

Shipping Table Rates

Magento 2 Extension - Licensing, Configuration & Storefront Guide

Flexible per-cart shipping rates with a visual rule builder, live cart simulator, versioned rate sets, conflict detection, native MSI, and Hyva support. Designed as the merchant-friendly alternative to Amasty / MageWorx Shipping Table Rates.

Module version	v1.2.0
Magento compatibility	Open Source 2.4.6 - 2.4.9 / Adobe Commerce 2.4.6 - 2.4.9
PHP	8.1 / 8.2 / 8.3 / 8.4
Document date	2026-06-04

1. What Shipping Table Rates does

Shipping Table Rates (STR) is the calculator that decides what shipping methods + costs a customer sees at checkout. Magento ships with a primitive built-in (one flat rate, OR a courier API like DHL/UPS). STR lets you set up unlimited "if-this-then-that" rules - by destination, cart weight, qty, subtotal, customer group, and product shipping type - and quote the right rate for each cart automatically.

Typical merchant problems STR solves:

- Different rates by region and weight (e.g. UK Standard at £4.99, Worldwide at £14.99 + £2/kg)
- Different rates by customer group (retail vs wholesale)
- Different rates by product type (fragile, oversized, hazmat, cold chain)
- Free shipping over a subtotal threshold
- Per-region postcode bands (Highlands surcharge, etc.)

Four differentiator features

Feature	What it does	Why it matters
Live Cart Simulator	Plug in a fake cart in admin, see exactly which rule wins and the formula breakdown.	Replaces 30 min of fake-checkout debugging with 5 seconds.
Version History + rollback	Every save creates a snapshot; one-click restore to any prior state.	Undo a bad CSV import or accidental rule delete.
Conflict Detection	On save, scans for rules that overlap your new one and warns you.	Surfaces hidden conflicts before customers hit them.
Human-readable CSV	Round-trip export, edit in Excel, re-import with atomic validation.	Bulk-edit hundreds of rules without admin clicks.

How this document is laid out

We walk through STR in the order a merchant actually experiences it:

- Section 2 - No-access state: what you see before the module is licensed
- Section 3 - Getting access: enter or buy a licence key, configure Stripe
- Section 4 - Module navigation: the admin sidebar entries you get after licensing
- Section 5 - Global configuration: the four module-wide toggles
- Section 6 - Creating + editing a shipping method (general, rate limits, multi-type, scope, volumetric)
- Section 7 - Rate rules deep-dive (conditions, formula, display, priority)
- Section 8 - CSV import/export, Live Cart Simulator, Version History
- Section 9 - Storefront result: what the customer sees at checkout

2. No-access state - module is locked

When the module is installed but the licence key is missing, invalid, or the server IP has been revoked from the eTechFlow portal subscription, the module silently disables itself. Storefront customers see nothing from this carrier; admin Method / Rate pages redirect to a gate.

2.1 Module Status banner shows what's wrong

Open Stores -> Configuration -> ETECHFLOW -> Shipping Table Rates. The first row, Module Status, shows a red banner telling you exactly why the module is disabled - in this case "License key invalid for this host".

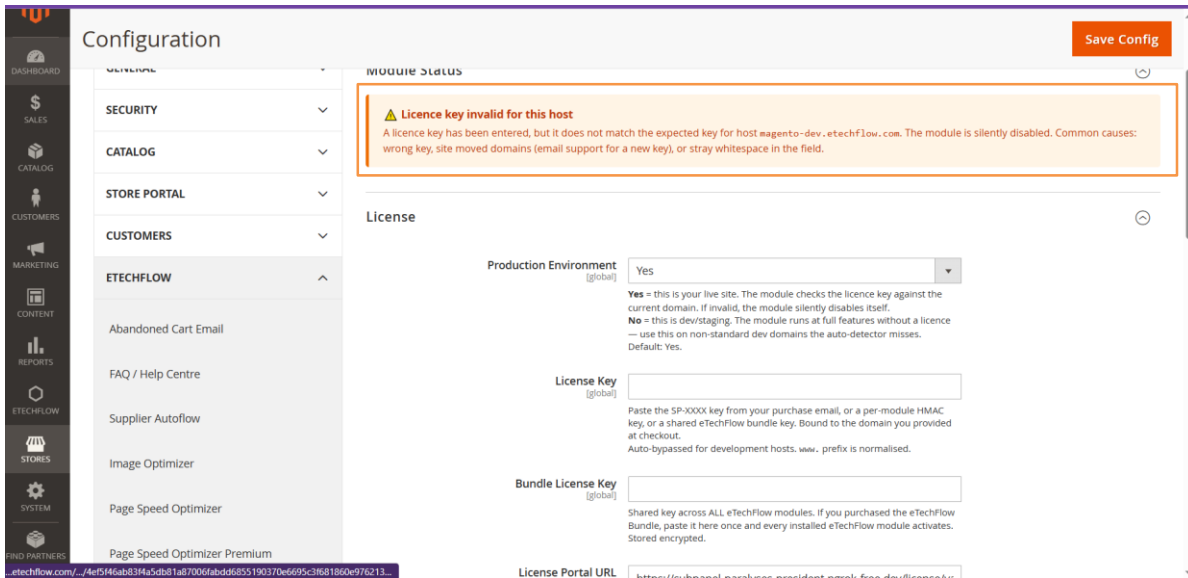


Figure 2.1 - Module Status banner shows the licence is invalid for this host. The module is disabled until a valid key is entered or the portal IP is restored.

Common causes missing licence key, key bound to a different domain, server IP removed from the portal subscription, or Production Environment = Yes on a dev host.

2.2 Admin Methods + Rate pages redirect to the gate

Any attempt to open the Methods grid or edit a rate rule redirects to the License Required gate page. The merchant cannot configure rates until a key is in place.

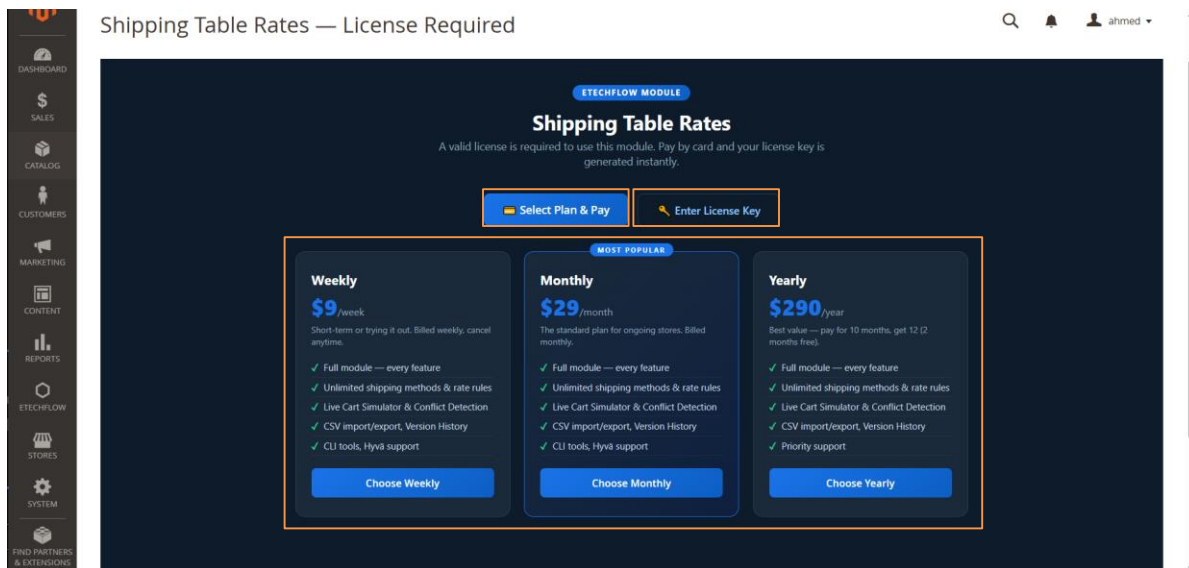


Figure 2.2 - License Required gate. The merchant chooses Weekly, Monthly or Yearly and pays with Stripe, or clicks "Enter License Key" to paste an existing SP-XXXX key.

What stays accessible while locked

- Stores -> Configuration -> ETECHFLOW -> Shipping Table Rates (so you can paste a key)
- /admin/etechflow_str/license/gate (the gate page itself)
- /admin/etechflow_str/license/checkout (Stripe checkout POST handler)
- /admin/etechflow_str/license/activated (Stripe success landing)
- Everything else (Methods grid, Edit Method, Edit Rate, CSV Import, Simulator) - blocked

3. Getting access - licensing

STR has two ways to authorise the module: enter an existing key (HMAC per-module key, eTechFlow Bundle key, or an SP-XXXX subscription key) or buy a fresh subscription via Stripe Checkout.

3.1 Choose Plan & Pay (Stripe Checkout)

On the gate page (Figure 2.2 above) the merchant picks one of three billing periods:

Plan	Price	What's included
Weekly	\$9 / week	Full module - every feature. Billed weekly, cancel anytime.
Monthly (Most Popular)	\$29 / month	Full module - every feature. Standard ongoing plan.
Yearly	\$290 / year	Full module + 2 months free vs monthly. Priority support.

Click Choose -> enter name + email -> Pay with Stripe. The merchant is redirected to Stripe Checkout. Use Stripe test card 4242 4242 4242 4242 with any future expiry and any CVC in test mode. On success, Stripe redirects back to /admin/etechflow_str/license/activated which contacts the eTechFlow portal to mint an SP-XXXX key and save it to Magento config automatically.

Auto-configured the SP-XXXX key is saved to `etechflow_shippingtable rates/license/license_key` on success. Flush cache once and the module unlocks.

3.2 Enter License Key manually

If the merchant already owns a key (purchased earlier, Bundle key, or transferred from another install) the "Enter License Key" button takes them to Stores -> Configuration -> ETECHFLOW -> Shipping Table Rates -> License where they paste it.

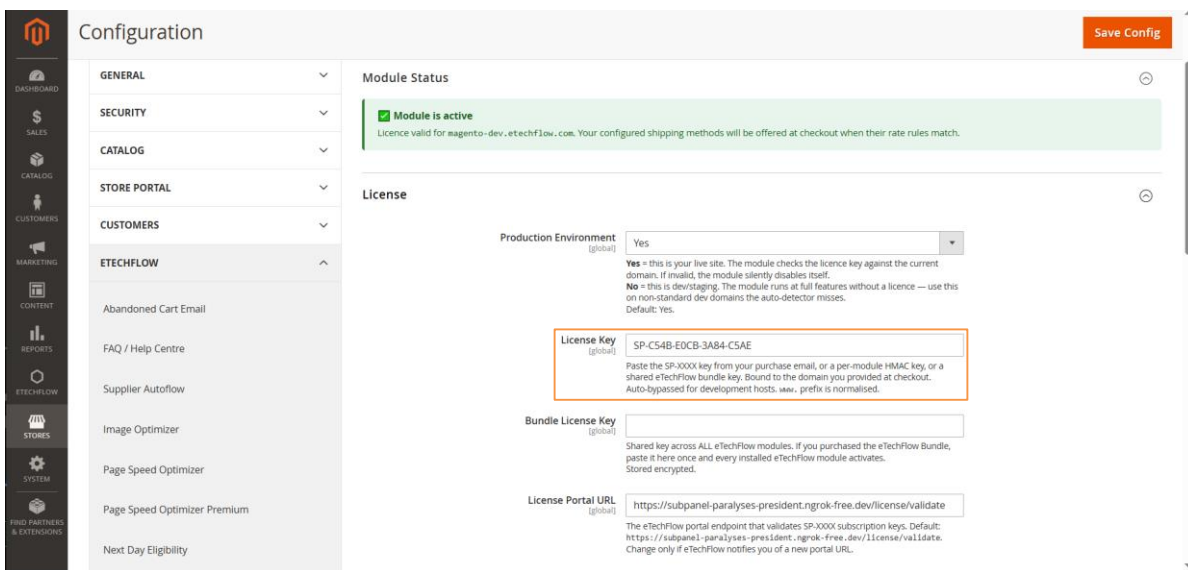


Figure 3.1 - License configuration section. Paste your SP-XXXX, per-module HMAC, or shared Bundle key here.

Field

Purpose

Production Environment	Yes = enforce licence on this host. No = treat as dev / staging, bypass the check (full features without a key).
License Key	Per-domain SP-XXXX subscription key, or per-module HMAC key from your purchase email. Bound to the domain you provided at checkout.
Bundle License Key	Shared key across ALL eTechFlow modules. Paste once and every installed eTechFlow module activates. Stored encrypted.
License Portal URL	Where the module phones home to validate SP-XXXX keys. Default = the eTechFlow portal. Change only if eTechFlow notifies you of a new URL.

3.3 Stripe payment settings

If you want the in-admin "Choose Plan & Pay" flow to actually work, you need to wire up your Stripe API keys under Payment (Stripe). The keys are stored encrypted in Magento config.

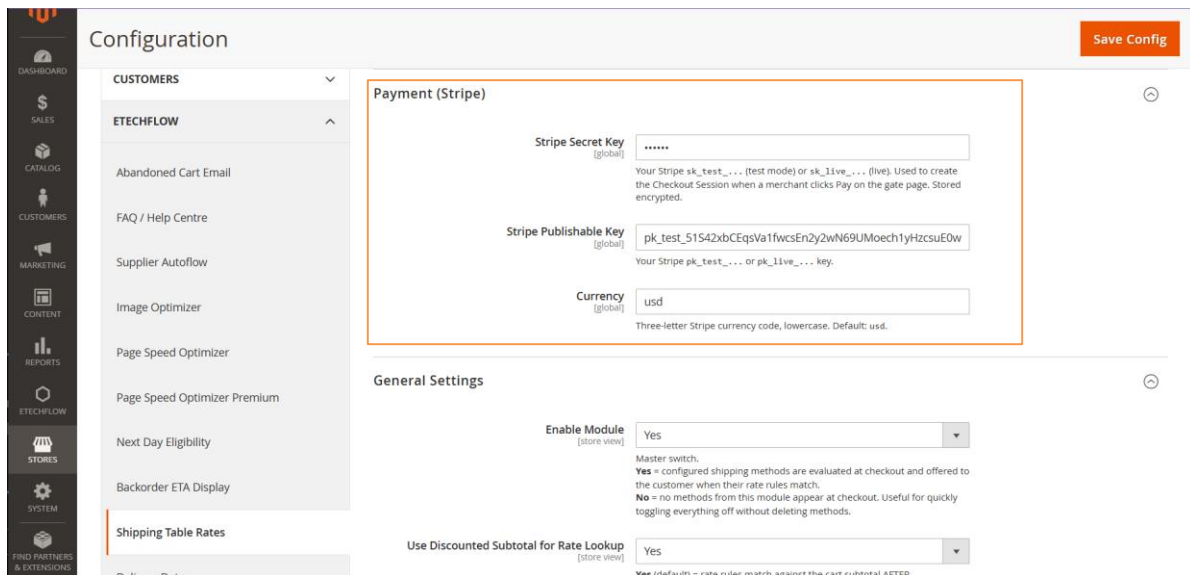


Figure 3.2 - Stripe payment settings. Stripe Secret Key (*sk_test...* or *sk_live...*), Publishable Key (*pk_*), and three-letter Currency code.

Encrypted the Stripe Secret Key field uses Magento's Encrypted backend model. The raw key never appears in `core_config_data` once saved.

3.4 IP-revoke + auto-restore

After activation the portal also tracks which server IPs the licence is bound to. If an admin removes the magento-dev server IP from the portal subscription, the next portal check returns 403 + `ip_blocked:true`. The module then clears the licence key from Magento config and sets an `ip_blocked` flag. When the IP is restored, the next portal check returns 200 `valid:true` and the module auto-restores the key from `issued_key` - no merchant action needed.

Manual clear stays locked if a merchant clears the licence key by hand (without an `ip_blocked` event), the module **STAYS LOCKED**. The auto-restore only fires when `ip_blocked = 1`.

4. Module navigation - after licensing

Once licensed, STR adds three entries under the eTechFlow sidebar:

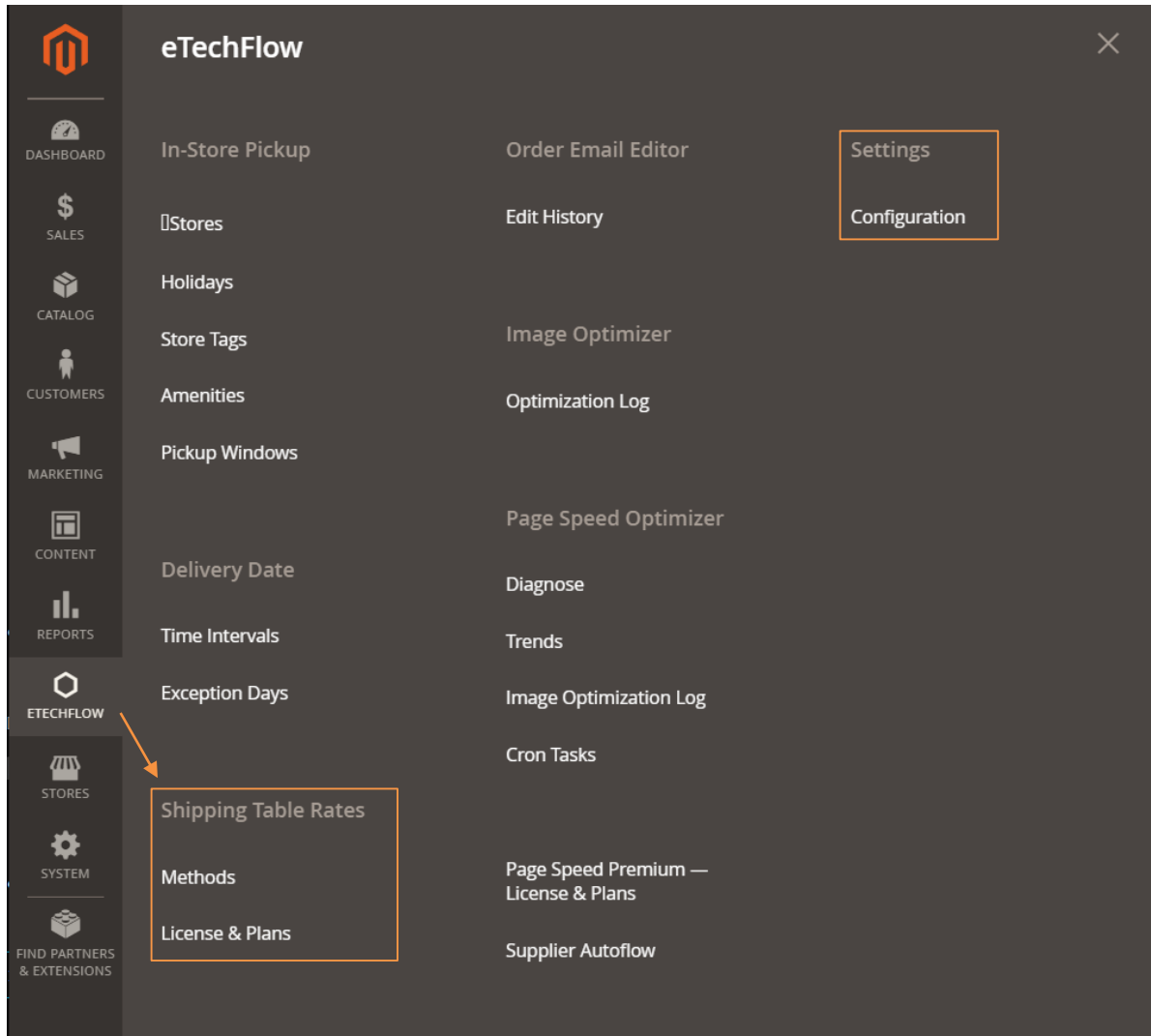


Figure 4.1 - eTechFlow sidebar menu. "Shipping Table Rates" section has Methods (the grid) and License & Plans (the gate).
 "Settings -> Configuration" opens the system config page.

Menu entry	URL	Purpose
eTechFlow -> Shipping Table Rates -> Methods	/admin/etechflow_str/method/index	Grid of all shipping methods. Add / Edit / Delete.
eTechFlow -> Shipping Table Rates -> License & Plans	/admin/etechflow_str/license/gate	License gate page (manage subscription, paste key).
eTechFlow -> Settings -> Configuration	/admin/admin/system_config/edit/section/etechflow_shippingtable rates	System config - license, payment, general toggles.

5. Global module configuration

Stores -> Configuration -> ETECHFLOW -> Shipping Table Rates -> General Settings has four module-wide toggles that change the behaviour of every method in the catalog.

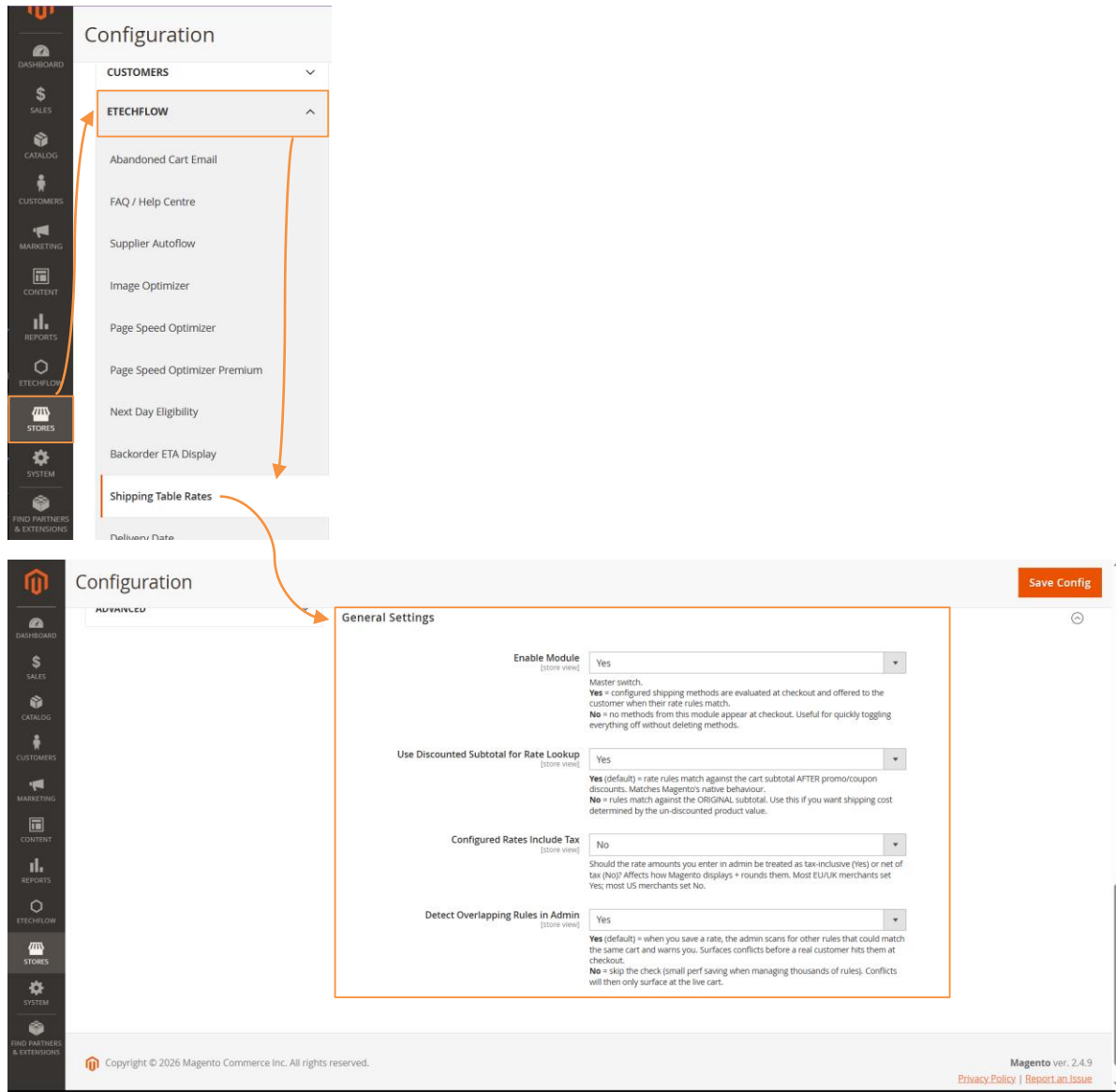


Figure 5.1 - Four global toggles. These apply across every method in STR.

Toggle	Default	Effect
Enable Module	Yes	Master kill-switch. No = no rates from STR appear at checkout. Useful for quickly toggling everything off without deleting methods.
Use Discounted Subtotal for Rate Lookup	Yes	Rate rules match against the cart subtotal AFTER promo / coupon discounts. Set to No to match against the original subtotal.
Configured Rates Include Tax	No	Treats admin-entered rate amounts

		as tax-inclusive (Yes) or net-of-tax (No). Most EU / UK merchants set Yes; most US merchants set No.
Detect Overlapping Rules in Admin	Yes	When you save a rate, scans for other rules that could match the same cart and warns you. Surfaces conflicts before checkout.

6. Shipping methods

6.1 Methods grid

eTechFlow -> Shipping Table Rates -> Methods opens the grid of all configured methods. Each row is one carrier method that can match rates and appear at checkout.

The screenshot shows the 'Shipping Table Rates' interface in the Magento Admin. A sidebar on the left contains navigation icons for Dashboard, Sales, Catalog, Customers, Marketing, Content, Reports, eTechFlow, Stores, System, and Third Parties & Extensions. The main content area has a search bar, a 'Reset Filter' button, and a notification that '1 records found'. Below this is a table with the following data:

ID	Code	Name	Active	Sort Order	Multi-Type	Action
1	uk_standard	UK Standard Shipping	Yes	10	Sum	[Action]

Arrows in the image point from the 'Add New Method' button to the 'Code' column and from the 'Code' column to the 'UK Standard Shipping' row.

Figure 6.1 - Methods grid. One method here ("UK Standard Shipping") with code `uk_standard`, active, sort=10, multi-type aggregation = Sum.

[**Add New Method**] creates a new method - sends you to the General section below.

6.2 General section

Click an existing method or Add New Method to open the editor. The first section is General.

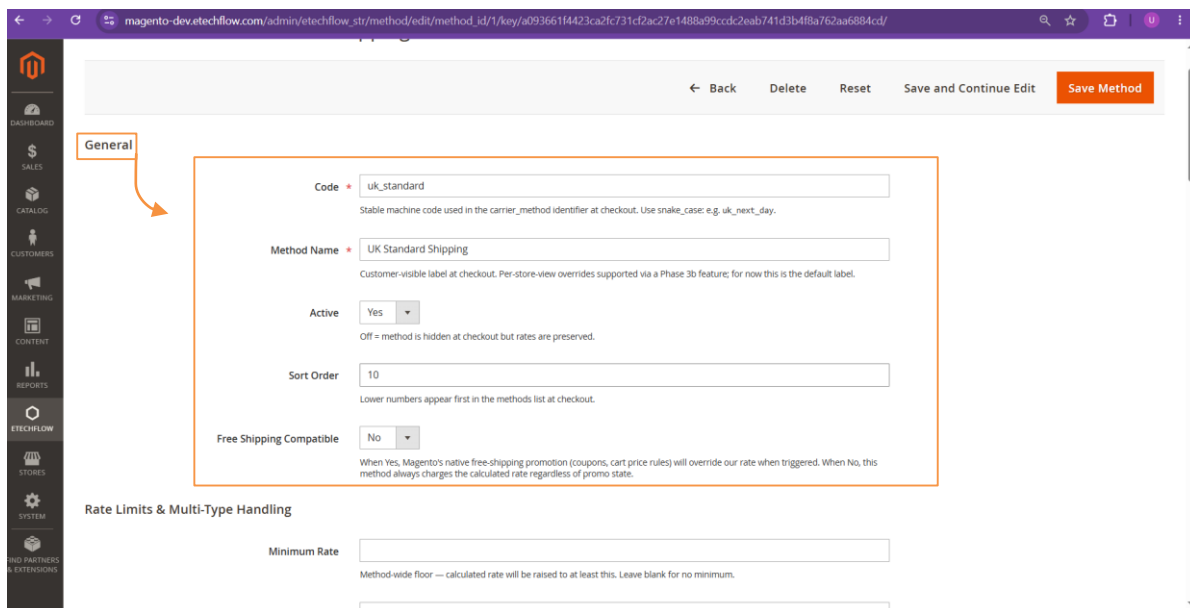


Figure 6.2 - General section. Code (machine slug), Method Name (customer-facing), Active, Sort Order, Free Shipping Compatible.

Field	Purpose
Code	Stable machine identifier used in the carrier_method string at checkout. Use snake_case (e.g. uk_next_day). Never change once a method is live - customer order history references this code.
Method Name	Customer-visible label at checkout.
Active	Off = method is hidden at checkout but its rate rules are preserved in the DB. Useful for seasonally enabling a method.
Sort Order	Lower numbers appear first in the checkout methods list.
Free Shipping Compatible	When Yes, Magento's native free-shipping promotion (coupons, cart price rules) overrides this rate when triggered. When No, this method always charges the calculated rate regardless of promo state.

6.3 Rate Limits & Multi-Type Handling

Method-wide clamps and aggregation. Used when a cart matches multiple rate rules.

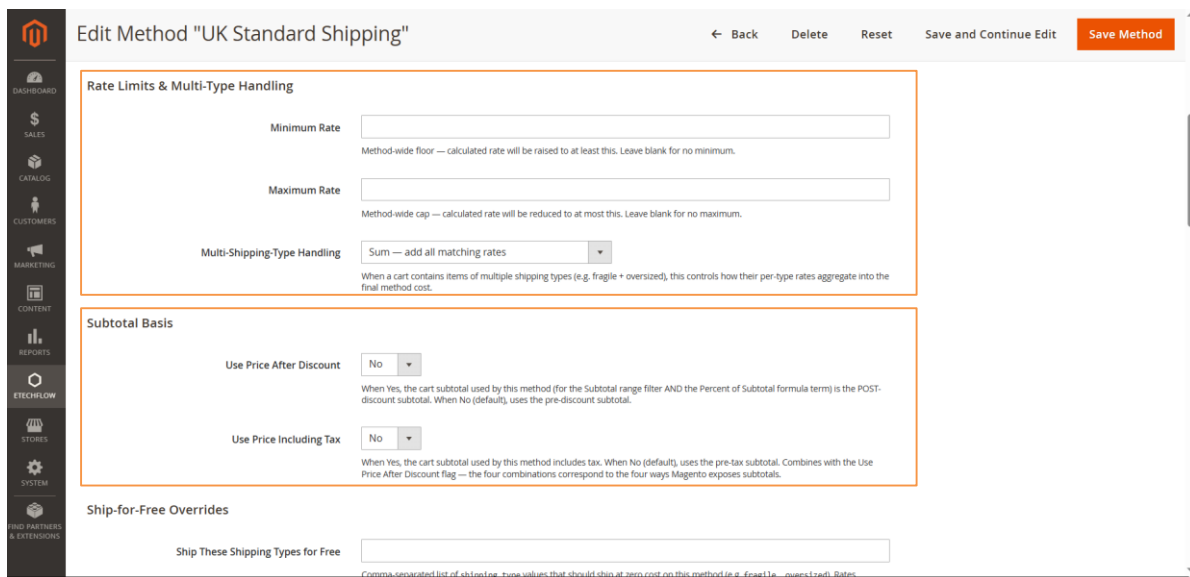


Figure 6.3 - Rate Limits + Multi-Type + Subtotal Basis. Min/max clamps, sum/min/max aggregation, and per-method discount/tax settings.

Field	Purpose
Minimum Rate	Method-wide floor. Calculated rate is raised to at least this. Blank = no minimum.
Maximum Rate	Method-wide cap. Calculated rate is lowered to at most this. Blank = no maximum.
Multi-Shipping-Type Handling	When a cart has mixed product shipping types (e.g. fragile + oversized) and multiple rates match, this controls aggregation: Sum (add all), Min (cheapest wins), or Max (most expensive wins).
Use Price After Discount	Yes = the subtotal used by this method (for Subtotal range filter AND Percent of Subtotal formula term) is the POST-discount subtotal. No (default) = uses pre-discount.
Use Price Including Tax	Yes = subtotal includes tax. No (default) = pre-tax. Combines with Use Price After Discount for all four combinations.

6.4 Ship-for-Free Overrides + Method Scope

Figure 6.4 - Ship-for-Free Overrides + Method Scope + Volumetric/Dimensional Weight.

Field	Purpose
Ship These Shipping Types for Free	Comma-separated list of shipping_type values (e.g. "fragile, oversized") that should ship at zero cost on this method. Rates targeting those types still match but their cost contribution is forced to 0 before multi-type aggregation. Wildcard rates (no shipping_type) are NOT zeroed.
Visible in Store Views	Comma-separated list of Magento store IDs this method should appear in (e.g. "1,2"). Blank = all stores.
Available to Customer Groups	Comma-separated list of customer-group IDs (e.g. "0,1" = Not Logged In + General). Blank = all groups. Per-method scope - per-rate customer-group filters still apply within.

6.5 Volumetric / Dimensional Weight

Couriers bill on whichever is greater: actual weight OR volumetric weight (length x width x height / divisor). Turning Use Volumetric Weight on makes STR's matcher use the larger of the two.

Edit Method "UK Standard Shipping" ← Back Delete Reset Save and Continue Edit Save Method

Volumetric / Dimensional Weight

Use Volumetric Weight No ▼

When Yes, the cart weight used by this method is $\max(\text{actual_weight}, \text{length} \times \text{width} \times \text{height} \div \text{divisor})$ across all cart items — carriers bill on whichever is greater. Requires the product dimension attributes (Length / Width / Height in cm) on the products. Carts without dimension data fall back to actual weight, so it's safe to turn this on before every product has dimensions filled in.

Volumetric Divisor (cm³ per kg)

Common courier values: 5000 (DHL / FedEx Air / Royal Mail Tracked), 6000 (FedEx Ground), 4000 (UPS small parcel premium). Leave blank for the carrier-default 5000. Only consulted when Use Volumetric Weight is Yes.

Rate Rules (4) Add Rate Rule

#	Active	Country	Region	Postcode	Weight	Qty	Subtotal	Type	Rate	Sort	Action
7	✓	GB	*	*	≥ 5	*	*	*	8.88	4	Edit Delete
8	✓	GB	*	*	0 - 3	*	*	*	7.50	50	Edit Delete
9	✓	GB	*	*	*	*	*	*	4.99 +0.30/kg	100	Edit Delete
10	✓	FR	*	*	*	*	*	*	3.99 +0.30/kg	200	Edit Delete

* = "match any value". Each rule matches a cart when EVERY non-wildcard condition is satisfied. Lower sort_order wins when multiple rules match.

Import / Export Rates (CSV) 🔄

Upload a CSV of rate rules. The column order in the template matches the export — round-trips cleanly. Each row is validated before any are saved; errors are reported per-row.

CSV File +
 No file chosen

Figure 6.5 - Volumetric weight settings + the Rate Rules table starts below. Common divisors: 5000 (DHL/FedEx Air/Royal Mail Tracked), 6000 (FedEx Ground), 4000 (UPS small parcel premium).

Safe to enable early carts without dimension data fall back to actual weight. You can turn this on before every product has L/W/H filled in.

7. Rate rules - the heart of STR

Each method holds one or more rate rules. A rule has three parts: CONDITIONS (when this rule matches), FORMULA (how much it costs), and DISPLAY (priority + label).

7.1 Cart Conditions - destination

The screenshot shows the 'Edit Rate Rule #7' interface. The main content area is titled 'Cart Conditions (leave blank to match any value)'. It contains several input fields with associated instructions:

- Country:** A dropdown menu currently showing 'United Kingdom'. Below it, the instruction reads: 'Leave as "(any)" to apply this rule regardless of destination country.'
- Region / State:** A text input field. Below it, the instruction reads: 'State code (e.g. CA, NY) or full region name. Case-insensitive. Blank = any.'
- City:** A text input field. Below it, the instruction reads: 'Exact city name; case-insensitive. Blank = any.'
- Postcode From:** A text input field. Below it, the instruction reads: 'Alphanumeric — UK / Canada / Netherlands codes supported. Spaces ignored on compare. Blank = no lower bound.'
- Postcode To:** A text input field. Below it, the instruction reads: 'Inclusive upper bound for the postcode range. Set To equal to From for a single postcode.'
- Cart Weight From:** A text input field containing the value '5.0000'. Below it, the instruction reads: 'Inclusive minimum, in store weight unit (kg or lb).'
- Cart Weight To:** A text input field. Below it, the instruction reads: 'Inclusive maximum.'

At the top right of the interface, there are navigation buttons: 'Back', 'Delete', 'Reset', 'Save and Continue Edit', and a prominent orange 'Save Rate Rule' button.

Figure 7.1 - Destination conditions. Country, Region/State, City, Postcode From/To, then Cart Weight starts at the bottom.

Field	Purpose
Country	Two-letter ISO code OR "(any)" for all destinations.
Region / State	State code (CA, NY, ...) or full region name. Case-insensitive. Blank = any.
City	Exact city name; case-insensitive. Blank = any.
Postcode From / To	Alphanumeric range (UK / Canada / Netherlands codes work). Spaces ignored on compare. Same-prefix ordering holds (SW1A1AA < SW1A1AB).

7.2 Cart Conditions - quantity, weight, subtotal, group, type

The screenshot shows the 'Edit Rate Rule #7' interface. At the top, there are navigation buttons: 'Back', 'Delete', 'Reset', 'Save and Continue Edit', and a prominent 'Save Rate Rule' button. The main form contains several input fields with descriptive text below them:

- Cart Weight From:** 5.0000. Inclusive minimum, in store weight unit (kg or lb).
- Cart Weight To:** (empty). Inclusive maximum.
- Item Qty From:** (empty). Total cart qty across all items.
- Item Qty To:** (empty).
- Subtotal From:** (empty). In store currency. The "use discounted price" setting determines whether this matches pre- or post-coupon.
- Subtotal To:** (empty).
- Customer Group IDs:** (empty). Comma-separated group IDs (e.g. 1, 3, 5). Blank = any group.
- Shipping Type:** (empty). Value of the product shipping_type attribute (e.g. fragile, oversized). Blank = any.

A red rectangular box highlights the 'Item Qty From', 'Item Qty To', 'Subtotal From', 'Subtotal To', 'Customer Group IDs', and 'Shipping Type' fields and their descriptions.

Figure 7.2 - Cart-size + audience conditions. Weight range, qty range, subtotal range, customer group IDs, product shipping_type.

Field	Purpose
Cart Weight From / To	Inclusive range in the store's weight unit (kg or lb).
Item Qty From / To	Total cart qty across all items.
Subtotal From / To	In store currency. Use Discounted Price method-level flag controls pre- vs post-coupon.
Customer Group IDs	Comma-separated group IDs (e.g. "1,3,5"). Blank = any group.
Shipping Type	Value of the product shipping_type attribute (e.g. fragile, oversized). Blank = any.

7.3 Rate Formula

All four components are added together. The final cost is then clamped by the method-level Min/Max rate.

Edit Rate Rule #7 ← Back Delete Reset Save and Continue Edit **Save Rate Rule**

Rate Formula (all components added; final cost clamped by method min/max)

Base Rate
Flat charge added once per cart that matches this rule.

Per-Product Rate
Multiplied by total cart qty.

Per-Unit-of-Weight Rate
Multiplied by total cart weight (kg or store unit).

Percent of Subtotal (%)
e.g. 5 means 5%. Applied to the cart subtotal.

Weight Unit Conversion
Cart weight is divided by this value before the Per-Unit-of-Weight Rate is applied. Leave at 1 for no conversion. Enter 2.2046 to convert pounds to kilograms (10 lb cart + 2.2046 = 4.54 kg billed). Enter 0.4536 to convert kilograms to pounds.

Display & Priority

Estimated Delivery (days)
Integer days. Used for the legacy "X days" suffix when the method name does not include a (day) placeholder, and to

Figure 7.3 - Rate Formula. $Base + Per-Product * qty + Per-Kg * weight + Percent * subtotal / 100$. Plus Weight Unit Conversion for lb \leftrightarrow kg.

Formula:

$$final = base + (per_product \times qty) + (per_kg \times weight) + (percent \times subtotal / 100)$$

$$final = clamp(final, method.min_rate, method.max_rate)$$

Field	Purpose
Base Rate	Flat charge added once per cart that matches this rule.
Per-Product Rate	Multiplied by total cart qty.
Per-Unit-of-Weight Rate	Multiplied by total cart weight (kg or store unit).
Percent of Subtotal (%)	e.g. 5 means 5%. Applied to the cart subtotal.
Weight Unit Conversion	Cart weight is DIVIDED by this before per-kg is applied. 1.0 = no conversion. 2.2046 = pounds-to-kg. 0.4536 = kg-to-pounds.

7.4 Display & Priority

Edit Rate Rule #7 ← Back Delete Reset Save and Continue Edit **Save Rate Rule**

Display & Priority

Estimated Delivery (days)
 Integer days. Used for the legacy "X days" suffix when the method name does not include a {day} placeholder, and to pick the slowest winner for {day} substitution in mixed-type carts.

Delivery Label ({day} value)
 Optional free-text label that replaces the {day} placeholder in the method name. Example: to Canada, 5 working days. Overrides the integer days for display. Leave blank to use the integer above.

Delivery Name ({name} value)
 Optional free-text label that replaces the {name} placeholder in the method name. Example: a method named Royal Mail {name} with this set to Tracked 24 displays at checkout as Royal Mail Tracked 24.

Checkout Comment
 Optional explanatory text displayed under the method at checkout. Safe HTML allowed (b, i, u).

Priority
 Lower wins when multiple rules match the same cart. Use distinct values to avoid non-deterministic picks.

Active

Off = this rule is ignored at checkout (kept in the table for future use).

Figure 7.4 - Display & Priority. Delivery-days label, custom label/name overrides, checkout comment, sort order priority, active flag.

Field	Purpose
Estimated Delivery (days)	Integer days. Used as the legacy "X days" suffix when the method name doesn't include a {day} placeholder, and to pick the slowest winner for {day} substitution in mixed-type carts.
Delivery Label ({day} value)	Optional free-text label that replaces {day} in the method name. Example: a method named "UK Royal Mail {day}" with this set to "5 working days" displays as "UK Royal Mail 5 working days".
Delivery Name ({name} value)	Optional free-text label that replaces {name} in the method name. Example: "Royal Mail {name}" with this set to "Tracked 24" displays as "Royal Mail Tracked 24".
Checkout Comment	Optional explanatory text displayed under the method at checkout. Safe HTML allowed (b, i, u).
Priority	Lower wins when multiple rules match the same cart. Use distinct values to avoid non-deterministic picks.
Active	Off = this rule is ignored at checkout (kept in the table for future use).

8. Bulk editing + debug tools

8.1 CSV Import / Export

Below the Rate Rules table you have a CSV round-trip section. Export the current rates to a spreadsheet, edit in Excel / Google Sheets / Numbers, re-upload. Each row is validated before any are saved - errors are reported per-row.

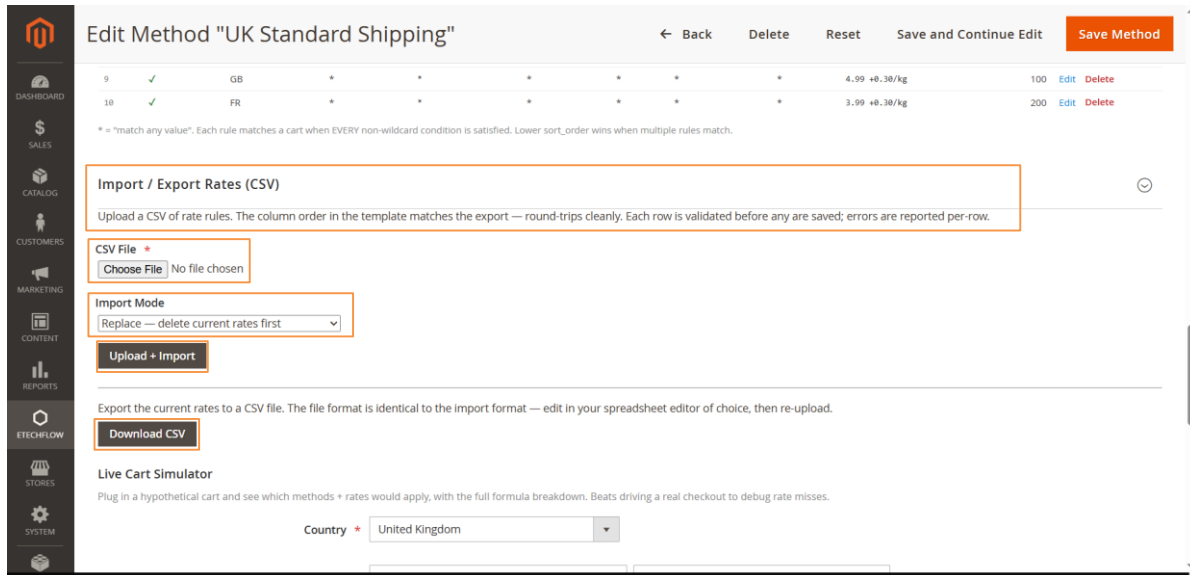


Figure 8.1 - CSV Import / Export panel. Choose File + Import Mode (Replace or Append) + Upload + Import / Download CSV.

Action	Effect
Download CSV	Exports all current rate rules with human-readable column names (country, weight_from, rate_base, ...). Round-trips cleanly through Upload + Import.
Upload + Import (Replace)	Deletes all current rates for this method first, then imports the CSV rows.
Upload + Import (Append)	Adds the CSV rows to the existing rates.

Atomic if ANY row fails validation, the whole import is rejected and no rows are written. You get a per-row error report listing what to fix.

8.2 Live Cart Simulator

Plug in a fake cart and see exactly which method wins + the formula breakdown - without driving a real checkout. Headline feature of STR.

Edit Method "UK Standard Shipping"

← Back Delete Reset Save and Continue Edit **Save Method**

Live Cart Simulator
 Plug in a hypothetical cart and see which methods + rates would apply, with the full formula breakdown. Beats driving a real checkout to debug rate misses.

Country: United Kingdom

Region / Postcode: Region / State Postcode

Cart Totals: 1.0 1 50.00

Customer Group: Guest (Not logged in)

Shipping Types in Cart: e.g. fragile,standard (comma-separated; leave empty if none)

Simulate This Cart

Version History
 Every method save and CSV import creates a snapshot you can restore from. The current state is auto-snapshotted before each rollback, so the rollback itself is reversible.

When	Label	By	Action
2026-06-04 18:39:20	Pre-CSV-import (replace)	ahmed	Restore
2026-06-04 18:11:22	Pre-add rate snapshot	ahmed	Restore
2026-06-04 18:06:39	Pre-rollback auto-snapshot 2026-06-04 10:06:39	ahmed	Restore
2026-06-04 18:05:23	Pre-rollback auto-snapshot 2026-06-04 10:05:23	ahmed	Restore
2026-06-04 09:59:39	Pre-edit rate snapshot	ahmed	Restore
2026-06-04 09:48:37	Pre-add rate snapshot	ahmed	Restore

Figure 8.2 - Live Cart Simulator + Version History panels below the Rate Rules table.

Simulator inputs:

- Country (dropdown)
- Region / Postcode (text)
- Cart Totals: Weight (kg) / Qty / Subtotal
- Customer Group (dropdown)
- Shipping Types in Cart (e.g. fragile,standard)

Output shows: which methods MATCHED vs NO MATCH, total cost (after min/max clamp), and per-rate detail with the formula breakdown ("base=4.99 + per_kg=0.30*2.0 = 5.59").

8.3 Version History + one-click restore

Every method save and CSV import creates a snapshot. The Version History panel below the Simulator lists the last 25 snapshots with a Restore button next to each.

Example label rows:

- Pre-CSV-import (replace) - taken before a CSV upload
- Pre-add rate snapshot - taken before adding a new rate rule
- Pre-rollback auto-snapshot - taken before YOU click Restore, so the rollback itself is reversible
- Pre-edit rate snapshot - taken before editing an existing rate

Reversible rollback even the Restore button takes a fresh snapshot first, so you can always go back to before the rollback.

8.4 Magento's built-in Flat Rate — coexistence + smart fallback

Magento ships with a built-in "Flat Rate" carrier enabled by default (\$5 per cart, every cart, regardless of weight or country). If left enabled, this competes with STR at checkout - customers see BOTH a \$5 Flat Rate row AND STR's calculated rate, and almost always pick the cheaper \$5 row. That makes STR's rule engine effectively useless.

STR ships with a three-way "Flat Rate Behavior" config to manage this collision.

Behavior	What happens at checkout	When to use
Smart fallback (default)	Flat Rate is SHOWN only when STR has no matching rule for the cart. Otherwise Flat Rate is hidden and only STR's rates appear.	Most merchants. STR wins where it has an answer; Flat Rate covers customers in unsupported countries / weight ranges so they can still check out.
Never show	Flat Rate is HIDDEN whenever STR is enabled, even if STR has no matching rule for the cart.	When you want STR to be the only carrier and prefer "no shipping available" over a \$5 fallback. Use with caution - customers in unsupported countries will be unable to check out.
Always show	Flat Rate runs alongside STR as Magento normally would. Customer sees both.	Original Magento behavior. Rarely useful with STR installed unless you specifically want a cheap fallback alongside calculated rates.

Set via Stores -> Configuration -> ETECHFLOW -> Shipping Table Rates -> General Settings -> Flat Rate Behavior.

Methods page advisory banner

When Magento's Flat Rate carrier is enabled, the Methods grid shows a yellow advisory banner with a one-click "Disable Flat Rate" button. This is the simplest way to make sure STR is the only carrier active. The merchant can always re-enable Flat Rate later under Stores -> Configuration -> Sales -> Shipping Methods -> Flat Rate.

Default = Smart Fallback *fresh STR installs use smart-fallback mode. Most merchants never need to change it.*

9. Storefront result - what the customer sees

After your method is set up with at least one matching rate rule and the licence is valid, the rate appears at storefront checkout. Magento queries STR's carrier when the customer enters a delivery address, the matcher picks the winning rule for that cart, the calculator returns the final cost, and Magento displays it in the Shipping Methods list.

The screenshot shows the Magento storefront checkout process. At the top, there are two progress indicators: 'Shipping' (checked) and 'Review & Payments' (2). Below this is the 'Shipping Address' section, which contains two columns of address information. The first column shows a default address: 'ahmed mohsin, 123 eest st, austria, Federated States Of Micronesia TX 78701, United States, +15125550100'. The second column shows a selected address: 'ahmed mohsin, 123 eest st, austria, Federated States Of Micronesia TX 78701, United States, +15125550100'. To the right of the selected address is a box for a test address: 'test test, 12 test, London, SW1A 1AA, United Kingdom, 0111111111, Edit'. Below the address section is a yellow warning box: 'Next day delivery unavailable. One or more items in your cart is not eligible for next day delivery. Standard shipping options are available.' To the right is the 'Order Summary' section, which shows '3 Items in Cart': 'Classic Test T-Shirt, Qty: 2, \$59.98' and 'Developer Coffee Mug, Qty: 1, \$14.99'. Below the address section is the 'Shipping Methods' section, which shows a single method: '\$8.88 UK Standard Shipping Shipping'. A 'Next' button is located at the bottom right of the shipping methods section.

Figure 9.1 - Storefront checkout with a UK delivery address selected (London, SW1A 1AA). UK Standard Shipping appears at \$8.88 - the result of the weight-tier rate rule matching this cart.

How Magento gets the cart weight

Every product in Magento has a weight attribute. The cart's total shipping weight = $\sum(\text{product.weight} \times \text{cart_qty})$ across every line item. So 3 x phone (0.2 kg) + 1 x laptop (2.5 kg) = 3.1 kg total cart weight. That's what STR's rate rules match against.

Demo products often weight=0 if a product's weight is 0 in the catalog (default for new products), the cart weight stays 0 regardless of qty - and weight-range rules won't match. Set the weight in Catalog -> Products -> Edit -> Weight before testing.

When does Magento ask STR for a rate?

- Customer adds a product to cart
- Customer goes to checkout and enters / picks a delivery address
- Magento iterates all enabled carriers, including STR
- STR's Carrier::collectRates() receives a RateRequest with country, postcode, region, package_weight, package_qty, package_value
- Config::isEnabled() checks LicenseValidator first (so an unlicensed install silently returns no rates)
- RateMatcher finds the winning rate rule (priority + condition match)
- RateCalculator computes the final cost (formula + min/max clamp)
- Magento renders the method in the Shipping Methods list

Appendix A - CLI reference

Three CLI commands ship with STR for debugging + ops.

Command	Purpose
<code>bin/magento etechflow:str:simulate</code>	Same as the admin Live Cart Simulator, but for the command line. Args: --country, --postcode, --region, --weight, --qty, --subtotal, --customer-group, --shipping-types. Exit code 0 = match, 1 = no match. Useful in CI / automated tests.
<code>bin/magento etechflow:str:verify</code>	Sanity-check every method and rate rule in the catalog - reports configurations that would never match a real cart, conflicting overlaps, missing weight/postcode bounds, etc.
<code>bin/magento etechflow:str:perf</code>	Quick benchmark of the matcher + calculator across N synthetic carts. Useful when planning whether to enable Detect Overlapping Rules in Admin on a large method table.

Appendix B - Common pitfalls

Symptom	Likely cause	Fix
No rates at storefront	Cart weight = 0 (product has weight=0 in catalog)	Set product weight under Catalog -> Products -> Edit.
Wrong rate wins for a cart	Two overlapping rules with same sort_order	Open the Simulator, see which rule_id won, give them distinct priorities.
UK rate doesn't match "SW1A 1AA" postcode	Postcode From / To uses spaces; admin normalises but check casing	Leave spaces out of the rule's postcode range, or just use "SW1A" - "SW9Z".
Method is hidden after IP change	Portal returned ip_blocked:true and cleared the licence key	Restore the IP in the portal; module auto-restores within 60 seconds.
Module locked despite key in config	Production Environment = Yes on a dev host that's not auto-detected	Set Production Environment = No on dev / staging.