Integration Steps

Thank you for your interest in developing with Clover!

For any technical developer questions along the way, please email developer-relations@devrel.clover.com and nirmala.sinha@clover-developer-relations.intercom-mail.com (with marco.antico@fiserv.com and jessica.pachis@fiserv.com cc'd).

After signing up as a developer, be on the lookout for the quarterly Clover Newsletter which you should begin to receive via email.

Integration Steps

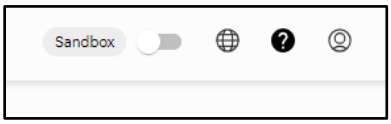
STEP 1 – Discovery Call

Please request an initial discovery call by sending an email to jessica.pachis@fiserv.com and marco.antico@fiserv.com

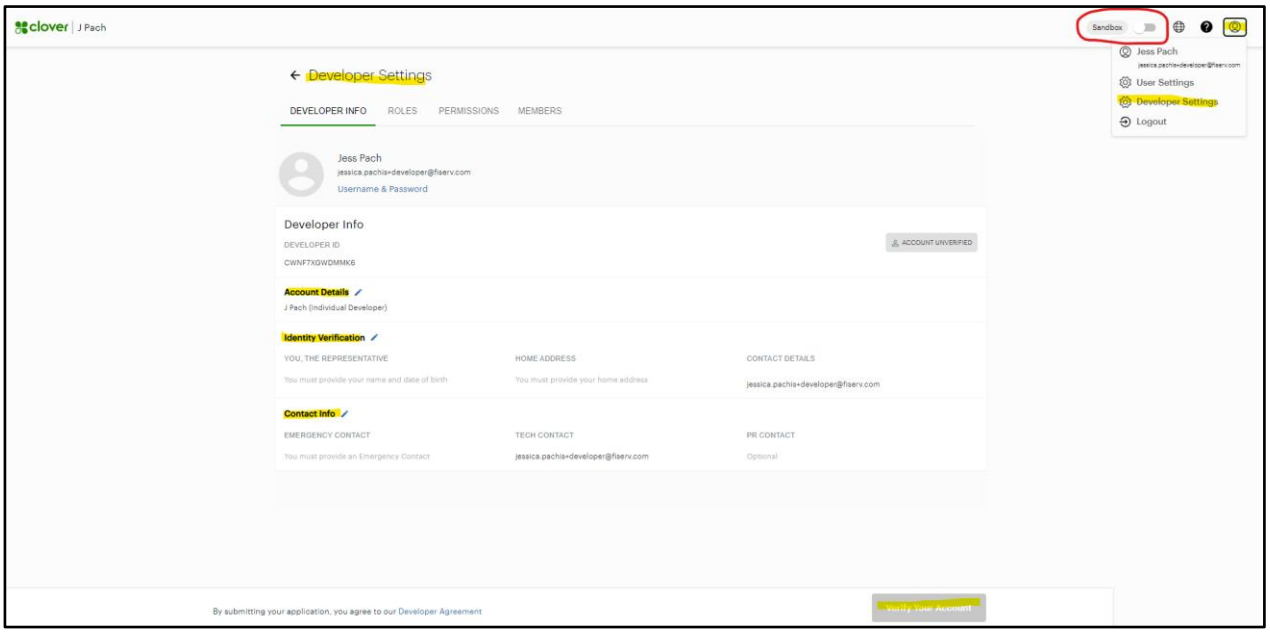
STEP 2 – Create Your Clover Developer Account & Submit your Clover Developer Account for Approval

a) Create a developer account on the Global Developer Dashboard - https://www.clover.com/global-developer-home/public/create-account

b) Next step is to submit your developer account for approval. When you are logged in, please ensure you are in the production environment (Toggle on the top right should be grey – see screenshot below).



c) Fill out the developer settings and click **"Verify Your Account**". See screenshot below. Please send an email to jessica.pachis@fiserv.com when this has been completed.



d) Once your developer account has been submitted, you will receive an automated email requesting you to submit the following documents to a BOX link provided.

If you are applying as an individual, please send the following documentation to validate your identity:

- A valid, unexpired passport or unexpired driver's license (please ensure it includes your date of birth clearly visible)
- Proof of home address. This can be a phone or utility bill showing the same name and address as your Clover Developer Application.

If you are applying as a company, please send these additional documents to validate your company information:

- Proof of business address (utility bill, bank statement, or government issued document)
- Proof of EIN/tax ID (government issued document)

If you did not receive this email, please email developer-relations@devrel.clover.com and cc marco.antico@fiserv.com and jessica.pachis@fiserv.com.

Please note: If you are applying as a company, you are required to upload all four documents (Individual and Company Documents). Please note that all documents must match the information listed in your Clover Developer Settings.

STEP 3a – Order a Dev Kit

Depending on the integration you are building, you will need a Clover Device to use for testing payments. Please order a Clover dev kit from https://cloverdevkit.com/. You'll want to order the device type that your merchants will use.

Please note: in order to ship your devkit outside the US, you will have to use a mail forwarding service such as Stackry, Vyking Ship or MyUs.

- ***Sign up for an account, and they will provide you with a US address to use. They will then forward the package directly to your address.***

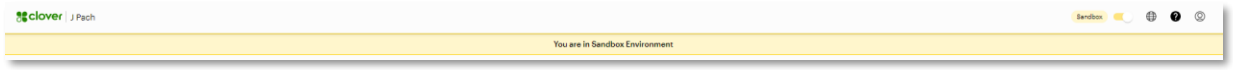
[OPTIONAL] STEP 3b – Use the Android Emulator

Learn how to use the emulator in Android Studio here: https://docs.clover.com/dev/docs/setting-up-an-android-emulator

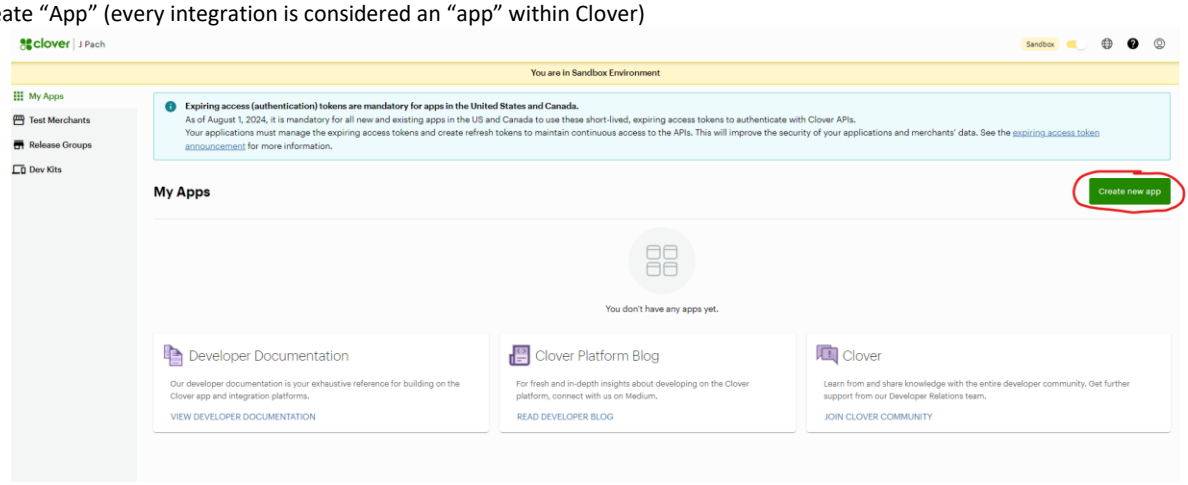
STEP 4 – Create an app in Sandbox for Testing Purposes

Learn about the differences between Sandbox and Production Environments here: Limitations by environment (clover.com).

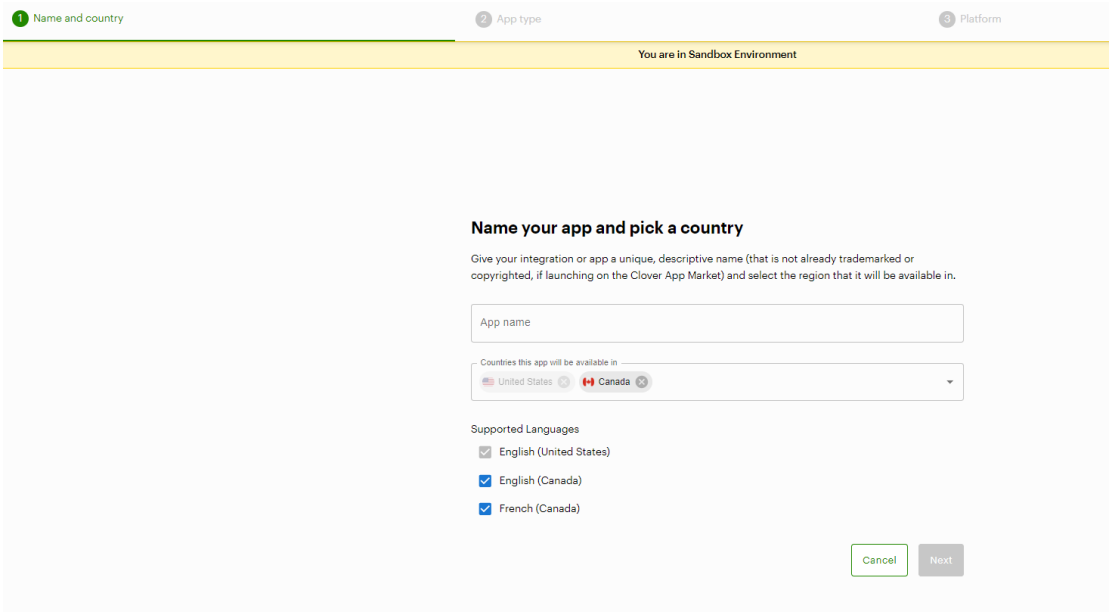
a) Toggle to your sandbox Environment



b) Create "App" (every integration is considered an "app" within Clover)



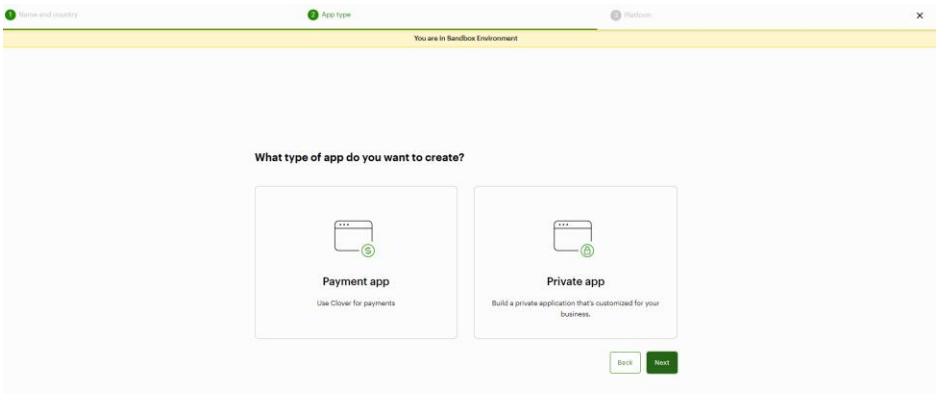
c) Select App Name and Country



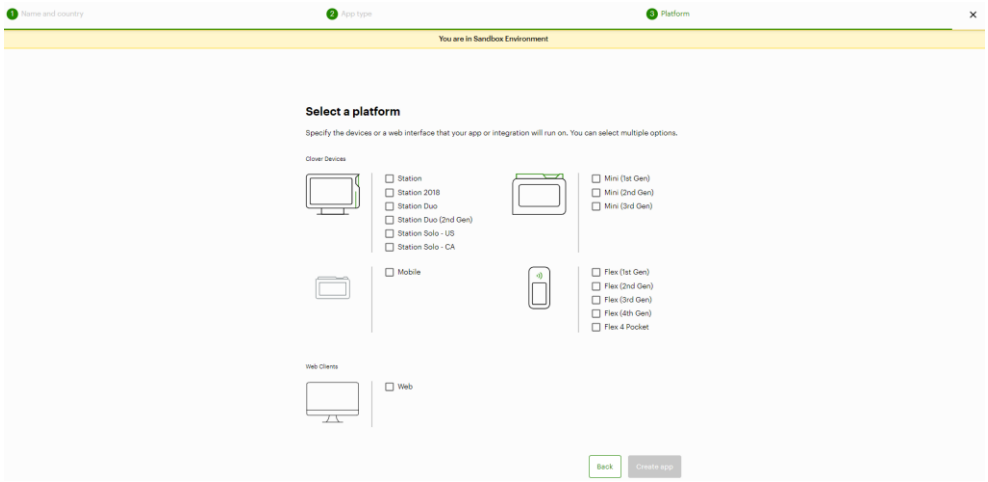
d) Select the type of app you want to create – App Market App, *Payment App or Private App*

1. App Market App - Public apps that Clover merchants can access through the Clover App Market. ***This option is available only in the production environment.***
2. Payment App - App that uses Clover for payment transactions
3. Private App - App that is customized for specific business needs and not published in the Clover App Market.

Please note: Public vs. Private Apps –public means that all Clover merchants can search and download your app from the Clover App Market. Private means it will not appear in the Clover App Market, but you can simply send interested merchants a url to click and download your app. All payment apps will be considered "private".

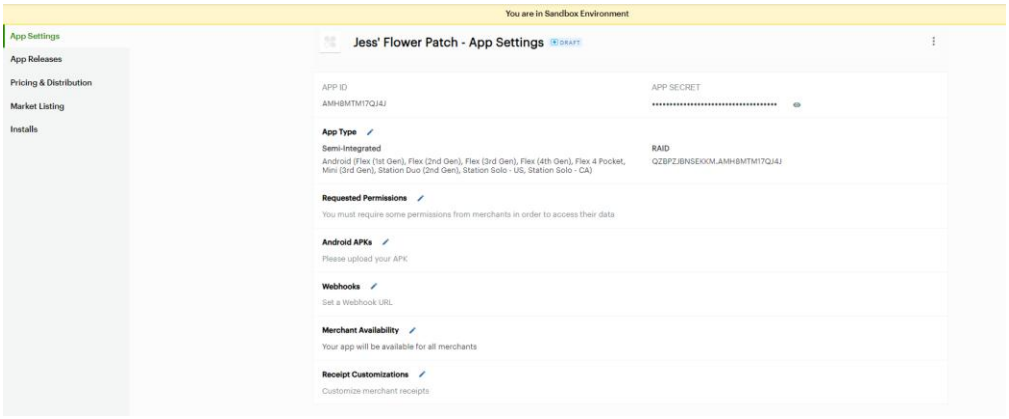


e) Select a Platform – *select the devices you wish you your app to run on*



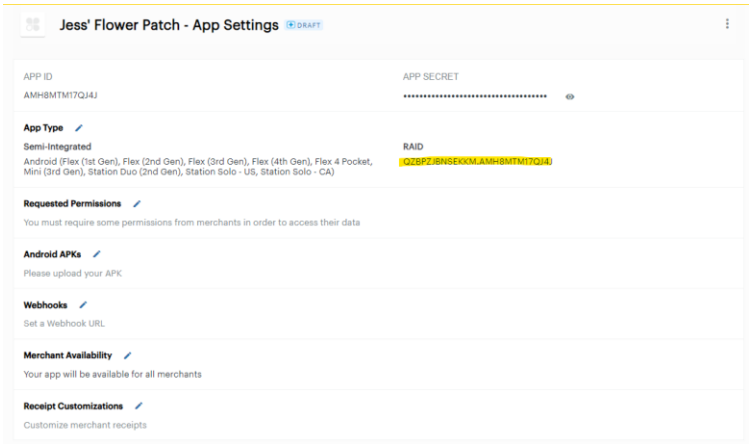
f) Complete the following sections depending on your integration type –

1. *App settings* – ***More information:*** ***Manage app settings***
    - ***Requested Permissions:*** Select the permissions for customers, employees, merchants, inventory, orders, payments, and eCommerce integrations. ***More information:*** ***Set app permissions***
    - **REST Configuration:** Enter site URL, alternate launch path, and CORS Domain settings for web apps.
    - **Android APKs:** Upload APK to build an Android app.
    - **Webhooks:** Set up a webhooks link (URL) to receive notifications when merchants who have installed your app perform certain events, such as creating an inventory or updating an order.
    - **Merchant Availability:** Select the software-as-a-service (SaaS) plan based on the modules your app needs to function. For example, if your app applies discounts to orders based on added items, you need the Orders, Items, and Discounts modules.
    - **Receipt customizations:** Set up smart receipts that customers can receive from merchants who have your app installed.
2. *App Release* - upload and manage APK versions for your Android apps. ***More information:*** ***Manage Android app releases***
3. *Pricing & Distribution* - Set up pricing tiers for your apps. You can then use the REST API endpoint or the Android AppsConnector method to send metered events to Clover. You need to submit your banking information to start adding paid subscription tiers and metered pricing for your approved app. ***More Information:*** ***Set up pricing tiers.***
4. *Market Listing* - Enter market listing information that displays with your published app on the Clover App Market. ***More information:*** ***Set Clover App Market listing***
5. *Installs* - View the metrics for billable merchants who have installed or uninstalled your app. The metrics are available for published apps in the Clover App Market with more than 100 installs. This information helps gain deeper insights into your app's adoption by merchants.



[PAYMENT INTEGRATIONS ONLY] STEP 5 – Using a Remote Application ID (RAID)

Required for ALL payment integrations. **Please skip this step if your app does not take payments.** If you selected "Yes" to "is this an app an integration to an existing POS", then you will see a RAID here:



When your integration connects to a Clover device, your semi-integrated application must pass a Remote App ID (remoteApplicationID or RAID) generated for your Clover app. This is separate from your Clover App ID, and both IDs are needed to launch your integration with Clover. The format of the RAID is {developerId}.{appId}.
The Remote App ID allows Clover to expedite support requests for your semi-integrated solutions, and it enables the logging of payments made through your app. ***More information:*** ***Create your Remote App ID (RAID) (clover.com)***

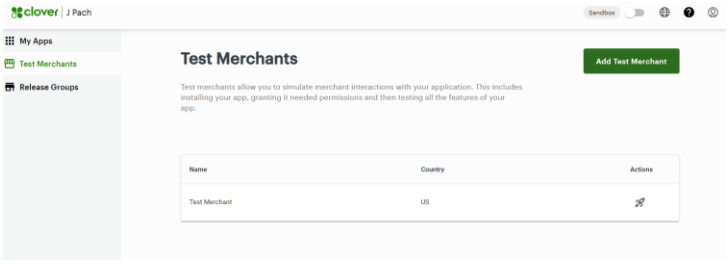
STEP 6 – Create a test merchant account in Sandbox

Test merchant accounts let you simulate merchant interactions with your application. This includes installing your app, assigning permissions, and then testing all the features of your app. A default test merchant account is automatically created for the sandbox and production environments. Test merchants in the production environment are not billed.

While creating and testing apps for the default test merchant, you can also:

- Create additional test merchants in the sandbox or production environment for the region where you want to make your app available.
- Add test merchants with different settings to simulate the effects of time zones, currencies, or permissions.
- Process test transactions using the correct payment gateway for a region. A specific payment gateway is configured based on the address you enter for your test merchant. For example, if you are a developer who wants to create an app for use in Canada, create your test merchant using a Canadian address.

More information: ***Manage test merchant accounts and information***



STEP 7 - Understanding OAuth

Why use OAuth? OAuth is the industry-standard protocol for online authorization. Due to the sensitivity of merchant data, Clover has implemented the OAuth 2.0 security framework. When a merchant selects and installs your app from the Clover App Market, Clover uses OAuth to secure the communication between your app and the merchant and to grant your app the necessary access to merchant data. Your app may need to access data about Clover merchants, such as their order history or current inventory, using the Clover REST API.

More information: Clover OAuth flow overview, Clover v2/OAuth flow overview.

STEP 8 – Building & Testing

See the following developer guides for information on building your application -

- Clover Android SDK to build Android apps that run on Clover devices.
- Clover REST API lets you query relevant information about Clover merchants, such as inventory, orders, and payments. You can build a browser-based integration that uses our REST API along with the relevant OAuth flow.
- Clover Semi-Integrations allows your existing point of sale (POS) software to accept EMV-ready, payment card industry (PCI) compliant payments. The Clover platform offers a customer-facing experience that enhances the POS and handles all payment acceptance tasks.
- Clover Ecommerce connects merchants' online stores with the Clover payment gateway, allowing acceptance of credit cards, debit cards, and digital wallets

How to generate a merchant specific test API token - Generate a merchant-specific test API token (clover.com). Please note that the process to create an API token is different in the sandbox and production environments.

STEP 9 – Create a video of your application to submit/upload

1) **Payment flow video** – If you are building a payments integration, a video demonstrating how your POS interacts with the Clover device is required for each transaction type. This video must be sent to developer-relations@devrel.clover.com and nirmala.sinha@clover-developer-relations.intercom-mail.com. You must conduct tests using a Dev Kit configured for the sandbox environment. The test card numbers used for some tests return correct responses only in the sandbox.
    - Test US payment flows
    - Test Canadian payment flows

2) **Functional demonstration video** – You must upload a video that provides a detailed functional description explaining the workflow of your app to enable quick review and approval of your app. The video should help the Clover App Market team visualize your app's functional flow and how it benefits the merchant. See the example video as a reference to create a video for your app submission.

Note: The functional demonstration video is separate from the payment flow videos used to validate your integration

STEP 10 – Re-create app in Production environment

Toggle into your production environment (ensure the toggle is grey again) and recreate your "app" in production. More information:

- Set Clover App Market listing

Note: that generating an API token is different in production - Authenticate with OAuth—Canada and US (clover.com).

STEP 11 - Submit your application in production for Approval

Submit for your application for Approval → https://docs.clover.com/docs/approval#submitting-a-developer-account-for-approval

1. Log in to Developer Dashboard, select USPROD section.
2. On the Your Apps tab, find your app, and click Details.
3. On the Details page, verify the information for your app, such as:
    - App name
    - Tagline
    - Description
    - Icon
    - EULA
    - Support email address
    - Support website
    - Support phone number
    - Two or more app benefits
    - One or more screenshots

- Link to your privacy policy and your terms of service or end user license agreement. These documents are verified for compliance with Clover Developer Legal Guidelines.

4. Click **Submit**
5. Clover reviews your application and checks for compliance with the following:
   - Clover App Market Terms
   - Clover App Market Policies
   - Clover Developer Agreement

STEP 11 – Final step is to email us:

Once you've submitted your application, please send an email to let us know to developer-relations@devrel.clover.com (cc marco.antico@fiserv.com + Jessica.pachis@fiserv.com) with the following information:

Understand Clover App Approval process here → Understand the app approval process (clover.com)