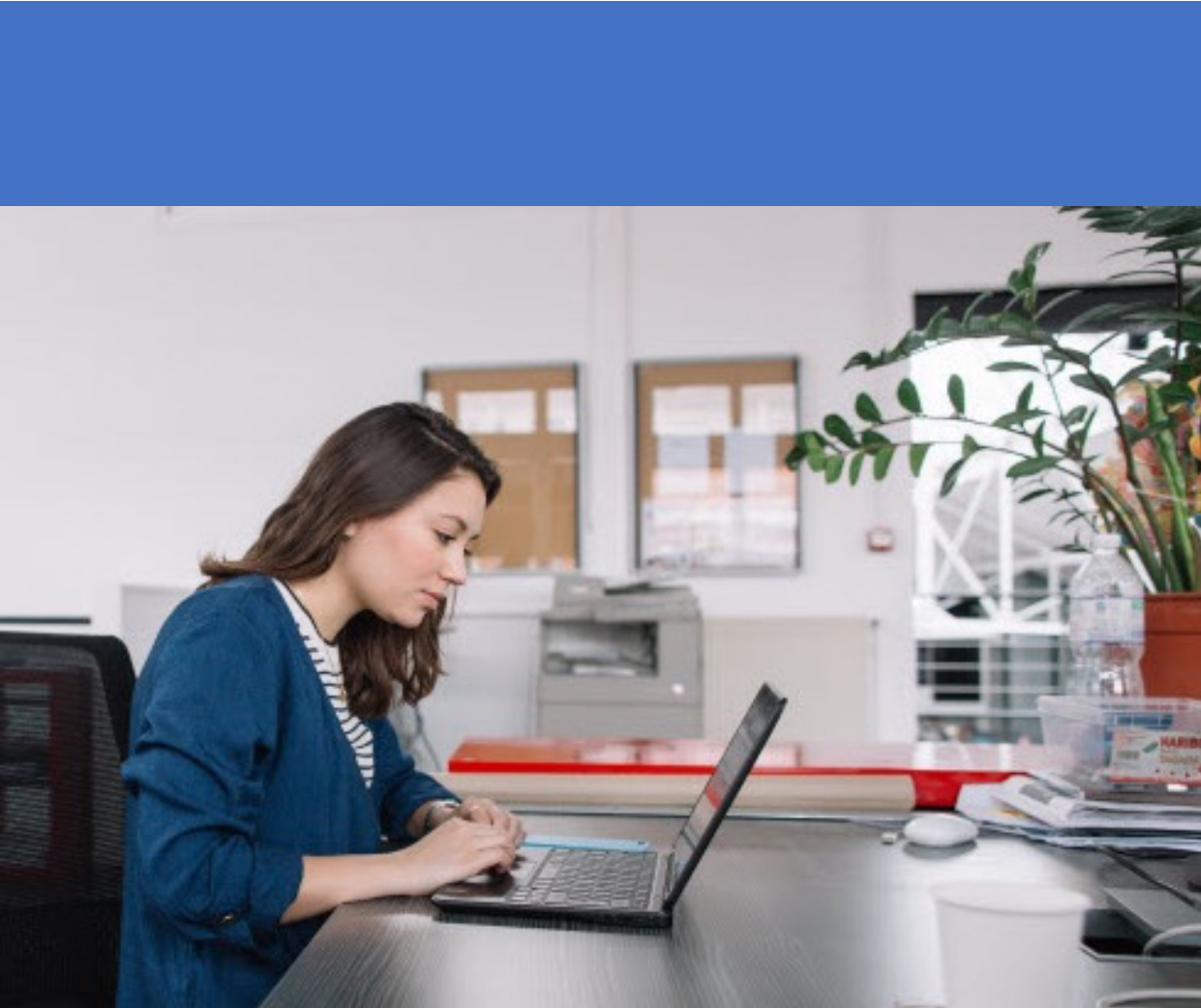


Braintree
A **PayPal** Service



 **salesforce** commerce cloud

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1 Summary

This Implementation Guide describes how to integrate `int_braintree_dropin_ui` version 24.1.0 into Commerce Cloud reference application Storefront Reference Architecture (SFRA) and `int_braintree` version 24.1.0

The `int_braintree_dropin_ui` includes:

- Drop-in UI

Integration of the cartridge into your storefront application does not imply modifications of core cartridge, SFRA approach of files overwriting should be used instead.

2 Component Overview

2.1 Drop-in UI

Drop-in UI is a ready-made payment UI that offers the quickest way to integrate and start securely accepting payment with Braintree.

For more details check [Drop-in UI](#).

3 Implementation Guide

3.1 Overview

`Int_braintree_dropin_ui` cartridge requires `int_braintree` cartridge version 24.1.0 to work properly.

3.2 Installation

3.2.1 Import metadata file

1. Upload and import metadata from the `metadata/meta` folder. To do so, go to **Business Manager > Administration > Site Development > Import & Export**. Click on **Upload** and add `system-objecttype-extensions.xml` file from `meta` folder in your local file system.
2. Import file from **Import & Export** menu. Click on **import** in **Meta Data** section and choose `system-objecttype-extensions.xml` from the list. Click **Next**.

Import & Export

Meta Data	
Import and export your system meta data (i.e., system type extensions, custom object types, custom preference definitions).	Import Export
Geolocations	
Import geolocations for a country.	Import
Import & Export Files	
Upload and download your import and export files.	Upload Download

Figure 3.2.1. Metadata sections in Import & Export

3.2.2 Add cartridge to cartridge path

Add `int_braintree_dropin_ui` into the cartridge path of a target site. To do so, go to **Business Manager > Administration > Sites > Manage Sites > Your Target Site > Settings** and insert `braintree_dropin_ui` before your cartridges record, as shown in Figure 3.2.2.

RefArch - Settings

Click **Apply** to save the details. Click **Reset** to revert to the last saved state.

Instance Type:	<input type="text" value="Sandbox/Development"/>
Deprecated. The preferred way of configuring HTTP and HTTPS hostnames is by using new features of the site aliases configuration ("SEO > Aliases Configuration"). The HTTP/HTTPS hostname	
HTTP Hostname:	<input type="text"/>
HTTPS Hostname:	<input type="text"/>
Instance Type: All	
Cartridges:	<input type="text" value="int_braintree_dropin_ui:int_braintree:app_storefront_base"/>
Effective Cartridge Path:	int_braintree_dropin_ui int_braintree app_storefront_base plugin_apple_pay plugin_facebook plugin_payments plugin_pinterest_commerce plugin_web_payments

Figure 3.2.2. Storefront cartridge path

3.2.3 PayPal Styles Configuration Business Manager modules installation

Add `bm_dropin_ui_configuration` and `bm_braintree` into the record of the Business Manager cartridge path. Go to **Business Manager > Administration > Sites > Manage Sites > Manage the Business Manager Site > Settings**. Shown in Figure 3.2.3.

Instance Type: Sandbox/Development ▾

Deprecated. Up to two instance specific hostname aliases for Business Manager can be configured here.
 ⚠ Setting a different hostname here will make some Business Manager modules unreachable. Manage additional hostnames in the 'Hostnames' tab instead.

HTTP Hostname:

HTTPS Hostname:

Instance Type: All

Cartridges:

Effective Cartridge Path:

```

app_business_manager
plugin_apple_pay
plugin_facebook
plugin_payments
plugin_pinterest_commerce
plugin_web_payments
bc_impex
bc_search
bc_analytics
bc_transaction
bc_catalog
bc_content
core
bm_dropin_ui_configuration
bm_braintree
customization_defaults

```

Figure 3.2.3. Business Manager Cartridge Path

Grant access to PayPal Styles Configuration.

- a. Go to **Business Manager > Administration > Organization > Roles & Permissions** and select the target role that needs to have access to PayPal Transaction management.
- b. Select the **Business Manager Modules** tab in the drop-down list on top. You must select your target site as the active context.
- c. Scroll to the for **Drop-in UI Button Styles Configuration** module. Grant access to it by selecting the checkbox and clicking **Update**.

Once you do this, every Business Manager user with that role can manage Drop-in button styles from **Business Manager > Merchant Tools > Braintree Plugin > Drop-in UI Button Styles Configuration**.

3.3 Configuration

Drop-in UI (int_braintree_dropin_ui) cartridge does not contain any specific site custom preferences and directly works with int_braintree custom site preferences.

Go to **Business Manager > Merchant Tools > Braintree Plugin > Preference Configuration**. You'll see the list of site preferences group.

General Credit Card PayPal Apple Pay Google Pay Secure Remote Commerce Venmo

Braintree General

Instance Type
Sandbox

Search by ID

Figure 3.3.1. Site preferences group that works with `int_braintree_dropin_ui`

3.3.1 Credit card configuration

If you as a merchant are making any changes in **Credit/Debit cards** settings (*Merchant tools > Payment methods > Manage Credit/Debit Cards*), to go smoothly with checkout, make sure the type of credit card matches the below:

- Visa
- MasterCard
- American Express
- Diners Club*
- Discover
- JCB
- UnionPay*
- Maestro
- Mir
- Elo
- Hiper
- Hipercard

* **Diners Club & UnionPay** cards are processed as **Discover** cards, meaning to checkout with this type of card, the Discover card type should be added in **Credit/Debit Cards** settings (*Merchant tools > Payment methods > Manage Credit/Debit Cards*).

4 Operation and Maintenance

4.1 Testing

Contact PayPal support for testing guide.

4.2 Logs

Cartridge uses `int_braintree` mechanism for logging errors.

4.3 SFRA core templates overlay list

The following templates from app_storefront_base cartridges have been overlaid by int_braintree_dropin_ui:

```
account/dashboardProfileCards.isml
cart/cart.isml
checkout/billing/billing.isml
checkout/billing/billingSummary.isml
checkout/cart/miniCart.isml
product/addToCardGlobal.isml
product/addToCardProduct.isml
common/scripts.isml
```

Templates are up to date with SFRA 6.3.0

4.4 Support

To get help and support from PayPal:

- **PayPal Business support** – Go to PayPal’s [Contact Us](#) and log in to your PayPal account.
- **Technical Support** – Go to the [Merchant Technical Support Help Center](#).

5 User guide

5.1 Drop-in UI overview

Drop-in UI present on:

- Account page - Figure 5.2.1
- Product page - Figure 5.3.1
- Cart page - Figure 5.4.1
- Mini cart page - Figure 5.5.1
- Billing checkout page - Figure 5.6.1

Drop-in UI can process the following payment methods: PayPal, Apple Pay, Google Pay, Venmo and Credit Card.

Also, Credit Card and PayPal can be saved to the Braintree Vault if 'Store Payment Method in Vault' site pref. is enabled. Note: In case there is an uncaptured CC transaction related to a certain customer and the logged-in buyer wants to remove any saved payment method from the Drop-In UI list, then 'Remove payment method' button is hidden for the logged-in buyers on the Billing and My Account pages.

Visibility of payment methods in Drop-in UI can be changed by the following ways:

- In Custom Preferences at the Business Manager. Check the [Site Preferences configuration](#) for details.
- In payment methods section: Go to **Business Manager > Merchant Tools > Ordering > Payment Methods**.

Important! Drop-in UI on the Product, Cart and Mini-cart pages will contain PayPal payment method only when buyer has no vaulted PayPal accounts.

5.2 Account page

On the Account page Drop-in shows the list of the saved payment methods PayPal and Credit Card and possibility to add a new PayPal or Credit Card payment method.

The screenshot displays the 'Account page' with a 'Home' link at the top left. The page is divided into several sections:

- Profile:** Includes fields for First Name (test), Last Name (2110), Email (test2110@gmail.com), and Phone (2025550162). An 'Edit' link is present.
- Password:** Includes a Password field with masked characters. An 'Edit' link is present.
- Address Book:** Shows a 'Default Address' with details: 473 Wiseman Street - Sevierville - 37862, Joy Gray, 473 Wiseman Street, Sevierville, TN 37862, +1 02025550162. An 'Add New' link is at the bottom.
- Order History:** Features a 'View' link and a 'Most Recent Order' section with an image of a man in a suit. Order details include: Order Number: 00020605, Date Ordered: 3/31/22, Order Status: NEW, and Shipped to: Joy Gray. A summary shows 'Total items 1' and 'Total \$325.48'.
- Saved payment methods:** Includes an 'Edit' link and two entries: a PayPal account (epamtester@pplest.com) and a Visa card (Ending in 1111).
- Add another payment method:** Offers options for 'Card' and 'PayPal'.

Figure 5.2.1 Drop-in UI on the Account Page

5.3 Product page

Important! Drop-in UI on the product page works only with vault flow.

On the Product page Drop-in process PayPal payment method.

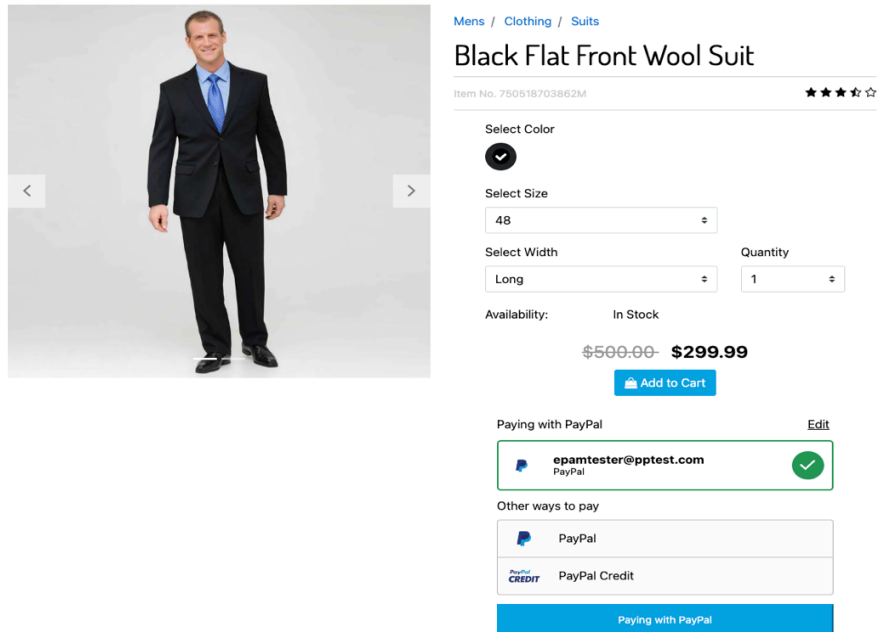


Figure 5.3.1 Drop-in UI on the PDP page


5.4 Cart page

On the Cart page Drop-in UI can process: PayPal, PayPal Credit, Google Pay, Apple Pay payment methods.

Your Cart

[Continue Shopping](#) 1 Items [Need Help? Call 1-800-555-0199](#)

Black Flat Front Wool Suit



Color: Black
Size: 48
Width: Long
In Stock
[Edit](#)

Each	Quantity	Total
\$500.00 \$299.99	1	\$299.99

✕

Enter Promo Code

Shipping

Ground (7-10 Business Days) ▾

Shipping cost \$9.99

Sales Tax \$15.50

Estimated Total **\$325.48**

Paying with Google Pay [Edit](#)

Google Pay ✓

epamtester@pptest.com
PayPal

Other ways to pay

- PayPal
- PayPal Credit
- Google Pay


Figure 5.4.1 Drop-in UI on the Cart page

5.5 Mini cart page

On the Mini cart page Drop-in process PayPal payment method.

Your shopping cart [View Cart](#)

Black Flat Front Wool Suit ✕



Color: Black
Size: 48
Width: Long
In Stock

Each	Quantity	Total
\$500.00 \$299.99	1	\$299.99

Estimated Total **\$299.99**

Paying with PayPal [Edit](#)

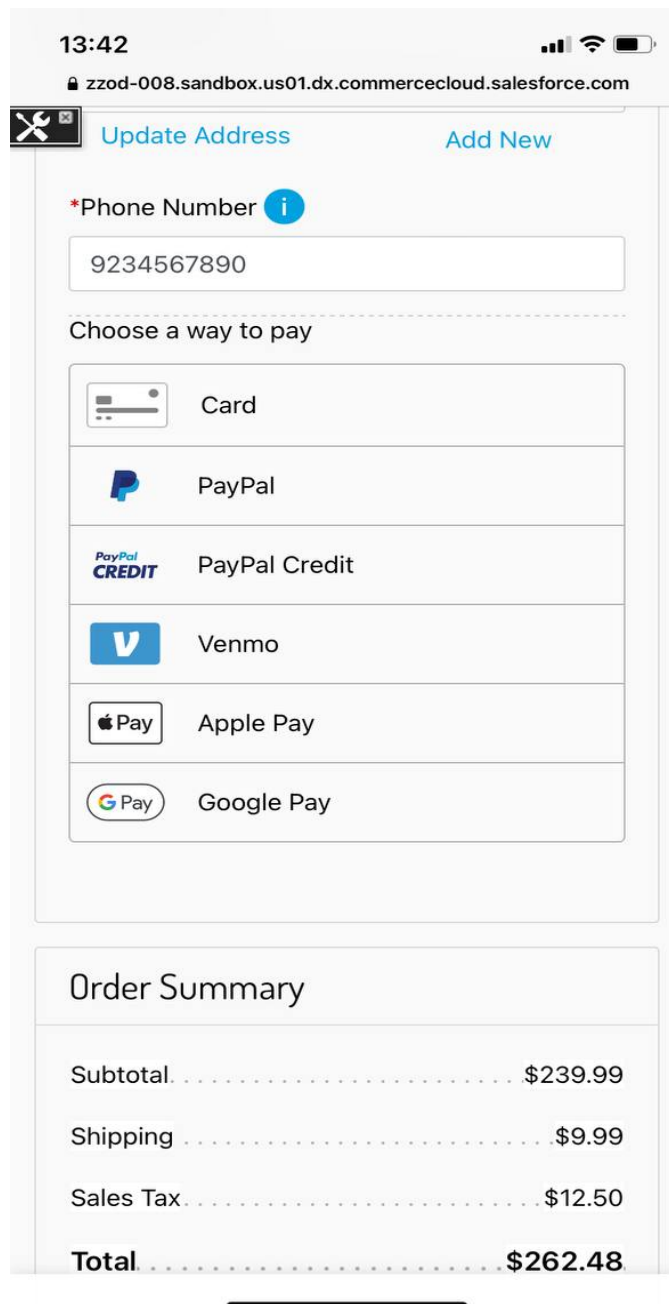
epamtester@pptest.com ✓
PayPal

Choose another way to pay

Figure 5.5.1 Drop-in UI on the Mini cart page

5.6 Billing Checkout page

On the Billing Checkout page Drop-in UI can process: PayPal, PayPal Credit, Google Pay, Apple Pay, Credit Card and Venmo payment methods.



The screenshot displays a mobile checkout interface. At the top, the time is 13:42 and the URL is zzod-008.sandbox.us01.dx.commercecloud.salesforce.com. Below the URL, there are two buttons: 'Update Address' and 'Add New'. A required phone number field contains '9234567890'. The 'Choose a way to pay' section lists six options: Card, PayPal, PayPal Credit, Venmo, Apple Pay, and Google Pay. The 'Order Summary' table is as follows:

Order Summary	
Subtotal	\$239.99
Shipping	\$9.99
Sales Tax	\$12.50
Total	\$262.48

Figure 5.6.1 Drop-in UI on the Billing Checkout page

5.7 Button Styles Configuration

PayPal button styles in Drop-in UI can be changed from Business Manager module. After installation open **Business Manager > Merchant Tools > Braintree Plugin > Drop-in UI Button Styles Configuration**.

You can configure styles of the PayPal, Google Pay, Apple Pay and Connect with PayPal buttons for checkout, product, cart, mini cart and login pages. For all available options please visit [Checkout docs](#).

Choose a PayPal Button Location:

billing

Choose a color:

black

Choose a shape:

pill

Choose a label:

pay

Choose a size:

The size changes are visible only in Drop-in on the storefront

medium

Pay with *PayPal*

The safer, easier way to pay

Figure 5.7.1 PayPal button configuration

PayPal Google Pay Apple Pay

Google Pay Button Configuration

Choose a location

billing

Choose a color

white

Choose a type

checkout

Choose a size mode

fill

Save Button Style Configuration

Checkout with  Pay

Figure 5.7.2 Google Pay button configuration

PayPal Google Pay Apple Pay

Apple Pay Button Configuration

Choose a location

billing

Choose a color

black

Save Button Style Configuration


Pay with  Pay

Figure 5.7.3 Apple Pay button configuration

PayPal Google Pay Apple Pay **Connect with PayPal**

Connect with PayPal Button Configuration

Choose a PayPal Button Location:

Choose a label:

Choose a shape:

Choose a size:

Choose a theme:

Save Button Style Configuration




Figure 5.7.4. Connect with PayPal configuration

5.8 Credit card verification

Card verification is a strong first-line defense against potentially fraudulent cards. It ensures that the credit card number provided is associated with a valid, open account and can be stored in the Vault and charged successfully.

Dropin can verify the filled-in card fields with the customer's bank as long as **card verification** is enabled and **AVS & CVV rules** are configured in your [Control Panel](#).

Note: If credit card verification hasn't been enabled and there're credit cards in vault, they won't be verified automatically once you enable credit card verification.

5.8.1 Enabling card verification

To enable the card verification (Figure 5.8.1& Figure 5.8.2):

1. Log into the [Control panel](#) & click on the gear icon in the top right corner
2. Click Processing from the drop-down menu
3. Scroll to the Vaulting section
4. Next to Card Verification, click the toggle to turn it on

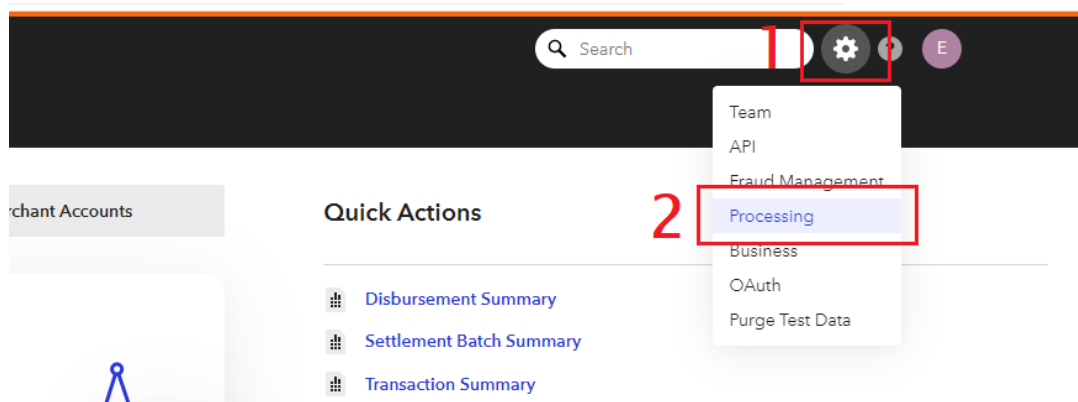


Figure 5.8.1. Enabling card verification (steps 1 & 2)

← Team API Fraud Management **Processing** Business OAuth Purge Test Data

Processing Options

Enable customers to pay with SRC
[Visa Checkout Terms](#)

Samsung Pay
Enable customers to pay with Samsung Pay
[Samsung Pay SDK License Agreement](#) [Samsung Pay Promotional Terms](#)

Vaulting **3**

Card Verification **4**
Ensure that a card is valid and passes fraud checks (if enabled) before storing in the Vault

Card Verification - Retry All Failed \$0
Automatically retry all failed \$0 authorizations as \$1 authorizations

Figure 5.8.2. Enabling card verification (steps 3 & 4)

Also, you can enable the feature **Card Verification - Retry All Failed \$0** to avoid rejecting valid cards when their bank isn't accepting \$0 as a valid transaction amount. To do so, make the same steps you did to enable card verification and then turn on the toggle next to feature **Card Verification - Retry All Failed \$0** (Figure 5.8.3).

← Team API Fraud Management **Processing** Business OAuth Purge Test Data

Processing Options

Enable customers to pay with SRC
[Visa Checkout Terms](#)

Samsung Pay
Enable customers to pay with Samsung Pay
[Samsung Pay SDK License Agreement](#) [Samsung Pay Promotional Terms](#)

Vaulting

Card Verification
Ensure that a card is valid and passes fraud checks (if enabled) before storing in the Vault

Card Verification - Retry All Failed \$0
Automatically retry all failed \$0 authorizations as \$1 authorizations

Figure 5.8.3. Enabling Card Verification - Retry All Failed \$0 feature

You can read more [here](#).

5.8.2 Configuring AVS & CVV rules

To configure AVS & CVV rules (Figure 5.8.4. Configuring AVS & CVV rules (step 1 & 2)Figure 5.8.4 & Figure 5.8.5):

1. Log into the [Control Panel](#) & click on the gear icon in the top right corner
2. Click Fraud Management from the drop-down menu or, if you are already on your merchant account configuration page, just switch to Fraud Management tab
3. There under Basic, click Options next to AVS & CVV and configure rules for which a transaction should be rejected (as e.g. shown on Figure 5.8.6 & Figure 5.8.7).

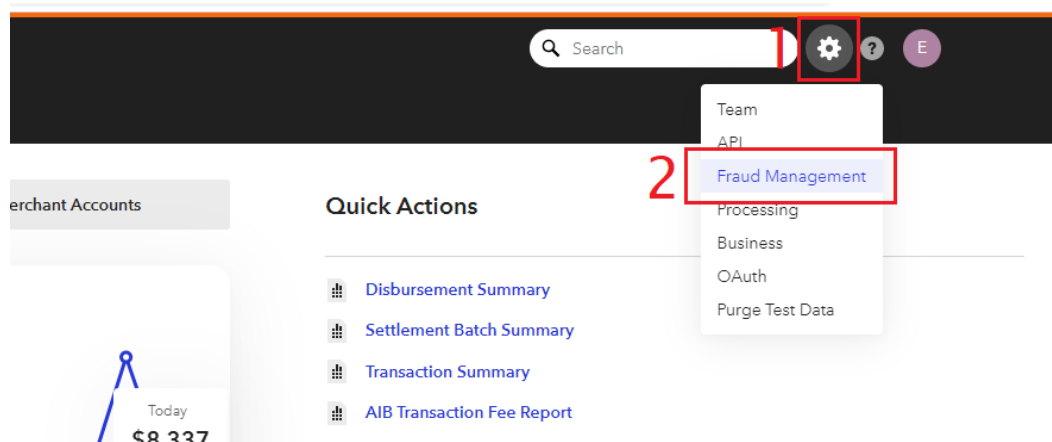


Figure 5.8.4. Configuring AVS & CVV rules (step 1 & 2)



Fraud Management

Help detect and prevent fraudulent transactions with a suite of integrated tools to fit your business needs, ranging from **basic** to **advanced**.

Basic

Easily turn on or off standard settings below to guard against the most common types of fraudulent transactions.

Included with your account.

AVS	Options
Automatically verify customer address information when processing transactions and verifications	
CVV	Options
Automatically verify the Card Verification Value with the card's issuing bank when processing transactions and verifications	
Risk Thresholds	Options
Apply a set of customizable rules and triggers to help detect and prevent fraud	

3

Figure 5.8.5. Configuring AVS & CVV rules (step 3)



Fraud Management

Edit CVV Rules

CVV numbers are not stored in the gateway, in accordance with PCI DSS. Rules configured here only apply to

Reject Transactions & Verifications If:

- CW does not match (when provided) (N)
 - For Any Transaction
 - For Specific Transactions
- CW not provided (I)
- CW is not verified (when provided) (U)
 - For Any Transaction
 - For Specific Transactions
- Issuer does not participate (when provided) (S)

Save

Cancel

Figure 5.8.6. CVV rules

Postal Code

Postal Code does not match (when provided) (N)

- For Any Transaction
 For Specific Transactions

Postal Code not verified (U)

- For Any Transaction
 For Specific Transactions

Postal Code not provided (I)

Street Address

Street Address does not match (when provided) (N)

- For Any Transaction
 For Specific Transactions

Street Address not verified (U)

- For Any Transaction
 For Specific Transactions

Street Address not provided (I)

Postal Code And Street Address

Reject only if both the postal code rule is violated and the street address rule is violated. (?)

AVS Error

Issuing bank does not support AVS (S)

AVS system error (E)

Country Scope:

United States Only (?)

Global (?)

In-store transactions

Skip AVS checks for in-store transaction (?)

Figure 5.8.7. AVS rules

5.9 3D Secure

To use 3DS with Drop-in UI enable the site preference **BRAINTREE_CC_3DSecure_Flow**. Choosing *Auto* or *Always* or *Always+ChallengeRequested* won't influence the behavior of 3DS since Drop-in will decide how to process it based on the data passed.

The plugin passes **email**, **billing address** and additional data which includes **shipping address**. Those are the recommended fields for achieving a 3DS v2 verification.

When 3DS is enabled, both credit cards and non-network tokenized Google Pay cards will perform verification.

Note: The site preference **BRAINTREE_GOOGLEPAY_3DSecure_Flow** doesn't impact 3DS for Google Pay in Drop-in.

3DS can be triggered on Cart page for Google Pay and on Billing page for Credit Card and Google Pay.

6 Version and Support Info

6.1 Cartridge Version

The file with the current version of the cartridge is located at:

```
int_braintree_dropin_ui/cartridge/templates/resources/dropinUIVersion.properties
```

The file with the current version of the int_braintree cartridge is located at:

```
int_braintree/cartridge/templates/resources/braintreeVersion.properties
```

The file with the current version of the SFRA cartridge is located at:

```
app_storefront_base/cartridge/templates/resources/version.properties
```

6.2 SFRA Version Support

Int_braintree_dropin_ui cartridge version 24.1.0 supports SFRA 6.3.0 only.

6.3 Compatibility Mode

Cartridge tested with Compatibility Mode 21.2.

7 Service Errors Handling

7.1 Service Timeout Handle

If a Braintree service becomes unavailable, error details can be found in the following logs:

- Error details can be found in the log with the **custom-Braintree** prefix.

- Service request/response details can be found in the log with the **service-graphql** prefix.

For more details about logs, see [Logs](#) section.

8 Known Issues

8.1 Billing and shipping address for the vaulted PayPal account

In case when a buyer has saved PayPal accounts, Drop-in on the cart page will contain all payment methods except PayPal, Mini-cart and Product pages will not contain Drop-in UI at all.