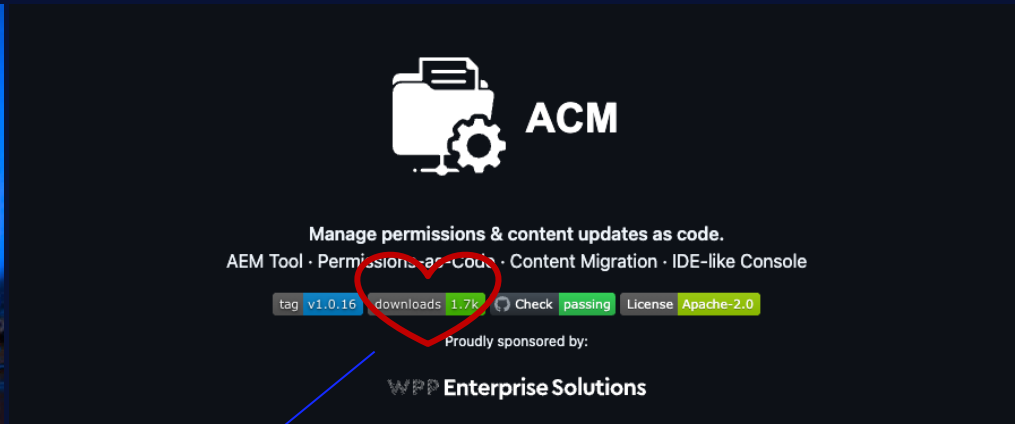
**Get Your AEM Together:
AEM Compose, the Ultimate DevEx Tool**



**First-ever AEM
IaC Providers**



ACM contribution from the last year adopted well :)



Thanks!

The problem: 'Eyeballing It'



- Visual regression & comparing environments is a niche
 - Yet our bread and butter are multi-thousand-page replatforms & never-ending production deployments
- What do we do then?
 - Alt-tab?
 - Vibe-code something?
 - Try the tools out there?

The Tools...

Half-baked Tools:

- Backstop.JS
 - No releases for years
- Playwright
 - Built-in screenshots
- Chromatic
 - Storybook-centric

Not-so-cheap Tools:

- Awesome features
- Initial setup cost
- Ongoing Cost (per user + usage)
- Infrastructure-heavy
- Examples: Percy.io, Applitools Eyes, TestMu AI (LambdaTest)

Where I Got Fed Up: The Client Story

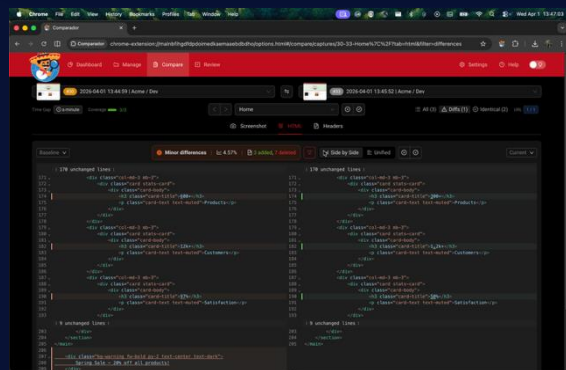
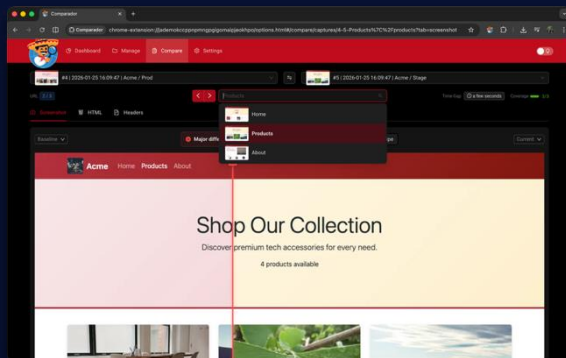
- Taking over a massive legacy AEM platform
- Buying tooling was a lengthy process
- Env differences & non-deterministic glitches
- Server config vs markup issues
 - Copy-paste markup into IntelliJ for diffing



The solution:



Comparador
Visual Regression Testing for Chrome



- Freeware Chrome Extension + Chromium, Edge, Brave, Opera, Vivaldi
- <1 minute to install
- Visual Diffing
- HTML Source Diffing
- HTTP Headers comparison
- Console logs diffing
- Metrics & performance comparison
- Shareable project setups (Git integration)
- Project quick-links in one place
- You can vibe-code the whole config (JSON file)

Contest & Perks!

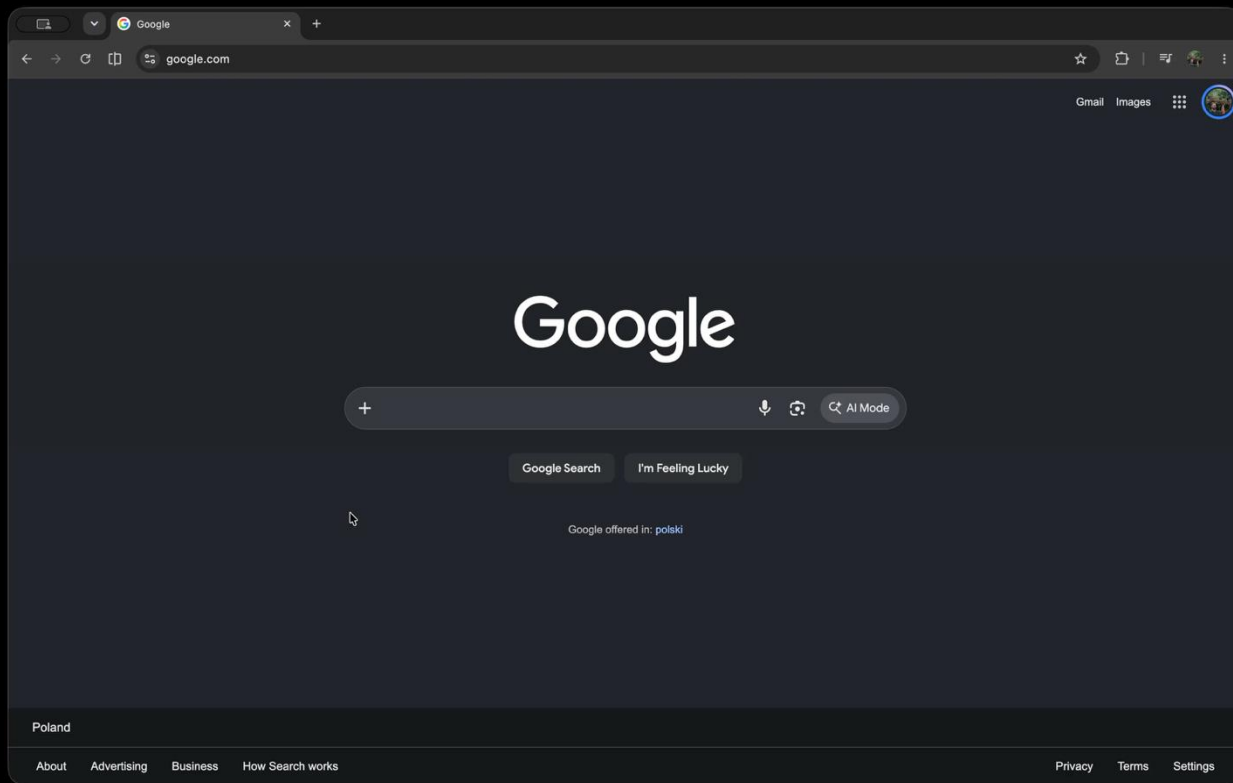


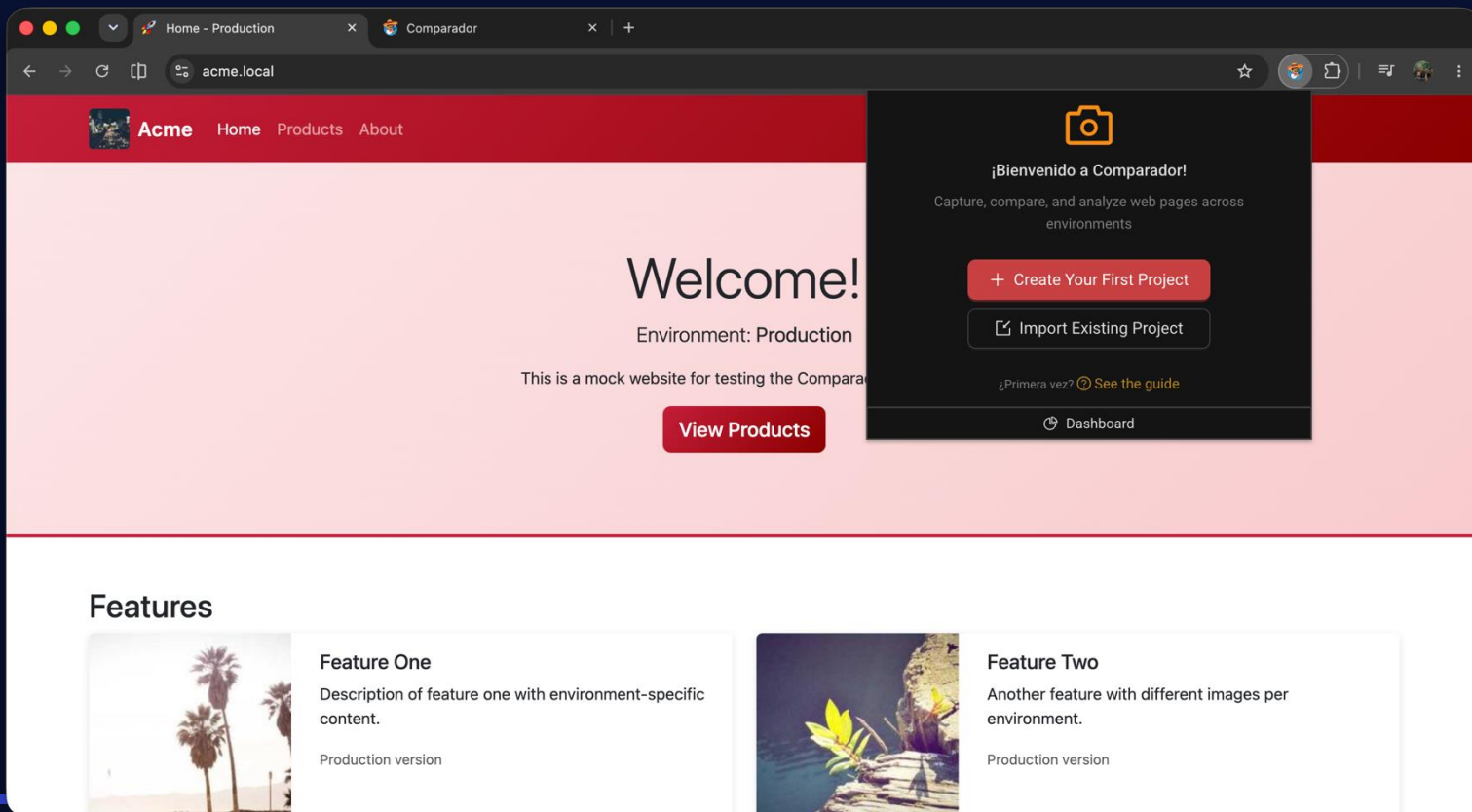
- Target: AEM WKND Site on our Sandbox
- Find X differences between environments
- 3 X Prize: Exclusive WPP ES x Adobe Brand Merch

How to participate



1. Google „Comparador testing”
2. Download config for WKND
3. Install extension
4. Click „the hombre” icon
5. *Import existing project* with downloaded config
6. Find X differences in „**WKND Site - WPP ES**”
7. Write how many differences there are into the Comments tab



Home - Production x Comparador x +

acme.local

Acme Home Products About

Welcome!

Environment: Production

This is a mock website for testing the Comparador

[View Products](#)

 ¡Bienvenido a Comparador!

Capture, compare, and analyze web pages across environments

[+ Create Your First Project](#)

[Import Existing Project](#)

¿Primera vez? [See the guide](#)

[Dashboard](#)

Features



Feature One

Description of feature one with environment-specific content.

Production version



Feature Two

Another feature with different images per environment.

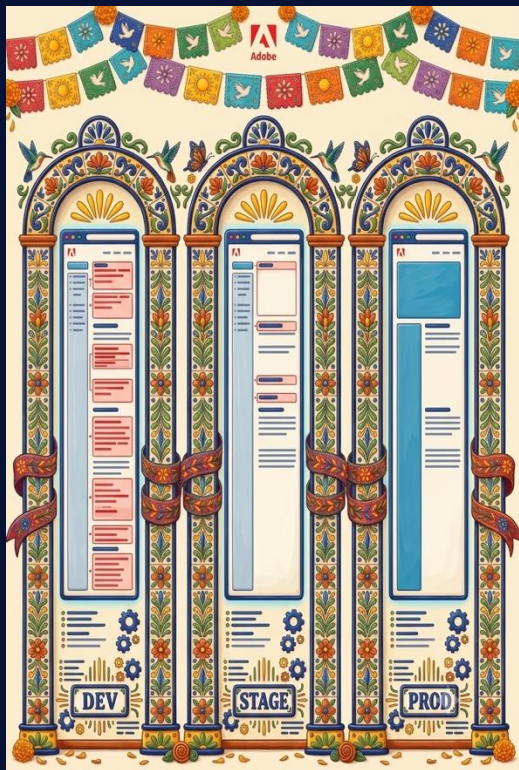
Production version

There is more...



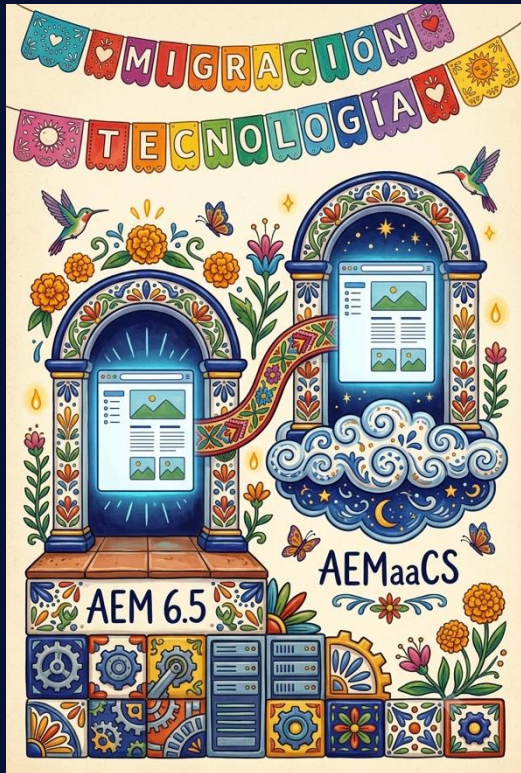
- Works with any website + defaults built with AEM in mind
- Let's you script all project-specific hell
- Configs shared with team through Local drive Git-sync feature
- Robust backup/restore
- Built-in visual help guide

Use Case 1: Daily Development



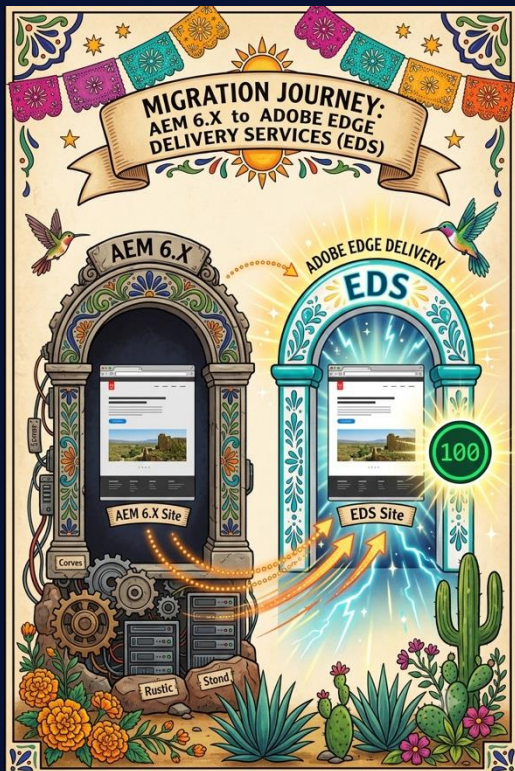
- Compare Dev / Stage / Prod
- Dis-joint environments (e.g. pesky Adobe Target scripts on Prod)
- Pre & Post-deployment checks
- Bulk content refactoring (the infamous Groovy scripts)
- Ideally most things should be identical

Use Case 2: AEM 6.5 to AEMaaCS



- Lift & Shift
- Visually: like-for-like
- Markup: stays kinda-the-same
- Headers: change a bit
- Performance: hopefully better!

Use Case 3: AEM 6.X to EDS



- The AI-driven tech stack revolution
- Visually: like-for-like
- Markup: very different
- Headers: change a bit
- Performance: much better!

Current Stats & Community



- 160+ daily active users (and counting)
- Freeware (free to use, both commercially and privately)
- Does NOT send any data anywhere
- Want more – raise it in Github:
<https://github.com/wttech/comparador/issues>



- Announcing the winners
- Q&A Session





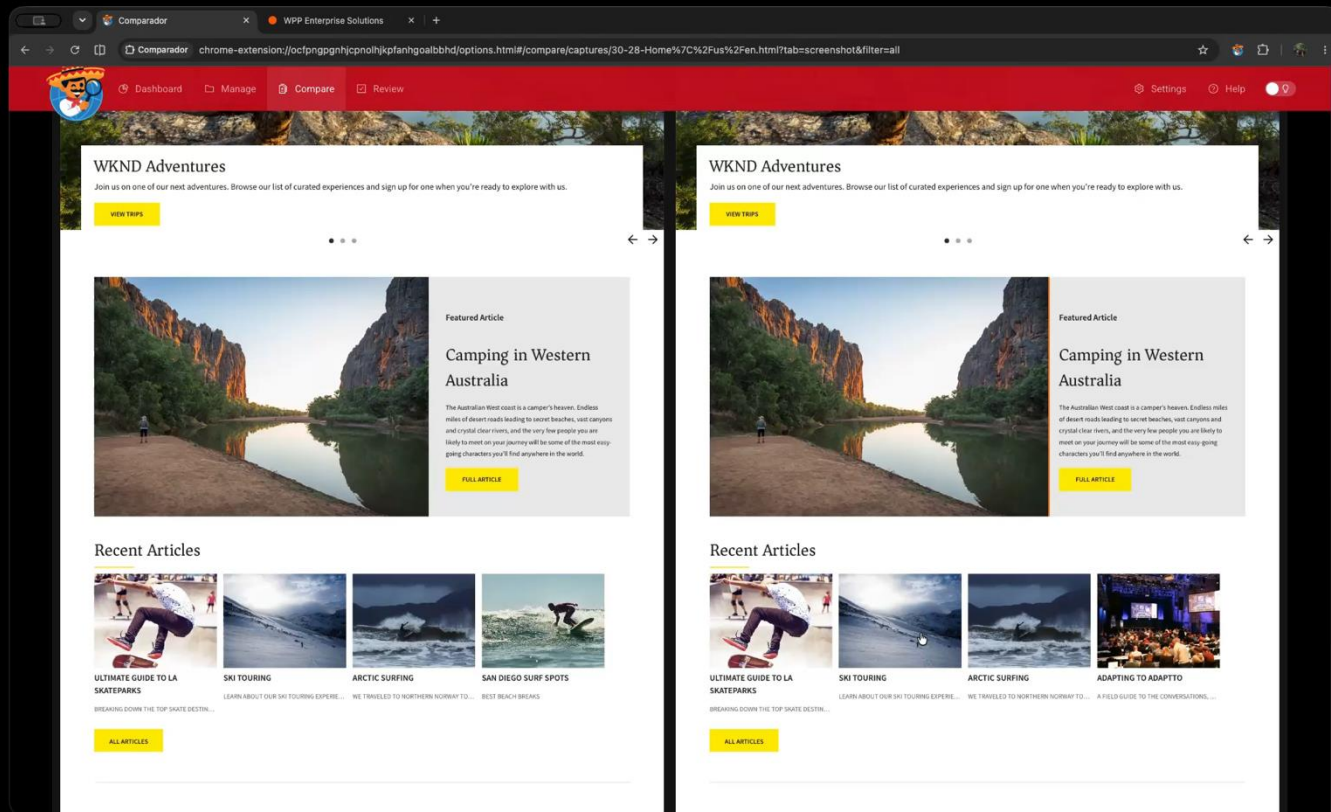
- DEV environment has 3 stable differences introduced by extra code deployment & WKND instabilities
- PROD and STAGE are identical (in theory)
- All environments affected by unstable:
 - JS issue visible in logs
 - strict-transport-policy & x-sky-isauth headers



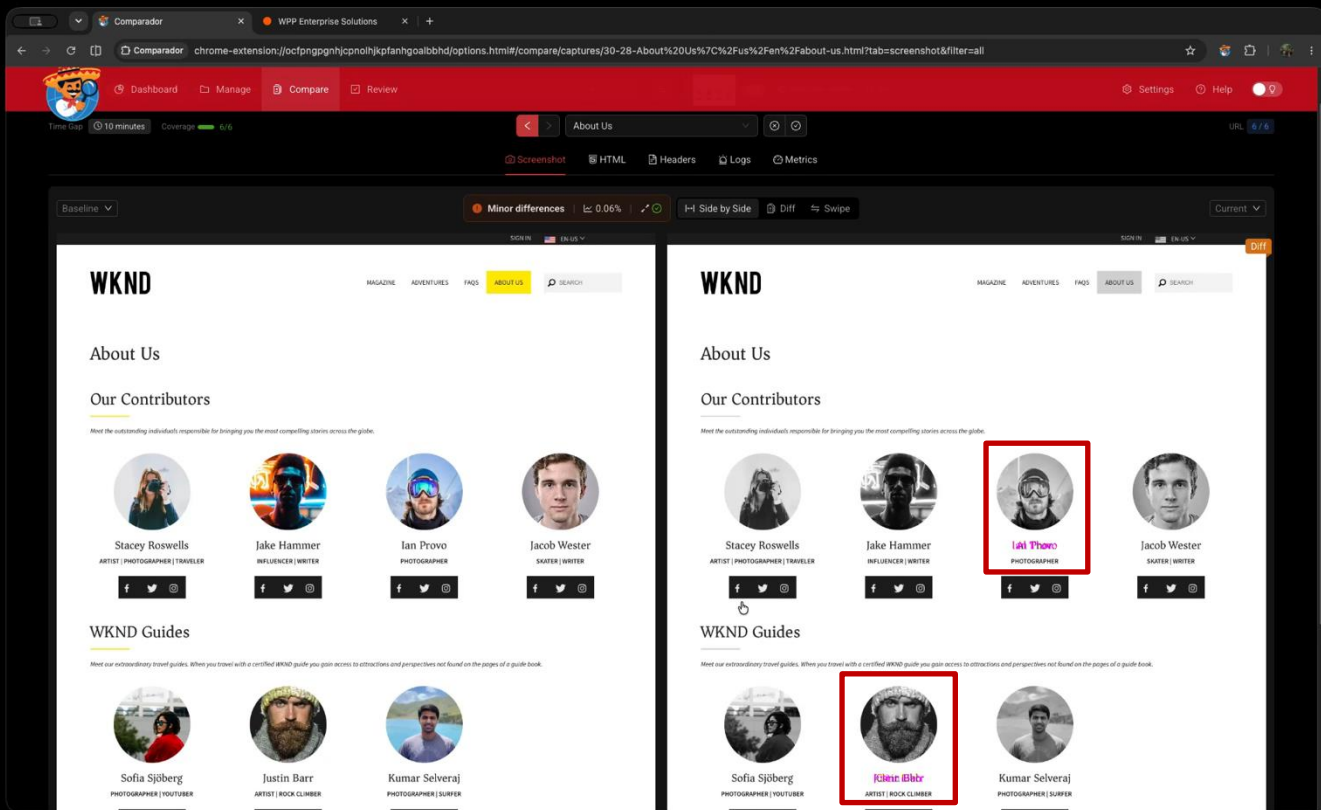
adaptTo()

Appendix

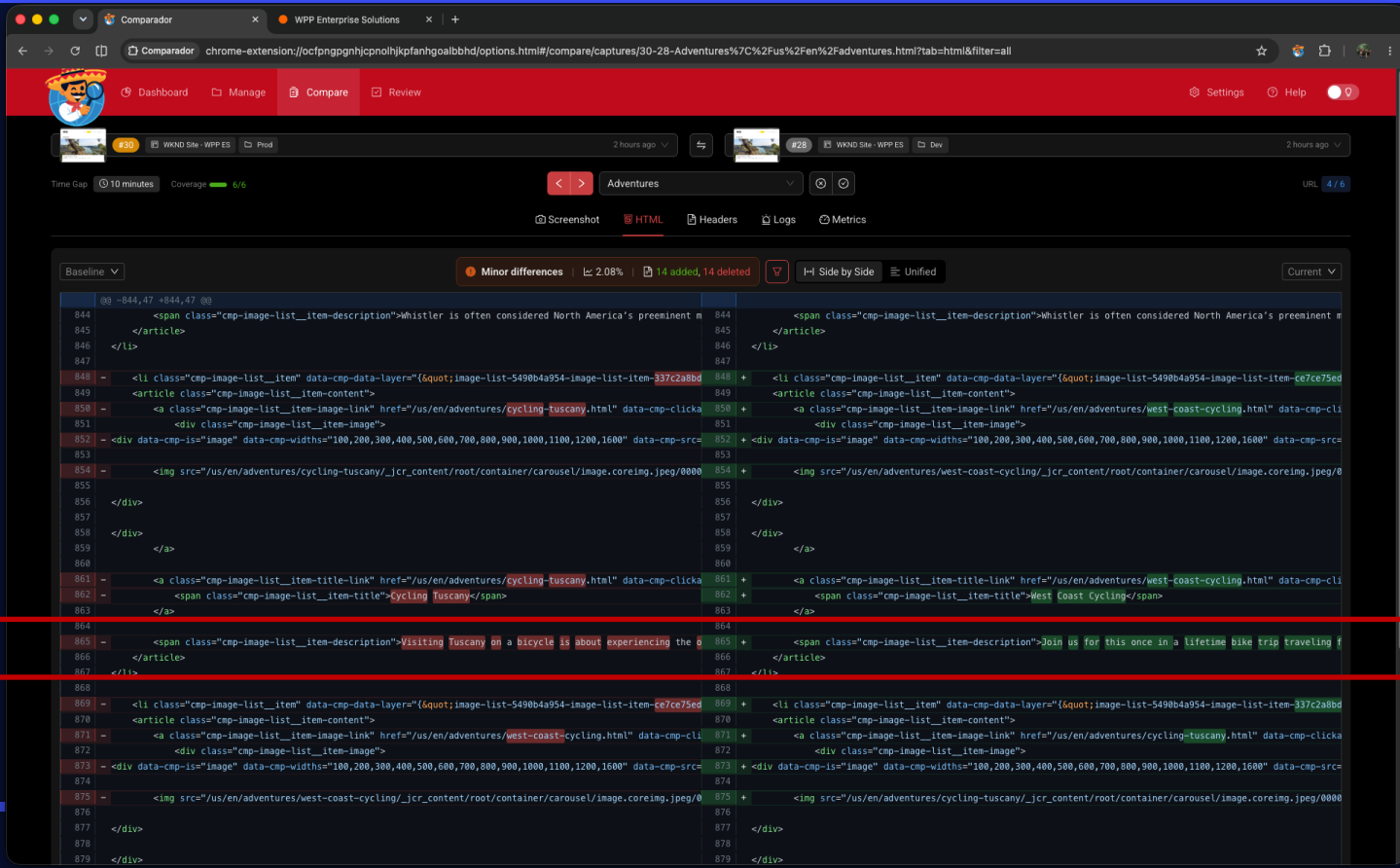
Difference 1 – Home Page – Styling & New Content



Difference 2 – About us – Swapped authors



Difference 3 – Adventures – Description text change



Comparador chrome-extension://ocfngpgnhjcpnolhjkpfanhgoalbbhd/options.html#compare/captures/30-28-Adventures%7C%2Fus%2Fen%2Fadventures.html?tab=html&filter=all

Dashboard Manage Compare Review Settings Help

WKN0 Site WPP ES Prod 2 hours ago

Time Gap 10 minutes Coverage 6/6

Adventures

HTML Headers Logs Metrics

Minor differences | 2.08% | 14 added, 14 deleted | Side by Side | Unified

Baseline	Current
844 Whistler is often considered North America's preeminent m	844 Whistler is often considered North America's preeminent m
845 </article>	845 </article>
846	846
847	847
848 - <li class="cmp-image-list_item" data-cmp-data-layer="{"image-list-5490b4a954-image-list-item-337c2a8bd	848 + <li class="cmp-image-list_item" data-cmp-data-layer="{"image-list-5490b4a954-image-list-item-ce7ce75ed
849 <article class="cmp-image-list_item-content">	849 <article class="cmp-image-list_item-content">
850 - <a class="cmp-image-list_item-image-link" href="/us/en/adventures/cycling-tuscany.html" data-cmp-clicka	850 + <a class="cmp-image-list_item-image-link" href="/us/en/adventures/west-coast-cycling.html" data-cmp-cl
851 <div class="cmp-image-list_item-image">	851 <div class="cmp-image-list_item-image">
852 <div data-cmp-is="image" data-cmp-widths="100,200,300,400,500,600,700,800,900,1000,1100,1200,1600" data-cmp-src=	852 + <div data-cmp-is="image" data-cmp-widths="100,200,300,400,500,600,700,800,900,1000,1100,1200,1600" data-cmp-src=
853	853
854 -	856 </div>
857	857
858 </div>	858 </div>
859 	859
860	860
861 - <a class="cmp-image-list_item-title-link" href="/us/en/adventures/cycling-tuscany.html" data-cmp-clicka	861 + <a class="cmp-image-list_item-title-link" href="/us/en/adventures/west-coast-cycling.html" data-cmp-cl
862 - Cycling Tuscany	862 + West Coast Cycling
863 	863
864	864
865 - Visiting Tuscany on a bicycle is about experiencing the o	865 + Join us for this once in a lifetime bike trip traveling f
866 </article>	866 </article>
867	867
868	868
869 - <li class="cmp-image-list_item" data-cmp-data-layer="{"image-list-5490b4a954-image-list-item-ce7ce75ed	869 + <li class="cmp-image-list_item" data-cmp-data-layer="{"image-list-5490b4a954-image-list-item-337c2a8bd
870 <article class="cmp-image-list_item-content">	870 <article class="cmp-image-list_item-content">
871 - <a class="cmp-image-list_item-image-link" href="/us/en/adventures/west-coast-cycling.html" data-cmp-clicka	871 + <a class="cmp-image-list_item-image-link" href="/us/en/adventures/cycling-tuscany.html" data-cmp-clicka
872 <div class="cmp-image-list_item-image">	872 <div class="cmp-image-list_item-image">
873 <div data-cmp-is="image" data-cmp-widths="100,200,300,400,500,600,700,800,900,1000,1100,1200,1600" data-cmp-src=	873 + <div data-cmp-is="image" data-cmp-widths="100,200,300,400,500,600,700,800,900,1000,1100,1200,1600" data-cmp-src=
874	874
875 -	877 </div>
878	878
879 </div>	879 </div>

Difference 4 – Unstable JS – Sometimes 😊



Dashboard

Manage

Compare

Review

Settings

Help



#7

WKND Site - WPP ES

Stage

5 minutes ago



#8

WKND Site - WPP ES

Dev

5 minutes ago

Time Gap a few seconds

Coverage 6/6



Adventures



URL 4 / 6

Screenshot

HTML

Headers

Logs

Metrics

Baseline

Major differences | 2 new



Current

Level	Source	Message	Count	Status
+ Warning	console	Accordion: container utilities at window.CQ.CoreComponents.container.utils are not available. This can lead to missing features. Ensure th...	+1	New
+ Warning	console	Tabs: container utilities at window.CQ.CoreComponents.container.utils are not available. This can lead to missing features. Ensure the cor...	+2	New

Difference 5 – Unstable STS – Sometimes 😊



Dashboard Manage Compare Review

Settings Help

#18 WKND Site - WPP ES Prod About Us 4 minutes ago #66 WKND Site - WPP ES Prod About Us a minute ago

Screenshot HTML Headers Logs Metrics

Baseline Major differences 10.00% 0 added, 1 deleted Side by Side Unified Current

@@ -2,9 +2,8 @@	
2 cache-control: max-age=300,stale-while-revalidate=3600	2 cache-control: max-age=300,stale-while-revalidate=3600
3 content-encoding: gzip	3 content-encoding: gzip
4 content-length: 13478	4 content-length: 13478
5 content-type: text/html;charset=utf-8	5 content-type: text/html;charset=utf-8
6 - strict-transport-security: max-age=31557600	
7 vary: Accept-Encoding,Origin	6 vary: Accept-Encoding,Origin
8 x-content-type-options: nosniff	7 x-content-type-options: nosniff
9 x-frame-options: SAMEORIGIN	8 x-frame-options: SAMEORIGIN
10 x-vhost: publish	9 x-vhost: publish



adaptTo()

Killer features

Universal web-dev tool but built with AEM in mind

Script Variables

Custom Tool

Project-specific JSON data injected as `project.variables`.

```

0 // Each environment = a site instance to capture. URLs are built from the selected tier
7 // Each tier URL is optional, but every environment needs at least one for setup/capt
8 "environments": [
9   // AEMaaS, AMS, or On-Premise higher environments
10  {
11    "id": "prod",
12    "name": "Prod",
13    // AEMaaS direct URLs - used by navigation script for CRX/author access
14    "authorBaseUrl": "https://author-p12345-e333333.adobeaemcloud.com",
15    "publishBaseUrl": "https://publish-p12345-e333333.adobeaemcloud.com",
16    //"liveUrl": "https://www.wknd.com",
17  },
18  {
19    "id": "stage",
20    "name": "Stage",
21    "authorBaseUrl": "https://author-p12345-e222222.adobeaemcloud.com",
22    "publishBaseUrl": "https://publish-p12345-e222222.adobeaemcloud.com",
23    //"liveUrl": "https://stage.wknd.com",
24  },
25  {
26    "id": "dev",
27    "name": "Dev",
28    "authorBaseUrl": "https://author-p12345-e111111.adobeaemcloud.com",
29    "publishBaseUrl": "https://publish-p12345-e111111.adobeaemcloud.com",
30    //"liveUrl": "https://dev.wknd.com",
31  },
32  // Local AEM must use Publish through Dispatcher
33  // Point publishBaseUrl at the Dispatcher,
34  // and use Sling mappings to map aem.content
35  /*

```

Generic
AEM

AEM

Load

Script Code

Setup Browser Page Compare Navigation

JavaScript that generates project structure

```

1 // AEM environments x paths setup: materializes each environment x path pair into a sav
2 // structure group, using the first configured tier URL (Live > Publish > Author).
3 // Group names intentionally use env.name so the AEM navigation template can associate
4 // each env's Pages folder by group name.
5 const environments = project.variables.environments || [];
6 const paths = project.variables.paths || [];
7 const aem = project.variables.aem || {};
8 const contentRoot = (aem.contentRoot || '/content/example').replace(/\/+$/, '');
9 const stripHtmlExtension = project.variables.stripHtmlExtension !== false;
10
11 const normalizeHost = (host) => host.replace(/\/+$/, '');
12
13 // Public-facing path form: '/' for root, otherwise leading slash, no trailing slash, n
14 const toPublicPath = (value) => {
15   const path = value.replace(/\.html$/, '').replace(/^\//+|\/+$/g, '');
16   return path === '' ? '/' : `/${path}`;
17 };
18
19 const toPageUrl = (env, path) => {
20   const publicPath = toPublicPath(path.value);
21   const isRoot = publicPath === '/';
22   if (env.liveUrl) {
23     return normalizeHost(env.liveUrl) + (isRoot ? '/' : publicPath + (stripHtmlExte
24   );
25   if (env.publishBaseUrl) {
26     return normalizeHost(env.publishBaseUrl) + (isRoot ? '/' : `/${publicPath}.html`
27   );
28   return `${normalizeHost(env.authorBaseUrl)}${contentRoot}${isRoot ? '' : publicPath
29 };
30

```

Test

AEM

Load

Script all the project-specific hell

Script Variables

[Custom](#) [Tool](#)

Project-specific JSON data injected as `project.variables`.

```
125 // Comparison normalization additions (read by compare script)
126 "compare": {
127   "html": {
128     // Cookie/consent banners, footers, etc. - add project-specific selectors here
129     // "removeSelectors": ["#onetrust-consent-sdk", ".experiencefragment--footer"]
130     // "removeAttributes": [{"data-my-tracking-id"}, {"selector": "[tabindex=\\"0\\""}
131     // Adobe DTM, Adobe Resources, and Helix RUM scripts
132     "removeUrls": [
133       "https://assets.adobedtm.com",
134       { "regex": "https://cdn[?/]*\\.adobe\\.resources\\.net" },
135       { "regex": "^https?://[?/]+\\.rum/" }
136     ],
137     "removeContent": [
138       // "myTracker(",
139       // { "regex": "myApp\\.init\\(" },
140       "dev.day.com/cq6.gif",
141     ],
142     "replacePatterns": [
143       // AEMaaCS clientlib cache-bust hash - rotates on every deploy, independent
144       { "pattern": "\\..lc-[a-f0-9]{16}-lc\\.min\\.(css|js)", "flags": "g", "re
145       // Core Components data layer - repo:id/repo:modifyDate always differ per
146       { "pattern": "(?:&quot;|\\")repo:id(?:&quot;|\\"):(?:&quot;|\\") [0-9a-f]{8}-
147       { "pattern": "(?:&quot;|\\")repo:modifyDate(?:&quot;|\\"):(?:&quot;|\\") [0-9
148       // Adaptive image (coreimg) rendition cache-bust timestamp - keep numeric
149       // Matches every coreimg shape: real renditions (coreimg.60.500.jpeg), th
150       // (coreimg.jpeg), and the lazy-load template attribute (coreimg.60.widt
151       { "pattern": "(coreimg(?:\\.\\.[^./]+)*\\.\\.(?:jpe?g|png|gif|webp))/[0-9]{13}/
152
153       // Direct AEMaaCS Author/Publish hosts - always differ per environment, u
```

E.g. ignore Adobe tracking (DOM injections)

Select template [Load](#)

Script Code

[Setup](#) [Browser](#) [Page](#) [Compare](#) [Navigation](#)

Normalizes HTML and headers before comparison to reduce false diffs. ⓘ

```
18 // — HTML Diff —
19 // Normalizes both baseline and current HTML, returns { baseline, current }
20
21 if (value.type === 'html-diff') {
22   var htmlDefaults = tool.variables.compare.html;
23   var htmlCustom = (project.variables.compare || {}).html || {};
24   var htmlConfig = {
25     removeSelectors: htmlDefaults.removeSelectors.concat(htmlCustom.removeSelectors ||
26     removeAttributes: htmlDefaults.removeAttributes.concat(htmlCustom.removeAttributes
27     removeUrls: htmlDefaults.removeUrls.concat(htmlCustom.removeUrls || []),
28     removeContent: htmlDefaults.removeContent.concat(htmlCustom.removeContent || []),
29     replacePatterns: htmlDefaults.replacePatterns.concat(htmlCustom.replacePatterns ||
30     sortClasses: htmlCustom.sortClasses !== undefined ? htmlCustom.sortClasses : htmlD
31     removeClasses: htmlDefaults.removeClasses.concat(htmlCustom.removeClasses || []),
32   };
33
34   var maskDefaults = tool.variables.mask;
35   var maskCustom = project.variables.mask || {};
36   var maskMarkup = maskCustom.markup !== undefined ? maskCustom.markup : maskDefaults.
37   var maskRules = maskDefaults.rules.concat(maskCustom.rules || []);
38
39   function normalizeHtml(html) {
40     var parser = new DOMParser();
41     var doc = parser.parseFromString(html, 'text/html');
42
43     htmlConfig.removeSelectors.forEach(function(sel) {
44       try { doc.querySelectorAll(sel).forEach(function(el) { el.remove(); }); } catch
45     });
46
47     htmlConfig.removeAttributes.forEach(function(attr) {
```

[Test](#) Select template [Load](#)



Configure with code and share to your team

Projects / WKND Site - WPP ES / Synchronize

Choose Provider Configure Connected

Filesystem

Read/write to a local folder.
Handle VCS operations separately.

GitHub

Sync directly to GitHub repository via API.

Git (Any Remote)

Sync to any Git server via HTTPS (Bitbucket, GitLab, Gitea, etc.).

Projects / WKND Site - WPP ES / Synchronize

Choose Provider Configure Connected

Provider	GitHub
Repository	krystian-panek-vmitech/comparator-aem-guides-wknd
Branch	main
Status	Ready
Last checked	a few seconds ago
Pull mode	Always check
Removal policy	Manual only

Push Pull Refresh Disable Disconnect

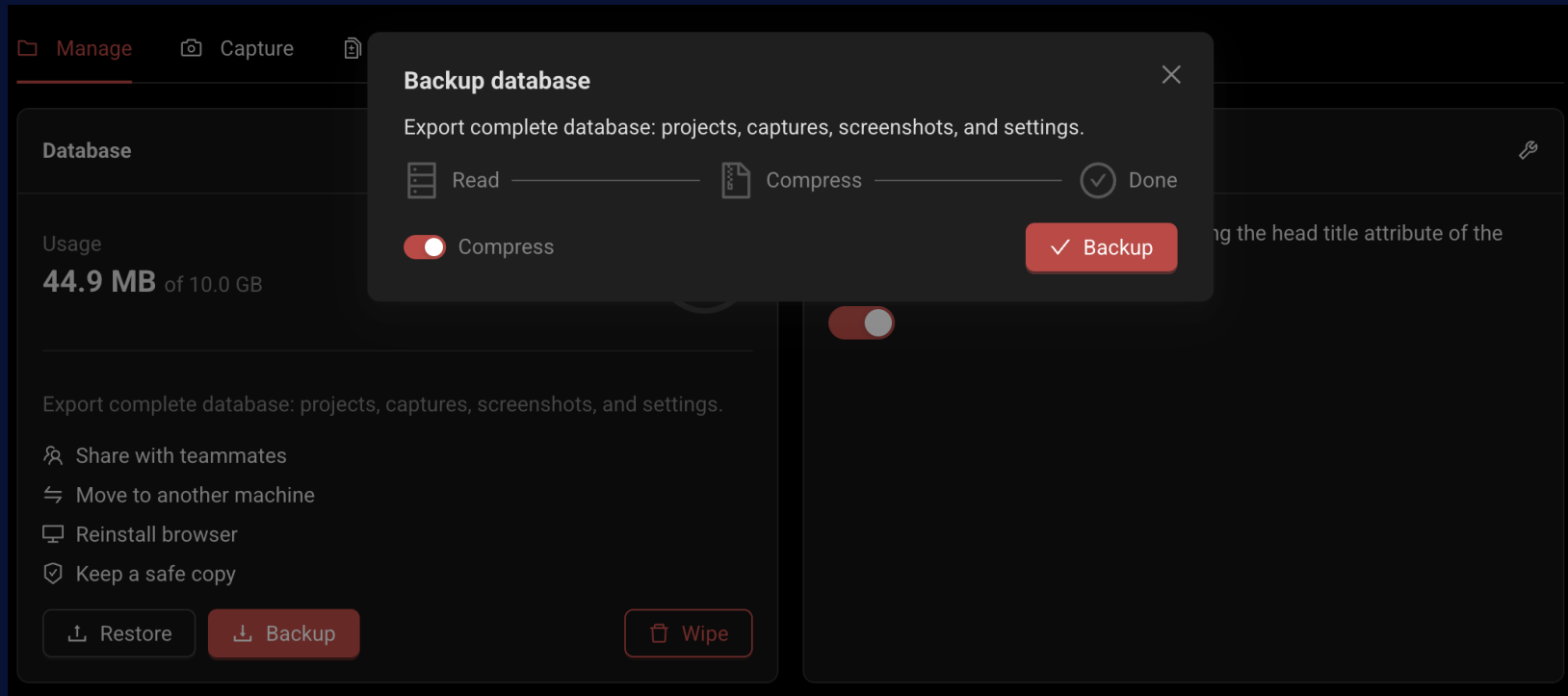
Always check
Every 5 minutes
Every 15 minutes
Every 60 minutes

adapto-dev comparator-aem-guides-wknd / .comparator / projects Go to file Add file

krystian-panek-vmitech chore: Comparator - sync configuration d428487 · 4 minutes ago History

Name	Last commit message	Last commit date
..		
scripts	chore: Comparator - sync configuration	4 minutes ago
project.json	chore: Comparator - sync configuration	yesterday
settings.json	chore: Comparator - sync configuration	yesterday
structure.json	chore: Comparator - sync configuration	yesterday
variables.json5	chore: Comparator - sync configuration	yesterday

Transfer freely with backups



The screenshot displays the adaptTo() application interface. At the top, there are three tabs: 'Manage' (selected), 'Capture', and a document icon. The main content area is titled 'Database' and shows a usage bar indicating '44.9 MB of 10.0 GB'. Below this, there is a list of actions: 'Share with teammates', 'Move to another machine', 'Reinstall browser', and 'Keep a safe copy'. At the bottom of this list are three buttons: 'Restore', 'Backup', and 'Wipe'. A modal dialog titled 'Backup database' is open in the center. It contains the text 'Export complete database: projects, captures, screenshots, and settings.' and a progress bar with three stages: 'Read' (indicated by a document icon), 'Compress' (indicated by a document icon with a checkmark), and 'Done' (indicated by a checkmark icon). Below the progress bar is a toggle switch labeled 'Compress' which is currently turned on. A red button with a checkmark and the text 'Backup' is located at the bottom right of the modal.

Feel supported by built-in help


Dashboard
Manage
Compare
Review
Settings
Help

<

>

1 / 10

¡Bienvenido!

¡Estructura!

¡Captura!

¡Compara!

¡Revisión!

¡Navegación!

¡Automatización!

¡Configuración!

¡Colaboración!

¡Adelante!

¡Bienvenido! — Getting Started

On-demand visual regression testing that runs entirely in your browser. No CI pipelines, no SaaS accounts, no infrastructure to maintain. Follow Elena's journey from first install to full automation.

Elena Navarro is a frontend developer at "Estudio Digital," a Barcelona digital agency. Her biggest client, "Viajes del Sol," is about to launch a full website redesign — new hero banners, restructured navigation, fresh content across three environments. She needs a way to verify that nothing breaks when the new version goes live. She installs Comparador.

The Workflow

Comparador follows a simple four-step cycle. Capture a page, let the extension automatically compare it against the baseline, review the differences, and lock the accepted result as the new baseline. If the capture is identical, it can be auto-accepted without manual review.

Capture

Auto Compare

Review

Baseline

- 📸 Capture** — Full-page screenshot, HTML source, and response headers — all grabbed in one click.
- 🔍 Auto Compare** — After capture, the extension automatically compares against the baseline — pixel diffs, HTML, and headers. Identical results can be auto-accepted. You can also compare any two captures manually.
- ✅ Review** — Accept or reject changes. Accepted captures become the new baseline.
- 🔄 Repeat** — After each deployment, capture again and see exactly what changed.