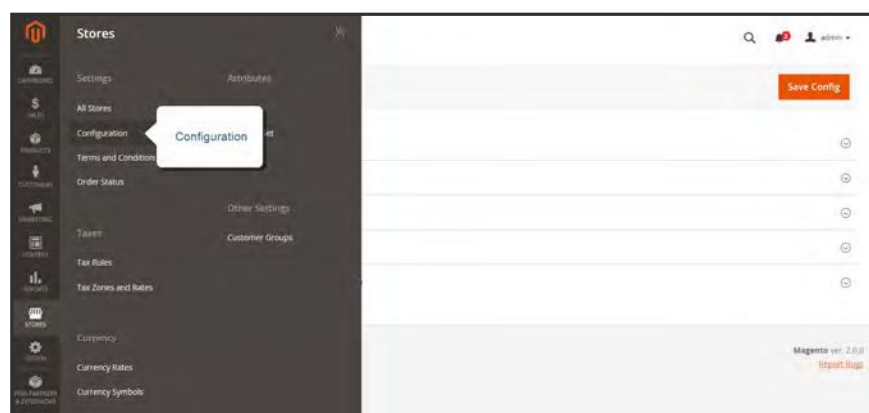




## CHAPTER 73:

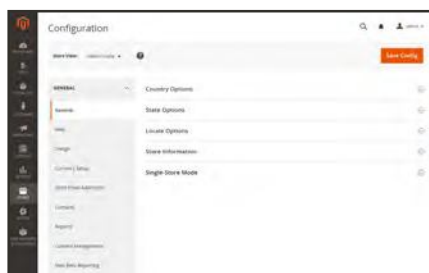
# Configuration

The online Configuration Reference has field descriptions for every configuration setting in Magento Commerce. To learn how to apply configuration settings to specific store views, see: [Scope](#).



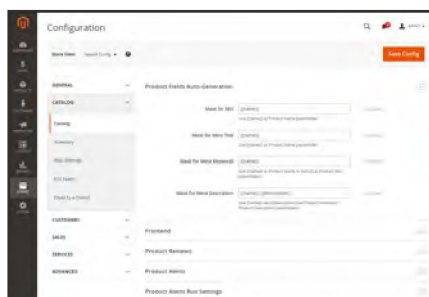
*Configuration*

## Configuration Tabs



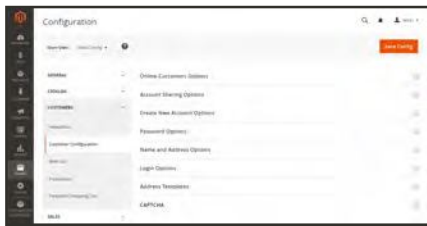
### General

Includes basic configuration settings for the store, URLs, theme, currency, email addresses, store contacts, editor, and dashboard reports.



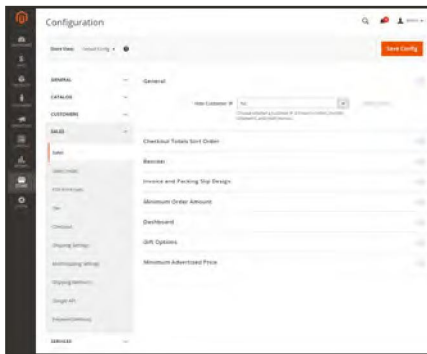
### Catalog

Determines product and inventory settings, controls sitemap and RSS feed generation, and specifies the email template that is used to share products with friends.



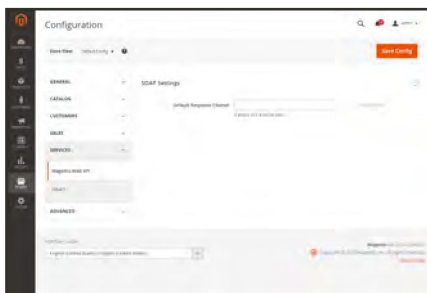
## Customers

Establishes basic customer account and login options, newsletter settings, ,wish list, and the format of auto-generated coupon codes.



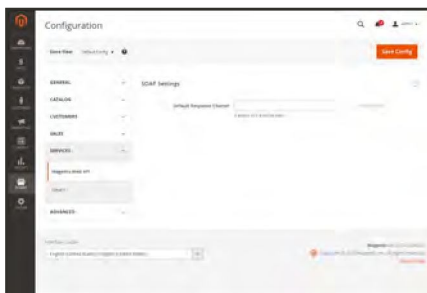
## Sales

Determines checkout and tax settings, payment and shipping options, sales email and PDF print-outs, and Google API settings.



## Services

Configures Magento API settings, including SOAP and OAuth.



## Advanced

Determines default Admin settings, various system configuration settings, advanced module controls, and developer tools.



## CHAPTER 74:

# Taxes

In this section of the guide, you will learn how to set up taxes according to the requirements of your locale. You can set up tax classes for products and customer groups, and create tax rules that combine product and customer classes, tax zones, and rates. In addition, you'll learn more advanced topics such as setting up fixed product taxes, compound taxes, and how to display consistent prices across international borders. If you are required to collect a value-added tax, you will learn how to set up your store to automatically calculate the appropriate amount with validation.

Magento provides a variety of options to define taxes. Tax classes are used to define “tax rules.” Tax rules are a combination of a Product Class, a Customer Class and a Tax Zone and Rate. Magento also supports the calculation of Value-Added Tax (VAT) for business-to-business transactions in the European Union.

## General Tax Settings


The following instructions take you through the basic tax configuration for your Magento installation. Before setting up your taxes, make sure that you are familiar with the tax requirements of your locale. Then, complete the tax configuration according to your requirements.

Admin permissions can be set to restrict access to tax resources, based on the business “need to know.” To create an Admin role with access to tax settings, choose both the Sales/Tax and System/Tax resources. If setting up a website for a region that differs from your default shipping point of origin, you must also allow access to the System/Shipping resources for the role. The shipping settings determine the store tax rate that is used for catalog prices.

### To configure the general tax settings:

1. On the Admin sidebar, choose **Stores**. Then under Settings, choose **Configuration**.
2. For a multisite configuration, set **Store View** to the website and store that is the target of the configuration.
3. Complete the following configuration settings. If necessary, clear the **Use System value** checkbox of any settings that are grayed out.

### Tax Classes

1. In the panel on the left under **Sales**, choose **Tax**.
2. Expand  the **Tax Classes** section. Then, do the following:



Tax Classes	
Tax Class for Shipping <small>[website]</small>	None <input checked="" type="checkbox"/> Use system value
Default Tax Class for Product <small>[global]</small>	Taxable Goods <input checked="" type="checkbox"/> Use system value
Default Tax Class for Customer <small>[global]</small>	Retail Customer <input checked="" type="checkbox"/> Use system value

#### *Tax Classes*

- a. Set **Tax Class for Shipping** to the appropriate class. The default classes are:
  - None
  - Taxable Goods
- b. Set **Default Tax Class for Product** to the appropriate class. The default classes are:
  - None
  - Taxable Goods
- c. Set **Default Tax Class for Customer** to the appropriate class. The default class is:

- Retail Customer
- Wholesale Customer

3. When complete, tap **Save Config.**

## Calculation Settings

1. Expand the **Calculation Settings** section. Then, do the following:

**Calculation Settings**

**Tax Calculation Method Based On** (website): Total ☒ Use system value

**Tax Calculation Based On** (website): Shipping Address ☒ Use system value

**Catalog Prices** (website): Excluding Tax ☒ Use system value  
This sets whether catalog prices entered from Magento Admin include tax.

**Shipping Prices** (website): Excluding Tax ☒ Use system value  
This sets whether shipping amounts entered from Magento Admin or obtained from gateways include tax.

**Apply Customer Tax** (website): After Discount ☒ Use system value

**Apply Discount On Prices** (website): Excluding Tax ☒ Use system value  
Warning: To apply the discount on prices including tax and apply the tax after discount, set Catalog Prices to "Including Tax".

**Apply Tax On** (website): Custom price if available ☒ Use system value

**Enable Cross Border Trade** (website): No ☐ ☒ Use system value  
When catalog price includes tax, enable this setting to fix the price no matter what the customer's tax rate.

### Calculation Settings

a. Set **Tax Calculation Method Based On** to one of the following:

Unit Price	The price of each product.
Row Total	The total of the line item in the order, less discounts.
Total	The order total

b. Set **Tax Calculation Based On** to one of the following:

Shipping Address	The address where the order is to be shipped.
Billing Address	The billing address of the customer.
Shipping Origin	The address that is specified as the point of origin for your store.


c. Set **Catalog Prices** to one of the following:

- Excluding Tax
- Including Tax

d. Set **Shipping Prices** to one of the following:

- Excluding Tax
  - Including Tax
- e. Set **Apply Customer Tax** to one of the following to determine whether tax is applied to the original or discounted price.
- After Discount
  - Before Discount
- f. Set **Apply Discount on Prices** to one of the following to determine if discounts include or exclude tax.
- Excluding Tax
  - Including Tax
- g. Set **Apply Tax On** to one of the following:
- Custom price if available
  - Original price only
- h. Set **Enable Cross-Border Trade** to one of the following:
- Yes      Use consistent pricing across different tax rates. If the catalog price includes tax, choose this setting to fix the price regardless of the customer's tax rate.
- No        Vary the price by tax rate.

**Important!** If cross-border trade is enabled, the profit margin changes by tax rate. Profit is determined by the formula (Revenue - CustomerVAT - CostOfGoodsSold). To enable cross-border trade, prices must be set to include tax.

2. Expand  the **Default Tax Destination Calculation** section. Then, specify the country that is to be the default for tax calculations.



*Default Tax Destination Calculation*

3. When complete, tap **Save Config.**

## Price Display Settings

**Important!** Some combinations of settings related to a price display that both includes and excludes tax can be confusing to the customer. To avoid triggering a warning message, see the

recommended settings.

1. Expand  the **Price Display Settings** section. Then, do the following:



*Price Display Settings*

- a. Set **Display Product Prices in Catalog** to one of the following:

Excluding Tax	Catalog prices that appear in the storefront do not include tax.
Including Tax	Catalog prices in the storefront include tax only if a tax rule matches the tax origin, or if the customer's address matches the tax rule. This might happen after a customer creates an account, logs in, or uses the Estimate Tax and Shipping tool in the cart.
Including and Excluding Tax	Catalog prices that appear in the storefront are displayed both with, and without tax.

- b. Set **Display Shipping Prices** to one of the following:

- Excluding Tax
- Including Tax
- Including and Excluding Tax

2. Expand  the **Shopping Cart Display Settings** section.

For each of the following settings, choose how you want taxes and prices to appear in the cart, according to the requirements of your store and locale.

- a. Set **Display Prices** to one of the following:

- Excluding Tax
- Including Tax
- Including and Excluding Tax

- b. Set **Display Subtotal** to one of the following:

- Excluding Tax
- Including Tax
- Including and Excluding Tax

- c. Set **Display Shipping Amount** to one of the following:

- Excluding Tax
  - Including Tax
  - Including and Excluding Tax
- d. Set the following to either “Yes” or “No,” according to your needs:
- Include Tax in Order Total
  - Display Full Tax Summary
  - Display Zero Tax Subtotal

Setting	Value	Use system value
Display Prices (store view)	Excluding Tax	<input checked="" type="checkbox"/>
Display Subtotal (store view)	Excluding Tax	<input checked="" type="checkbox"/>
Display Shipping Amount (store view)	Excluding Tax	<input checked="" type="checkbox"/>
Include Tax in Order Total (store view)	No	<input checked="" type="checkbox"/>
Display Full Tax Summary (store view)	No	<input checked="" type="checkbox"/>
Display Zero Tax Subtotal (store view)	No	<input checked="" type="checkbox"/>

*Shopping Cart Display Settings*

3. Expand the **Orders, Invoices, Credit Memos Display Settings** section. Then, do the following to specify how prices and taxes appear in orders, invoices, and credit memos.
- a. Set **Display Prices** to one of the following.
- Excluding Tax
  - Including Tax
  - Including and Excluding Tax
- b. Set **Display Subtotal** to one of the following:
- Excluding Tax
  - Including Tax
  - Including and Excluding Tax
- c. Set **Display Shipping Amount** to one of the following:
- Excluding Tax
  - Including Tax
  - Including and Excluding Tax
- d. Set the following to “Yes” or “No,” according to your requirements:
- Include Tax in Order Total
  - Display Full Tax Summary
  - Display Zero Tax Subtotal



Orders, Invoices, Credit Memos Display Settings		
Display Prices <small>[store view]</small>	Excluding Tax	<input checked="" type="checkbox"/> Use system value
Display Subtotal <small>[store view]</small>	Excluding Tax	<input checked="" type="checkbox"/> Use system value
Display Shipping Amount <small>[store view]</small>	Excluding Tax	<input checked="" type="checkbox"/> Use system value
Include Tax In Order Total <small>[store view]</small>	No	<input checked="" type="checkbox"/> Use system value
Display Full Tax Summary <small>[store view]</small>	No	<input checked="" type="checkbox"/> Use system value
Display Zero Tax Subtotal <small>[store view]</small>	No	<input checked="" type="checkbox"/> Use system value

*Orders, Invoices, Credit Memos Display Settings*

4. When complete, tap **Save Config.**


## Cross-Border Price Consistency

Cross-border trade (also referred to as price consistency) supports European Union (EU) and other merchants who want to maintain consistent prices for customers whose tax rates are different than the store tax rate.

Merchants operating across regions and geographies can show their customers a single price by including the tax in the price of the product. Pricing is clean and uncluttered regardless of tax structures and rates that vary from country to country.

**Important!** When cross-border trade is enabled, your profit margin changes by tax rate. Profit is determined by the formula:  $(\text{Revenue} - \text{CustomerVAT} - \text{CostOfGoodsSold})$ .

### To enable cross-border price consistency:

1. On the Admin sidebar, choose **Stores**. Then under Settings, choose **Configuration**.
2. For a multisite configuration, set **Store View** to the website and store that is the target of the configuration.
3. In the panel on the left, under **Sales**, choose **Tax**.
4. Expand  the **Calculation Settings** section. Then, do the following:

Calculation Settings

Tax Calculation Method Based On  
(website)

Total

Use system value

Tax Calculation Based On  
(website)

Shipping Address

Use system value

Catalog Prices  
(website)

Including Tax

Use system value

This sets whether catalog prices entered from Magento Admin include tax.

Shipping Prices  
(website)

Excluding Tax

Use system value

This sets whether shipping amounts entered from Magento Admin or obtained from gateways include tax.

Apply Customer Tax  
(website)

After Discount

Use system value

Apply Discount On Prices  
(website)

Excluding Tax

Use system value

Warning: To apply the discount on prices including tax and apply the tax after discount, set Catalog Prices to "Including Tax".

Apply Tax On  
(website)

Custom price if available

Use system value

Enable Cross Border Trade  
(website)

Yes

When catalog price includes tax, enable this setting to fix the price no matter what the customer's tax rate.

Calculation Settings

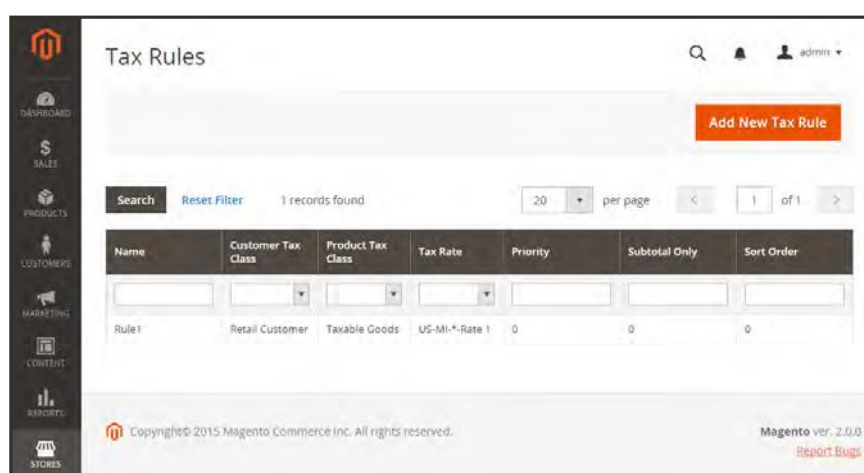
- a. Set **Catalog Prices** to “Including Tax.”

b. To enable cross-border price consistency, set **Enable Cross Border Trade** to “Yes.”
5. When complete, tap **Save Config.**

## Tax Rules

Tax rules incorporate a combination of product class, customer class and tax rate. Each customer is assigned to a customer class, and each product is assigned a product class. Magento analyzes the shopping cart of each customer and calculates the appropriate tax according to the customer and product classes, and the region (based on the customer's shipping address, billing address or shipping origin).

When numerous taxes must be defined, you can simplify the process by importing them.



*Tax Rules*

### Step 1: Complete the Tax Rule Information

1. On the Admin sidebar, tap **Stores**. Then under **Taxes**, choose **Tax Rules**.
2. In the upper-right corner, tap **Add New Tax Rule**.
3. Under Tax Rule Information, enter a **Name** for the new rule.
4. Choose the **Tax Rate** that applies to the rule. If you need to edit an existing tax rate, do the following:
  - a. Hover over the tax rate, and tap the **Edit** icon.
  - b. Update the form as needed, and tap **Save**.

Tax Rule Information

Name \*

Tax Rate \*

US-CA-\*.Rate 1

US-NY-\*.Rate 1

US-MI-\*.Rate 1

Add New Tax Rate

Tax Rule Information

To enter tax rates, use either of the following methods:

Method 1: Enter Tax Rates Manually

- 1. Tap **Add New Tax Rate**.
- 2. Complete the form as needed. For more information, see: Tax Zones and Rates.
- 3. When complete, tap **Save**.

Tax Rate

Save

Tax Identifier \*

Zip/Post is Range

☐

Zip/Post Code

\* - matches any; 'xyz\*' - matches any that begins on 'xyz' and are not longer than 10.

State \*

Country \*

United States

Rate Percent \*

New Tax Rate

## Method 2: Import Tax Rates



1. Scroll down to the section at the bottom of the page.
2. To import tax rates, do the following:
  - a. Tap **Choose File**, and navigate to the CSV file with the tax rates to be imported.
  - b. Tap **Import Tax Rates**.
3. To export tax rates, tap **Export Tax Rates**.

To learn more, see: Import/Export Tax Rates.



*Import / Export Tax Rates*

## Step 2: Complete the Additional Settings

4. Tap **Additional Settings** to open the section. Then, do the following:
  - a. Choose the **Customer Tax Class** to which the rule applies.
    - To edit a customer tax class, tap the edit  icon. Then, update the form as needed, and tap **Save**.
    - To create a new tax class, tap **Add New Tax Class**. Then, complete the form as needed, and tap **Save**.
  - b. Choose the **Product Tax Class** to which the rule applies.
    - To edit a product tax class, tap the edit  icon. Then, update the form as needed, and tap **Save**.
    - To create a new tax class, tap **Add New Tax Class**. Then, complete the form as needed, and tap **Save**.
  - c. In the **Priority** field, enter a number to indicate the priority of this tax, when more than one tax applies. If two tax rules with the same priority apply, then the taxes are added together. If two taxes with different priority settings apply, then the taxes are compounded.
  - d. If you want taxes to be based on the order subtotal, mark the **Calculate off Subtotal Only** checkbox.
  - e. In the **Sort Order** field, enter a number to indicate the order of this tax rule when listed with others.

▼ Additional Settings

Customer Tax Class \*

✓ Retail Customer

Add New Tax Class

Product Tax Class \*

✓ Taxable Goods

Add New Tax Class

Priority \*

0

Tax rates at the same priority are added, others are compounded.

Calculate Off Subtotal Only

☐

Sort Order \*

0

Additional Settings

5. When complete, tap **Save Rule**.

## Tax Classes

Tax classes can be assigned to customers, products, and shipping. Magento analyzes the shopping cart of each customer and calculates the appropriate tax according to the class of the customer, the class of the products in the cart, and the region (as determined by the customer's shipping address, billing address or shipping origin). New tax classes can be created when a tax rule is defined.



### Customer

---

You can create as many customer tax classes as you need, and assign them to customer groups. For example, in some jurisdictions, wholesale transactions are not taxed, but retail transactions are. You can associate members of the Wholesale Customer group with the Wholesale tax class.



### Product

---

Product classes are used in calculations to determine the correct tax rate is applied in the shopping cart. When you create product, it is assigned to a specific tax class. For example, food might not be taxed, or be taxed at a different rate.



### Shipping

---

If your store charges an additional tax on shipping, you should designate a specific product tax class for shipping. Then in the configuration, specify it as the tax class that is used for shipping.

## Configuring Tax Classes

The tax class that is used for shipping, and the default tax classes for products and customers are set in the Sales configuration.



*Tax Classes*

### To configure tax classes:

1. On the Admin sidebar, tap **Stores**. Then under **Settings**, choose **Configuration**.
2. In the panel on the left under **Sales**, choose **Tax**.
3. Expand ☑ the **Tax Classes** section. Then, choose the tax class for each of the following:
  - Set Tax Class for Shipping
  - Default Tax Class for Product
  - Default Tax Class for Customer
4. When complete, tap **Save Config.**



## Default Tax Destination

The default tax destination settings determine the country, state, and ZIP or postal code that are used as the basis of tax calculations.

The screenshot shows a configuration panel titled "Default Tax Destination Calculation". It contains three main settings: "Default Country" with a dropdown menu showing "UNITED STATES" and a "Use system value" checkbox; "Default State" with a dropdown menu and a "Use system value" checkbox; and "Default Post Code" with a text input field. Each setting has a "(store view)" link below it. A close button is in the top right corner.

*Default Tax Destination Calculation*

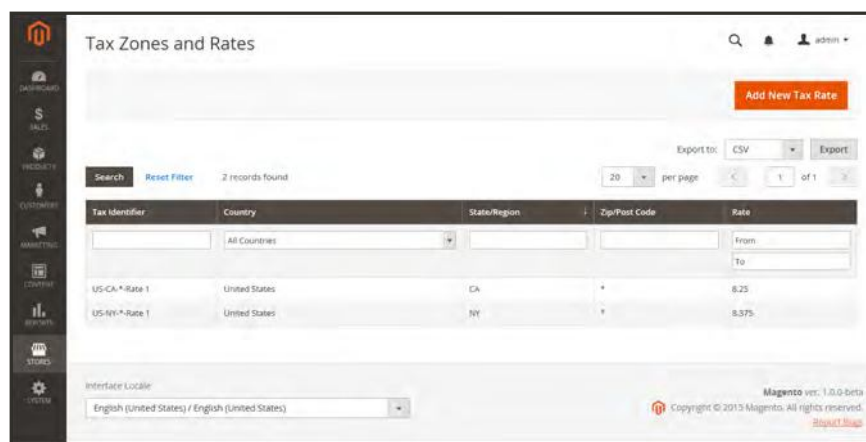
### To configure the default tax destination for calculations:

1. On the Admin sidebar, tap **Stores**. Then under **Settings**, choose **Configure**.
2. In the panel on the left under **Sales**, choose **Tax**.
3. Expand ☷ the **Default Tax Destination Calculation** section. Then, do the following:
  - a. Set **Default Country** to the country upon which tax calculations are based.
  - b. Set **Default State** to the state or province that is used as the basis of tax calculations.
  - c. Set **Default Post Code** to the ZIP or postal code that is used as the basis of local tax calculations.
4. When complete, tap **Save Config**.

## Tax Zones and Rates

Tax rates generally apply to transactions that take place within a specific geographical area. The Tax Zones and Rates tool enables you to specify the tax rate for each geographical area from which you collect and remit taxes. Because each tax zone and rate has a unique identifier, you can have multiple tax rates for a given geographic area (such as places that do not tax food or medicine, but do tax other items).

Store tax is calculated based on the store's address. The actual customer tax for an order is calculated after the customer completes the order information. Magento then calculates the tax based upon the tax configuration of the store.



*Tax Zones and Rates*

### To define a new tax rate:

1. On the Admin sidebar, tap **Stores**. Under **Taxes**, choose **Tax Zones and Rates**.
2. In the upper-right corner, tap **Add New Tax Rate**.
3. Enter a **Tax Identifier**.
4. To apply the tax rate to a single ZIP or postal code, enter the code in the **Zip/Post Code** field.
5. The asterisk wildcard (\*) can be used to match up to ten characters in the code. For example, 90\* represents all ZIP codes from 90000 through 90999.
6. To apply the tax rate to a range of ZIP or postal codes, do the following::
  - a. Mark the **Zip/Post is Range** checkbox.
  - b. Enter the first ZIP or postal code in the range.
  - c. Enter the last ZIP or postal code in the range.
  - d. Choose the **State** where the tax rate applies.

- e. Choose the **Country** where the tax rate applies.
  - f. Enter the **Rate Percent** that is used for the tax rate calculation.
7. When complete, tap **Save Rate**.

The screenshot shows the 'New Tax Rate' form in the Magento Admin interface. The form is titled 'New Tax Rate' and has a sidebar on the left with various icons. The form fields are as follows:

- Tax Identifier**: A text input field.
- Zip/Post is Range**: A checkbox.
- Zip/Post Code**: A text input field with a hint: "\*\*\*\* matches any; 'xyz\*' matches any that begins on 'xyz' and are not longer than 10."
- State**: A dropdown menu with 'California' selected.
- Country**: A dropdown menu with 'United States' selected.
- Rate Percent**: A text input field.

At the top right of the form, there are buttons for 'Back', 'Reset', and 'Save Rate'.

*New Tax Rate*

### To edit an existing tax rate:

1. On the Admin sidebar, tap **Stores**. Then under **Taxes**, choose **Tax Zones and Rates**.
2. Find the tax rate in the Tax Zones and Rates grid, and open the record in edit mode.  
If there are many rates in the list, use the filter controls to find the rate you need.
3. Make the necessary changes to the **Tax Rate Information**.
4. Update the **Tax Titles** as needed.
5. When complete, tap **Save Rate**.

## Import/Export Tax Rates

If you conduct business in several states and ship a large quantity of product, it is more efficient to download tax rates by ZIP code than enter the rates manually. The rates can then be imported into Magento. The following example shows how to import a set of California tax rates that was downloaded from the Avalara website. Avalara is a Magento Technology Partner, and provides tax rate tables that can be downloaded at no charge for every ZIP code in the United States.

### Process Overview:

Step 1: Export the Magento Tax Rate Data

Step 2: Prepare the Import Data

Step 3: Import the Tax Rates

### Step 1: Export the Magento Tax Rate Data

1. On the Admin sidebar, tap **System**. Then under **Data Transfer**, choose **Import/Export Tax Rates**.
2. Tap **Export Tax Rates**. Look for the download file in the lower-left corner of the browser window.
3. Save the file, and then open it in a spreadsheet. (In this example, we use OpenOffice Calc.)

The exported Magento tax rate data includes the following columns:

- Code
- Country
- State
- Zip/Post Code
- Rate
- Range From
- Range To
- A column for each store view

	A	B	C	D	E	F	G	H	I	J	K	L	M
	Code	Country	State	Zip/Post Code	Rate	Zip/Post is Range	Range From	Range To	english	french	german	spanish	
2	US-CA-1	US	CA	*	8.25								
3	US-NY-1	US	NY	*	8.375								
4	US-MI-1	US	MI	*	8.25								
5													
6													

*Exported Tax Rate Data*

4. Open the new tax rate data in a second instance of the spreadsheet, so you can see both, side by side.

In the new tax rate data, take note of any additional tax rate data that you might need to set up in your store before the data is imported. For example, the tax rate data for California also includes:

- TaxRegionName
- CombinedRate
- StateRate
- CountyRate
- CityRate
- SpecialRate

If you need to import additional tax zones and rates, you must first define them from the Admin of your store, and update the tax rules as needed. Then, export the data, and open the file in OpenOffice Calc, so it can be used for reference. However, to keep this example simple, we will import only the standard tax rate columns.

## Step 2: Prepare the Import Data

You now have two spreadsheets open, side by side. One with the Magento export file structure, and the other with the new tax rate data that you want to import.

1. To create a place to work in the spreadsheet with the new data, insert as many blank columns at the far left as needed. Then, use cut and paste to rearrange the columns so they match the order of the Magento export data.
2. Rename the column headers to match the Magento export data.
3. Delete any columns that have no data. Otherwise, the structure of the import file should match the original Magento export data.
4. Before saving the file, scroll down and make sure that the tax rate columns contain only numeric data. Any text found in a tax rate column will prevent the data from being imported.
5. Save the prepared data as a .CSV file. When prompted, verify that a comma is used as a **Field delimiter**, and double quotes as the **Text delimiter**. Then, tap **OK**.

### Step 3: Import the Tax Rates

1. On the Admin sidebar, tap **System**. Then under **Data Transfer**, choose **Import/Export Tax Rates**.
2. Tap **Browse**, and choose the .CSV tax rate file that you prepared to import. Then, tap **Import Tax Rates**.

It might take several minutes to import the data. When the process is complete, the message, "The tax rate has been imported" appears. If you receive an error message, correct the problem in the data and try again.

3. On the Admin sidebar, tap **Stores**. Then under Taxes, choose **Tax Zones and Rates**. The imported rates appear in the list. Use the page controls to view the new tax rates.

Tax Identifier	Country	State/Region	Zip/Post Code	Rate
MADERA	United States	CA	94976	0.065
BERNANDO	United States	CA	91341	0.065
SACRAMENTO	United States	CA	95799	0.065
AGOW	United States	CA	93662	0.01
AJBI	United States	CA	95077	0.01
AGSZ	United States	CA	92232	0.01
SHASTA	United States	CA	96067	0.065
MODI	United States	CA	94019	0.095
AIVM	United States	CA	95330	0.01
AJBV	United States	CA	93258	0.01
AGBP	United States	CA	94557	0.01
US-CA*-Rate 1	United States	CA	*	\$ .25
COUNTRY	United States	CA	95148	0.065
AGZM	United States	CA	95451	0.01
AGXM	United States	CA	93555	0.01

*Imported Tax Rates*

4. Run some test transactions in your store with customers from different ZIP codes to make sure that the new tax rates work correctly.

## Value Added Tax (VAT)

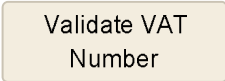
Some countries charge a value-added tax, or VAT, on goods and services. There can be different VAT rates depending on which stage you as a merchant are at in the manufacture or distribution of the products, materials, or services that you sell to your customers. In some cases, you might need to use more than one VAT rate in your store for tax calculation purposes.

Magento can be set up to charge a value-added tax if both the merchant and customer are located in the same EU country. No VAT is charged if the merchant and customer are located in different EU countries.

However, for the sale of downloadable products — or digital goods —, the VAT rate is based on the shipping destination, rather than the merchant location. To learn more, see: [EU Place of Supply for Digital Goods](#).

Magento uses the following fields and configuration settings to address different scenarios.

### Summary of VAT Fields

SECTION		DESCRIPTION
<b>MERCHANT INFORMATION</b>		
Stores > Configuration > General > General > Store Information		
Store Information	VAT Number	The value-added tax number that is assigned to the merchant.
		VAT validation confirms that the VAT Number matches the corresponding record in the European Commission database.
<b>CUSTOMER INFORMATION</b>		
Customers > All Customers > Edit		
Account Information	Tax/VAT Number	If applicable, the tax number or value-added tax number that is assigned to the customer.
Addresses	VAT Number	If applicable, the value-added tax number that is associated with a specific billing or shipping address of the customer. For the sale of digital goods within the EU, the amount of the VAT is based on shipping destination.

**Summary of VAT Fields (cont.)**

SECTION	DESCRIPTION	
Configure > Customers > Customer Configuration		
Create New Account Options	Show VAT Number on Storefront	Determines if the customer VAT Number field is included in the Address Book that is available in the customer account.
	Default Value for Disable Automatic Group Changes Based on VAT ID	VAT ID is an internal identifier for the VAT Number of the customer when used in VAT Validation. During VAT Validation, Magento confirms that the number matches the European Commission database. Customers can be automatically assigned to one of the four default customer groups based on the validation results.

## Configuring VAT

The following instructions include a sample procedure to set up a 20% VAT in the U.K. for sales to retail customers. For other tax rates and countries, follow the general procedure but enter specific information that corresponds to your country, VAT rate, customer types, and so on.

Before proceeding, make sure to find out which rules and regulations apply to VAT in your area.

In certain business-to-business transactions, VAT is not assessed. Magento can validate a customer's VAT ID to ensure that VAT is assessed (or not assessed) properly. To learn more, see: VAT ID Validation.

**Process Overview:**

- Step 1: Set Up Customer Tax Classes
- Step 2: Set Up Product Tax Classes
- Step 3: Set Up Tax Zones and Rates
- Step 4: Set Up Tax Rules
- Step 5: Apply Tax Classes to Products



### Step 1: Set Up Customer Tax Classes

1. On the Admin sidebar, tap **Stores**. Then choose, select **Tax Zones and Rates**.
2. Ensure that there is a customer tax class that is appropriate to use with the VAT. For this example, ensure that there is a customer tax class named Retail Customer. If Retail Customer does not exist, click the **Add New** button and add it.

### Step 2: Set Up Product Tax Classes

1. On the Admin menu, select **Sales > Tax > Product Tax Classes**.
2. Click the **Add New** button and create three new classes:
  - VAT Standard
  - VAT Reduced
  - VAT Zero
3. Click the **Save Class** button for each new class that you add.

### Step 3: Set Up Tax Zones and Rates

1. On the Admin menu, select **Sales > Tax > Manage Tax Zones & Rates**.  
For this example you can remove the U.S. tax rates, or leave them as they are.
2. Click the **Add New Tax Rate** button. Add new rates as follows:

NEW TAX RATE	SETTINGS	
VAT Standard	Tax Identifier:	VAT Standard
	Country and State:	United Kingdom
	Rate Percent:	20.00
VAT Reduced	Tax Identifier:	VAT Reduced
	Country and State:	United Kingdom
	Rate Percent:	5.00

3. Click the **Save Rate** button for each rate.

### Step 4: Set Up Tax Rules

A tax rule is a combination of a customer tax class, a product tax class, and a tax rate.

1. On the Admin menu, select **Sales > Tax > Manage Tax Rules**.
2. Add new tax rules as follows:

NEW TAX RULE	SETTINGS	
VAT Standard	Name:	VAT Standard
	Customer Tax Class:	Retail Customer
	Product Tax Class:	VAT Standard
	Tax Rate:	VAT Standard Rate
VAT Reduced	Name:	VAT Reduced
	Customer Tax Class:	Retail Customer
	Product Tax Class:	VAT Reduced
	Tax Rate:	VAT Reduced Rate

3. Click the **Save Rule** button for each rate.

### Step 5: Apply Tax Classes to Products

1. On the Admin menu, select **Catalog > Manage Products**.
2. Open a product from your catalog in edit mode.
3. On the General page, find the **Tax Class** field. Then, select the **VAT Class** that applies to the product.
4. When complete, click the **Save** button.

## VAT ID Validation

VAT ID Validation automatically calculates the required tax for B2B transactions that take place within the European Union (EU), based on the merchant and customer locale. Magento performs VAT ID validation using the web services of the European Commission server.

VAT-related tax rules do not influence other tax rules, and do not prevent the application of other tax rules. Only one tax rule can be applied at a given time.

- VAT is charged if the merchant and customer are located in the same EU country.
- VAT is not charged if the merchant and customer are located in different EU countries, and both parties are EU-registered business entities.

The store administrator creates more than one default customer group that can be automatically assigned to the customer during account creation, address creation or update, and checkout. The result is that different tax rules are used for intra-country (domestic) and intra-EU sales.

**Important:** If you sell virtual or downloadable products, which by their nature do not require shipping, the VAT rate of a customer's location country should be used for both intra-union and domestic sales. You must create additional individual tax rules for product tax classes that correspond to the virtual products.

### Customer Registration Workflow

If VAT ID Validation is enabled, after registration each customer is proposed to enter the VAT ID number. However only those who are registered VAT customers are expected to fill this field.

After a customer specifies the VAT number and other address fields, and chooses to save, the system saves the address and sends the VAT ID validation request to the European Commission server. According to the results of the validation, one of the default groups is assigned to a customer. This group can be changed if a customer or an administrator changes the VAT ID of the default address or changes the whole default address. The group can be temporarily changed (group change will be emulated) in some cases during one-page checkout.

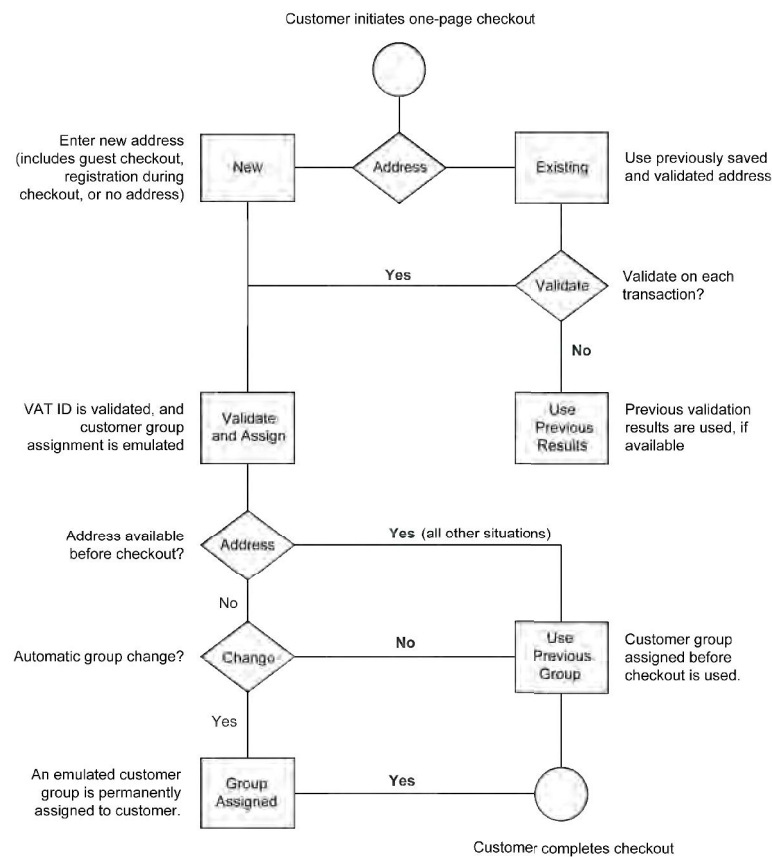
If enabled, you can override VAT ID Validation for individual customers by selecting the checkbox on the Customer Information page.

## Checkout Workflow

If a customer's VAT validation is performed during checkout, the VAT request identifier and VAT request date are saved in the Comments History section of the order.

The system behavior concerned with the VAT ID validation and the customer group change during the checkout depends on how the Validate on Each Transaction and the Disable Automatic Group Change settings are configured. This section describes the implementation of the VAT ID Validation functionality for the checkout on the frontend.

In case a customer uses Google Express Checkout, PayPal Express Checkout or another external checkout method, when the checkout is performed completely on the side of the external payment gateway, the Validate on Each Transaction setting cannot be applied. Thus the customer group cannot change during checkout.



*VAT Validation Checkout Workflow*

## Configuring VAT ID Validation

To configure VAT ID validation, you must first set up the customer groups that are needed, and create the related tax classes, rates, and rules. Then, enable VAT ID validation for the store, and complete the configuration.

The following examples show how tax classes and rates are used for VAT ID Validation. Take a look at the examples, and then follow the instructions to set up the tax classes and rules that are needed for your store.

### Example: Minimal Tax Rules Required for VAT ID Validation

#### TAX RULE #1

Customer Tax Class	Customer tax classes must include: A class for domestic customers A class for customers with invalid VAT ID A class for customers, for whom VAT ID validation failed
Product Tax Class	Product tax classes must include a class for products of all types, except bundle and virtual.
Tax Rate	The tax rate must include the VAT rate of the merchant's country.

#### TAX RULE #2

Customer Tax Class	A class for intra-union customers.
Product Tax Class	A class for products of all types, except virtual.
Tax Rate	VAT rates for all EU countries, except merchant's country. Currently this rate is 0%.

#### TAX RULE #3 (REQUIRED FOR VIRTUAL AND DOWNLOADABLE PRODUCTS)

Customer Tax Class	Customer tax classes must include: A class for domestic customers A class for customers with invalid VAT ID A class for customers, for whom VAT ID validation failed
Product Tax Class	A class for virtual products.
Tax Rate	VAT rate of the merchant's country.

#### TAX RULE #4 (REQUIRED FOR VIRTUAL AND DOWNLOADABLE PRODUCTS)

Customer Tax Class	A class for intra-union customers.
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**TAX RULE #4 (REQUIRED FOR VIRTUAL AND DOWNLOADABLE PRODUCTS)**

Product Tax Class	A class for virtual products.
Tax Rate	VAT rates for all EU countries, except merchant's country. Currently this rate is 0%.

**Process Overview:**

Step 1: Create VAT-Related Customer Groups

Step 2: Create VAT-Related Classes, Rates and Rules

Step 3: Enable and Configure VAT ID Validation

Step 4: Set your VAT ID and Location Country

Step 5: Verify the List of EU Member Countries

**Step 1: Create VAT-Related Customer Groups**

VAT ID Validation automatically assigns one of the four default customer groups to customers according to VAT ID validation results:

- Domestic
- Intra-EU
- Invalid VAT ID
- Validation error

You can create new customer groups for VAT ID Validation or use existing groups, if they comply with your business logic. When configuring VAT ID Validation, you must assign each of the created customer groups as a default for customers with appropriate VAT ID validation results.

**Step 2: Create VAT-Related Classes, Rates, and Rules**

Each tax rule is defined by three entities:

- Customer Tax Classes
- Product Tax Classes
- Tax Rates

Create the tax rules that you need to use VAT ID Validation effectively.

- Tax rules include tax rates and tax classes.
- Tax classes are assigned to customer groups.

### Step 3: Enable and Configure VAT ID Validation

1. On the Admin sidebar, tap **Stores**. Under **Settings**, choose **Configuration**.
2. If necessary, set the **Store View** for the configuration.
3. In the panel on the left under **Customers**, choose **Customer Configuration**.
4. Expand ☯ the **Create New Account Options** section.

**Create New Account Options**

Enable Automatic Assignment to Customer Group [store view] Yes

Tax Calculation Based On [store view] Billing Address Use system value

Default Group [store view] General Use system value

Group for Valid VAT ID - Domestic [store view] -- Please Select --

Group for Valid VAT ID - Intra-Union [store view] -- Please Select --

Group for Invalid VAT ID [store view] -- Please Select --

Validation Error Group [store view] -- Please Select --

Validate on Each Transaction [store view] No

Default Value for Disable Automatic Group Changes Based on VAT ID [global] Yes

Show VAT Number on Storefront [website] No Use system value

To show VAT number on Storefront, set Show VAT Number on Storefront option to Yes.

Default Email Domain [store view] Use system value

Default Welcome Email [store view] Use system value

Email template chosen based on theme fallback when "Default" option is selected.

Default Welcome Email Without Password [store view] Use system value

This email will be sent instead of the Default Welcome Email, if a customer was created without password.

Email template chosen based on theme fallback when "Default" option is selected.

Email Sender [store view] Use system value

Require Emails Confirmation [website] No Use system value

Confirmation Link Email [store view] Use system value

Email template chosen based on theme fallback when "Default" option is selected.

Welcome Email [store view] Use system value

This email will be sent instead of the Default Welcome Email, after account confirmation.

Email template chosen based on theme fallback when "Default" option is selected.


Generate Human-Friendly Customer ID [global] No

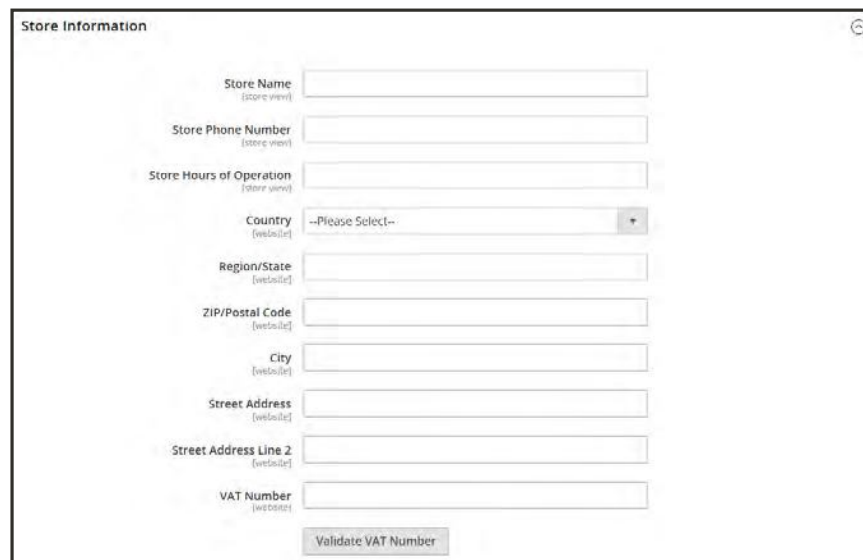
#### Create New Account Options

5. Set **Enable Automatic Assignment to Customer Group** to “Yes.” Then complete the following fields as needed.

- Default Group
  - Default Value for Disable Automatic Group Changes Based on VAT ID
  - Show VAT Number on Frontend
6. When complete, tap **Save Config.**

#### Step 4: Set Your VAT ID and Location Country

1. On the Admin sidebar, tap **Stores**. Under **Settings**, choose **Configuration**.
2. If needed, set **Store View** to the applicable store view.
3. In the panel on the left under **General**, choose **General**.
4. Expand  the **Store Information** section. Then, do the following:



The screenshot shows the 'Store Information' configuration panel. It contains several input fields: 'Store Name', 'Store Phone Number', 'Store Hours of Operation', 'Country' (a dropdown menu currently showing '--Please Select--'), 'Region/State', 'ZIP/Postal Code', 'City', 'Street Address', 'Street Address Line 2', and 'VAT Number'. Each field has a small label below it indicating its visibility: '(store view)' for Name, Phone, Hours, Region, ZIP, City, Street Address, and Line 2; and '(website)' for Country, VAT Number, and the 'Validate VAT Number' button.

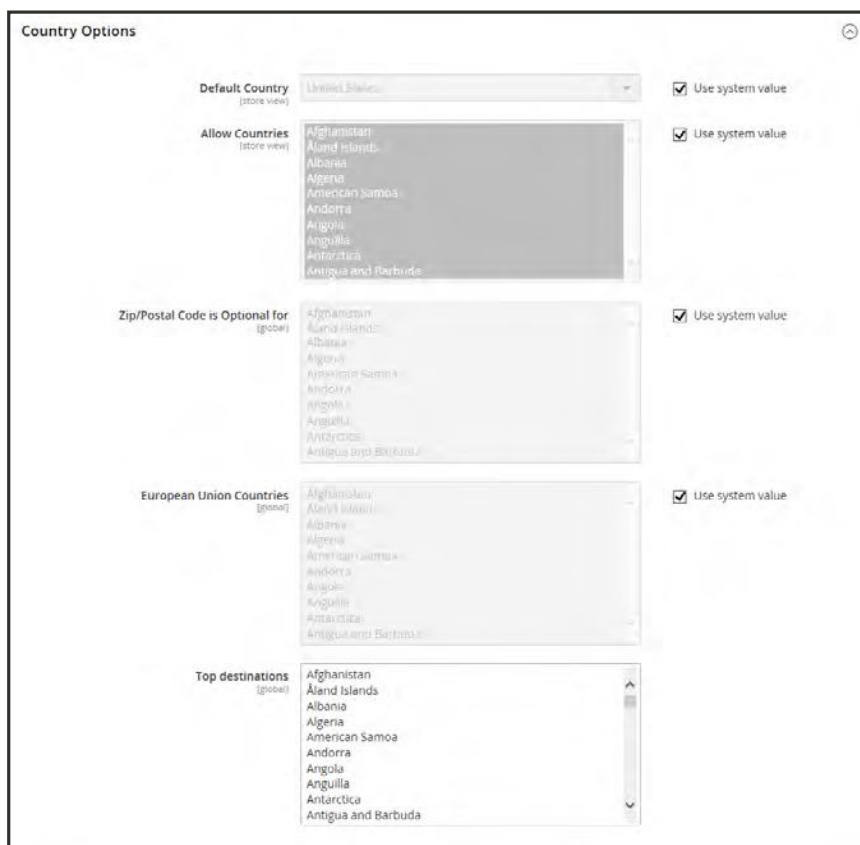
*Store Information*

- a. Select your **Country**.
  - b. Enter your **VAT Number**. Then, tap **Validate VAT Number**. The result appears immediately.
5. When complete, tap **Save Config.**



## Step 5: Verify the List of EU Member Countries

1. Continuing in the General configuration section, expand  the **Countries Options** section.



*Countries Options*

2. In the list of **European Union Countries**, verify that each member country of the EU is selected.
3. When complete, tap **Save Config.**

## Tax Quick Reference

Some tax settings have a choice of options that determines the way the tax is calculated and presented to the customer. To learn more, see: [International Tax Guidelines](#).

### Tax Calculation Methods

Tax calculation method options include Unit Price, Row Total, and Total. The following table explains how rounding (to two digits) is handled for different settings.

#### Tax Configuration Options

SETTING	CALCULATION AND DISPLAY
Unit Price	Magento calculates the tax for each item and displays prices tax-inclusive. To calculate the tax total, Magento rounds the tax for each item, and then adds them together.
Row Total	Magento calculates the tax for each line. To calculate the tax total, Magento rounds the tax for each line item and then adds them together.
Total	Magento calculates the tax for each item and adds those tax values to calculate the total unrounded tax amount for the order. Magento then applies the specified rounding mode to the total tax to determine the total tax for the order.



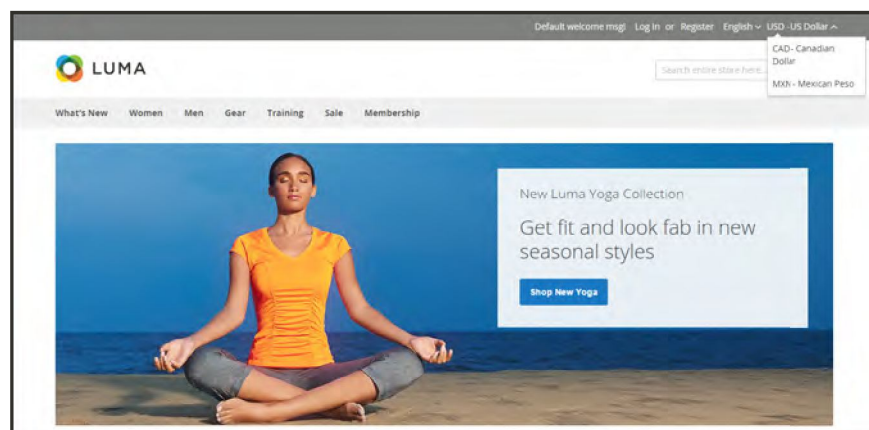
## CHAPTER 75:

# Currency

Magento Commerce gives you the ability to accept currencies from more than two hundred countries around the world. If the store supports multiple currencies, a Currency Chooser appears in the header after currency rates are updated.

If you accept payment in multiple currencies, make sure to monitor the currency rate settings, because any fluctuation can impact your profit margin.

Currency symbols appear in product prices and sales documents such as orders and invoices. You can customize the currency symbols as needed, and also set the display of the price separately for each store or view.

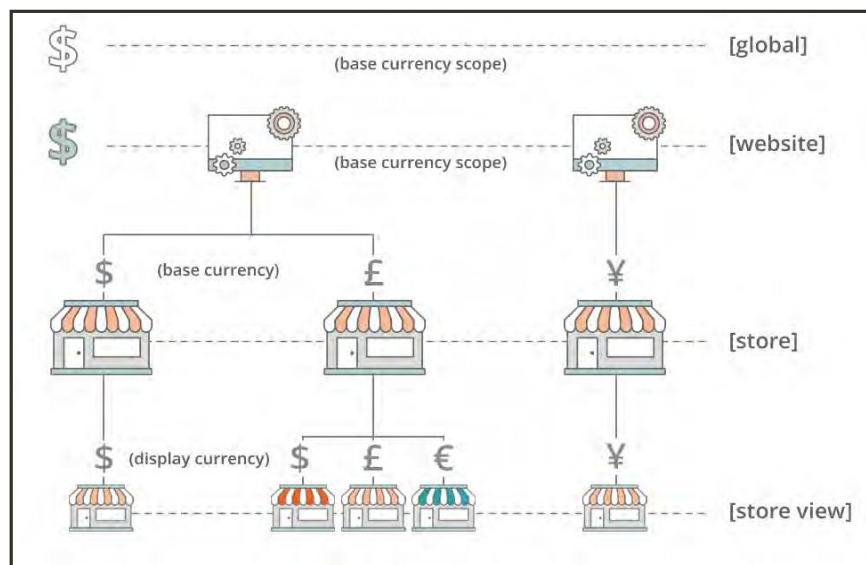


*Currency Chooser*

## Currency Configuration

Before setting up individual currency rates, you must first set the scope of the base currency. By default, it is set to global, which applies the base currency setting to the entire store hierarchy. If you have a multisite installation of Magento, you can manage multiple base currencies by setting the scope to the website level.

Then, specify which currencies you accept, and the currency that you want to use for the display of prices in your store. In the following illustration, the scope of the base currency is set at the website level, so each website can have a different base currency.



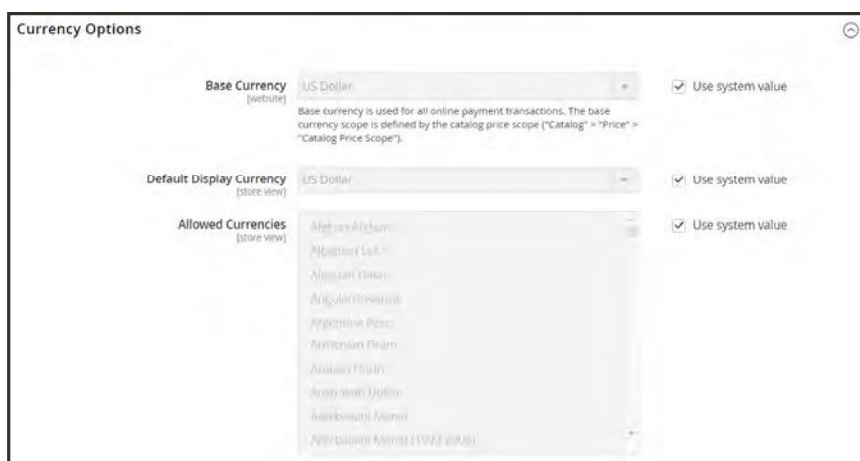
*Scope of Base Currency*

### Process Overview:

- Step 1: Choose the Accepted Currencies
- Step 2: Configure the Import Connection
- Step 3: Configure the Scheduled Import Settings
- Step 4: Update the Currency Rates

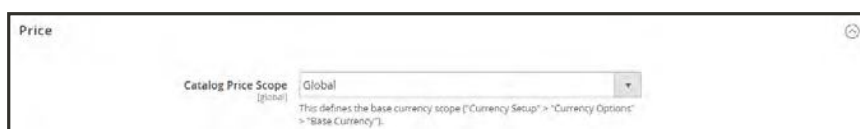
## Step 1: Choose the Accepted Currencies

1. On the Admin sidebar, tap **Stores**. Then under **Settings**, choose **Configuration**.
2. In the panel on the left under **General**, choose **Currency Setup**.
3. Expand ☯ the **Currency Options** section, and do the following:
  - a. Set **Base Currency** to the primary currency that you use for online transactions.
  - b. Set **Default Display Currency** to the currency that you use to display pricing in your store.
  - c. In the **Allowed Currencies** list, select all currencies that you accept as payment in your store. Make sure to also select your primary currency. (For multiple currencies, hold down the Ctrl key and select each option.)




*Currency Options*

4. When prompted to refresh the cache, tap the **Close** ✕ box in the upper-right corner of the system message. We'll refresh the cache later.
5. To define the scope of the base currency, do the following:
  - a. In the panel on the left under **Catalog**, choose **Catalog**. Then, scroll down and expand ☯ the **Price** section.
  - b. Set **Catalog Price Scope** to either "Global" or "Website."



*Price*


## Step 2: Configure the Import Connection

1. Scroll back up to the top of the page. In the panel on the left under **General**, choose **Currency Setup**.
2. Expand  the **WebserviceX** section.
3. In the **Connection Timeout in Seconds** field, enter the number of seconds of inactivity to allow before the connection times out.



*WebserviceX*

## Step 3: Configure the Scheduled Import Settings

1. Continuing with Currency Setup, expand  the **Scheduled Import Settings** section.
2. To automatically update currency rates, set **Enabled** to "Yes." Then, do the following:
  - a. Set **Service** to the rate provider. The default value is "WebserviceX."
  - b. Set **Start Time** to the hour, minute, and second that the rates will be updated according to the schedule.
  - c. To determine how often the rates are updated, set **Frequency** to one of the following:
    - Daily
    - Weekly
    - Monthly
  - d. In the **Error Email Recipient** field, enter the email address of the person who is to receive email notification if an error occurs during the import process. To enter multiple email addresses, separate each with a comma.
  - e. Set **Error Email Sender** to the store contact that appears as the sender of the error notification.
  - f. Set **Error Email Template** to the email template used for the error notification.
3. When complete, tap **Save Config**.
4. When prompted to update the cache, tap the **Cache Management** link. Then, refresh the invalid cache.



*Refresh Cache*

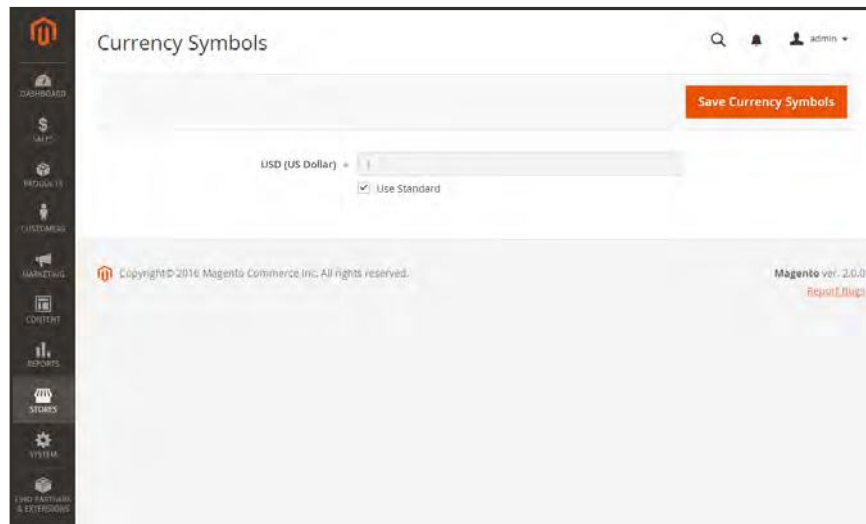
*Scheduled Import Settings*

### **Step 4: Update the Currency Rates**

The currency rates must be updated with the current values before they go into effect. Follow the instructions to update the rates manually or to import the rates automatically.

## Currency Symbols

Manage Currency Symbols gives you the ability to customize the symbol associated with each currency that is accepted as payment in your store.



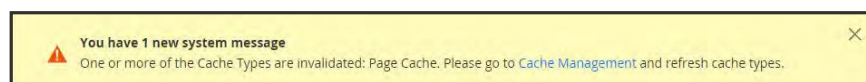
*Currency Symbols*

### To customize currency symbols:

1. On the Admin sidebar, tap **Stores**. Then under **Currency**, choose **Currency Symbols**.  
Each currency that is currently enabled for your store appears in the Currency list.
2. Enter a custom symbol for each currency you want to use, or mark the **Use Standard** checkbox to the right of each currency.
3. To override the default symbol, clear the **Use Standard** checkbox. Then, enter the symbol that you want to use.

It is not possible to change the alignment of the currency symbol from left to right.

4. When complete, tap **Save Currency Symbols**.
5. When prompted to update the cache, tap the **Cache Management** link. Then, refresh any invalid cache.



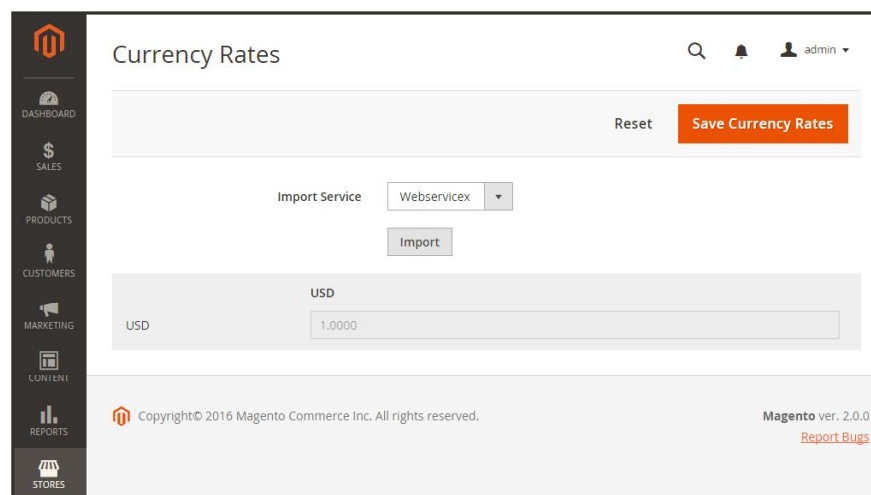
*Refresh Cache*



## Updating Currency Rates

Currency rates can be set manually, or imported into the store. To ensure that your store has the most current rates, you can configure the currency rates to be updated automatically on schedule.

Before importing currency rates, complete the Currency Rate Setup to specify the currencies that you accept, and to establish the import connection and schedule.



*Updating Currency Rates*

### To manually update a currency rate:

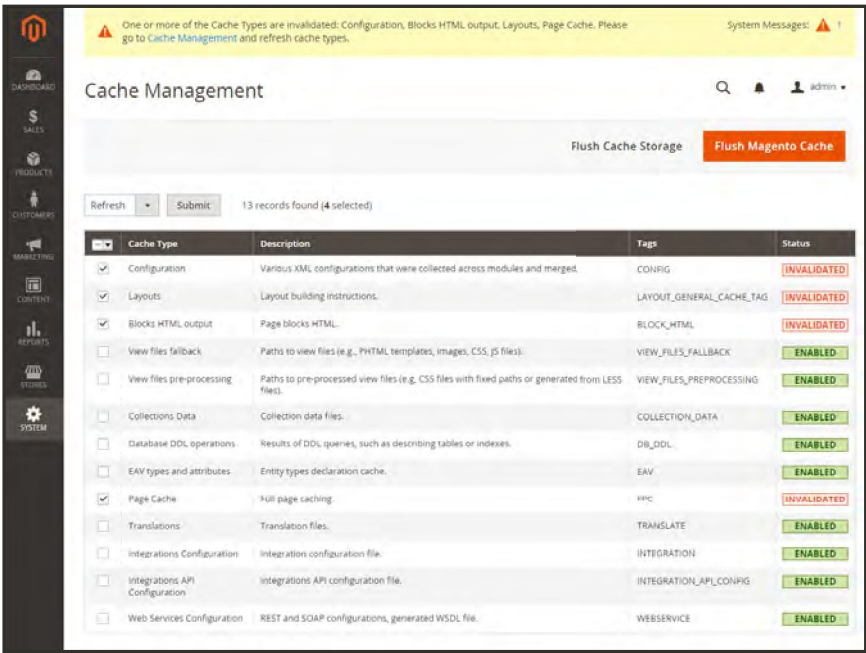
1. On the Admin sidebar, click **Stores**. Then under **Currency**, choose **Currency Rates**.
2. Tap the rate you want to change, and enter the new value for each currency supported.
3. When complete, tap **Save Currency Rates**.

### To import currency rates:

1. On the Admin sidebar, tap **Stores**. Then under **Currency**, choose **Currency Rates**.
2. Set **Import Service** to the currency rate provider. WebserviceX is the default provider.
3. Tap **Import**.

The updated rates appear in the Currency Rates list. If the rates have changed since the last update, the old rate appears below for reference.

4. When complete, tap **Save Currency Rates**.
5. When prompted to update the cache, tap the **Cache Management** link. Then, refresh all invalid caches.



Refresh Invalid Caches

**To import currency rates on schedule:**

- 1. Make sure that Cron is enabled for your store.
- 2. Complete the Currency Rate Setup to specify the currencies that you accept, and to establish the import connection and schedule.
- 3. To verify that the rates are imported on schedule, check the Currency Rates list. Then, wait for the duration of the frequency setting established for the schedule, and check the rates again.