

# Canonical & Hreflang

[Canonical URLs](#) • [Hreflang alternates](#) • [Luma + Hyvä](#) • [Adobe Commerce](#)

Fixes duplicate-content and international-targeting SEO for Magento 2 / Adobe Commerce: emits one clean `rel="canonical"` per product, category and CMS page (collapsing filtered, sorted, paginated and multi-category URL variants), and `rel="alternate"` hreflang links across store views — theme-agnostic and de-duplicating against Magento's own canonical.

## **Etechflow\_CanonicalHreflang • Module Documentation & User Guide**

Compatible with Magento / Adobe Commerce 2.4.6 – 2.4.9 • PHP 8.1 – 8.4 • Part of the Etechflow SEO Suite

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## 1 • Overview

### 1.1 What the module does

Etechflow Canonical & Hreflang fixes two of the most common technical-SEO problems in Magento: **\*\*duplicate content\*\*** and **\*\*international targeting\*\***. It outputs a single, clean ``rel="canonical"``` link on product, category and CMS pages — collapsing filtered, sorted, paginated and multi-category URL variants down to one authoritative URL — and ``rel="alternate"``` hreflang links that tell Google which store view to serve in each language/region. It is theme-agnostic (Luma + Hyvä) and de-duplicates against Magento's own canonical tag. Part of the Etechflow SEO Suite.

### 1.2 Highlights

- **One clean canonical** per product / category / CMS page — independently switchable per page type.
- **Strips query parameters** (`?filter`, `?sort`, tracking) so variant URLs point at the clean URL.
- **Multi-category de-dup** — a product reachable under several category paths canonicalises to a single, category-free URL.
- **Self-referencing pagination** toggle — page 2+ canonicalises to itself (`?p=N`) or back to page 1.
- **Hreflang** — `rel="alternate"` across active store views with an optional `x-default` and per-store code overrides.
- **De-dupes Magento's native canonical** — never ships two conflicting canonical tags.
- **Theme-agnostic + fail-safe** — injects via PageConfig head assets (works in Luma and Hyvä); any error fails silently and never breaks the page.
- **Licensed** — activation via the eTechFlow portal; fully blocks output when unlicensed.

### 1.3 Compatibility matrix

| Area                     | Supported                                                                      |
|--------------------------|--------------------------------------------------------------------------------|
| Magento / Adobe Commerce | 2.4.6, 2.4.7, 2.4.8, 2.4.9                                                     |
| PHP                      | 8.1, 8.2, 8.3, 8.4                                                             |
| Storefronts              | Luma, Hyvä, Adobe Commerce (injects via PageConfig — no theme template needed) |
| Caching                  | Full Page Cache / Varnish supported (tags are baked into the cached page)      |

## 2 • Architecture

### 2.1 The module

A single, self-contained, **\*\*storefront-only\*\*** module — Etechflow\_CanonicalHreflang (package etechflow/module-canonical-hreflang, namespace Etechflow\CanonicalHreflang). No admin grids, no database tables: it only adds ``<link>`` tags to the storefront ``<head>`` and a configuration screen.

### 2.2 How it injects tags

- **One plugin** — `Plugin/Frontend/HeadLinksPlugin` on `Magento\Framework\View\Result\Page::beforeRenderResult`. It adds the canonical + hreflang links as **PageConfig remote page assets**, so they render in **any theme** (Luma and Hyvä alike) — not via a `.phtml` template.
- **De-dup** — it first removes any existing `canonical` asset, so even when Magento's own canonical is enabled, only **one** canonical tag is emitted.
- **Two resolver services** — `CanonicalResolver` computes the canonical URL; `HreflangResolver` computes the alternate-language URLs.

- **Safe** — it skips AJAX and the master-off state, and the whole plugin is wrapped in try/catch: any failure simply emits nothing and never breaks the page.

← → ↺

DASHBOARD

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SALES

CATALOG

CUSTOMERS

MARKETING

CONTENT

ETECHFLOW BLOG

REPORTS

ETECHFLOW

STORES

Configuration

AI SEO

Meta Templates

Back-in-Stock Notification

Supplier Autoflow

SEO Audit

Image Optimizer

Canonical & Hreflang

Page Speed Optimizer

Next Day Eligibility

Backorder ETA Display

Stores > Config > ETechFlow

Figure 1 — The result in a product page's <head>: one rel="canonical" plus rel="alternate" hreflang links (en-us, fr-fr, x-default).

## 2.3 The single licence chokepoint

`Model/Config::isEnabled()` is gated on `LicenseValidator::isValid()`. The plugin and **both** resolvers check `isEnabled()` first, so an invalid / suspended / expired / wrong-domain licence makes the module emit **nothing** — full-block enforcement at one place.

## 3 • Installation & Setup

### 3.1 Install & enable

Distributed via the private eTechFlow Composer repository; your licence key doubles as the download token. From the Magento root:

```
composer config repositories.etchflow composer
[redacted]/composer
composer config http-basic.[redacted] you@example.com SP-XXXX-XXXX-XXXX-XXXX
composer require etechflow/module-canonical-hreflang
bin/magento module:enable Etechflow_CanonicalHreflang
bin/magento setup:upgrade
bin/magento setup:di:compile          # production mode only
bin/magento cache:flush
```

#### Important

The module ships with its master switch **OFF**. Set Stores → Configuration → ETECHFLOW → Canonical & Hreflang → General → **Enable Module = Yes** (and paste a licence key) before it emits anything.

### 3.2 Where it lives

| Action                    | Path                                                                                             |
|---------------------------|--------------------------------------------------------------------------------------------------|
| Configuration             | Stores → Configuration → ETECHFLOW → Canonical & Hreflang ( <a href="#">etchflow_canonical</a> ) |
| Licence gate / activation | Admin menu: <b>Marketing</b> → Canonical & Hreflang License                                      |

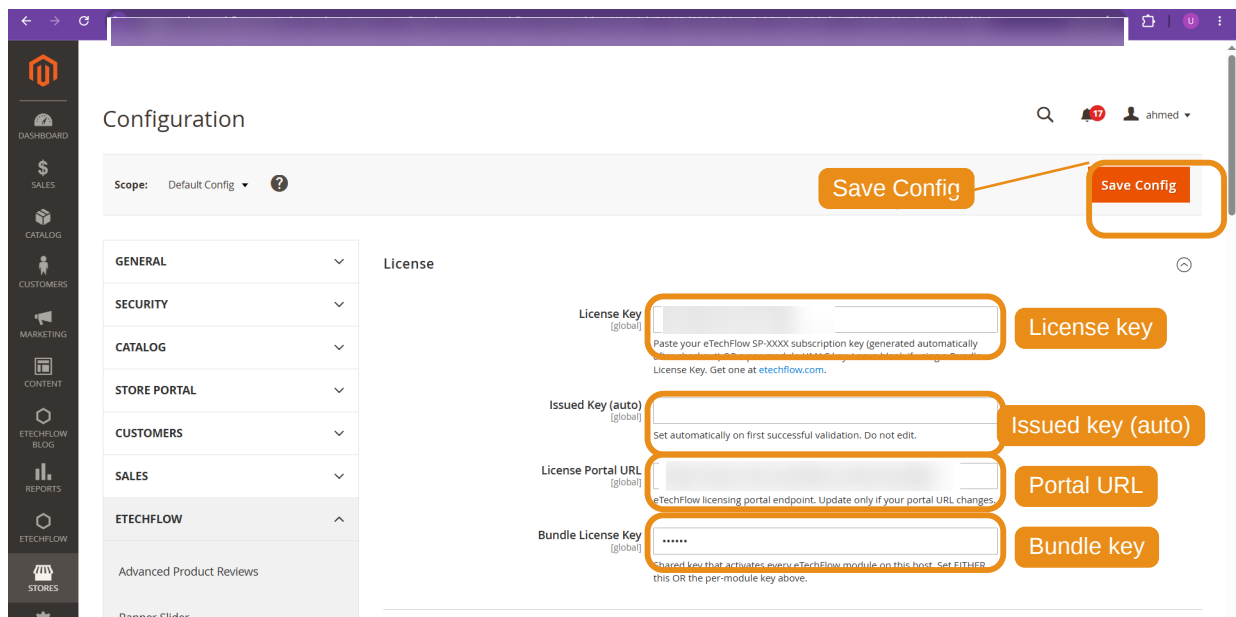


Figure 2 — Configuration → License: paste your SP-XXXX key (or an HMAC / Bundle key); the portal URL is pre-set

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## 4 • Canonical Tags

On product, category and CMS pages the module emits one `rel="canonical"` link. Each page type is independently switchable, and several rules de-duplicate URL variants down to one authoritative URL.

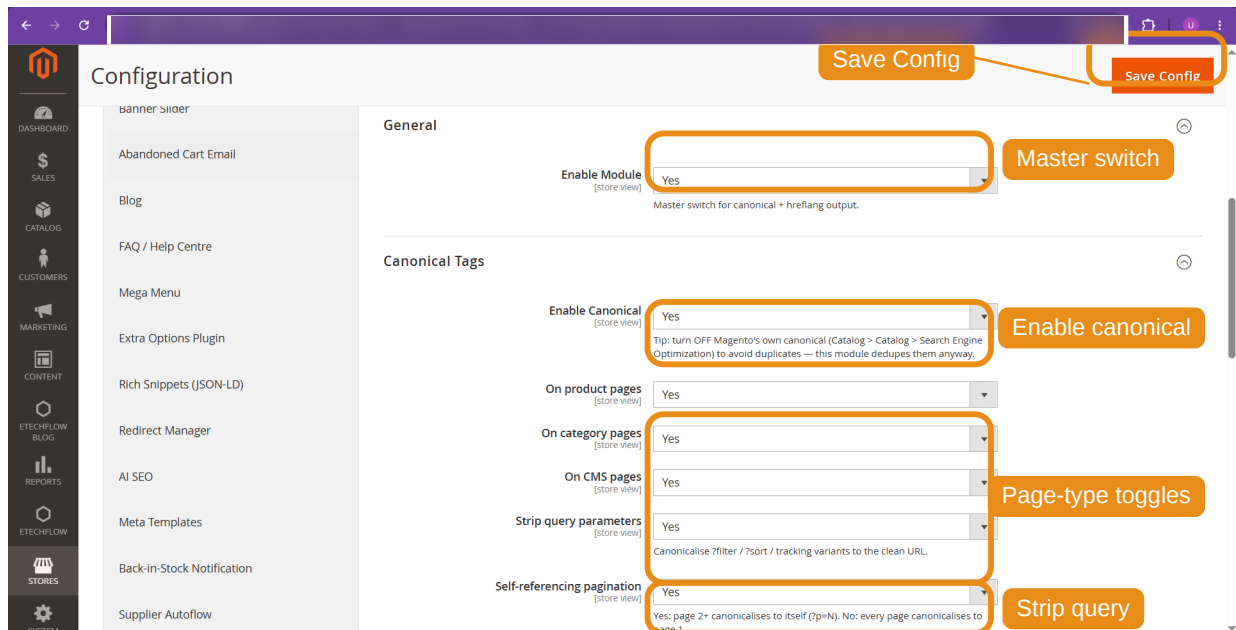


Figure 3 — Canonical Tags settings: enable canonical, per-page-type toggles (product / category / CMS), strip query parameters, and self-referencing pagination.

#### 4.1 Per-page-type + clean URLs

- **Product / Category / CMS** — each can be turned on/off independently. Product canonical → the product's clean URL; category → the category URL; CMS home → the store base URL, other CMS pages → base + identifier.
- **Strip query parameters** (on by default) — `?filter`, `?sort`, tracking params etc. are removed, so filtered / sorted / `?-variant` URLs all resolve to the one clean URL.

```
<link rel="canonical" href="https://[redacted]car-keys.html" />
```

Figure 4 — Strip query: a category URL with query parameters still canonicalises to the clean `.../car-keys.html`.

#### 4.2 Multi-category single canonical

Products are resolved with ``_ignore_category``, so a product reachable under several category paths (e.g. ``/car-keys/...``, ``/sale/...``) collapses to **one** category-free canonical. (On a store that doesn't put categories in product URLs, the URL is already bare — the protection still applies if category paths are turned on.)

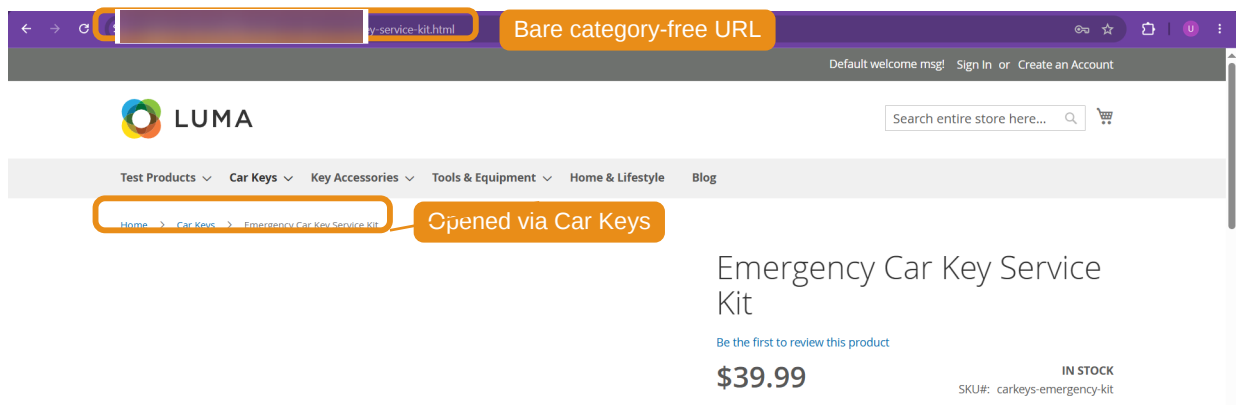


Figure 5 — A product opened via the Car Keys category, with the bare, category-free URL — its canonical is that single clean URL.

#### 4.3 Self-referencing pagination

The **Self-referencing pagination** toggle controls page 2+ of a category:

- **Yes** (default) — page N canonicalises to **itself** (`?p=N`), Google's modern recommendation. Other params are still stripped; only `p` is kept.
- **No** — every page canonicalises back to **page 1** (the bare category URL).

```
33 <link rel="preload" as="font" crossorigin="anonymous" href="https://trontend
34 <link rel="canonical" href="https://trontend
35 <script type="text/x-magento-init" data-magento-init='{"*":{"url_rewrite":{"add_defaults":{"category_url_rewrite":{"p":{"add_defaults":{"canonical":{"p": "p"}}
```

Figure 6 — Self-referencing pagination = Yes: `.../car-keys.html?p=2` canonicalises to itself (keeps `?p=2`, strips everything else).

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### 5 • Hreflang

For multi-language / multi-region stores, the module outputs `rel="alternate"` hreflang links so Google serves the right store view per locale. It iterates every **active store view**, finds the current entity's URL in each store, and labels it with that store's hreflang code.

- **Code source** — each store's hreflang code comes from an admin override (`storeId:code`, e.g. `1:en-gb`) or falls back to that store's Locale (`en_US` → `en-us`).
- **x-default** — set a store view ID to mark as the `hreflang="x-default"` fallback.

- **Only with 2+ store views** — hreflang is meaningless on a single store, so it emits nothing unless there are at least two alternates.
- **Per-entity URLs** — product/category URLs per store come from the `url_rewrite` table; CMS pages from base URL + identifier.

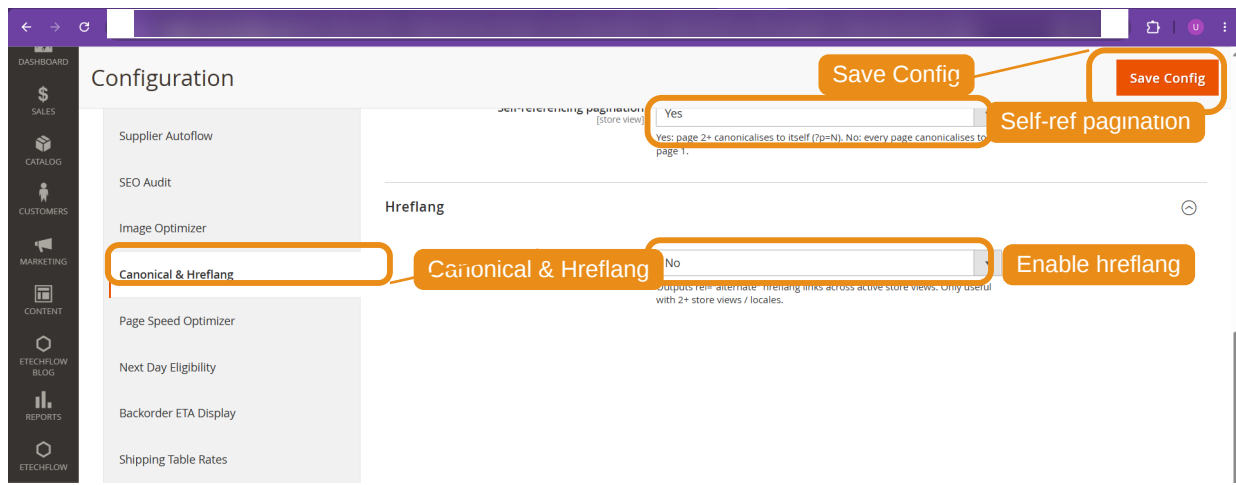


Figure 7 — Hreflang settings (and the left-nav location): enable hreflang, x-default store view ID, and per-store code overrides. Off by default.

#### Note

In Figure 1 you can see the hreflang output for a 2-store setup: **en-us** (default store), **fr-fr** (a French store at `/fr/`), plus **x-default**. Each hreflang href is that store's base URL **plus the page's path in that store** (resolved from the `url_rewrite` table) — e.g. the product becomes `.../fr/classic-test-t-shirt.html`. So for the alternates to resolve, configure real store routing (store-code URLs or a subdomain / domain per language) in production.

## 6 • Configuration Reference

Stores → Configuration → ETECHFLOW → Canonical & Hreflang (``etechflow_canonical``). Every option with its config path:

| Setting (path)                     | Default | Purpose                                                                                                                 |
|------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------|
| <b>general/enabled</b>             | No      | Master switch for all canonical + hreflang output.                                                                      |
| <b>canonical/enabled</b>           | Yes     | Master switch for the canonical tags.                                                                                   |
| <b>canonical/product</b>           | Yes     | Emit canonical on product pages.                                                                                        |
| <b>canonical/category</b>          | Yes     | Emit canonical on category pages.                                                                                       |
| <b>canonical/cms</b>               | Yes     | Emit canonical on CMS pages.                                                                                            |
| <b>canonical/strip_query</b>       | Yes     | Canonicalise <code>?filter/?sort/</code> tracking variants to the clean URL.                                            |
| <b>canonical/paginated_to_self</b> | Yes     | Yes: page 2+ → itself ( <code>?p=N</code> ). No: page 2+ → page 1.                                                      |
| <b>hreflang/enabled</b>            | No      | Output <code>rel="alternate"</code> hreflang across store views (needs 2+).                                             |
| <b>hreflang/x_default_store</b>    | —       | Store view ID to mark as hreflang="x-default" (blank = none).                                                           |
| <b>hreflang/mapping</b>            | —       | Per-store overrides, one line <code>storeId:code</code> (e.g. <code>1:en-gb</code> ); unlisted stores use their Locale. |

|                            |     |                                                                |
|----------------------------|-----|----------------------------------------------------------------|
| license/license_key        | —   | Your SP-XXXX subscription key (or HMAC key).                   |
| license/portal_url         | ... | Licence validation endpoint (leave as shipped).                |
| license/bundle_license_key | —   | Shared key that activates every eTechFlow module on this host. |

#### Tip

Magento has its own canonical setting (Stores → Configuration → Catalog → Catalog → Search Engine Optimization). You can leave it on or off — this module removes the native canonical before adding its own, so you always get exactly **one** tag.

## 7 • Licensing & Activation

Activated with a key from the eTechFlow portal, validated live against ... and bound to your store domain + server IP.

1. Obtain a key (SP-XXXX-XXXX-XXXX-XXXX) from your eTechFlow account.
2. Go to Stores → Configuration → ETECHFLOW → Canonical & Hreflang → License, paste the key, Save.
3. Or use the in-admin gate: Marketing → Canonical & Hreflang License → plan cards → Pay → key issued automatically.

#### Important

Full-block enforcement: when the licence is missing, **suspended**, expired or wrong-domain, the module emits **no** canonical/hreflang tags (the `Config::isEnabled()` chokepoint). The configuration page stays reachable so you can re-license.

#### Note

Suspended-licence behaviour (v1.1.1): your licence **key is kept** (never auto-removed) — the module simply freezes, and a warning banner appears across the admin: `"Canonical & Hreflang — licence suspended. The module is disabled... Contact support@etechflow.com to restore access."` Re-activating the subscription clears the banner and restores output within ~60 s.

## 8 • Troubleshooting / FAQ

### I changed a setting but the page source looks the same.

The head tags are baked into the Full Page Cache (and a front Caddy/Varnish cache). Add a unique query to force a fresh page — e.g. `../classic-test-t-shirt.html?x=1`` — or flush cache. View-source tabs also cache aggressively (hard-reload).

### I see no canonical/hreflang at all.

Check the master switch (general/enabled), the licence (a suspended/invalid licence blocks all output), and the per-type toggle (e.g. canonical/product). On a single store, hreflang correctly emits nothing.

### The hreflang ``/fr/`` link gives a 404.

The hreflang `**tag**` is correct — it points into the French store (its base URL plus the page's path). The 404 just means that store has no real front-end routing yet. In production, configure store-code URLs or a subdomain/domain per language so the alternate resolves; the module emits the right tag regardless.

**Do I need to turn off Magento's own canonical?**

No — you can leave it on. The module removes the native canonical asset before adding its own, so you never get two canonical tags. Turning the native one off is optional.

**A product is in several categories — which canonical wins?**

The category-free product URL. Products resolve with ``_ignore_category``, so all category-path variants share one canonical (no multi-category duplicates).

**Should page 2 of a category canonical to page 1 or itself?**

Your choice — the ``Self-referencing pagination`` toggle. Yes (default) = each page is its own canonical (``?p=N``); No = all pages point to page 1.

**It's a storefront-only module — is there an admin page?**

Only the configuration screen and the licence gate. There are no grids or dashboards; the module's entire job is the ``<head>`` tags.