

# Shippo Integration in Angular

A Step-by-Step Guide to Creating  
Shipping Functionality



Abdelfattah Ragab

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# Introduction

Welcome to the book “Shippo Integration in Angular: A Step-by-Step Guide to Creating Shipping Functionality”. In this book, I explain how to integrate Shippo into your Angular application.

Shippo is a multi-carrier shipping solution designed to streamline the shipping process for businesses of all sizes.

By integrating shipping into your application, you can create better types of e-commerce applications.

You will learn how to create the labels, calculate shipping costs, and get the fastest, cheapest, and best rates.

By the end of this book, you will be able to enable shipping in your Angular application and handle all kinds of scenarios.

Let us get started.

# What is Shippo?

Shippo is a multi-carrier shipping solution designed to streamline the shipping process for businesses of all sizes. It offers a comprehensive API that allows developers to integrate shipping functionalities directly into their applications to efficiently manage shipping logistics.

## Create a Shippo account

In order to use Shippo, it is necessary to create a Shippo account first. This account serves as the basis for accessing Shippo's services and functions.

## Dashboard Management

The Shippo dashboard provides a user-friendly interface where you can manage your carriers, view shipment history, process returns and access analytics. This centralized management is essential for monitoring your company's shipping activities.

## API Keys

Once you have created an account, you will receive unique API keys that are required to integrate Shippo into your application. These keys authenticate your

requests and ensure that your application can communicate securely with Shippo's servers.

## Test Keys

Shippo offers **test keys** that allow you to simulate transactions without performing real shipments. This is important for developers to make sure their integration works correctly before it goes live.

You get unique API keys for testing that you can use during development.

## Live keys

Live keys allow you to authenticate API requests in your production environment.

When you're ready for production, simply replace the test keys with the live keys. That's it, you don't need to change anything else. You don't need to change anything in the code either. Just replace the test API keys with the live keys and you're done.

## The Backend

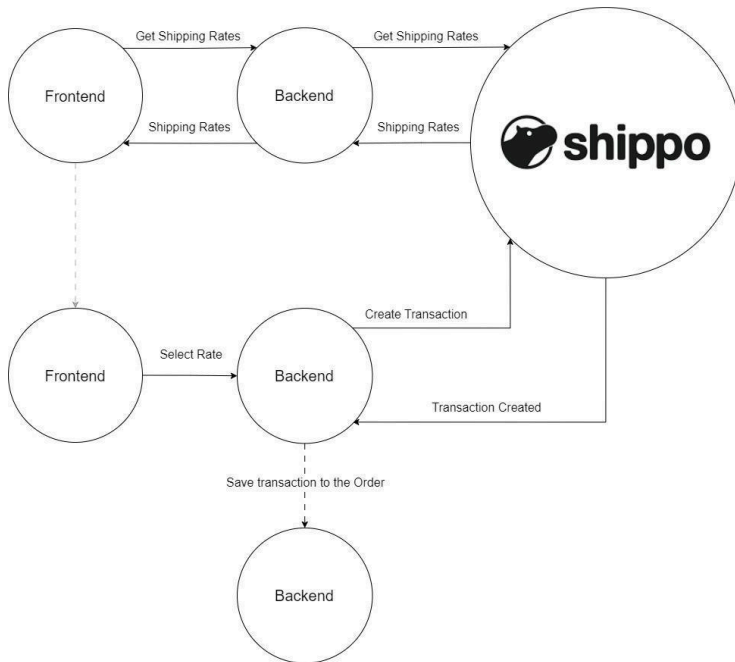
To effectively integrate Shippo into an application, both front-end and back-end components are required. Both play a different role in ensuring secure and efficient shipping processing.

The **front-end** is responsible for the user interface through which customers interact with the shipping system. It provides users with a seamless and intuitive experience that allows them to enter their shipping information and submit transactions easily.

However, the front end alone cannot ensure secure shipping processing. It must communicate with the backend to complete the transaction.

The **backend** is responsible for the more sensitive aspects of shipping processing. It communicates with Shippo's servers using secret API keys that must never be disclosed to the frontend. After the backend has received the response from Shippo, we can save all transaction details in the order object and provide the user with the tracking url of the shipment.

# Shippo Process



When the user reaches the shipping page, he has already selected the items in the shopping cart and decided to proceed with the purchase.

We have already added items to the cart and are now on the shipping page where the user can select the shipping method.

1. We then send a request to the backend to inquire about the shipping costs for the specified products.

2. The backend sends the information to the Shippo server and asks for the rates.
  3. We then return the created shipment to the frontend and display the list of rates for the user to choose from.
  4. Once the user selects the rate, he goes to checkout, so we send the cartItems and the selected rate to the backend to make the payment.
  5. In the backend, we add the shipping costs to the total amount of the order and wait for the "Payment successful" webhook event.
  6. Once we receive the "payment successful" event, we ask the Shippo server to create a transaction for us. We then save the transaction details in the new order. The transaction details include the labelUrl, trackingNumber, trackingUrl and other shipping details.
  7. If we save this information in the order record, the user can easily track their shipment at any time later.
- This completes the shipping process.

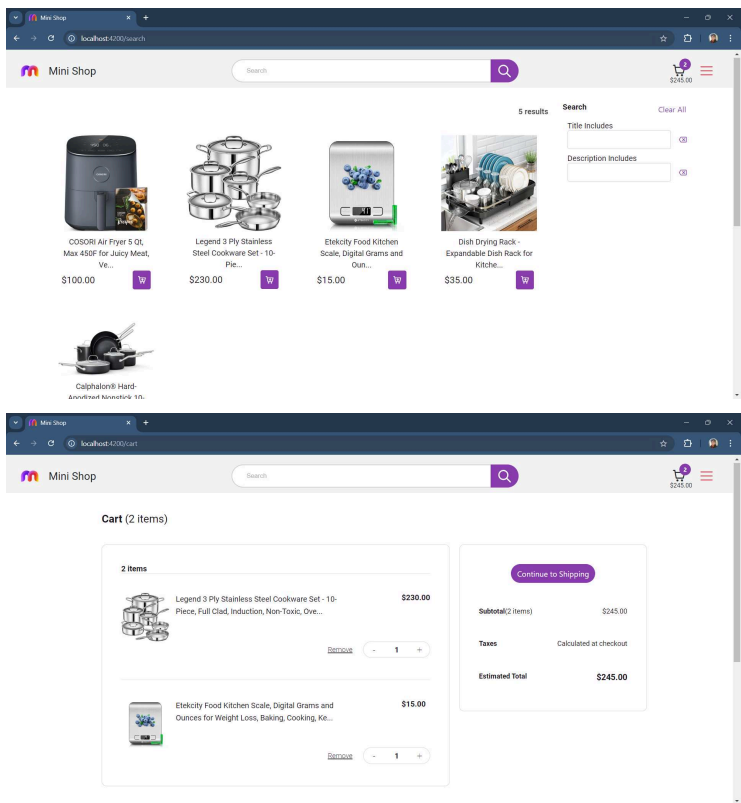
## Shippo Dashboard

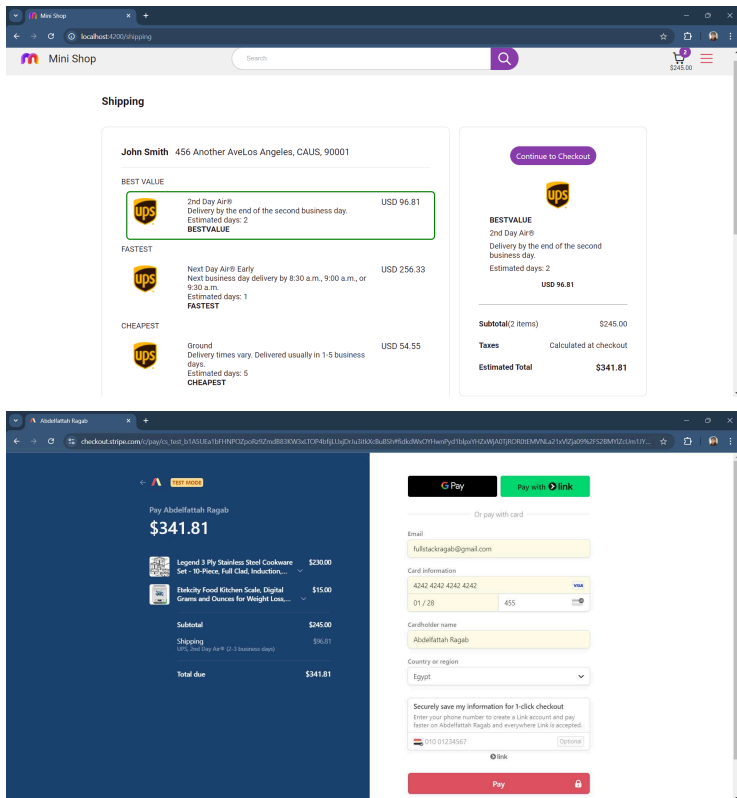
Shipments are displayed in your Shippo dashboard so that you can manage all business details such as returns etc.



You can manage service providers from the dashboard if you want to add UPS, FedEx and so on. All these details are managed through your Shippo account.

# Practical Example





This Angular application consists of three pages, the search page with some products, the shopping cart page and the shipping page. The Stripe form is provided by Stripe, so we do not create it.

On the search page, the products are loaded from the backend.

When you click on the "Proceed to Shipping" button, you will be redirected to the shipping page to select the shipping method.