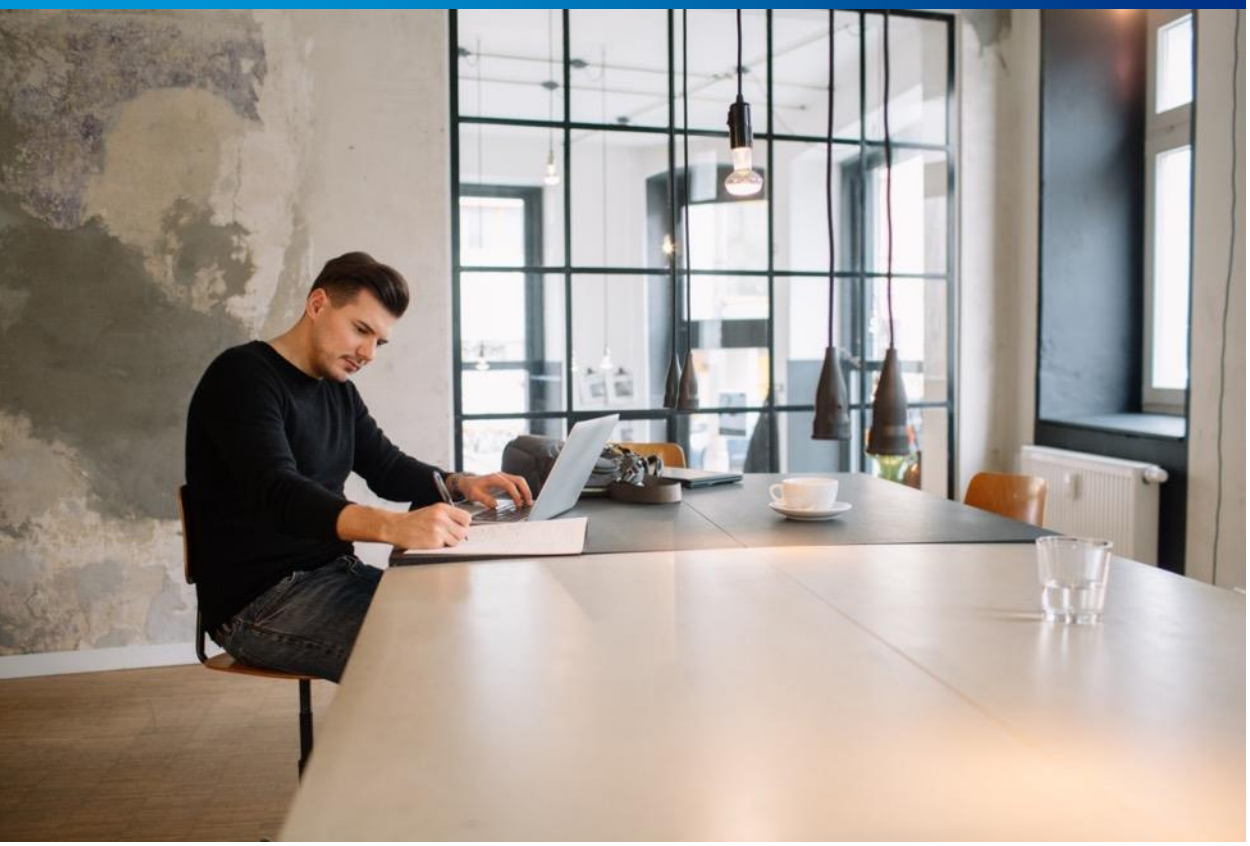
PayPal Integration Guide

FOR SALESFORCE COMMERCE CLOUD



salesforce commerce cloud

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1 Summary

This Implementation Guide describes how to integrate **int_paypal**, **bm_paypal** and **bm_paypal_configuration** cartridges version 21.3.0 into Commerce Cloud reference application Store Front Reference Architecture (6.0 SFRA).

Cartridges includes:

- PayPal Checkout from cart and payment pages
- Billing Agreement creation in the checkout process
- Review and post-process PayPal transactions in the Business Manager
- Dynamic Smart Button styling management from the Business Manager

PayPal integration uses PayPal REST Order API for checkout and Payment API for transaction post processing in Business Manager.

For more information, contact your PayPal support manager.

2 Component Overview

2.1 Supported Features

2.1.1 Smart Payment Button

PayPal Checkout with Smart Payment Buttons gives your buyers a simplified and secure checkout experience. PayPal intelligently presents the most relevant payment types to your shoppers, automatically, making it easier for them to complete their purchase using methods like Pay with Venmo, PayPal Credit, credit card payments.

Button Demo

2.1.2 Billing Agreement and Reference Transactions

The PayPal Billing Agreement (Reference Transactions) feature helps customers to pay more quickly. If a buyer accepts Billing Agreements with your site, they can check out without redirection to PayPal, both from the Cart and Billing page.

To learn more, see Reference transactions overview.

NOTE: Reference transaction needs to be enabled in a merchant account setting. Please contact your PayPal support manager enable this feature on your account

2.1.3 Alternative Payment Methods

Alternative payment methods allow customers across the globe to pay with their bank accounts, wallets, and other local payment methods. Relevant alternative payment methods are automatically presented with Smart Payment Buttons.

To learn more, see Alternative Payment Methods overview.

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2.1.4 Transactions post processing

Orders paid with integration can be post-processed from separate Business Manager module. Post-processing includes transaction capture, refund and void. Also, you can create a new transaction using existed billing agreement id.

Check Business Manager chapter for more details.

2.1.5 PayPal-provided Billing Address and Phone Number

To retrieve a buyer's billing address and phone number from the PayPal Checkout flow, please contact your PayPal representative or PayPal Support to enable them.

Important: Retrieve billing address and phone number should be enabled in merchant account before PayPal button will be enabled on a cart page.

2.1.6 Connect with PayPal

Connect with PayPal enables users to create an account for your website and log in using their PayPal credentials.

2.1.7 Webhook Support

The purpose of the webhooks is to reflect changes which was done manually or automatically on PayPal console level.

For now only the next hooks are supported: **Payment authorization voided**, **Payment capture refunded** and **Payment capture completed**.

2.2 Privacy and Payment

This integration requires access to the following customer data elements: Shipping Address, Order Details, Customer Profile.

3 Implementation Guide

3.1 Overview

Three cartridges support this integration:

1. **int_paypal** – Commerce Cloud storefront extension
2. **bm_paypal** – Business Manager extension “PayPal Transactions”
3. **bm_paypal_configuration -** Business Manager extension “PayPal Styles Configuration”

3.2 Installation

3.2.1 Import metadata archive

1. Upload and import meta.zip from the metadata folder. To do so, go to **Business Manager > Administration > Site Development > Site Import & Export**. Upload archive using Local option in

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the Upload Archive section. After upload choose metadata.zip in the list and click on import button.

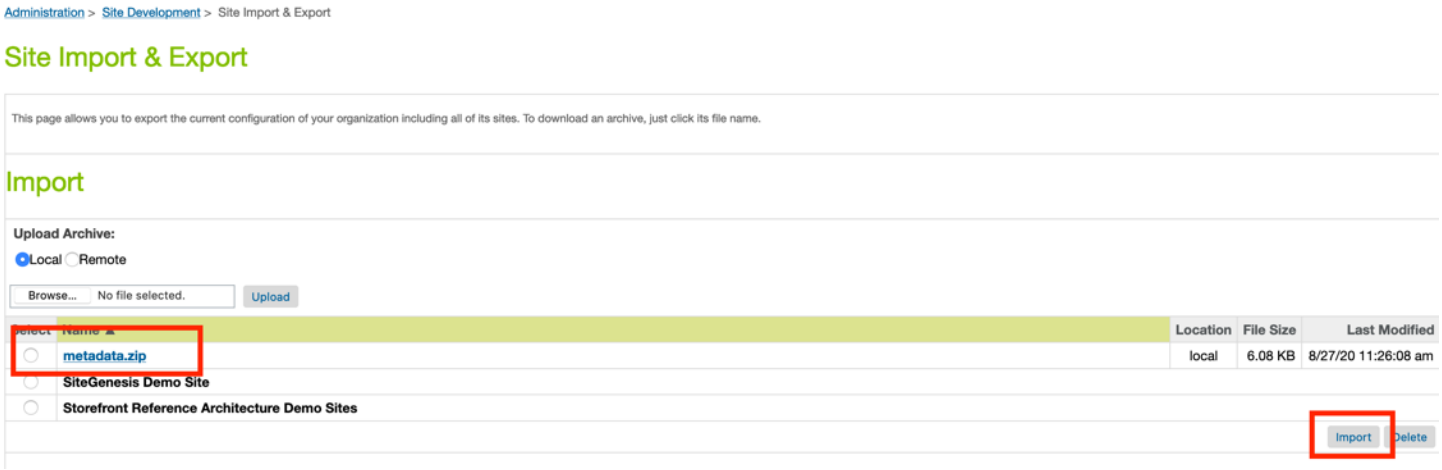

Figure 1. metadata.zip archive import

3.2.2 Add cartridge to cartridge path

Add **int_paypal** 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 **int_paypal** before your cartridges record, as shown in Figure 2.

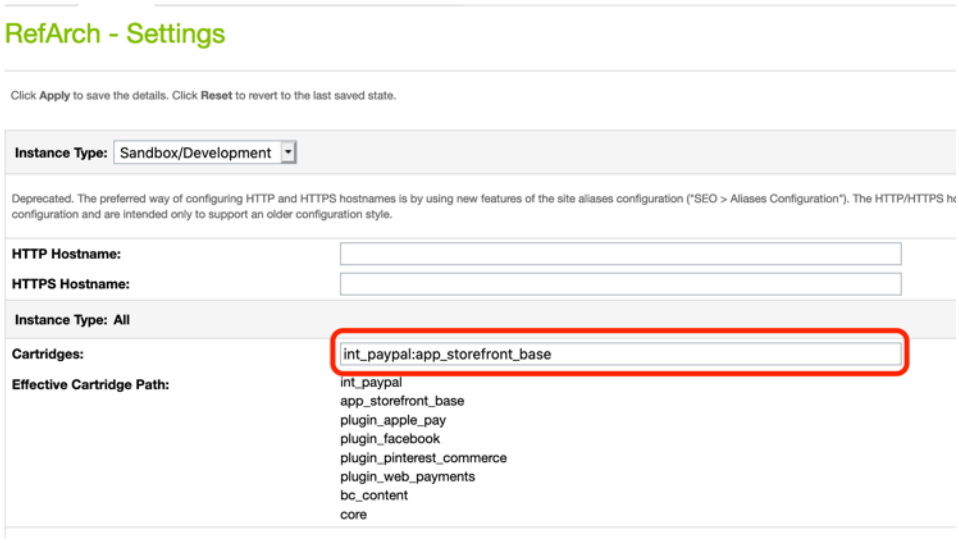

Figure 2. Storefront cartridge path

3.2.3 Adding API Credentials

Services:

- int_paypal.http.rest – is used for the main plugin logic (Smart Button, manipulations with transactions and etc.).
- int_paypal.http.token.service - is used for Connect with PayPal and Webhooks features.

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To access credentials go to **Business Manager > Administration > Operations > Services > Credentials**.

You need to fill the next credentials with the same data:

- Paypal_Sandbox_Credentials
  SB URL: https://api.sandbox.paypal.com/
  Prod URL: https://api.paypal.com/
  User: Client Id
  Pass: Secret
- Paypal_Sandbox_Connect_Credentials
  SB URL: https://api-m.sandbox.paypal.com/v1/
  Prod URL: https://api-m.paypal.com/v1/
  User: Client Id
  Pass: Secret

For both credentials use Client Id as **User** and Secret as **Password.** Client Id and Secret can be obtained in the app details at the PayPal developer portal.

For more details about REST apps and credentials please visit Get credentials page at the PayPal Developer Portal.

NOTE: Current integration supports only one credentials usage at a time. If you wish to use multiple credentials at one sandbox you should customize cartridge at PaypalRestService.js file

(Optional) For non-production activities we recommend enabling the communication log for the **int_paypal.http.rest** and **int_paypal.http.token.service** service. The communication log will log every request and response to the log files. To do this navigate to the **Business Manager > Administration > Operations > Services** and click on **int_paypal.http.rest/ int_paypal.http.token.service.** Check Communication Log Enabled checkbox (Figure 4)

PLEASE NOTE: By enabling the communication log, some details such as customer's personal information including address, phone, and email will be logged in cleartext. This should only be used for debugging purposes. We recommend, if possible, only use this in a sandbox; however, when used in production, ensure you are disabling / unchecking the communication log box immediately after you are done with your debugging. Further, some credentials will also be saved in cleartext.

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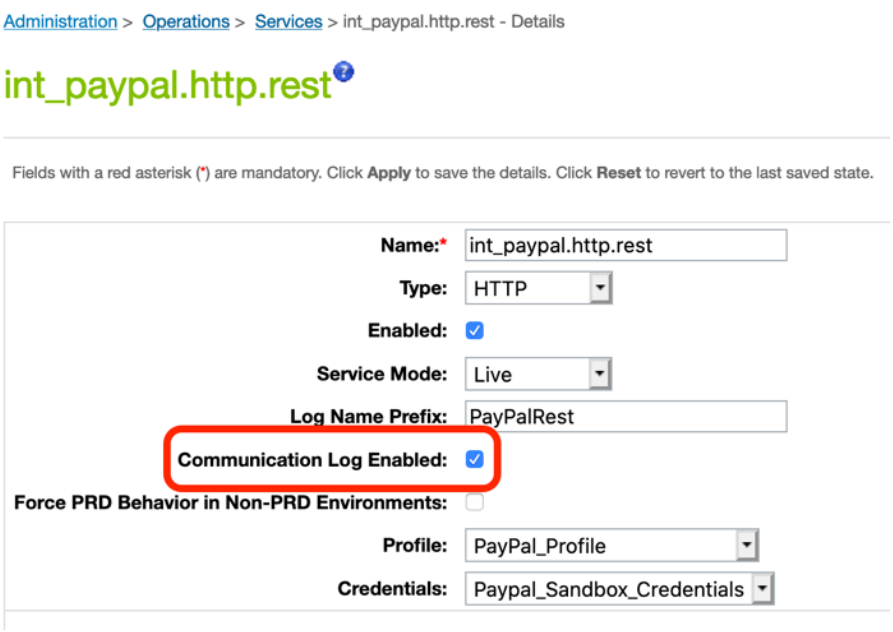

Figure 3. Service Example

3.2.4 Papal Transaction and PayPal Styles Configuration Business Manager modules installation

Add **bm_paypal** into the record of the Business Manager cartridge path. Go to **Business Manager > Administration > Sites > Manage Sites > Manage the Business Manager Site > Settings** and add **bm_paypal** and **bm_paypal_configuration** to the input as shown in Figure 4.

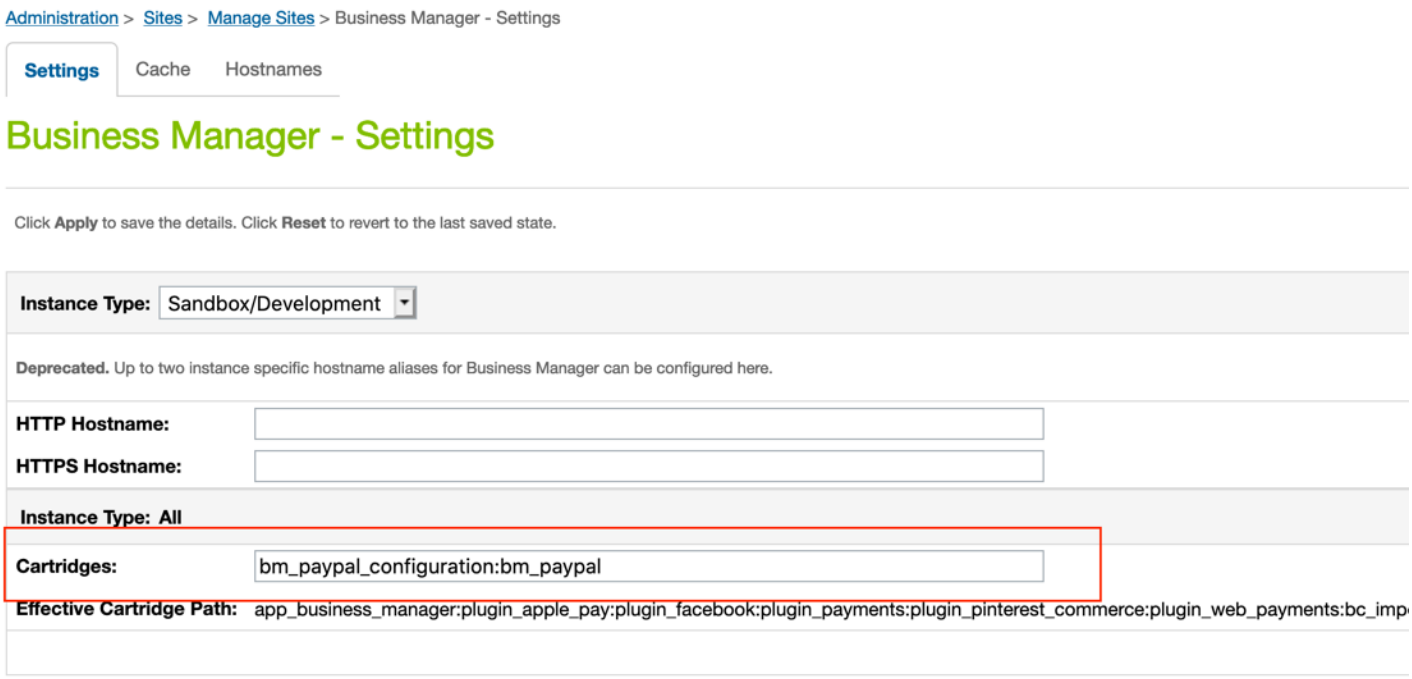

Figure 4. Business Manager Cartridge Path

Grant access to Business Manager modules:

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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 **PayPal Transactions** module. Grant access to it by selecting the checkbox and clicking **Update**. Repeat same action for **PayPal Styles Configuration.**

Once you do this, every Business Manager user with that role can manage PayPal Transactions by selecting **Business Manager > Merchant Tools> Ordering > PayPal Transactions** and change Smart Button styling under **Business Manager > Merchant Tools> Site Preferences > PayPal Styles Configuration.**

3.2.5 Custom cache configuration

Custom cache required for fast and stable work on the integration. Navigate to **Business Manager > Administration > Operations > Custom Caches** and check checkbox **Enable Caching**.

There are 2 custom cache objects used by the integration

1. paypalPreferences – custom site preferences cached. Out of the box, the integration supports single site usage and custom preferences are cached. For multiple sites we recommend removing cache definition from caches.json file in the cartridge.
2. paypalRestOauthToken – OAUTH token for communication with PayPal REST API. Out of the box, the integration supports single site usage and token retrieved from PayPal is cached. For multiple credentials usage we recommend removing cache definition from caches.json file in the cartridge.

NOTE: Custom Cache could be disabled for developing or testing purposes. But we don't recommend disabling it on production and staging to avoid performance issue and http calls quota violation.

3.3 Configuration

3.3.1 Updating Cartridge Custom Site Preferences

Go to **Business Manager > Merchant Tools > Site Preferences > Custom Site Preferences**. You'll see new Custom Site Preference Group called PayPal Configuration (Figure 7)

Figure 5. PayPal Custom Site Preferences

Click **View** for PayPal Configuration. Detailed description about each option is available under preference name on the page.

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NOTE: *Show PayPal button on the cart page* requires customer shipping address. Review PayPal-provided Billing Address and Phone Number before enabling this preference.

NOTE: Review section Billing Agreement and Reference Transactions section before enable Billing Agreement feature.

3.3.2 Job configuration for removal outdated transaction

To record transaction created from Business Manager cartridge use custom object feature. After the year transaction became outdated and to remove it job with recurring interval was imported with metadata.

Job has site context and default site id is RefArch. If you have different site id, navigate to **Business Manager > Administration > Operations > Jobs > RemoveOutdatedPayPalTransaction > Job Steps** and click on RefArch mark near Scope and select new site to run.

By default, job will run every 2 months. If you don't create transaction from Business Manager or you want to change a job interval, navigate to **Business Manager > Administration > Operations > Jobs > RemoveOutdatedPayPalTransaction > Schedule and History**. Uncheck Enable checkbox if you want to disable the job or change an internal in the menu below.

3.3.3 Static values configuration

All configuration option available in `cartridge/config/sdkConfig.js` file. You could change

1. Allowed currencies. By default, all currencies are allowed. Currency list available under allowedCurrencies variable. More details Currency
2. Disable funds. By default, only alternative payment methods are disabled. More details Disable funding and Alternative Payment Methods
3. Static image for PayPal button. Will be rendered on a page in use cases where quick checkout is available, and load of the Smart Payment Button is not required. List of images for usage - Available images

3.3.4 Alternative Payment Methods Configuration

By default, all payment methods are disabled for Smart Button. To enable payment method, navigate to **Business Manager > Merchant Tools > Site Preferences > Custom Site Preferences -> PayPal Configuration.** Add payment method id to the list and click Add (Figure 6).

List of IDs can be found here.

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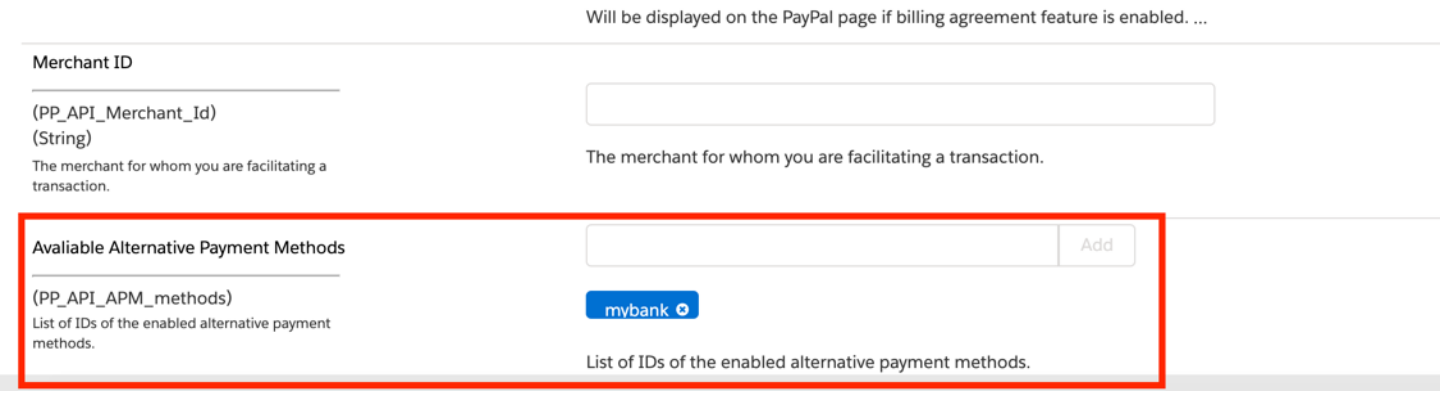

Figure 6. Alternative Payment Methods configuration

NOTE: Alternative Payment Methods are available only on the billing page and will appears only if *Capture funds immediately* preference set to *Yes*. For registered user also required to disable *Billing Agreement Enabled* preference.

3.3.5 Service Profile Configuration

By default, integration doesn't have any service profile configuration. We recommend putting limitation and timeout values according to a storefront traffic to prevent fraud or potential attack. You can read more about configuration values here.

3.4 Webhook support

The purpose of the webhooks is to reflect changes which was done manually or automatically on PayPal console level.

To configure webhook support, follow this PayPal guide.

After covering configurations mentioned in PayPal guide – get Webhook ID from PayPal dev console (from SANDBOX WEBHOOKS section). And enter in to the Custom Site Preference with ID: *PP_WH_Authorization_And_Capture_Id* (which located inside *Paypal Configuration* Custom Site Pref Group).

NOTE: you may subscribe only on events listed below.

3.4.1 Payment authorization voided

Triggers when payment has been voided.

3.4.2 Payment capture refunded

Triggers when a merchant refunds a payment capture.

3.4.3 Payment capture completed

Triggers when a payment capture completes.

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4 Operations and Maintenance

4.1 Data Storage

The int_paypal integration requires System Objects Extension to store payment-related information.

OrderPaymentInstrument custom properties:

- **paypalOrderId** – Result of a payment action (Auth, Order, Sale).
- **currentPaypalEmail** – The reference ID for PayPal API calls.
- **PP_API_ActiveBillingAgreement** – The PayPal Payer ID in the PayPal service.

Profile custom properties:

- **PP_API_billingAgreement** – Array of saved billing agreements. Each billing agreement is an object with balD, email, default keys

Order custom properties:

- **paypalPaymentMethod** – Property to differentiate PayPal related orders.

4.2 Logs

This integration introduces three new custom logs:

1. **PayPal Storefront Custom logs** – starts with prefix custom-PayPal-blade2-2-appserver-20150722.log. This Log file contains all errors related information in the int_paypal cartridge.
2. **PayPal Business manager custom logs** – starts with prefix custom- PayPal-BM-blade. This Log file contains all errors related information in the bm_paypal cartridge.
3. **Service communication logs** – starts with service-PayPalRest. These logs contain every request and response to the PayPal endpoint. To enable these logs, check Adding API Credentials **Optional** section.

4.3 HTTP Service Availability

You can track availability and downtime by service status in the Commerce Cloud Business Manager. Go to **Administration > Operations > Service Status > int_paypal.http.rest**.

You can configure options for HTTP calls to REST API related to this PayPal integration via the Commerce Cloud Service Profile Interface. To do this, go to **Administration > Operations > Services > Service Profiles -> PayPal_Default_Profile**. You can set a timeout for all requests, enable the Circuit Breaker mechanism, and adjust the Rate Limit.

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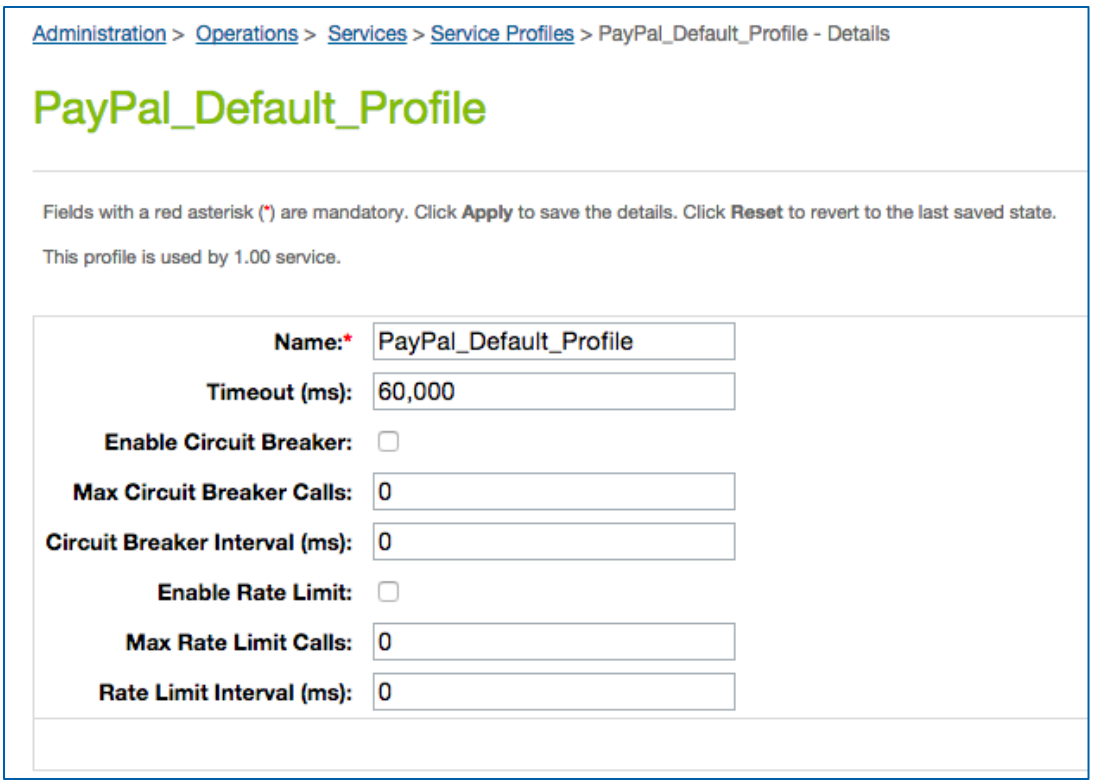

Figure 7. PayPal Service Profile Settings

4.4 Testing

You must obtain your own test account on the PayPal Developer Portal. If you can't create your own PayPal Sandbox account, contact PayPal support.

4.5 SFRA core templates overlay list

The following templates from app_storefront_base cartridges been overlay by int_paypal

cart/cart.isml

account/dashboardProfileCards.isml

checkout/billing/paymentOptions/paymentOptionsContent.isml

checkout/billing/paymentOptions/paymentOptionsSummary.isml

checkout/billing/paymentOptions/paymentOptionsTabs.isml

common/scripts.isml

Templates are up to date with SFRA 6.0

4.6 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.

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5 User Guide

5.1 Business Manager modules

5.1.1 PayPal Transactions

This integration introduces a new Business Manager function, PayPal Transactions. See Papal Transaction Business Manager module configuration for a detailed description of how to grant access to the PayPal Transactions page.

The PayPal Transactions extension allows you to manage PayPal transactions assigned to Commerce Cloud Orders by the Commerce Cloud Business manager. PayPal Transactions module supports reauthorization (after 3 days), capture and partial capture, void, refund.

The main PayPal Transactions page displays all orders in a site that were paid or partially paid by PayPal. You can access this page in the Ordering menu by selecting **Business Manager > Merchant Tools > Ordering > PayPal Transactions**.

This page displays various information from the order record:

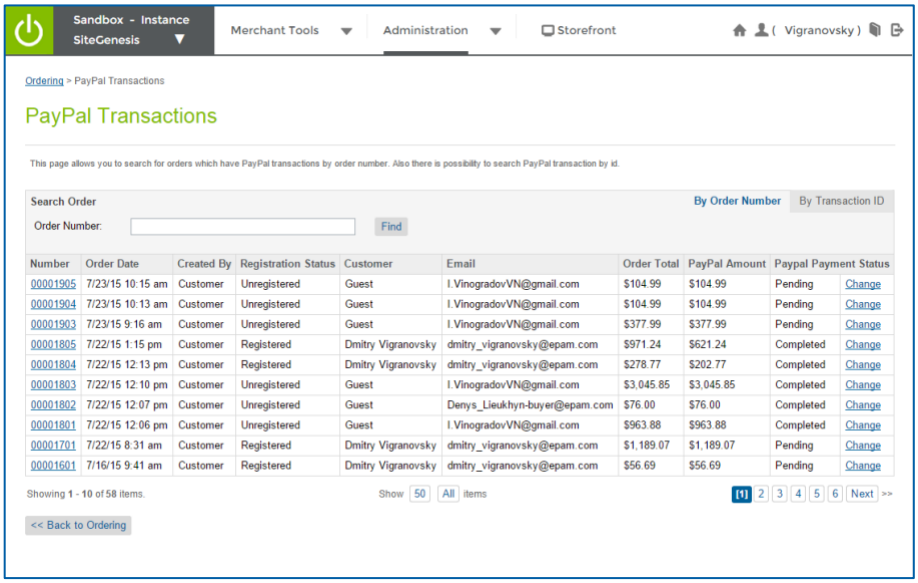

Figure 8. PayPal Transactions Business Manager Main Page Interface

You can search Orders placed within PayPal order number (as shown in Figure 9) or by PayPal Transaction ID (as shown in Figure 10).

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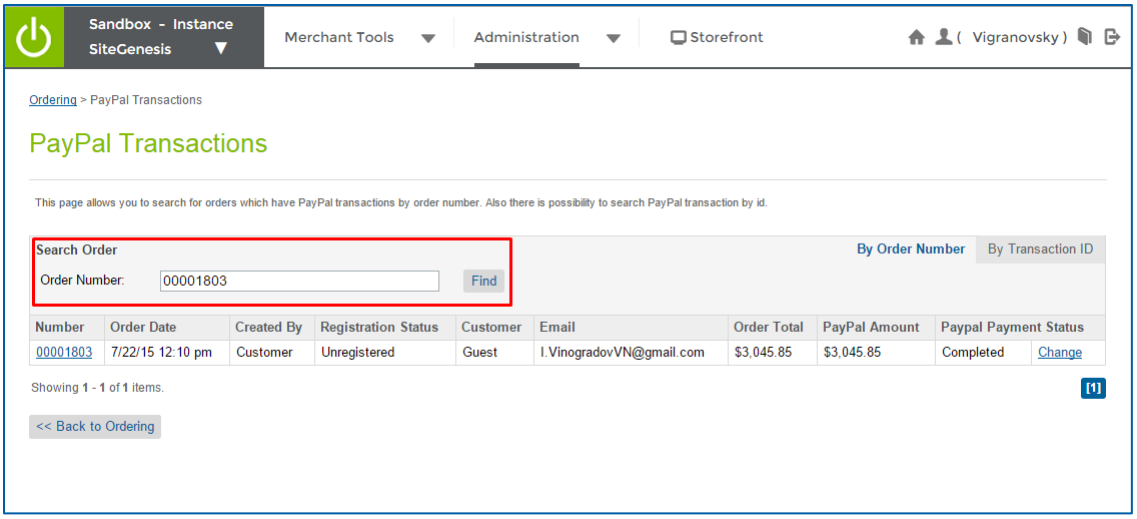

Figure 9. Search Orders with PayPal Transaction by Commerce Cloud Order Number

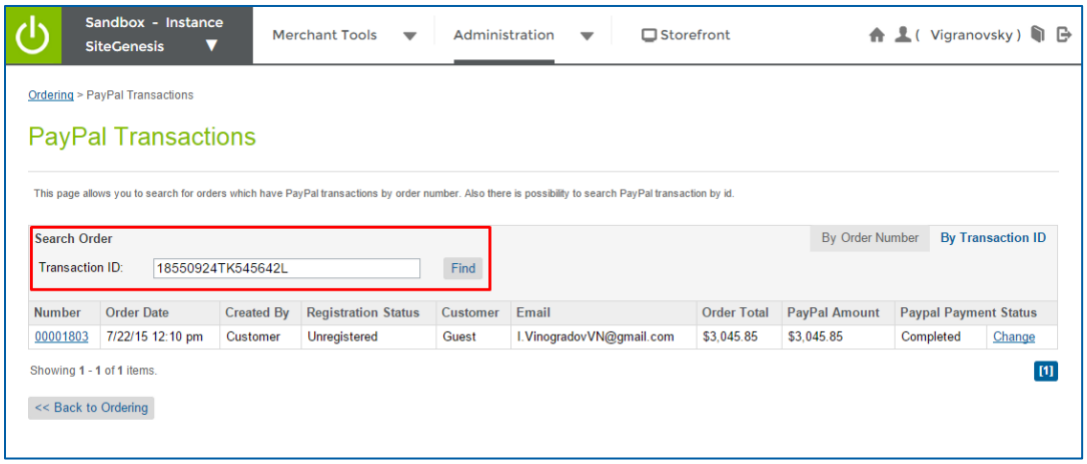

Figure 10. Search Orders with PayPal Transaction by Transaction ID

You can see Transaction Details from the PayPal Payment Transaction of the actual order by clicking **Order Number** or the **Change** link on the right. If an order has more than one related transaction, you'll see a selection box with all the transactions that are related to the current order (as shown in Figure 11).

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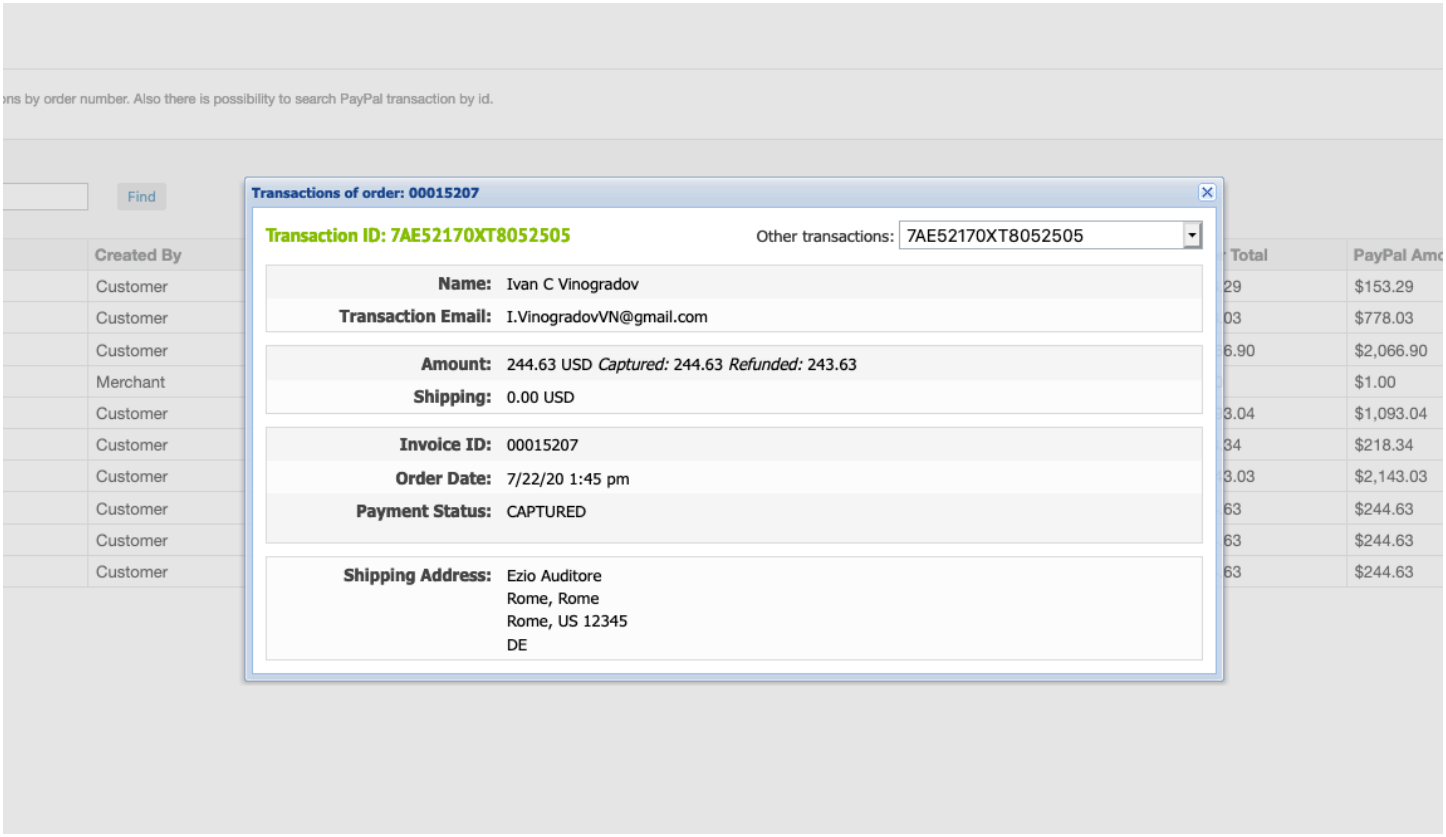

Figure 11. Transaction Details Popup

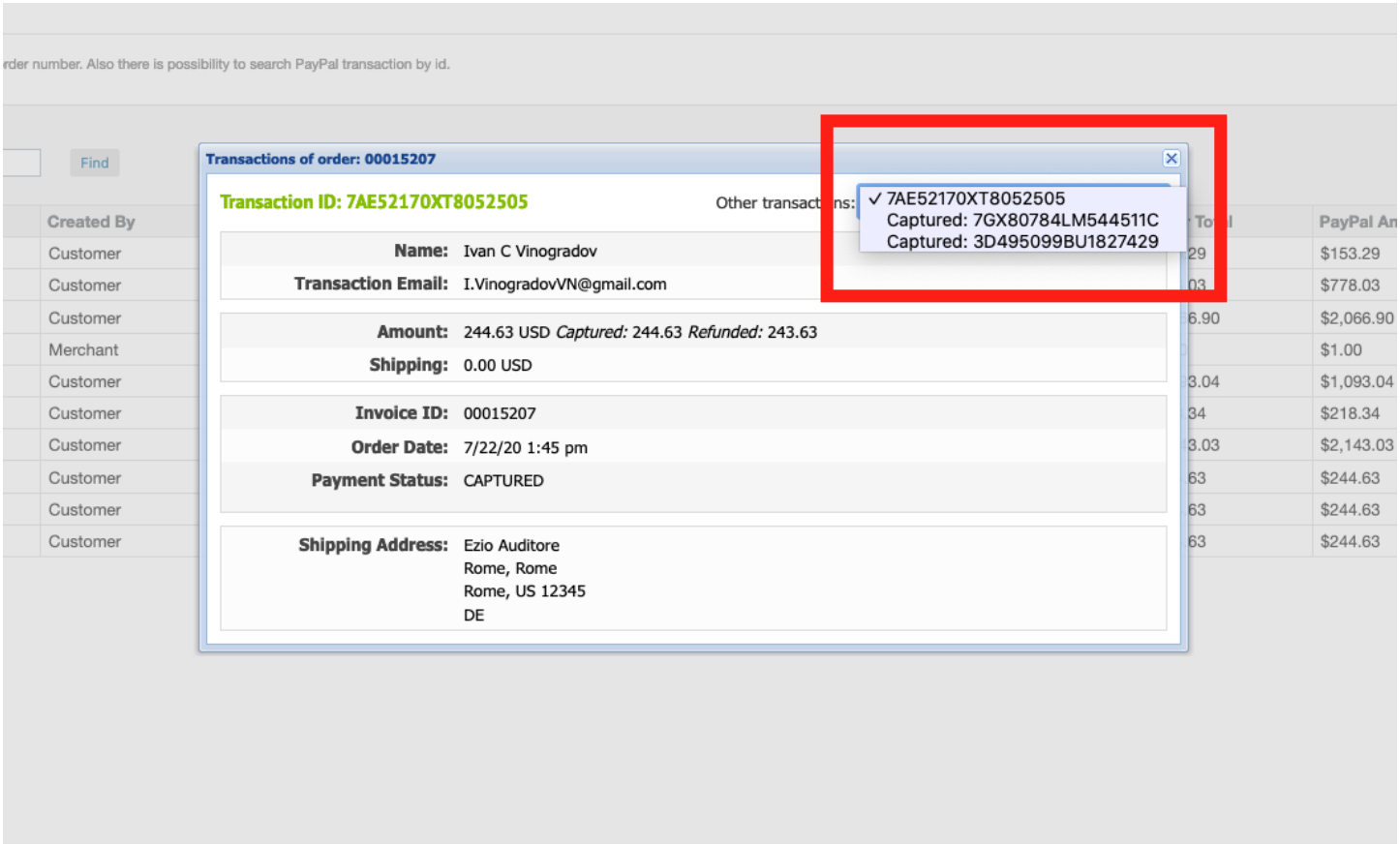

Figure 12. PayPal Transactions Selected for Their Relationships to Commerce Cloud Order Transactions

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Depending on the transaction type and status, the order may have the following action buttons

- Capture (Figure 13)
- Void (Figure 13 and Figure 14)
- Issue Refund (Figure 15)
- Reauthorize (Figure 14)

After click on a button pop-up with details will appear

- Capture Form (Figure 17)
- Void Form (Figure 16)
- Issue Refund From (Figure 18)
- Reauthorize From (Figure 18)

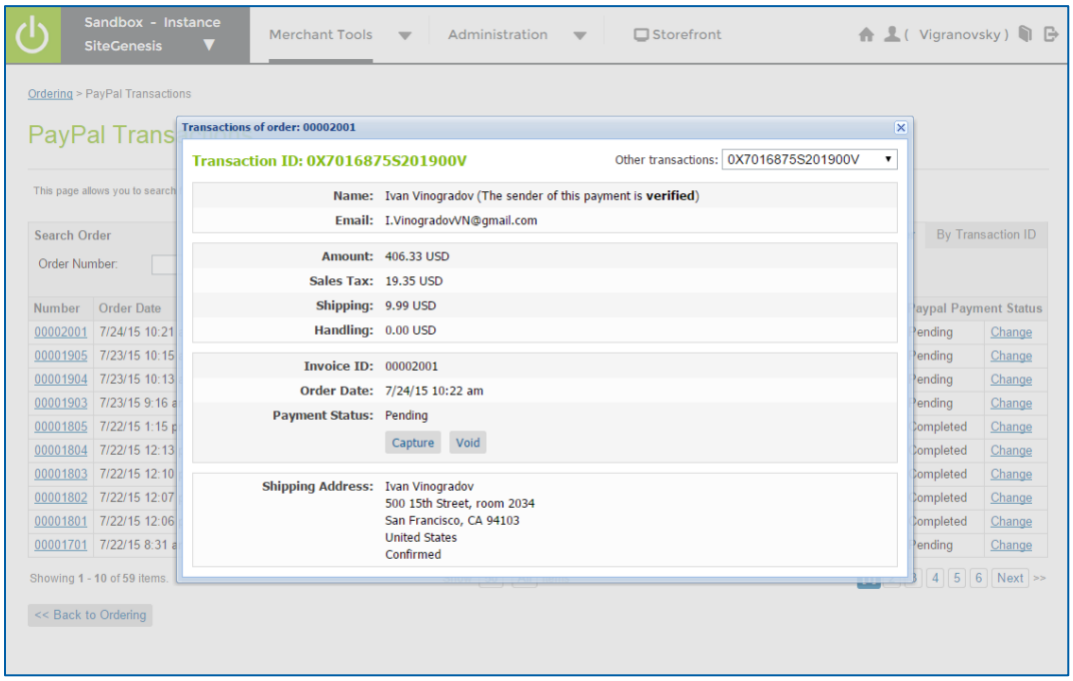

Figure 13. Authorized transaction payment actions

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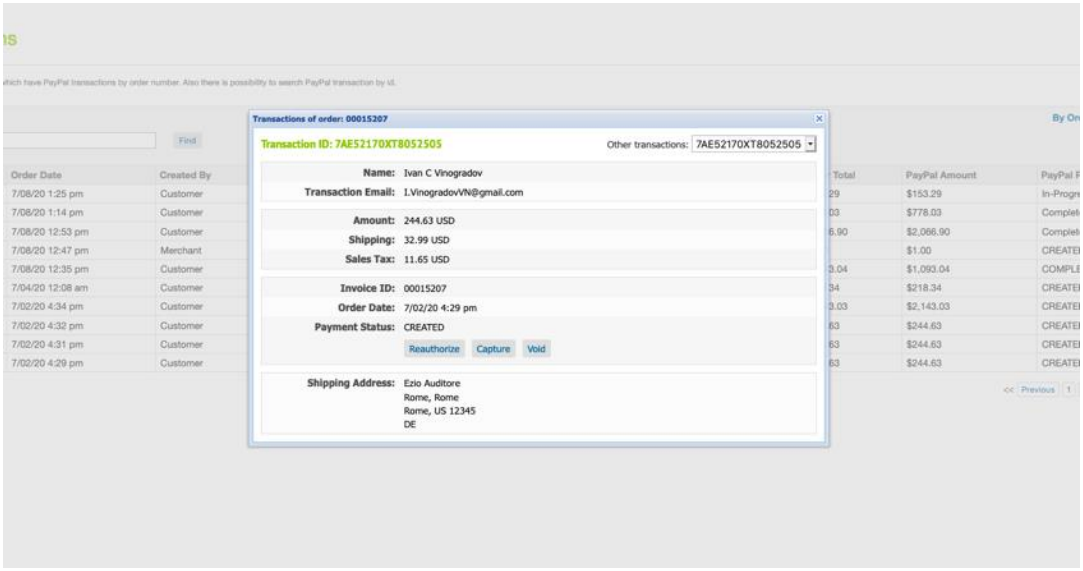

Figure 14. Authorized transaction payment actions (after 3 days)

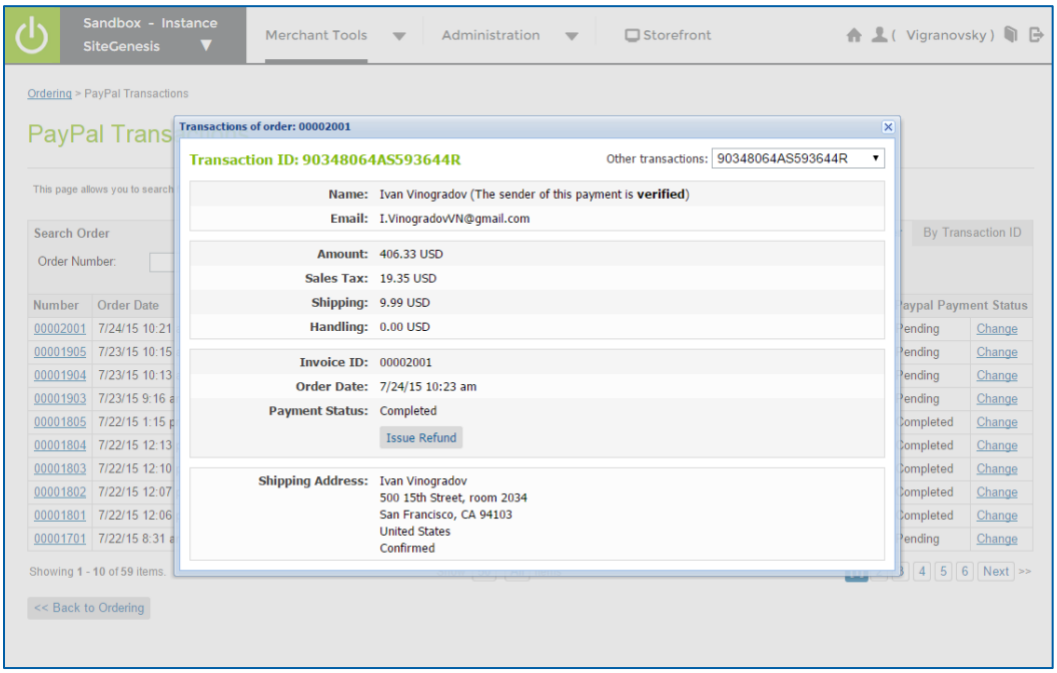

Figure 15. Captured transaction payment actions

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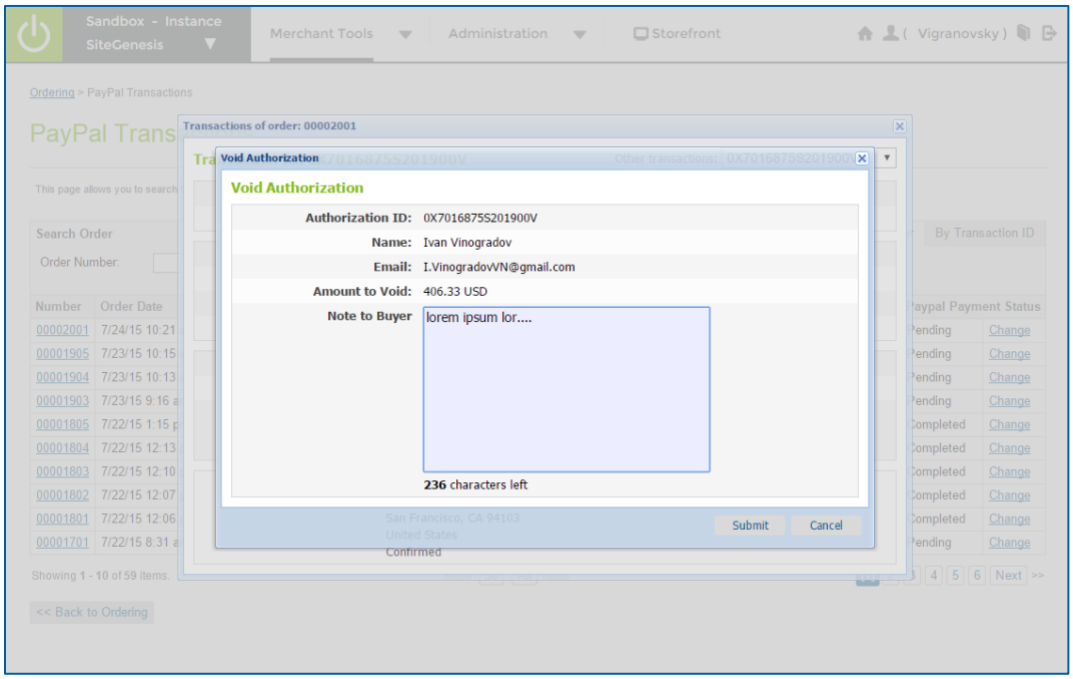

Figure 16. Void Authorization Form

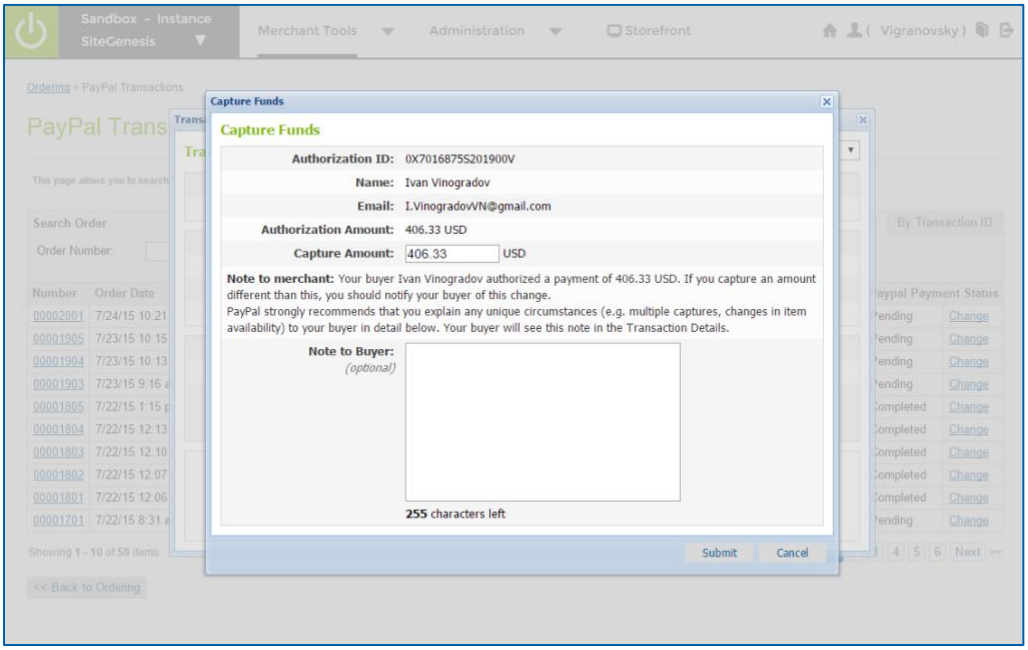

Figure 17. Capture Form

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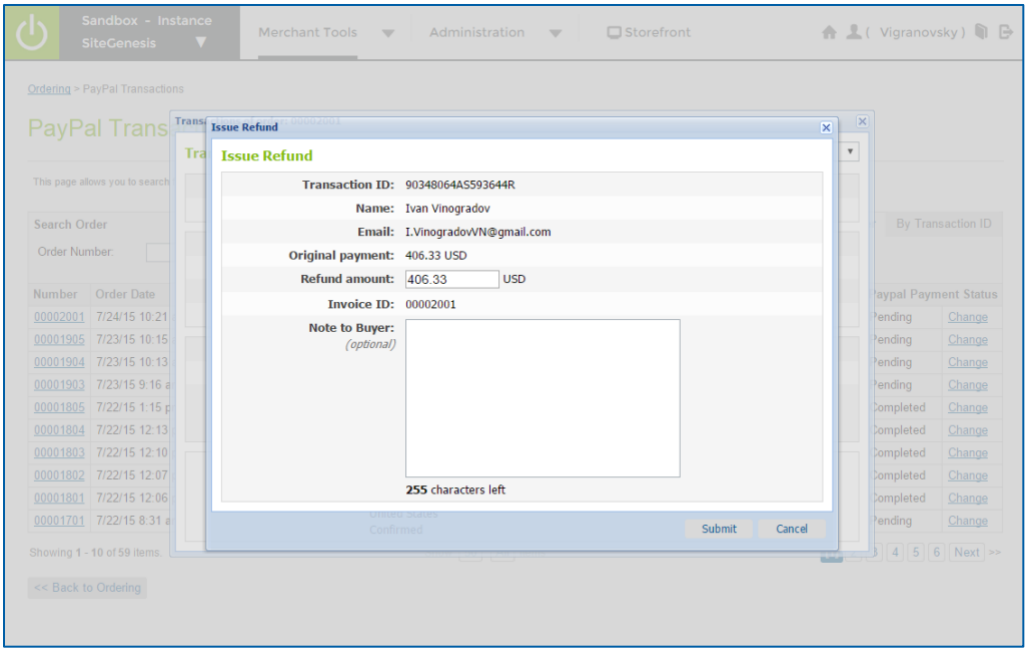

Figure 18. Issue Refund Form

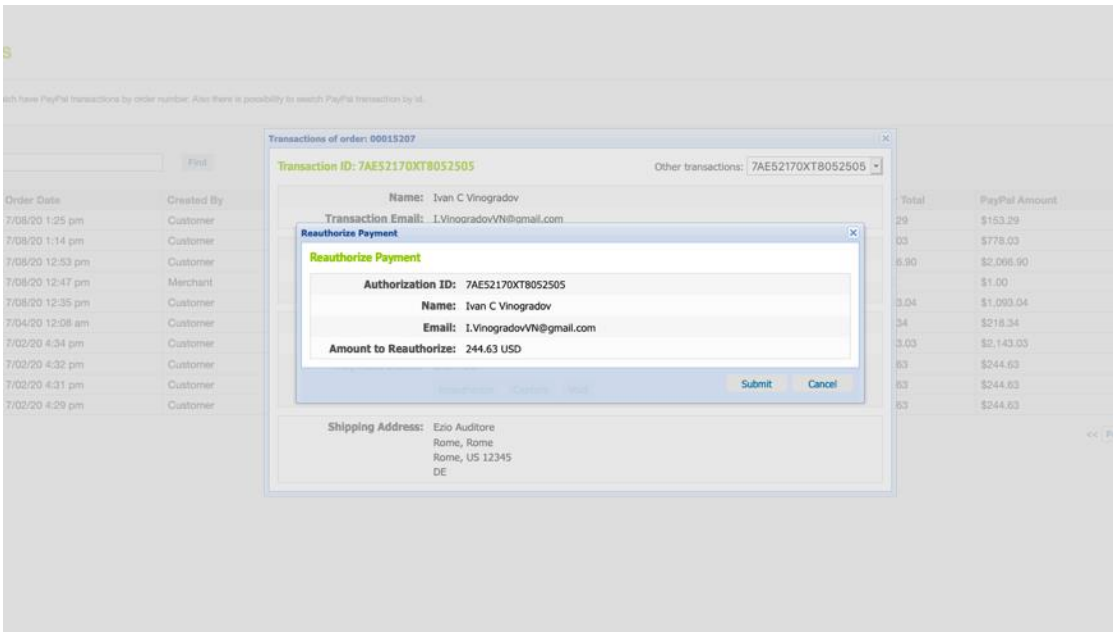

Figure 19 Reauthorize form

5.1.2 PayPal Styles Configuration

PayPal Styles Configuration allow to choose styling of the Smart Button from the Business Manager. After installation new menu item will appear in under Site Preferences in the Business Manager (Figure 20).

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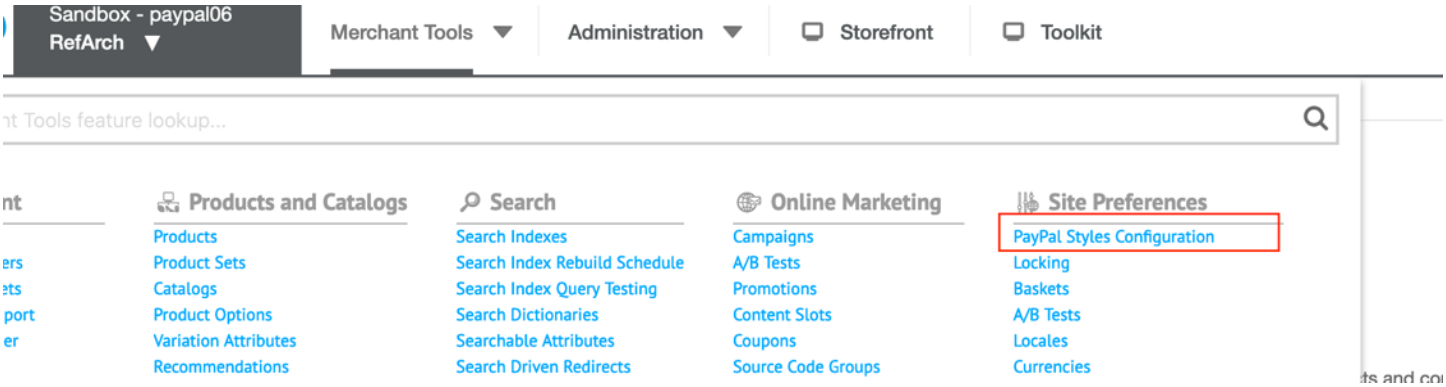

Figure 20 PayPal Styles Configuration in the Business Manager

If **int_paypal** cartridge was installed properly you should see styling options for the PayPal Smart Button. Depends on buttons locations will be for Billing page or for Cart page. To read more about styling options visit Customize the PayPal Buttons. After configuration done click **Save Smart Button Configuration** to update styling.

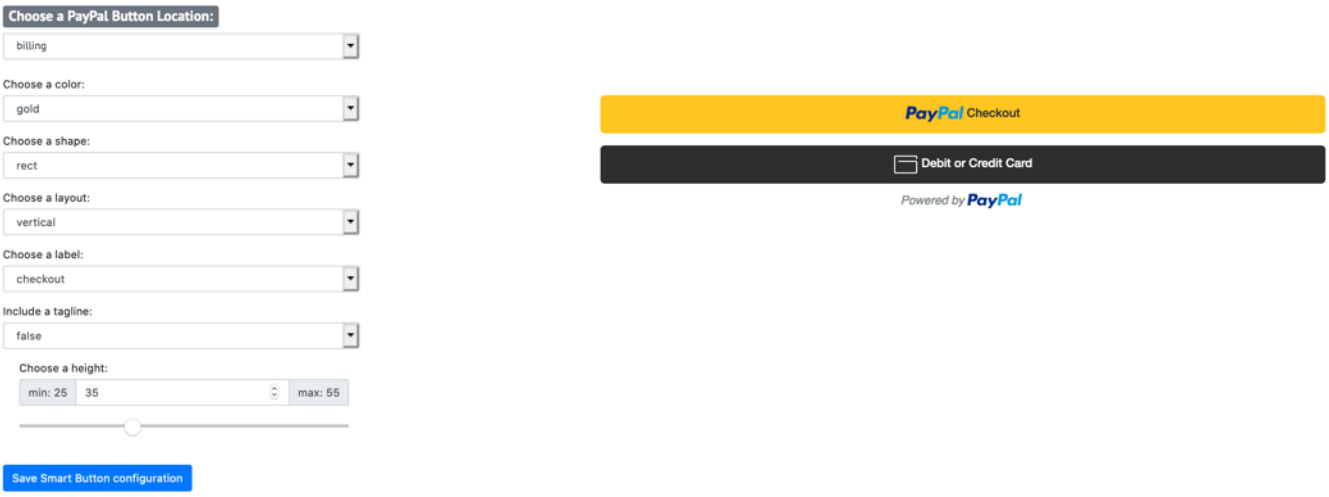

Figure 21. Smart Button styling options

5.2 Storefront Functionality

Integration has 3 types of checkout with PayPal. All of them are available from payment page or cart page.

NOTE: Checkout from cart requires customer data from PayPal. Review PayPal-provided Billing Address and Phone Number before enable PayPal button on a cart page.

1. One-time checkout. Available for both guest and registered user types if billing agreement is disabled in Custom Preferences.
2. Checkout with billing agreement creation. Available for both guest and registered user types if billing agreement is enabled in Custom Preferences.
3. Checkout using saved billing agreement. Available for registered user who already path checkout once with billing agreement and saved it.

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NOTE: Reference transaction feature must be enabled at the merchant account setting to activate flow 2 and 3. Review Billing Agreement and Reference Transactions for more details.

5.2.1 Email, Phone, Shipping and Billing Address behavior

When customer process with checkout using PayPal button on the cart page, phone, email, shipping and billing address will be taken from customer's PayPal account.

For checkout with saved account default account values will be taken as shipping address and phone.

When customer proceed with checkout using PayPal button on the billing page or with saved PayPal account, the shipping address will be taken from storefront and billing address with a phone will be taken from PayPal account according to the chosen payment option. If a customer enters email it won't be changed.

If a customer left the email field empty during checkout from payment page, last used email from the session will be automatically set in a form or PayPal account email, in case if session value is empty.

5.2.2 Connect with PayPal

Ability for buyer to create a storefront account by clicking on just one button.

This functionality is available on the next pages: Account Login, Page before Checkout (for guest buyers).

More about this feature you may read on this page.

To use this feature, you have to go through these steps. During configuration on PayPal side, select all fields to successfully create an account on storefront:

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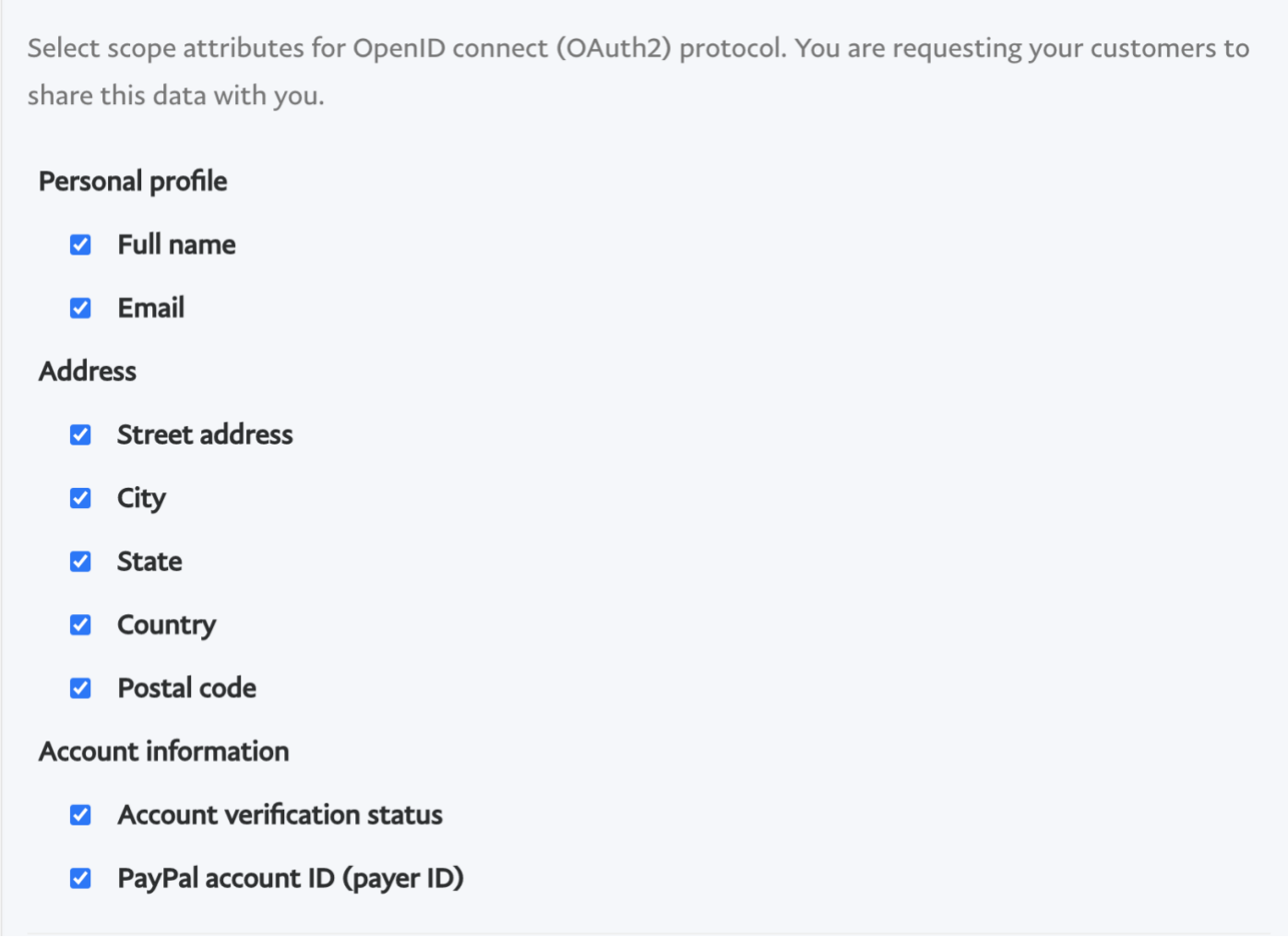

Figure 22 Connect with PayPal configurations

After user clicked on the “Connect with PayPal” button and went through auth PayPal form successfully an account on storefront will be created with data from PayPal buyer account.

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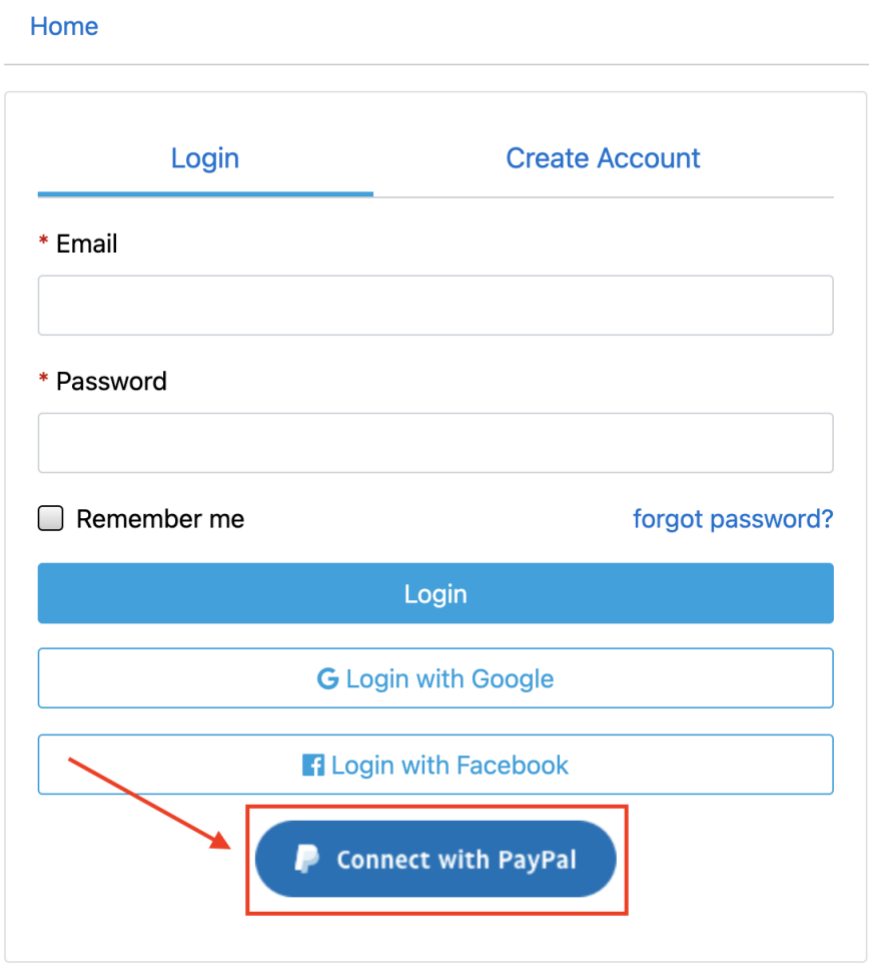

Figure 23 Connect with PayPal button

When going to production don't forget to change Site Pref with ID: *PP_Connect_With_Paypal_Button_Url* from *https://www.sandbox.paypal.com/connect*? To *https://www.paypal.com/connect*? (Check site pref description).

5.2.3 One-time checkout (non-billing agreement)

One-time checkout is available from payment page (Figure 27) and from cart page (Figure 24) (if custom preferences **Show PayPal button on the cart** page values if Yes).

After click on available payment method from Smart Payment Button customer will proceed through checkout on PayPal side (Figure 26) and return to the storefront to the order review page (Figure 29).

After checkout on PayPal side customer can update any basket info without needs to login to checkout for the second time. In this case on the cart page PayPal will be represented by static image on a cart page (Figure 25) and on a payment page user can choose previously used account or login into new PayPal account (Figure 28). Customer can have only one account active during checkout session. Login to the new PayPal account will replace previous account in the session. Review Basic Integration for more details.

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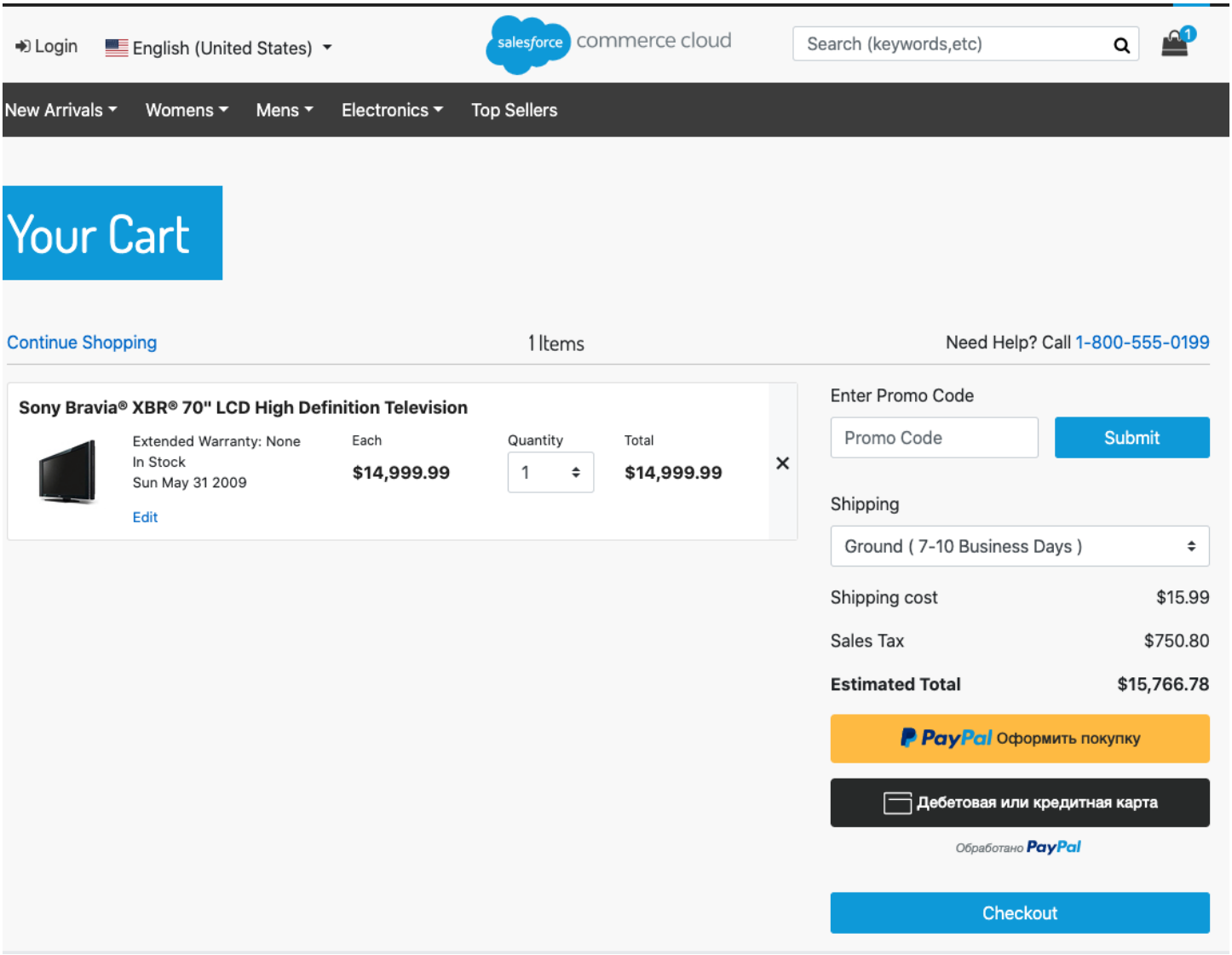

Figure 24 Checkout from the cart page using Smart Button

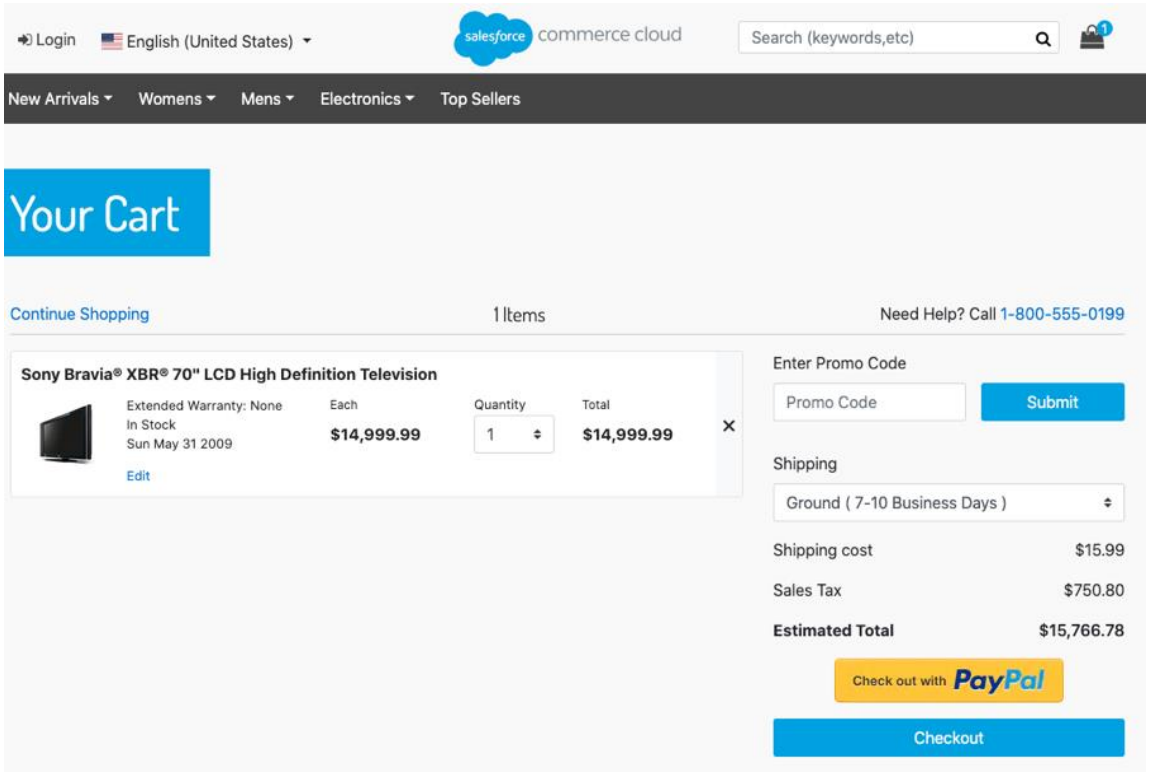

Figure 25. Checkout from the cart page using static image

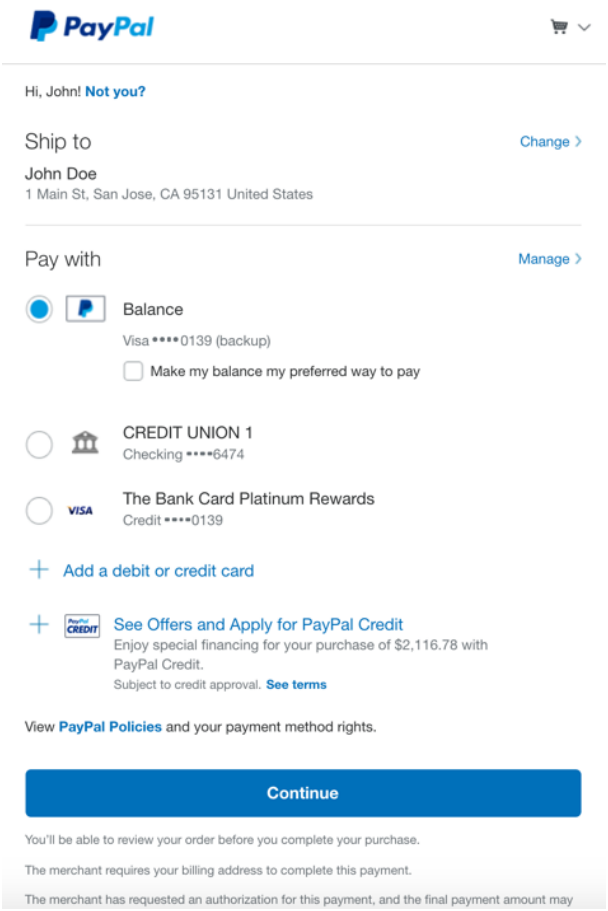

Figure 26. Basic checkout pop-up example

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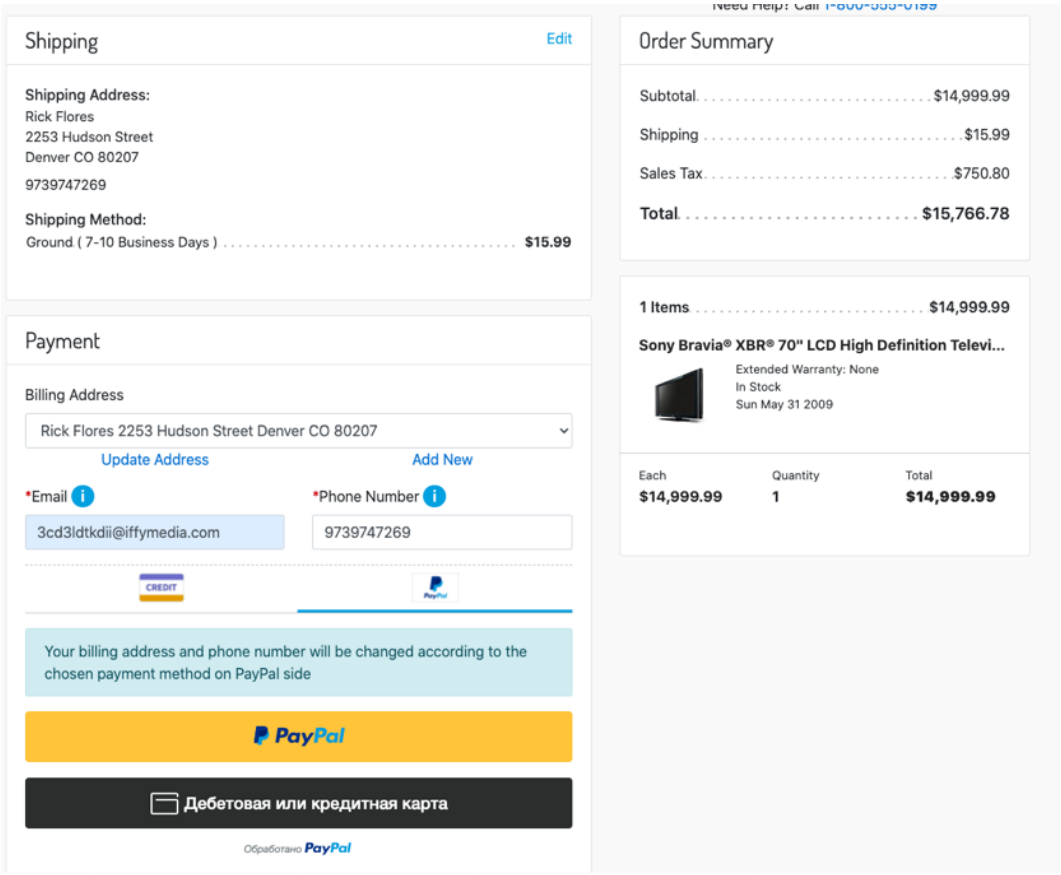

Figure 27. Checkout from the payment page using Smart Button

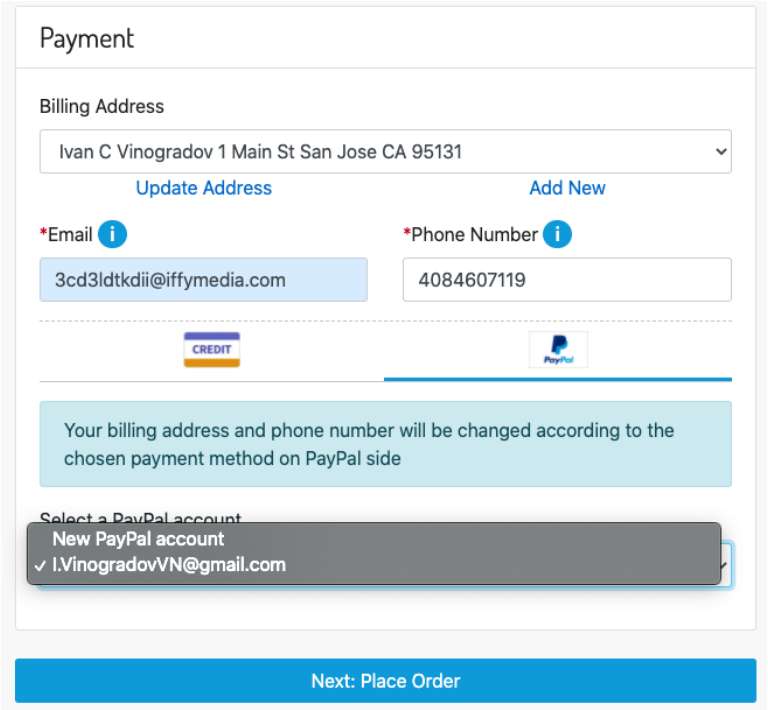

Figure 28. Checkout from the payment page with already chosen account

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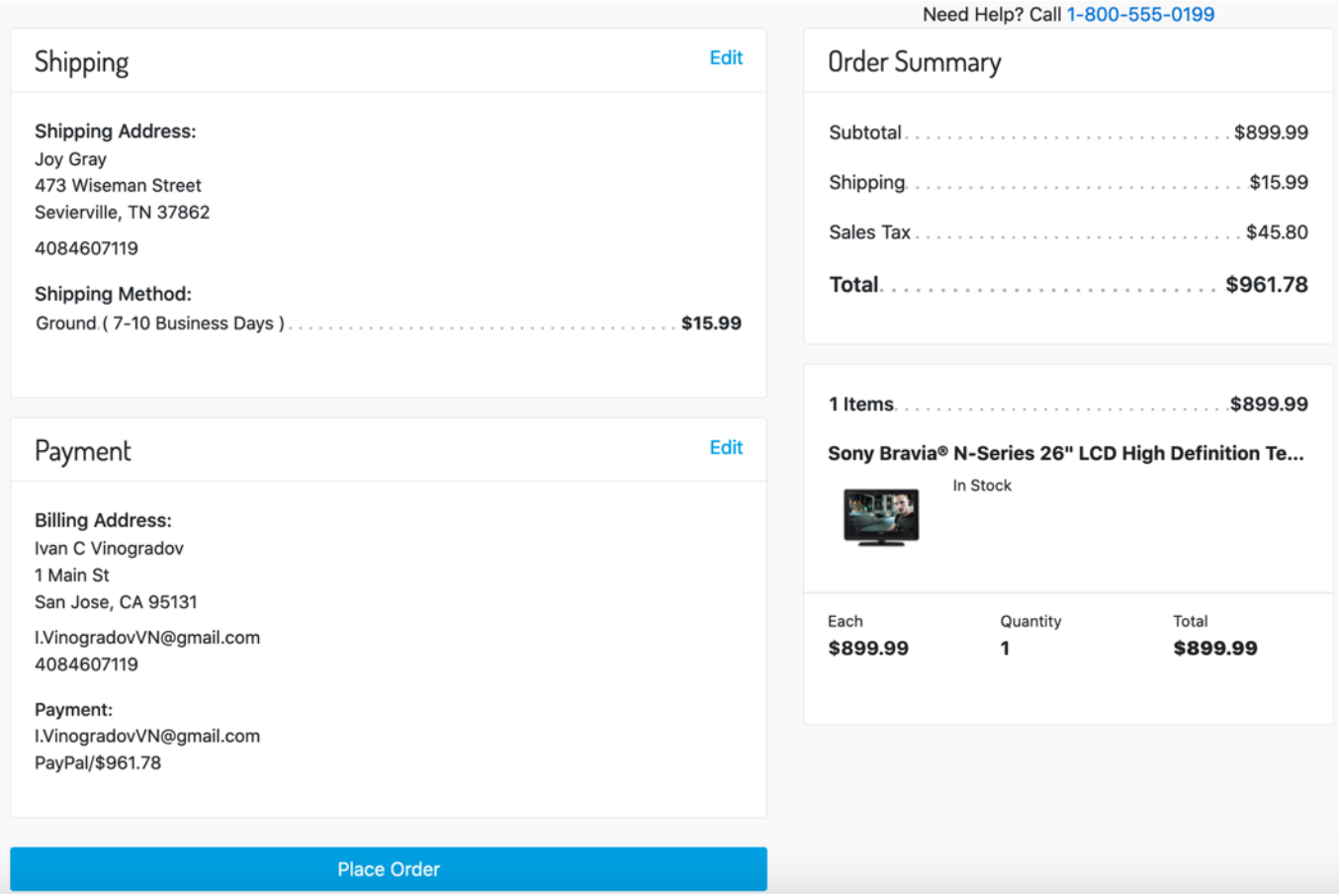

Figure 29. Order review page

5.2.4 Checkout with billing agreement creation

For both guest and registered user integration provides an ability to create billing agreement. Registered customer could save billing agreement as payment method in a storefront. This would allow user to go through checkout with PayPal faster next time.

To enable billing agreement creation in Business Manager, navigate to **Merchant Tools -> Site Preferences -> PayPal Configuration** and set **Billing Agreement Enabled** preference value as **Yes**

Visually checkout with billing agreement like Basic checkout (non-billing agreement) with 2 exceptions

1) On payment page registered customer has additional checkbox **Save PayPal account** (Figure 30). On the cart page checkbox value will be set to true automatically.
2) On PayPal side after login customer will see **Save and Continue** instead of Save and no shipping address option (Figure 31). Check Email, Phone, Shipping and Billing Address behavior for more details.

If registered customer had **Save PayPal account** checkbox checked after order was placed successfully customer can review saved PayPal account in **My Account** section. (Figure 32). First customer account is always default.

Review Billing agreement and Reference Transaction section on PayPal developer portal for more details about billing agreement creation.

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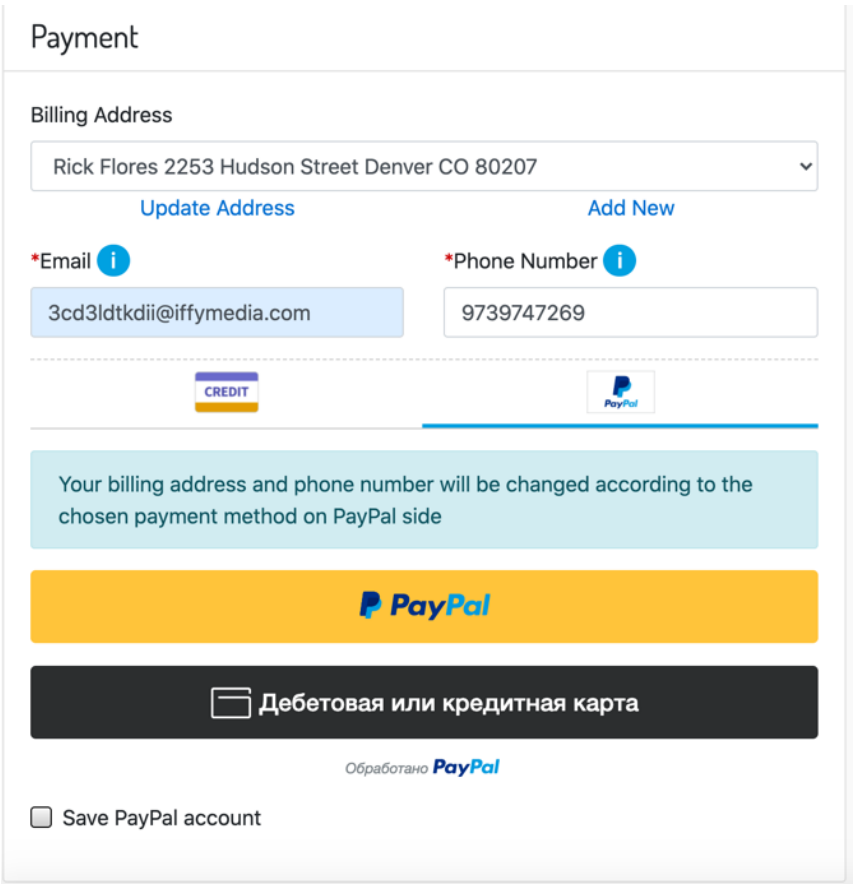

Figure 30. Smart Button for billing agreement creation on the payment page

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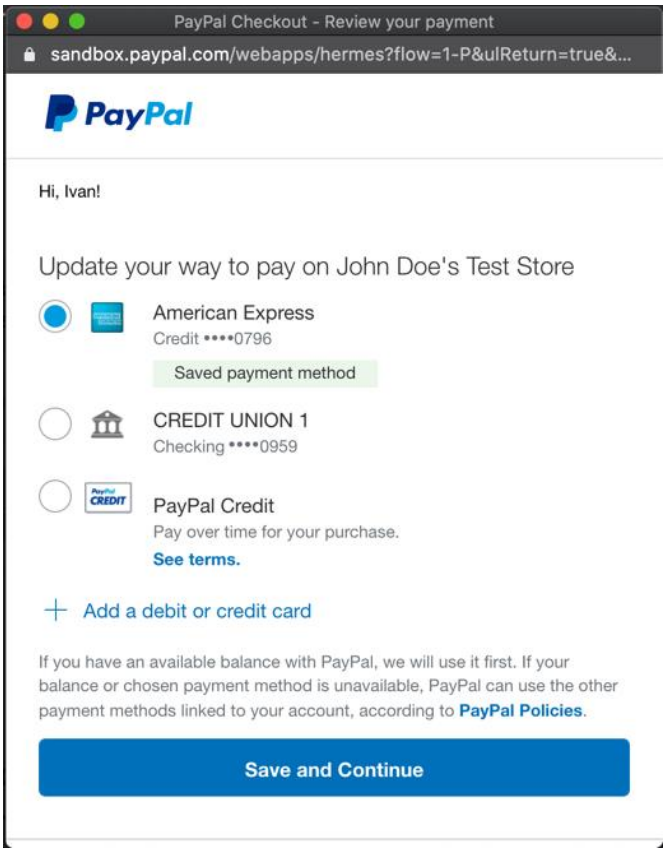

Figure 31. Billing Agreement creation on the PayPal page

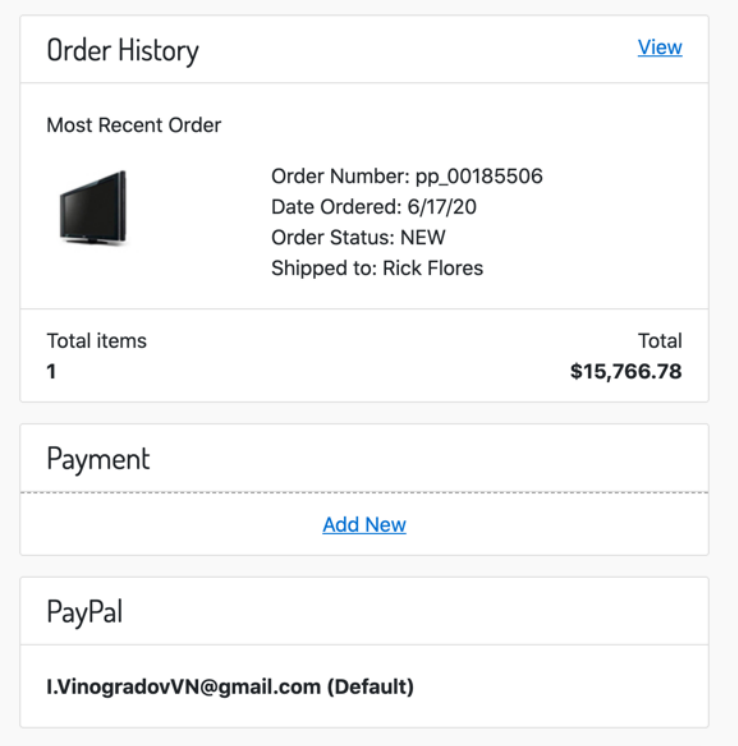

Figure 32. My Account section with saved PayPal account

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5.2.5 Checkout using saved billing agreement

After registered customer created billing agreement and save it as payment method (Figure 32) customer can pay for an order using billing agreement and proceed through the checkout without Smart Button loading.

Saved account will appear in dropdown on the payment page (Figure 33) and will be represented by static image on the cart page (Figure 25).

Review Email, Phone, Shipping and Billing Address behavior for more information about addresses behavior for saved account.

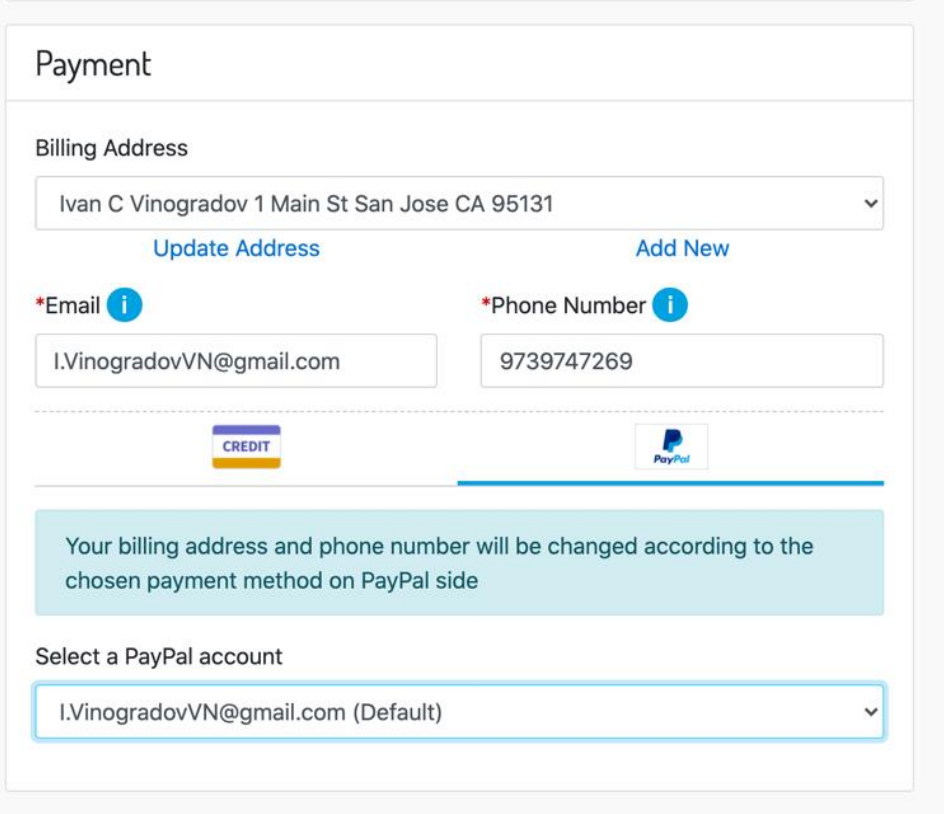

Figure 33. Saved PayPal account on the payment page

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5.2.6 Checkout with multiple saved PayPal accounts

Customer can have up to 3 saved PayPal account one on them is always default.

Customer can add new account from billing page. In a dropdown with saved account customer must choose **New PayPal** account option and load Smart Button (Figure 34). In this case experience in like Checkout with billing agreement creation except **Make Default** checkbox. Customer could make new account the default one or leave existed account as default.

After order was placed customer can observe new account in **My Account** section (Figure 35) and in dropdown on payment page (Figure 36).

Cart page will always use default saved account for checkout. Review Checkout using saved billing agreement for more details.

NOTE: Billing agreement type is MERCHANT_INITIATED_BILLING_SINGLE_AGREEMENT (More details about Billing Agreement types here). Customer can't have multiple billing agreements created for one PayPal account. If user try to do so, his existed billing agreement for this account will be updated.

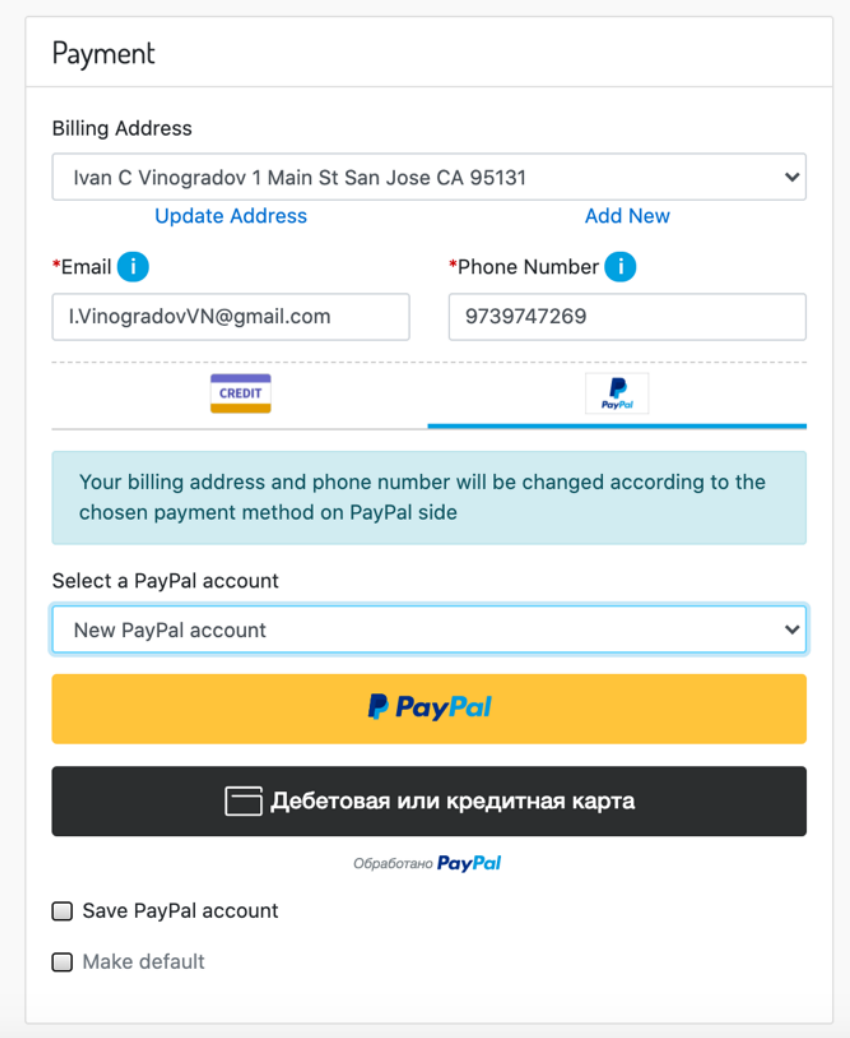

Figure 34. New PayPal account option on payment page

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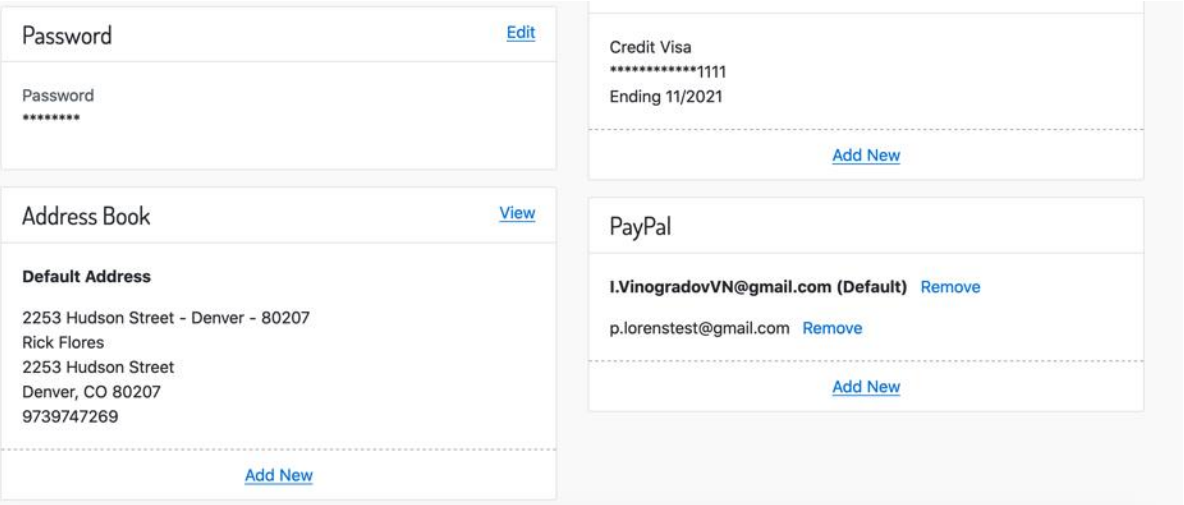

Figure 35. Multiple saved accounts in My Account section

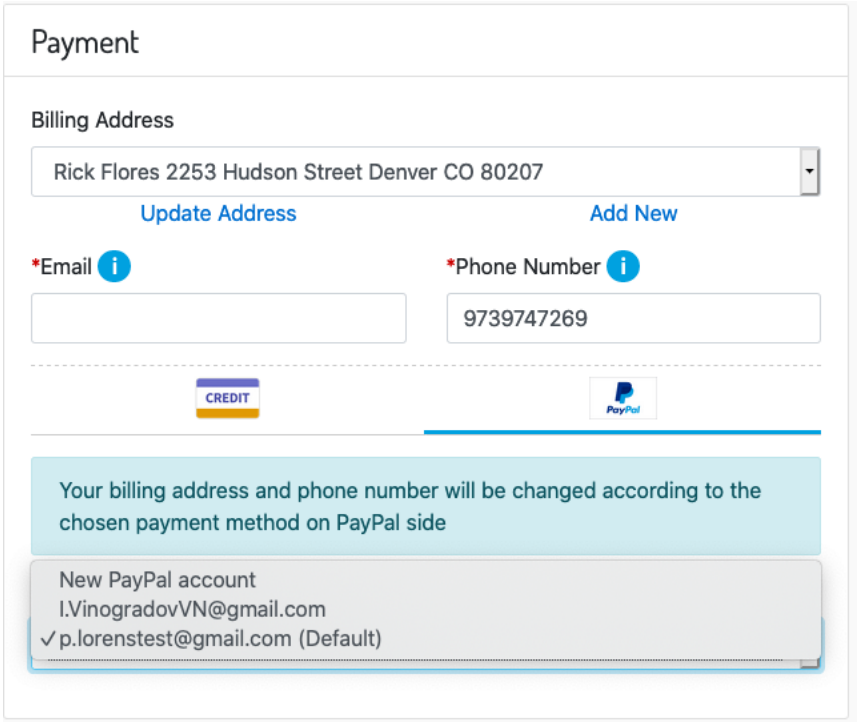

Figure 36. Multiple account view on payment page

5.2.7 Alternative Payment Methods

Alternative payment methods allow customers across the globe to pay with their bank accounts, wallets, and other local payment methods. Relevant alternative payment methods are automatically presented with Smart Payment Buttons.

For example, a customer in the Netherlands might want to pay using iDEAL, which is used by more than half of consumers in the Netherlands for online purchases, whereas a customer in Belgium on the same website might want to pay using Bancontact, a popular payment method there.

Alternative Payment Methods available on the billing page only. Shipping address and phone always provided by customer. Email will be pulled from billing page, if it was

provided by a customer, if email was empty customer will enter email on the PayPal side.

The transaction will be completed only when a customer returns to the storefront. If a transaction wasn't confirmed or the customer didn't finish checkout on the PayPal side customer's basket still will be available.

Important: after the customer will confirm the transaction and returns to the storefront, the order will be placed immediately, skipping the Order Review page.

NOTE: Alternative Payment Methods appearances based on customer's locale, not on storefront locale.

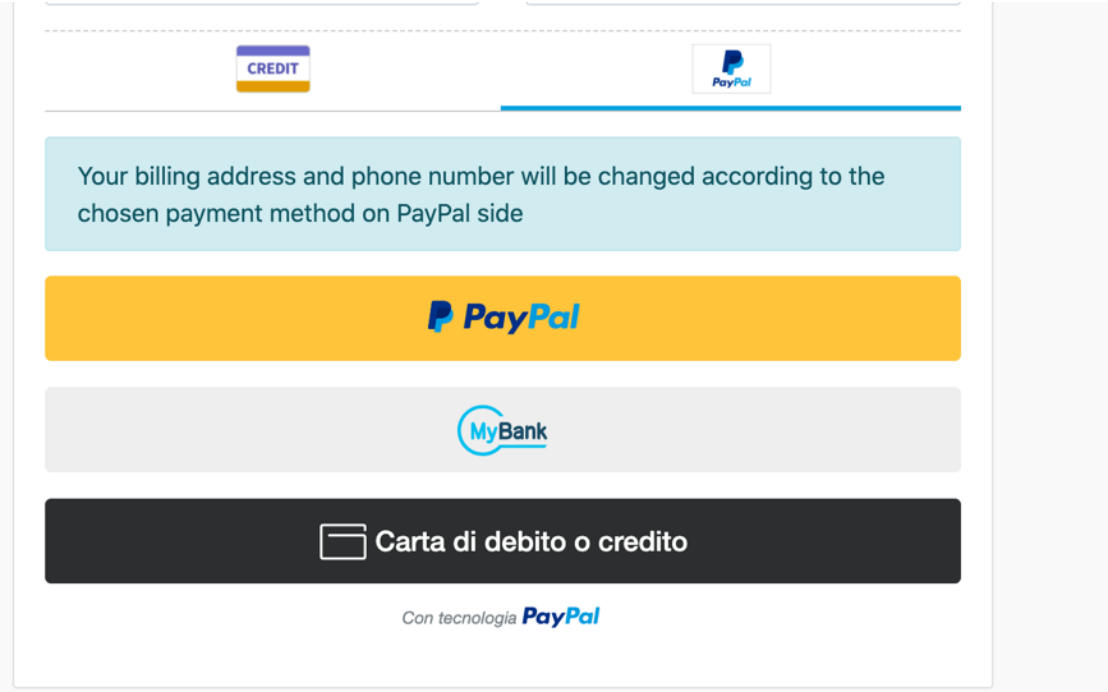

Figure 37. Alternative Payment Methods appearances in Smart Button

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Figure 38. Alternative Payment Method transaction confirmation

5.2.8 Manage Billing Agreement from My Account

If Billing Agreement was enabled in the Custom Preferences customer can save PayPal Account as payment method for faster checkout or remove saved account from My Account section at a storefront (Figure 39).

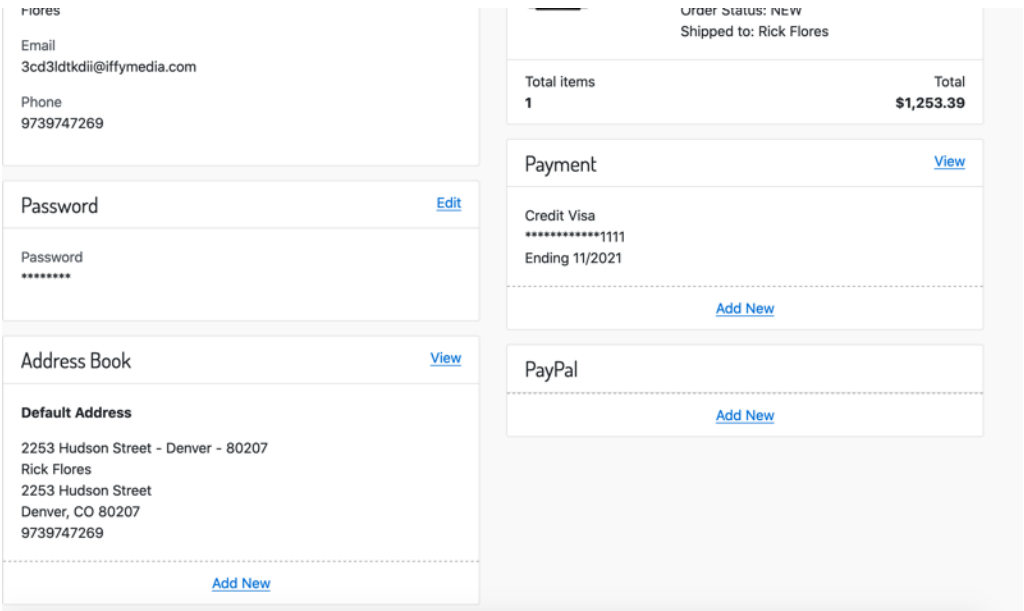

Figure 39. PayPal section in My Account

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After customer clicks **Add New** button PayPal Smart Button appears and customer must click on it to run through Billing Agreement flow. Once customer approves Billing Agreement page will be reloaded and new PayPal account email with billing agreement will appear under PayPal section (Figure 40).

Custom can cancel Billing Agreement by clicking on remove button or from PayPal side. If customer cancels billing agreement form PayPal it will be automatically removed from My Account.

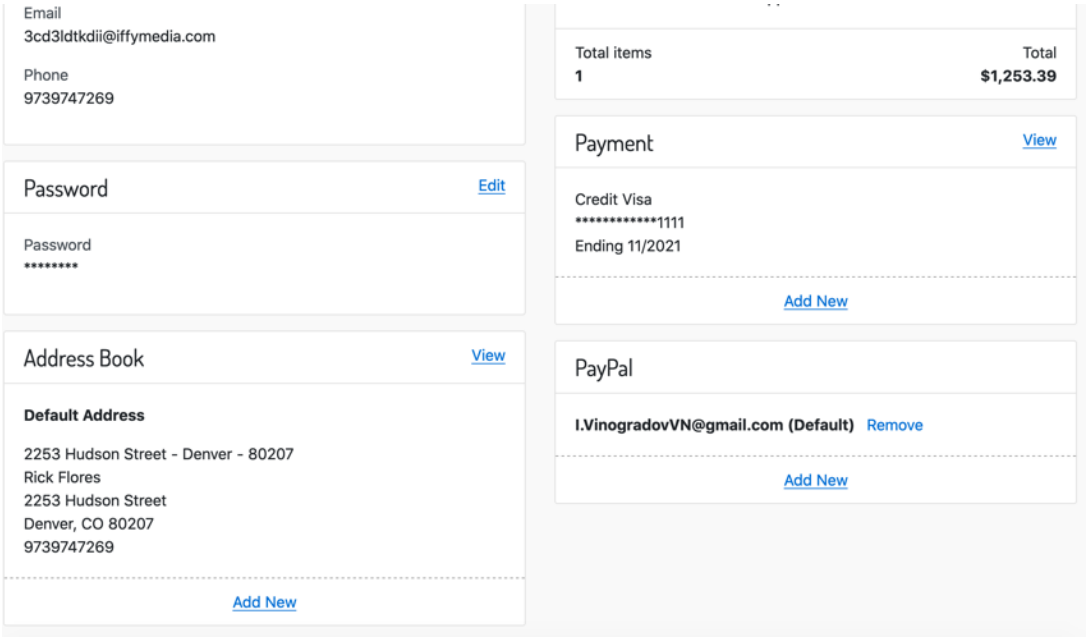

Figure 40. Billing Agreement view in My Account

6 Locales and addresses

6.1 General info

Out of the box PayPal using build in SFRA locations for checkout from billing or cart page.

Checkout available only with one locale, multi shipping and multi locales are not supported.

For checkout from cart using cartridge doesn't provide any validation for addresses that was received form PayPal. Addresses will be mapped to Shipping or Billing address in Order automatically.

Example: After login to PayPal customer chooses Canada address while storefront locale is USA. Canadian address will be returned from PayPal and will be accepted by the cartridge.

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7 Multi-site and multi-credential support

7.1 General info

PayPal cartridges doesn't come with multi-site or multi-credential support out of the box.

On service level build in logic will use only int_paypal.http.rest service and credential attached to the service to communicate PayPal REST API.

8 Gift Certificate Support

8.1 General info

PayPal cartridges doesn't provide an ability to add gift certificate to a basket or redeem gift certificates during checkout.

Customer can pay for a gift certificate using PayPal. If gift certificate is the only item in the basket shipping address won't be requested from a customer and billing address will be set as shipping address.

If customer add gift certificate as payment option and it partially covers order total customer can pay the rest using PayPal. In this case gift certificate amount will be treated as discount and subtracted from order total.

8.2 Technical info

Integration supports only gift certificates from B2C Commerce API. Gift certificate as product should be present as `GiftCertificateLineItem` in a basket. Gift Certificate as payment method should be applied as `OrderPaymentInstrument` using `createGiftCertificateLineItem` function.

For more information, contact your PayPal support manager.

9 Version and SFRA Support Info

9.1 JavaScript Files and Cartridge Version Location

The JavaScript files to be added to your page are located at:

`cartridges/int_paypal/cartridge/templates/default/paypal/cart/paypalButton.isml`

`cartridges/int_paypal/cartridge/templates/default/paypal/checkout/paypalContent.isml`

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

`int_paypal/cartridge/templates/resources/paypal_version.properties`

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

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app_storefront_base/cartridge/templates/resources/version.properties

9.2 SFRA Version Support

PayPal cartridge version 21.3.0 supports SFRA 6.0 only.

9.3 Compatibility Mode

Cartridge tested with Compatibility Mode 21.2

10 Service Errors Handling

10.1 Service Timeout Handle

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

- Error details can be found in the log with the **custom-PayPal** prefix.
- Service request/response details can be found in the log with the **service-PayPalRest** prefix.

On the storefront, the customer will see a PayPal button, but the pop-up will close instantly.

For more details about logs, see Logs section.

For more information about how to track service downtime and about possible options for configuration in situation when PayPal API is unavailable or throws an error review HTTP Service Availability section.

10.2 Fallback/Recovery

If you continue to see issues where the PayPal button and/or experience is not rendering, or if you are seeing 500 or 400 errors in the logs, please contact your PayPal representative or request to a Merchant Technical Support so that we may investigate this further. These orders will not be able to proceed with the PayPal payment option, and you may need to disable PayPal until the issue is resolved.

Please be aware that when contacting PayPal, we will ask for details that may need to be extracted from the logs as well as assistance with reproducing the issue step by step.

10.3 Handle Error Response

Error handling in the integration based on SFRA build in error logic. If it's possible detailed error will be shown to a customer (Figure 41). In cases where customization isn't possible customer will see SFRA system error (Figure 42). In this case detailed error from PayPal can be found at custom-PayPal log. Review Logs section for more details.

All errors text located at int_paypal/cartridge/templates/resources/paypalerrors.properties.

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You can add your own text for errors from REST API, using format: paypal.error + error code from paypal or error name in lower case. For example

```
paypal.error.transaction_refused=Transaction was refused by
merchant
```

```
paypal.error.unprocessable_entity=Please check billing address
```

NOTE: Custom errors text won't appear on order review page due to build in SFRA logic. System message will always appear (Figure 42).

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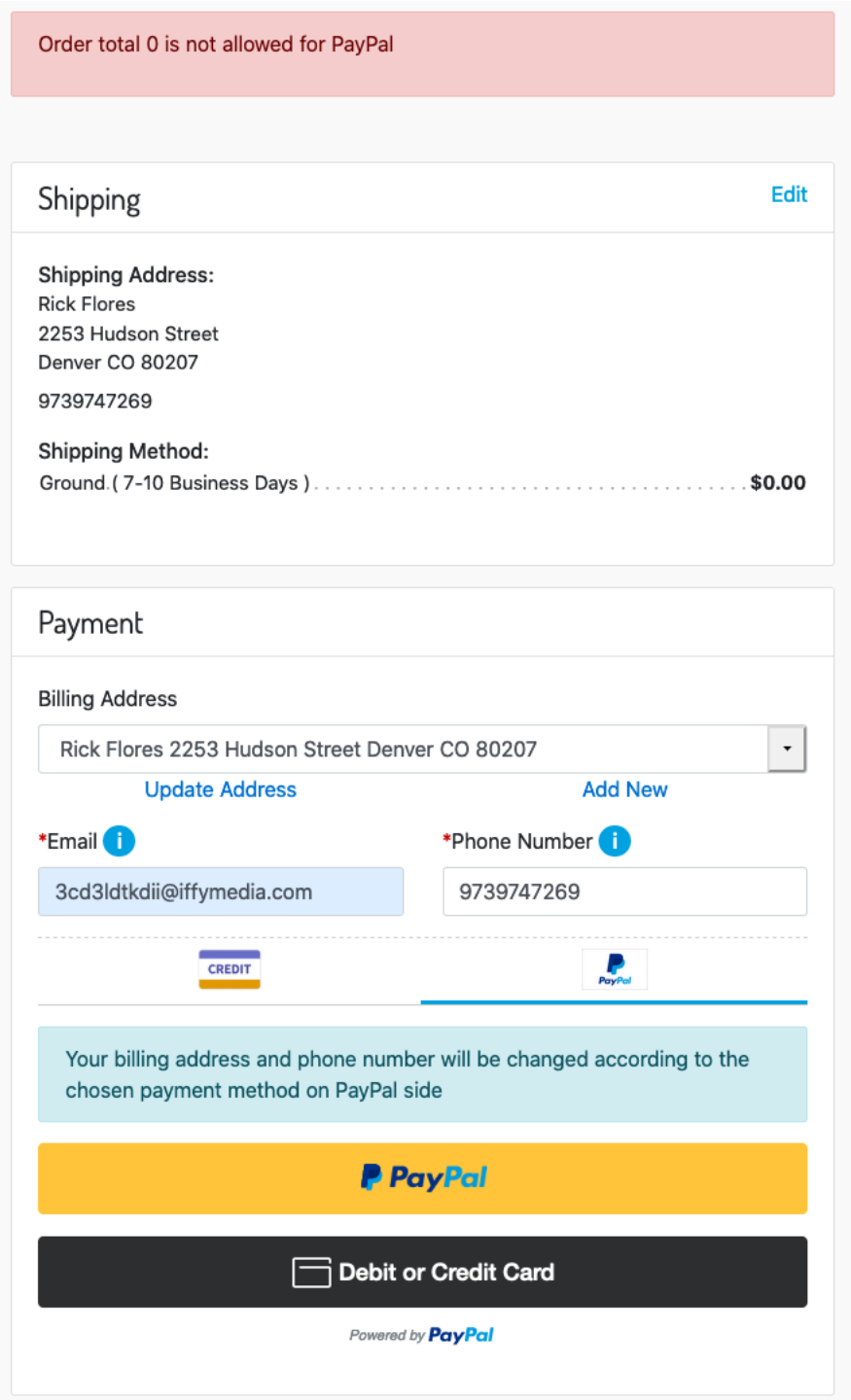

Figure 41. Custom error message example

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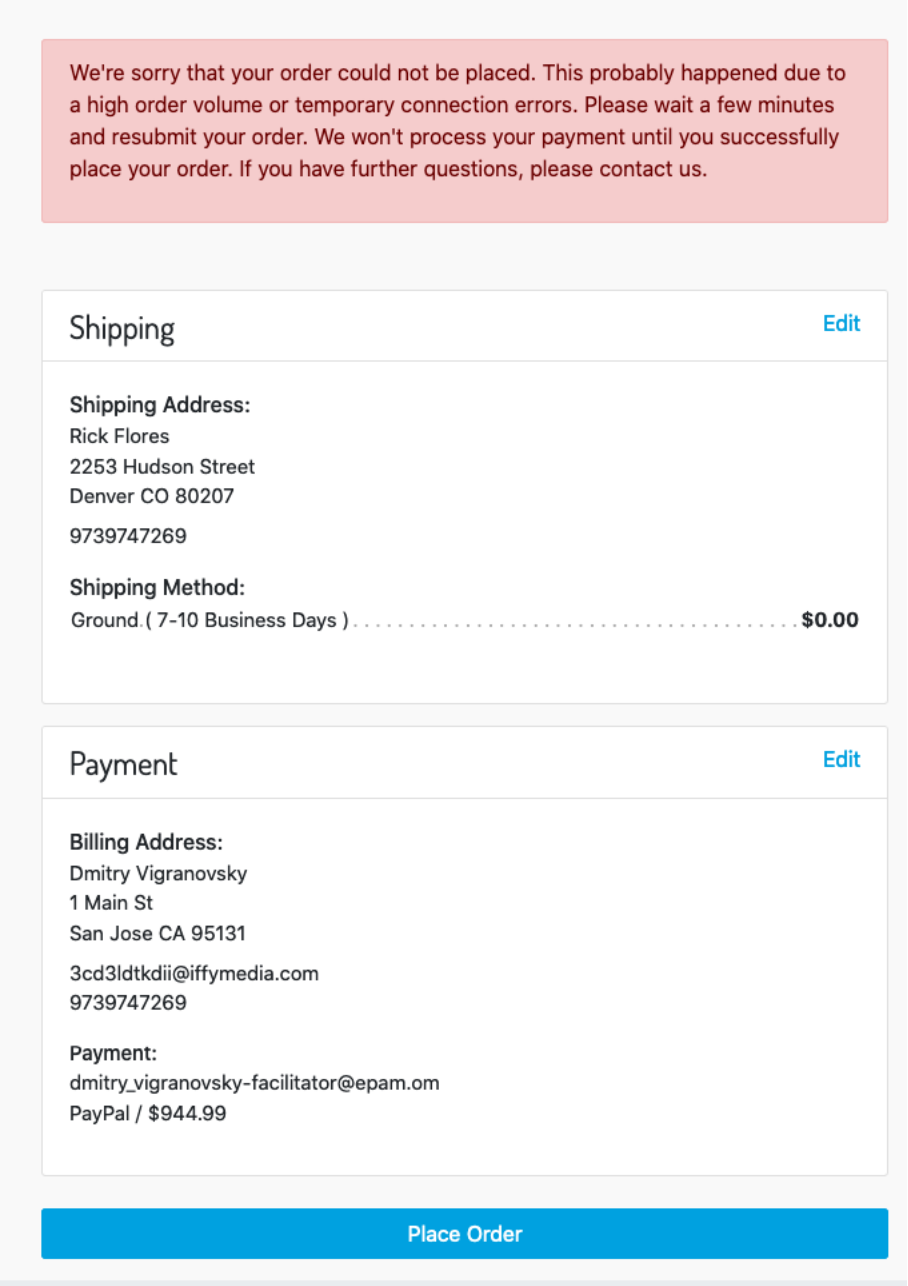

Figure 42. SFRA standard error message example

11 Automated Testing

The cartridge has unit, integration, and function tests included in the repository.

Please use the instructions described in the `test/unit/README.md`, `test/integration/README.md`, and `test/acceptance/README.md` files in the repository to configure and run tests.

12 Known Issues

No reported issues so far.

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