PayPal®

Express Checkout Integration Guide

For Professional Use Only
Currently only available in English.

A usage Professional Uniquement
Disponible en Anglais uniquement pour l'instant.

PayPal Express Checkout Integration Guide

Contents

Contents

List of Tables

List of Figures

Preface

This Document

This is the original release for *PayPal Express Checkout Integration Guide,* a document that describes the PayPal Express Checkout product.

Intended Audience

This document is written for merchants, resellers, and sellers who wish to implement a powerful and dynamic customer-centric checkout process for their website.

Background Information about the PayPal Web Services API. Consult the *PayPal Web Services API Reference* for information about the following:

- Architecture of the PayPal Web Services API, such as security and authentication basics
- The location of PayPal's Web Services Definition Language (WSDL) and X-Schema Definition files
- The structure of SOAP requests and responses
- Other APIs, such as GetTransactionDetails and TransactionSearch

Organization of This Document

Chapter 1, "Express Checkout Overview," describes what Express Checkout is, who can use it, what developers need to know to make it work, and why it is the perfect checkout solution for your website.

Chapter 2, "How Express Checkout Works," is a detailed, step-by-step explanation of how Express Checkout works and how it can be integrated into your checkout process.

Chapter 3, "Business Rules for PayPal Placement," details guidelines for placing PayPal logo graphics on your website, variations on those guidelines, and special considerations in integrating Express Checkout in some cases of the customer experience, such as handling shipping addresses and reapproving the use of PayPal.

Chapter 4, "Express Checkout API," details the elements of the PayPal Web Services APIs that Express Checkout comprises.

Chapter 5, "Testing Express Checkout" provides information on how to test your website- and API-based implementation of Express Checkout.

Notational Conventions

This document uses typefaces to identify the characteristics of text. These typefaces and the characteristics they imply are described below:

Typeface	How Used
serif italics	A document title.
	A term being discussed or defined. For example: A *file* is a readable or writable stream of characters …
	Boolean values (not keywords). For example: The function returns *true* if it encounters an error.
monospaced	Pathnames or file names that appear in body text frames.
	Code-related names that appear in body text frames. Such names are used for functions, callbacks, arguments, data structures, and fields. For example: `AbstractResponseType` is the SOAP response type definition on which all PayPal API response methods are based.
	Components of Internet protocol requests and responses, such as HTTPS and `FORM` variables. For example: The PayPal system uses a `method=POST` request to return IPN status variables related to subscriptions, such as `txn_type`.
Serif bold	User interface names, such as window names or menu selections. For example: On the **Profile** page, click **Email** to confirm your email address.
San-serif oblique	Placeholders used in the context of a format or programming standard or formal descriptions of PayPal system syntax. Placeholders indicate values or names that the reader should provide. Example: For example, `amount` is the variable for a single-item shopping cart, but `amount_X` is the name of the variable for a multi-item shopping cart. `amount_3` is the item amount for the third item in a multiple-item shopping cart.

To convey additional information, this document may also apply color and underlining to words or phrases that use the typefaces described above. Such use is described below:

Text attribute	How Used
xxxx	Hypertext link to a page in the current document or to another document in the set.
xxxxxx	Hypertext link to a URL or that initiates a web action, such as sending mail.

Documentation Problems

If you discover any errors in or have any problems with this documentation, please email us by following the instructions below. Describe the error or problem as completely as possible and give us the document title, the date of the document (located at the foot of every page), and the page number or page range.

To contact Customer Service about documentation problems:

1. Go to https://www.paypal.com/.

2. Click **Help** in the upper left corner of the page.

3. Click **Contact Us** in the lower left of the page.

4. Choose **Help by Email**.

5. Complete the form.

1   Express Checkout Overview

The more convenient it is for your customers to buy from you, the more they'll buy. Express Checkout allows customers the option to pay quickly through PayPal – and gives your business more benefits:

- **Give buyers more convenience, and get more sales.** Since your customers simply log in to use information they've already entered with PayPal, they save time by completing transactions in fewer steps. This helps increase loyalty and sales.

- **Complete sales on your website, and get more upsell opportunities.** Buyers finish their orders on your website. This gives you more advertising opportunities.

- **Help customers feel safer, so they buy more.** Buyers prefer to pay with PayPal because their customer information is kept safe. When they're confident about the security of their information, they purchase more.

What Is Express Checkout?

- Express Checkout allows your customers to complete transactions in very few steps. It lets them use shipping and billing information stored securely at PayPal to check out, so they don't have to re-enter it on your site.

- Express Checkout gives you the flexibility to put PayPal first in your checkout process – or on your billing page with other payment options.

- It's an API-based feature that can be used along with the PayPal Direct Payment API, which lets you process credit cards directly on your website.

How It Works

1. After selecting products to purchase, your customers click **Checkout with PayPal** on your website.

2. They're transferred to PayPal, where they select their payment method, as well as the correct shipping and billing address, then are returned to your website to complete their purchase.

3. PayPal automatically gives you the shipping address, email, and other customer information needed to fulfill your order.

With Express Checkout, your buyers finish their orders on your website, not PayPal's, so you can:

- Get real time notification of successful payments.

- Automate your internal business processes.

- Ensure buyers make it to your final confirmation page.

- Be notified that the buyer's address is confirmed, and ensure you're eligible for coverage under PayPal's Seller Protection Policy.

Get the Advantages You've Come to Expect From PayPal.

- Our industry-leading fraud-prevention measures help you do business safely

- More than 63 million users in 45 countries use PayPal, which means you make your products available to a large, and growing, global group of buyers

- PayPal is proven to attract new customers for our merchants

Availability

All PayPal business and premier account holders are eligible to implement PayPal Express Checkout on their websites. You can use Express Checkout to accept payment from both current PayPal account holders and from customers who sign up for PayPal during your checkout process.

NOTE: If a customer does not have a PayPal account but wants to pay with PayPal, the customer must sign up for a PayPal account. After signup, PayPal returns the customer to your website.

Compatibility

Express Checkout works with many other PayPal products, such as Instant Payment Notification, Settlement System, Downloadable History Log, Authorization & Capture, and more.

Funding Sources

With Express Checkout, you can accept all major credit cards, debit cards, bank transfers, and PayPal balance payments.

Technical Requirements

Integrating Express Checkout requires the knowledge of the following:

HTTP form GETs	These are required for redirecting the customer to and from the PayPal secure website.
SOAP-based XML	SOAP API calls exchange information between PayPal and the merchant site. For information about PayPal's SOAP APIs, see the *PayPal Web Services API Reference*.
SSL Certificates	The latest encryption technology ensures that data is communicated safely and securely.
The PayPal Sandbox	The Sandbox is a simulation of PayPal's live environment. PayPal strongly recommends that you test your integration of Express Checkout with the Sandbox to verify its completeness. For information about the Sandbox, see the *PayPal Sandbox User Guide*.

2 How Express Checkout Works

PayPal Express Checkout is a combination of the checkout process on your website, PayPal login and review pages on https://www.paypal.com, and PayPal Web Services API SOAP requests/responses.

To explain how Express Checkout works, this chapter presents a generalized checkout process and details how Express Checkout can be implemented with it. This generalized checkout process, which might differ from your own, is shown in Figure 2.1, "Generalized Customer Checkout." Each numbered step in the diagram coincides with what this guide refers to as Express Checkout Integration Points 1, 2, and 3.

The Integration Points occur in the following sequence. Your customer always starts and completes his order on your website.

1. When a customer clicks **Checkout with PayPal**, he is transferred to PayPal to log in.

2. The customer then selects a shipping address and payment method and approves the use of PayPal.

3. PayPal then returns the customer to your website to review and finalize the order.

FIGURE 2.1   Generalized Customer Checkout
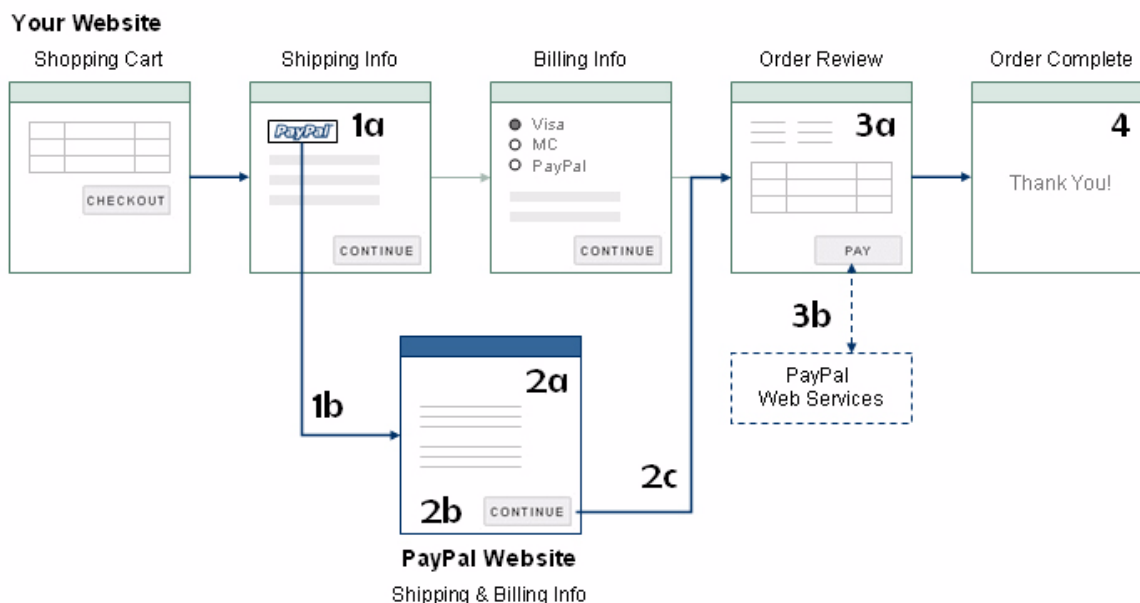
At each Integration Point, you must set certain required API element values, and you can affect the behavior and usefulness of Express Checkout by setting optional elements.

After a succinct description of the technical view of implementing Express Checkout, the remainder of this chapter includes detailed steps for each of the Integration Points.

TABLE 2.1   Steps in Integrating Express Checkout

Step	Description	See Page
1a	After selecting products to purchase, your customer clicks the **Checkout with PayPal** button on your website. This allows your customer to quickly skip entering shipping and billing information on your website.	24
1b	**Integration Point 1** You make an API call to pass PayPal the transaction details. You then transfer the customer to PayPal via an HTTP redirect. Your customer is transferred to PayPal.	25
2a	Your customer selects a shipping address and payment method stored on PayPal.	29
2b	Your customer clicks **Continue Checkout** to approve the use of PayPal and is returned to your website.	31
2c	**Integration Point 2** Your customer is transferred back to your website. PayPal transfers the customer via an HTTP redirect. You then make an API call to retrieve transaction details, such as shipping address, email address, and other information needed to fulfill your order.	31
3a	Your customer finishes the checkout process on your website, reviews the order, and completes the order.	34
3b	**Integration Point 3**. When your customer places the order, you make an API call to PayPal to request payment. (Your customer does not see this step.) The payment transaction is initiated, and PayPal sends your customer an email receipt for the payment.	36
4	You transfer your customer to your order confirmation page.	39

Express Checkout gives you the flexibility to put PayPal either first in your checkout process or on your billing page along with other payment options.

Express Checkout Integration Points: Technical View

A technical view of implementing Express Checkout is shown in Figure 2.2, "Express Checkout Integration Points: Technical View" on page 22:

1. Preparatory indication to PayPal that you intend to use Express Checkout for the payment for the customer's order: `SetExpressCheckoutRequest`.

2. Getting details from PayPal about this customer (such as shipping address) and optionally allowing the customer to edit these details during the order review: `GetExpressCheckoutDetailsRequest`.

3. Making the payment transaction at the end of checkout, whether as the complete amount of the sale or as an authorization for a total amount that you must later process with PayPal Authorization & Capture: `DoExpressCheckoutPaymentRequest`.

For precise details about the elements in all three SOAP requests and responses, see Chapter 4, "Express Checkout API. "

FIGURE 2.2 Express Checkout Integration Points: Technical View
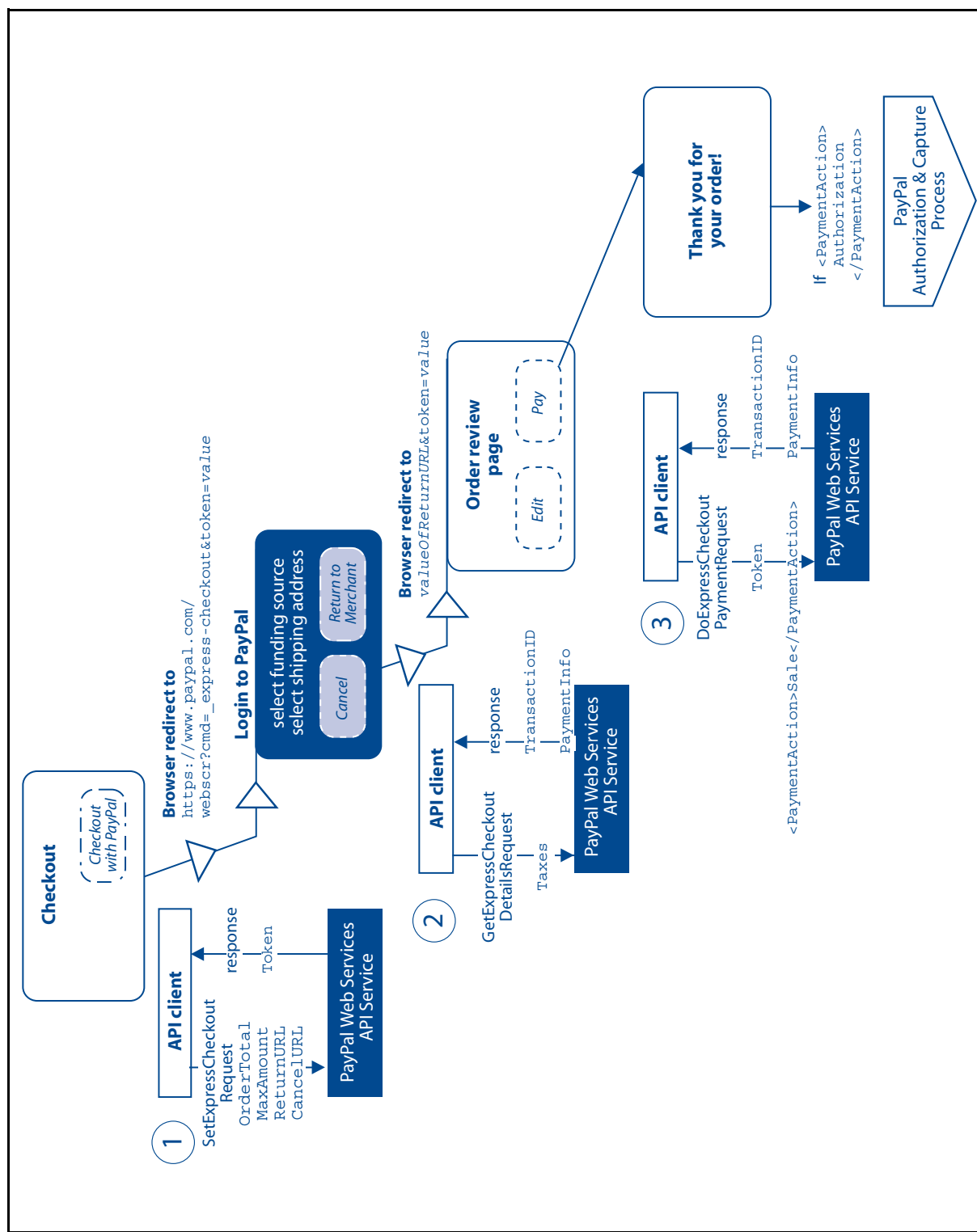
TABLE 2.2   Express Checkout Program Flow-of-Control and Integration Points

	Customer...	Merchant...	PayPal...
1	Clicks **Checkout with PayPal** button.	Sends SOAP request `SetExpressCheckoutRequest` with the required elements – estimated `OrderTotal`, `ReturnURL`, and `CancelURL` – and optional elements, such as `MaxAmount`.	
			Returns `SetExpressCheckoutResponse` with `Token`.
		Adds value of element `Token` from `SetExpressCheckoutRequest` as a name/value pair to the following URL, and redirects the user's browser to: `https://www.paypal.com/webscr?cmd=_express-checkout&token=`*value_from_SetExpressCheckout Response*	
2	Logs in to PayPal, approves the use of PayPal, and clicks **Continue Checkout**.		With a `GET`, redirects user's browser to merchant's `ReturnURL` with token value appended.
		Sends SOAP request `GetExpressCheckoutDetailsRequest` with `Token` to retrieve your customer's information.	Returns `GetExpressCheckoutDetailsResponse` with `PayerID`, email address, shipping address, confirmed or unconfirmed status of that shipping address, and other details.
		Renders page in customer's browser for the next step in checkout process, such as your "Order Review" page.	
3	Clicks "Confirm Order" button	Sends SOAP request `DoExpressCheckoutPaymentRequest` with the required elements `Token`, `OrderTotal`, `PaymentAction`, and `PayerID` returned by `GetExpressCheckoutDetailsResponse`.	Returns `PaymentInfo` with important `TransactionID` value and other details about the payment.

Relationship to PayPal Authorization & Capture
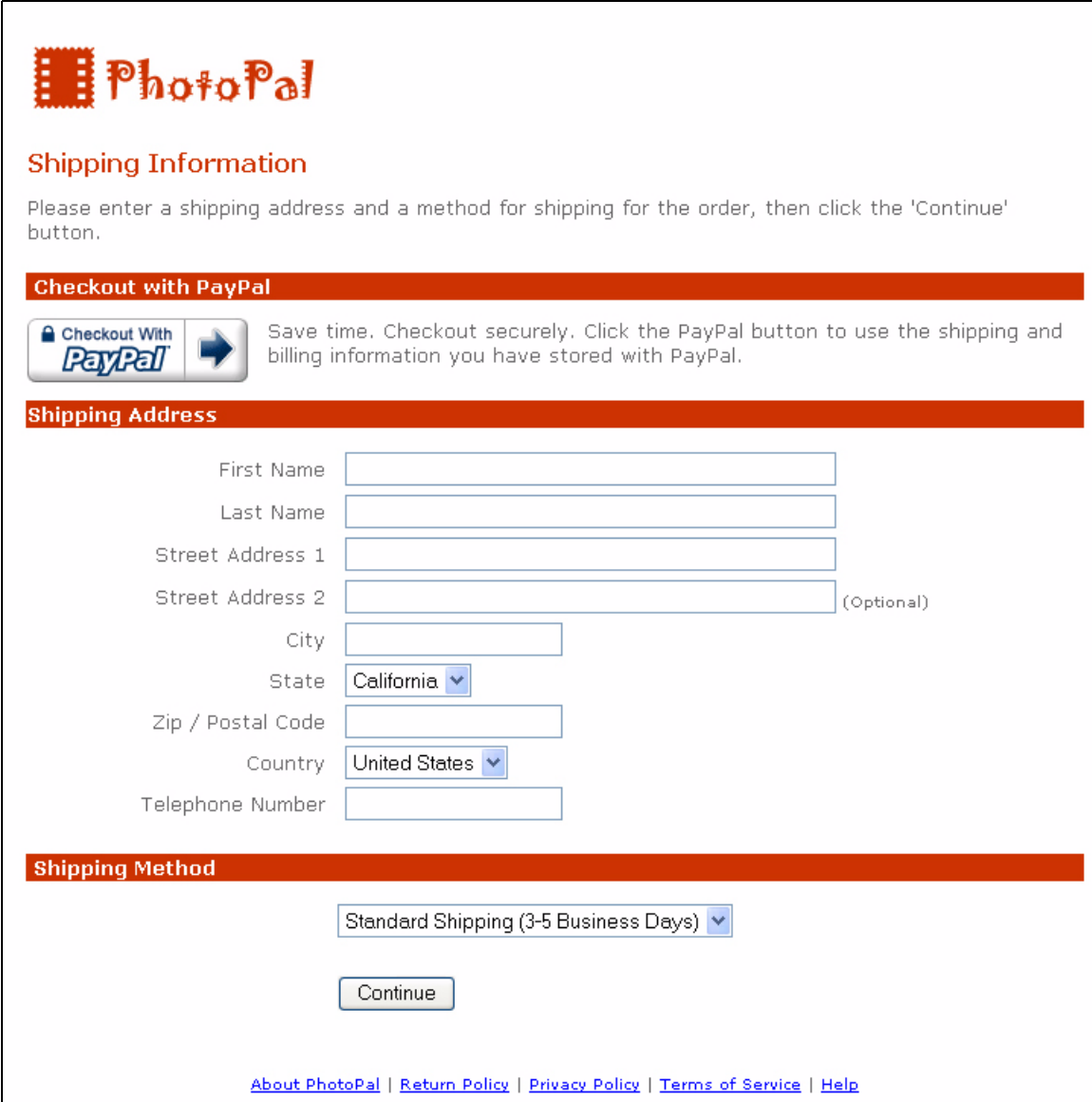
PayPal assumes that at the end of the checkout process, you will make a final sale and payment transaction via PayPal. If at point of sale you do not know the complete cost of the order—for example, if shipping, handling, and tax is not precisely known, or if you want to upsell—you can authorize a transaction that you capture later with PayPal Authorization & Capture.

For more information about PayPal Authorization & Capture, see the *PayPal Authorization & Capture Integration Guide*.

Step 1a: Customer Selects PayPal on Your Website

PayPal recommends that you place the Express Checkout button on your website before your customers are required to enter their shipping and billing information, as shown in Figure 2.3, "PayPal Express Checkout Button Before Shipping Address Information."

FIGURE 2.3   PayPal Express Checkout Button Before Shipping Address Information

NOTE: Your customer always reviews transaction details and makes the final payment on your website. PayPal handles the payment verification and passes you the customer's

shipping information. PayPal never shares your customer's financial information with anyone.

Step 1b: Integration Point 1

As shown in Figure 2.4, "Express Checkout Integration Point 1," Integration Point 1 is where you transfer a customer's browser to PayPal to select or add a shipping address and funding source.

FIGURE 2.4   Express Checkout Integration Point 1
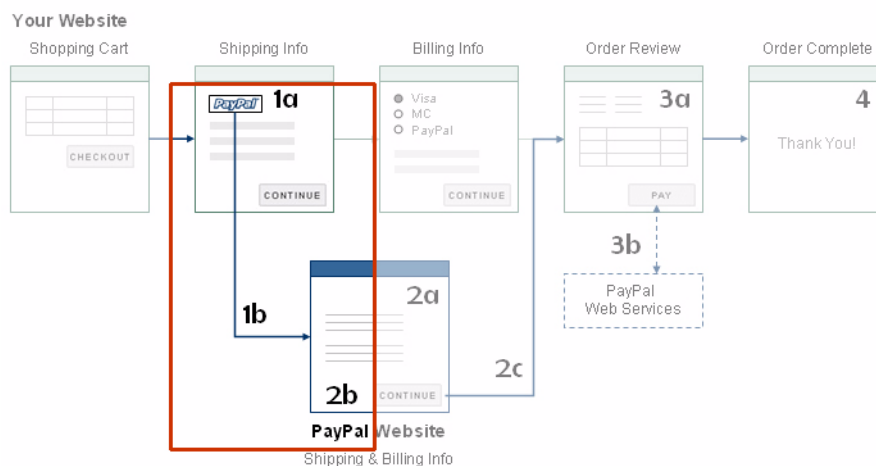
Integration Point 1 consists of the following events and actions:

- The customer clicks the **Checkout with PayPal** button.
- You send `SetExpressCheckoutRequest` to PayPal.
- PayPal returns the `SetExpressCheckoutResponse`.
- You redirect the customer's browser to PayPal.

Usage Notes About SetExpressCheckout Elements

The following is important usage information about some of the required or optional elements in the first SOAP request for Express Checkout. For complete details about all elements, see "SetExpressCheckout" on page 56.

For information about suggested use of elements related to shipping address information, see "Sending Shipping Address Information to PayPal" on page 48.

TABLE 2.3   SetExpressCheckoutRequest Usage Notes

Element	Required or Optional?	Notes
OrderTotal	Required	The total estimated cost of the order to the customer. If shipping and tax charges are known, include them in OrderTotal; if not, OrderTotal should be the current subtotal of the order.
MaxAmount	Optional	The expected maximum total amount of the complete order, including shipping and tax charges. PayPal uses an adjusted OrderTotal to determine which funding sources it can authorize for use by the customer. PayPal business logic calculations account for the fact that shipping and tax will likely be added to the OrderTotal before the customer completes the purchase. MaxAmount is additional information for PayPal's business logic to properly calculate the customer's available funds for your unique circumstances. If OrderTotal is the final amount, set MaxAmount equal to OrderTotal. **NOTE:** If the final OrderTotal sent with the DoExpressCheckoutPaymentRequest (the final PayPal Express Checkout API) exceeds the value of MaxAmount, the payment will still be successfully processed.
ReturnURL	Required	URL to which the customer's browser is returned after approving use of PayPal. PayPal recommends that the value of the required ReturnURL element be the final review page on which the customer confirms the order and payment. The value of your ReturnURL must always assume GET as the FORM METHOD, just as if the value were to be included in a FORM. That is, your ReturnURL must expect to read from the QUERY_STRING environment variable, not from standard input. For your programmatic control on the redirect of the customer's browser to your website, the value of ReturnURL can include any name/value pairs your programs require.

TABLE 2.3 *SetExpressCheckoutRequest Usage Notes*

Element	Required or Optional?	Notes
`CancelURL`	Required	URL to which the customer is returned if he decides not to use PayPal or if PayPal is not able to authorize the customer.
		PayPal recommends that the value of the required `CancelURL` be the original page on which the customer chose to use PayPal. For instance, if the customer were transferred to PayPal from your shipping information page, the `CancelURL` value should be the URL of your shipping information page. If the customer clicks **Cancel** on the PayPal website, PayPal redirects the customer's browser to your shipping information page, where the customer can continue with your standard checkout process.
`PaymentAction`	Optional	How you want to obtain payment:
		- `Sale` indicates that this is a final sale for which you are requesting payment.
		- `Authorization` indicates that this payment is subject to settlement with PayPal Authorization & Capture. A `PaymentAction` of `Authorization` indicates to PayPal that the order total at the end of the customer's checkout will not be a final sale. If you choose this action, you will need to perform an additional step in order to capture the payment.
		IMPORTANT: *You cannot set* `PaymentAction` *to* `Sale` *on* `SetExpressCheckoutRequest` *and then change* `PaymentAction` *to* `Authorization` *on the final PayPal Express Checkout API* `DoExpressCheckoutPaymentRequest`*.*
		For more information about PayPal Authorization & Capture, see the *PayPal Authorization & Capture Integration Guide*.

TABLE 2.3   SetExpressCheckoutRequest Usage Notes

Element	Required or Optional?	Notes
cpp-header-image	Optional	A URL for the image you want to appear at the top left of the payment page. The image has a maximum size of 750 pixels wide by 90 pixels high. Value must be URL-encoded.
		IMPORTANT: PayPal recommends that you provide an image from a secure (https) server. If the image is not on a secure server, when the customer's browser is redirected to the PayPal website, the customer will see a message about potential security risks (a mixture of secure and insecure items). This message might intimidate some customers from continuing with their purchase.
		In Figure 2.5, "PayPal Login Page" on page 29, the PhotoPal image beneath the PayPal logo demonstrates how a cpp-header-image appears.
		For more information about custom payment pages, see the *Merchant User Manual and Integration Guide*.
Custom	Optional	The optional Custom element is a *passthrough variable*. Its value is returned verbatim on the final PayPal Express Checkout API, DoExpressCheckoutPaymentReResponse. You can use this value for whatever purpose you desire, such as an accounting tracking number or additional data needed by your programs (for example, a session-id or other variable).

TABLE 2.4   SetExpressCheckoutResponse Usage Notes

Element	Notes
Token	A timestamped token by which you identify to PayPal that you are processing this payment with Express Checkout.
	NOTE: The token expires after three hours.

Transferring Your Customer to PayPal

After you receive a successful response from PayPal, you should add the value of the element Token from SetExpressCheckoutResponse as a name/value pair to the following URL, and redirect your customer's browser to it:

```
https://www.paypal.com/webscr?cmd=_express-checkout&token=value_from_SetExpressCheckoutResponse
```

Step 2a: Customer Approves Use of PayPal

The next step after redirecting the customer's browser to PayPal with the response token is for the customer to approve PayPal as the payment method for his purchase. The customer is redirected to the PayPal login page to enter his email and password as shown in Figure 2.5, "PayPal Login Page." If the customer does not have a PayPal account, he can click the **Don't have a PayPal account? Click Here** link and enter his credit card information to register for a PayPal account.

*FIGURE **2.5** PayPal Login Page*

If the customer has previously been to PayPal, his email address is pre-filled to save time during login.

After the customer logs in to PayPal, he needs to verify his information on the "Review Your PayPal Information" page, as shown in Figure 2.6, "PayPal Review Page."

FIGURE 2.6   PayPal Review Page

The customer then:

1. Can review his default funding source and shipping address, select other funding sources or shipping address already saved on PayPal, or enter new ones.

> **NOTE:** PayPal returns your customer to the ReturnURL specified by you in SetExpressCheckoutRequest. If the customer clicks the **Cancel** button, PayPal returns him to the CancelURL specified in the SetExpressCheckoutRequest.

2. Clicks **Continue Checkout** to approve the use of PayPal.

3. Returns to your website to complete the purchase.

Step 2b: Customer Returns to Your Website

After the customer has selected shipping and billing information on the PayPal website, he clicks **Continue Checkout**, which is the customer's approval of the use of PayPal. PayPal then redirects the customer's browser to your website as described in "Step 2c: Integration Point 2."

Step 2c: Integration Point 2

Figure 2.7, "Express Checkout Integration Point 2" illustrates Express Checkout Integration Point 2.

FIGURE 2.7   Express Checkout Integration Point 2
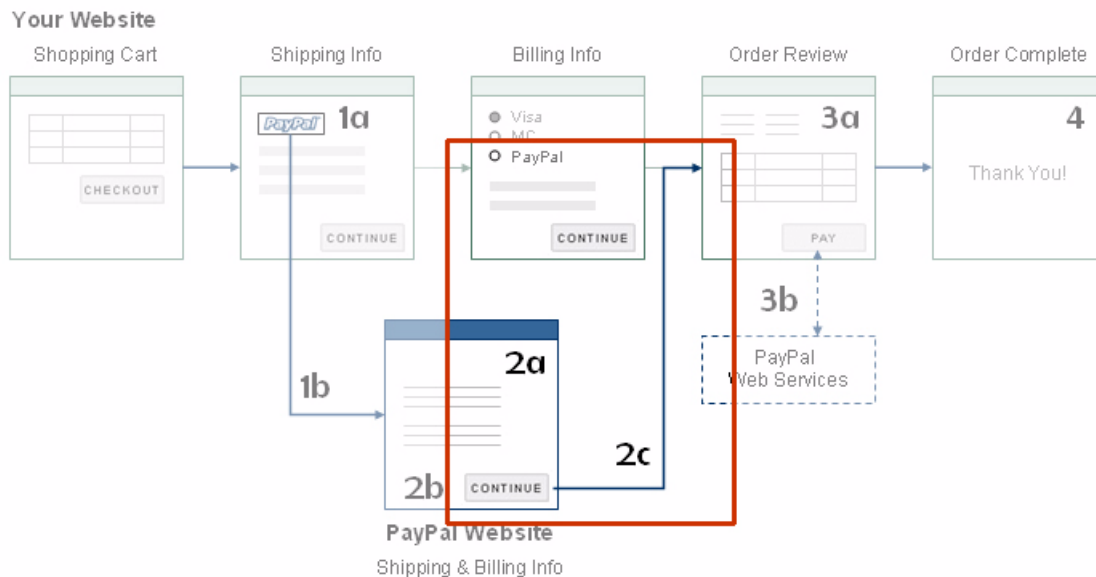
Integration Point 2 consists of the following events and actions:

- The customer clicks **Continue Checkout** on the PayPal review screen.
- PayPal transfers your customer to the location you specified in the `ReturnURL`.
- You send the `GetExpressCheckoutDetailsRequest` to PayPal.
- PayPal returns the `GetExpressCheckoutDetailsResponse`.
- You display the next screen of your checkout process to your customer.

After your customer has reviewed and approved his financial and shipping information, and done any necessary editing, PayPal redirects his browser to the `ReturnURL` provided in `SetExpressCheckoutRequest`.

ReturnURL, CancelURL, and the Express Checkout Token

PayPal appends the name/value pair token=*tokenValue* to the value of your `ReturnURL` and `CancelURL`. For example, if you set `ReturnURL` as follows:

`https://www.newco.com/ourcheckout`

PayPal changes the value as follows:

`https://www.newco.com/ourcheckout`**?**`token=`*tokenValue*

Similarly, if your `ReturnURL` value already has name/value pairs, like the following:

`https://www.newco.com/ourcheckout?cartid=1234`

PayPal prefixes the appended token with the name/value pair delimiter, like this:

`https://www.newco.com/ourcheckout?cartid=1234`**&**`token=`*tokenvalue*

Once the customer arrives at this `ReturnURL`, you need to send the `GetExpressCheckoutDetailsRequest` with the `Token` value provided in `SetExpressCheckoutResponse`. PayPal then sends you a response with your customer's transaction information.

For a list of all elements in `GetExpressCheckoutDetailsResponse`, see "GetExpressCheckoutDetailsResponse" on page 64.

Usage Notes About GetExpressCheckoutDetails Elements

The following outlines usage information for some of the important elements sent in this response.

TABLE 2.5   GetExpressCheckoutDetailsResponse Usage Notes

Element	Notes
Payer	Email address of the payer.
PayerID	Unique encrypted PayPal customer account number. You must provide this value with `DoExpressCheckoutPaymentRequest`.
PayerStatus	The payer's PayPal account status. A value of `Verified` means that the customer has confirmed ownership of a bank account or has verified his account status through other means.
FirstName LastName	The payer's name.

TABLE 2.5   GetExpressCheckoutDetailsResponse Usage Notes

Element	Notes
Address	The payer's shipping address selected on PayPal. **NOTE:** With `SetExpressCheckoutRequest`, if you sent PayPal an `Address` in and set `AddressOverride`, on `GetExpressCheckoutDetailsResponse` PayPal returns the shipping address you originally sent on `SetExpressCheckoutRequest`. For the recommended use of elements on `SetExpressCheckoutRequest` for handling shipping address information that the customer enters on your website (not on PayPal), see "Sending Shipping Address Information to PayPal" on page 48.
AddressStatus	The status of the customer's shipping address. A status of `Confirmed` means that the shipping address matches a billing address on record with PayPal and that that billing address has been verified by AVS. Your use of a `Confirmed` address is one of the requirements for you to be protected by PayPal's Seller Protection Policy (SPP). For more information about the Seller Protection Policy, see the following: https://www.paypal.com/spp
ContactPhone	Payer's contact telephone number. `ContactPhone` is returned to you only if you set this as a preference in the **Website Payment Preferences** of your Profile on https://www.paypal.com.

To protect the privacy of your customer, PayPal does not share billing address or financial information, such as credit card numbers.

NOTE: The terms of PayPal's Privacy Policy allow you to use a customer's personal information only for communications relating to the transaction, unless the customer expressly gives you permission to use the information for other purposes. For information about the PayPal Privacy Policy, see http://www.paypal.com/privacy.

Step 3a: Customer Completes Order

After you receive a successful `GetExpressCheckoutDetailsResponse`, display the next page in your checkout process. This page might be your order review page or a page on which the customer can select a shipping method, enter shipping instructions, or specify any other information necessary to complete the purchase.

FIGURE 2.8   Example of Order Review Page

PayPal recommends that you alter your order review page as follows. Figure 2.8, "Example of Order Review Page" on page 34 is an example of a page that has been altered to reflect these guidelines.

TABLE 2.6   Shipping, Billing and Order Total Usage

Shipping Information Section	Display the shipping address supplied by PayPal.
	The "Edit Shipping" button should return your customer to PayPal to edit shipping information on the PayPal website. This allows the customer to quickly select a different address that he already has stored with PayPal, or enter a new address. This also ensures that PayPal can provide you with the updated `AddressStatus` for the new shipping address.
	For other recommendations about the design of your order review page, see "Best Practices for Edit Shipping" on page 49.
	For information about `AddressStatus`, see "AddressStatus" on page 66.
Billing Information Section	For billing information, display the customer's PayPal email address provided in Express Checkout.
Order Total	With Express Checkout, you must display to the customer the same exact OrderTotal value that you send to PayPal in `DoExpressCheckoutPaymentRequest`.

When the customer clicks the "Place Order" button, send `DoExpressCheckoutPaymentRequest` to initiate the payment. After a successful response is sent from PayPal, direct the customer to your order completion page to inform him that you received his order.

Step 3b: Integration Point 3

Figure 2.9, "Express Checkout Integration Point 3" illustrates Express Checkout Integration Point 3.

*FIGURE **2.9*** ***Express Checkout Integration Point 3***
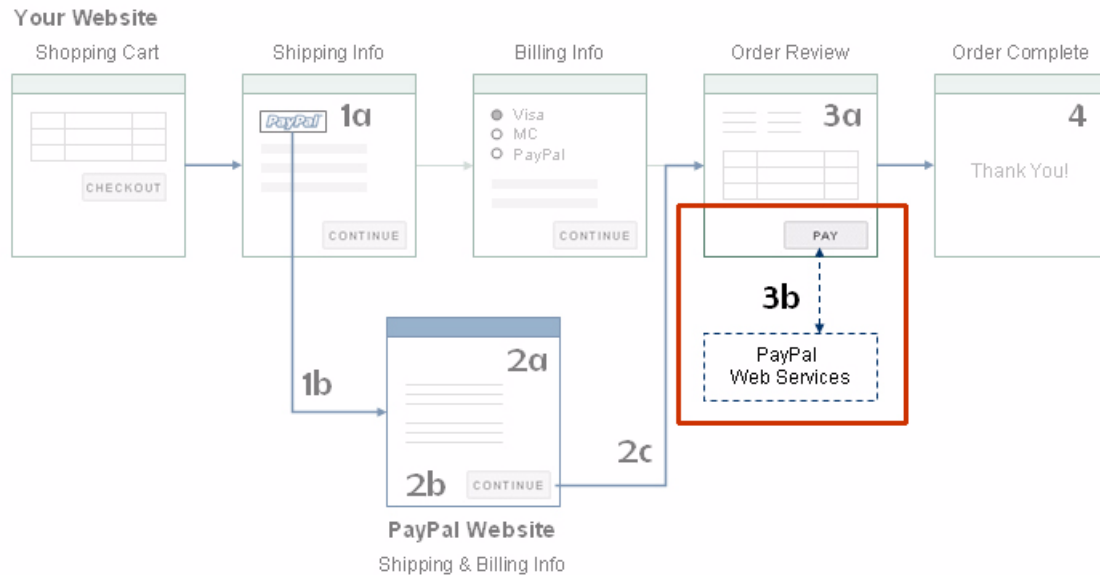
Integration Point 3 consists of the following events and actions:

- The customer clicks the "Place Order" button on your website.
- You send the `DoExpressCheckoutPaymentRequest` to PayPal.
- PayPal returns the `DoExpressCheckoutPaymentReResponse`.
- You redirect the customer to your "Order Confirmation" page.

Usage Notes About DoExpressCheckoutPaymentRequest Elements

The following are important usage information about some of the required or optional elements in the final SOAP request for Express Checkout.

TABLE 2.7   DoExpressCheckoutPaymentRequest Usage Notes

Element	Required or Optional?	Notes
OrderTotal	Required	Total of the order, including shipping, handling, and tax. This must be the final amount of the purchase and can differ from the original, estimated `OrderTotal` you sent in the `SetExpressCheckoutRequest`. **NOTE:** PayPal does not enforce a maximum difference between the original estimated `OrderTotal` and the one you send on `DoExpressCheckoutPaymentRequest`. However, if the difference is substantial, your customer may no longer be approved to use the funding source he originally accepted.
PaymentAction	Required	How you want to obtain payment: ● `Sale` indicates that this is a final sale for which you are requesting payment. ● `Authorization` indicates that this payment is subject to settlement with PayPal Authorization & Capture. **NOTE:** If you set `PaymentAction` to `Sale` on `SetExpressCheckoutRequest`, you cannot change the `PaymentAction` value to `Authorization` on `DoExpressCheckoutPaymentRequest`. You can, however, set `PaymentAction` to `Sale` on `DoExpressCheckoutPaymentRequest` if you originally set it to `Authorization` on `SetExpressCheckoutRequest`. **IMPORTANT:** *PayPal requires that a merchant using Express Checkout display to the customer the same exact amount that the merchant sends to PayPal for initial authorization in the OrderTotal element with the* `DoExpressCheckoutPaymentRequest` *API.*
ItemTotal ShippingTotal HandlingTotal TaxTotal	Optional	You can send individual order-level totals for items, shipping, handling, and tax. If you send this information, PayPal includes it in the customer's transaction receipt from PayPal and on PayPal's Transaction Details page. If you send this information, the sum of these four totals must equal `OrderTotal`.

TABLE 2.7 *DoExpressCheckoutPaymentRequest Usage Notes*

Element	Required or Optional?	Notes
`Order Description`	Optional	The description you want to appear on the customer's transaction receipt from PayPal and on PayPal's Transaction Details page. PayPal recommends that you include your order number for this purchase if one is available.

`PaymentItem`
● `Name`
● `Number`
● `Amount`
● `Quantity`
● `SalesTax`
`Payment Details`
● `ItemTotal`
● `TaxTotal`
	`PaymentItem` is optional.
	
	`PaymentDetails` is required.
		If you send details about each item, they are included in the customer's transaction receipt from PayPal and on PayPal's Transaction Details page.
		
		Providing this information allows your customer to review the purchase information in his PayPal account details, can remind your customer about the purchase details, and might decrease the likelihood that your customer will mistakenly file a chargeback.
		
		The following rules apply to the `PaymentItem` elements:
		1. If you send `PaymentItem.Name`, you must also send `PaymentItem.Amount`.
		2. If you send `PaymentItem.Amount`, the sum of (`PaymentItem.Amount` x `Quantity`) for all payment items must equal `PaymentDetails.ItemTotal`.
		3. If you send `PaymentItem.SalesTax`, the sum of (`PaymentItem.SalesTax` x `Quantity`) for all payment items must equal `PaymentDetails.TaxTotal`.

`ShipToAddress`	Optional	If you allow the customer to enter or edit shipping information on your website, you should pass your customer's shipping address to PayPal. **IMPORTANT:** *If you are using the shipping address PayPal returned to you with* `GetExpressCheckoutDetailsResponse`*, do not pass this address back to PayPal on* `DoExpressCheckoutPaymentRequest`*.* **NOTE:** PayPal recommends that, whenever possible, you allow your customer to use the shipping address stored by PayPal. Doing so helps your customer complete the checkout more quickly and allows PayPal to provide you with the shipping `AddressStatus` in `GetExpressCheckoutDetailsResponse`.

Step 4: Customer Notified Order Is Complete

After the customer approves the order and it completes successfully, PayPal recommends that you display an order completion page showing the details of the transaction. An example is shown below.

FIGURE 2.10 Example of Order Complete Page

PhotoPal

Your Order is Complete

Please print this receipt for your records.

Shipping Information

Shipping Address	2211 North First Street San Jose, CA 95131 United States
Shipping Method	Standard Shipping (3-5 Business Days)

Billing Information

Payment Method	PayPal Account joe@photopaldemo.com
PayPal Transaction ID	823487029384790

Order Details

PhotoPal Order Number	123-456-789

Quantity	Item	Details		Price
1	San Francisco Bay	32" x 32"	$	$250.00
1	Mount Hamilton	20" x 20"	$	$50.00
		Item Total	$	$300.00
		Shipping & Handling	$	$5.00
		Tax	$	$0.00
		Order Total	$	$305.00

About PhotoPal | Return Policy | Privacy Policy | Terms of Service | Help

PayPal sends the customer an email notification with the completed transaction details of the order. You also receive an email of the payment and can view it in your Downloadable History Log or Account Overview.

3 Business Rules for PayPal Placement

There are four prime considerations and sets of business rules for positioning PayPal on your website. This chapter discusses each of them:
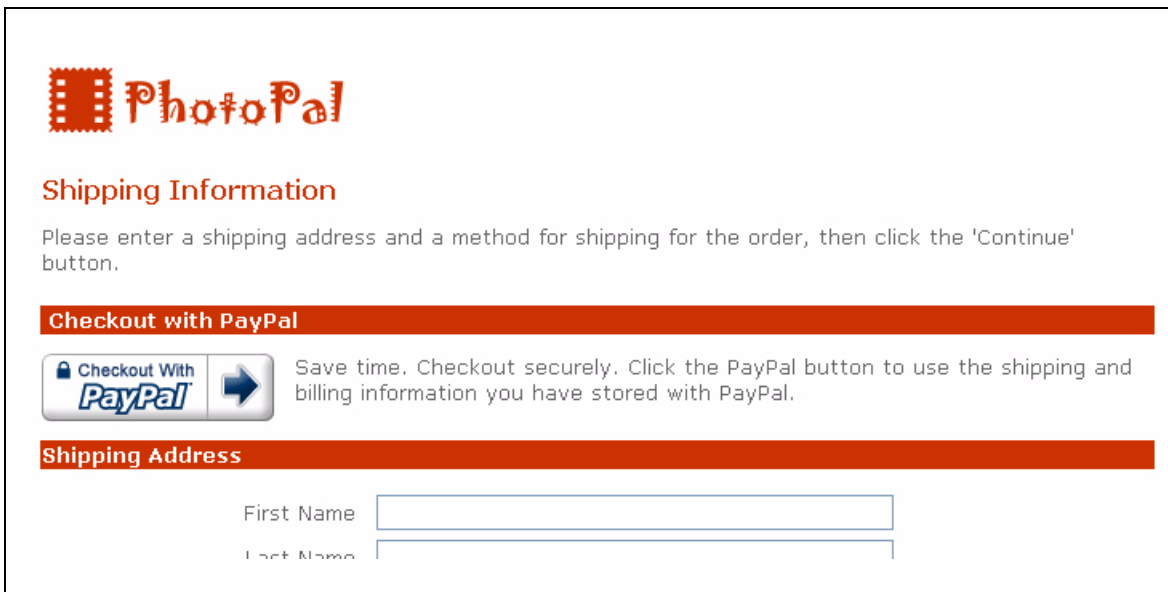
1. "Placement of the Express Checkout Button" on page 41 details the business rules for and benefits of displaying the PayPal Express Checkout button in the primary position in your checkout process.

2. "Placement of PayPal With Other Payment Methods" on page 44 describes the business rules for positioning.

3. "Best Practices for Edit Shipping" on page 49 recommends the best way to use Express Checkout when a customer needs to change shipping information.

4. "Best Practices: Reapproving PayPal at Integration Point 3" on page 51 recommends the best way to use Express Checkout if the customer needs to reapprove the use of PayPal Express Checkout when the order total increases significantly.

IMPORTANT:

Placement of the Express Checkout Button

Chapter 2, "How Express Checkout Works," details the general Express Checkout process with an example of Express Checkout as the first step of the checkout. Putting PayPal first in your checkout allows a customer to save time by skipping several checkout steps. This chapter provides instructions for how to implement the PayPal option in two locations in your checkout process.

Figure 3.1, "Placement of Express Checkout Button First in Your Checkout Flow" on page 42 is an example of how to implement the Express Checkout product as the first step of your checkout process. By placing the button before your customer is asked to enter shipping and billing information, your customer is able to check out quickly using information already stored on PayPal.

FIGURE 3.1 Placement of Express Checkout Button First in Your Checkout Flow

Business Rules for Express Checkout Button in First Position

When PayPal is in the first step in your checkout process, you must adhere to the following four business rules. Following these rules helps PayPal account holders understand that they are offered the benefits of a faster checkout. In addition, this placement will possibly increase impulse purchases, repeat purchases, and purchases from shoppers who are comfortable paying online only with PayPal.

1. Add the PayPal choice at the top of the first page of your checkout process *before* you ask for the shipping address or payment method.

2. Use the approved Express Checkout button shown in Figure 3.1, "Placement of Express Checkout Button First in Your Checkout Flow."

3. Put the text following text above either the **Checkout with PayPal** button or the corresponding message, whichever is most appropriate to your website design.

    Checkout with PayPal

4. Put the following message next to the PayPal Express Checkout button:

    Save time. Checkout securely. Click the PayPal
    button to use the shipping and billing information
    you have stored with PayPal.

Where to Find the Express Checkout Button and Message Text

The following URL is the location of the Express Checkout button logo and message text:

https://www.paypal.com/express-checkout-buttons

From this location, copy the HTML and paste it in the appropriate location of your checkout pages, as described in "Placement of the Express Checkout Button" on page 41. You might need to edit the variables in the HTML to suit your particular needs.

The customer's click of the **Checkout with PayPal** button is the start of Express Checkout Integration Point 1, which is described in "Step 1b: Integration Point 1" on page 25.

If the first step of your checkout process asks the customer to select a payment method, follow the business rules detailed in "Business Rules for PayPal with Other Payment Methods" on page 46.

Placement of PayPal With Other Payment Methods

Step 1a in Figure 3.2, "Placement of PayPal With Other Payment Methods is that point in the checkout process where PayPal can be placed with other payment methods.

FIGURE 3.2 Placement of PayPal With Other Payment Methods
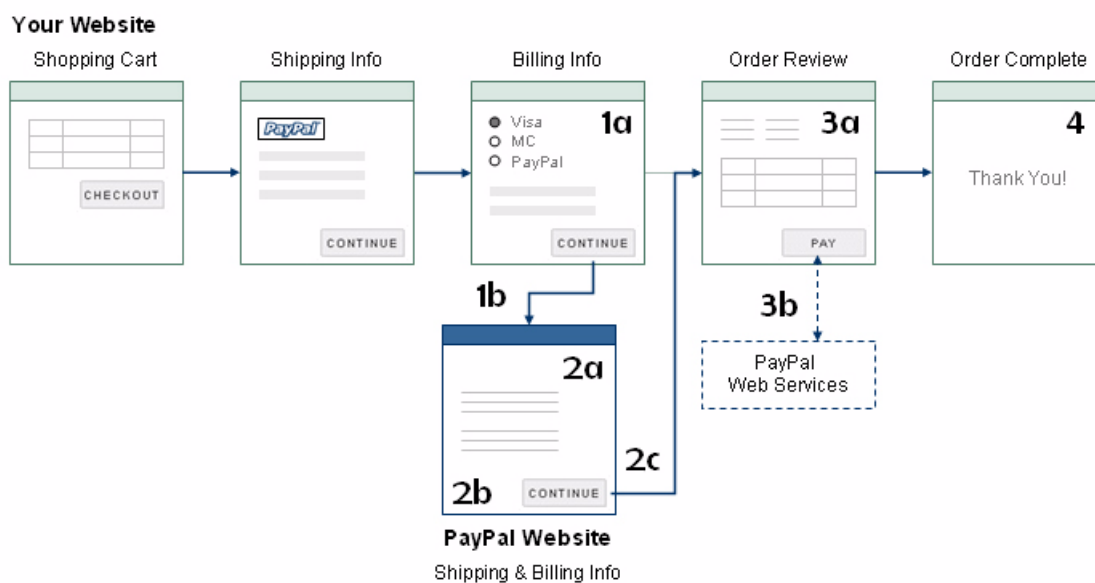
An example of PayPal's recommended placement of PayPal with other payment methods is shown in Figure 3.3, "Example of Billing Information Page" on page 45.

FIGURE 3.3 Example of Billing Information Page

For background information about design considerations similar to this, see "Step 1a: Customer Selects PayPal on Your Website" on page 24. The primary difference is that the customer selects PayPal from a list of other payment methods. When the customer clicks the "Continue Checkout" button or hyperlink on your billing page, you must redirect the customer to PayPal according the instructions described "Step 1b: Integration Point 1" on page 25.

Business Rules for PayPal with Other Payment Methods

When PayPal is positioned with other payment methods, PayPal recommends the following design:

1. Display the options for payment methods *before* you ask the customer for billing address information.

2. Add the PayPal mark logo graphic as one of the options, as shown in "Example of Billing Information Page" on page 45.

    NOTE: You can find this logo graphic in the PayPal logo center at the following location:

    https://www.paypal.com/logocenter

3. Add the following message next to the PayPal mark logo:

    Save time. Pay securely using your stored
    payment information. Pay with credit card,
    bank account, or your PayPal account balance

4. Make a design choice for the display of PayPal with other payment methods. You have several designs to choose from:

    – The treatment shown in "Example of Billing Information Page" on page 45
    – Horizontal option fields shown in Figure 3.4, "Payment Methods in Horizontal Design."
    – A drop-down SELECT list shown in Figure 3.5, "Payment Methods as Drop-Down SELECT List.."

FIGURE 3.4 Payment Methods in Horizontal Design

FIGURE 3.5 Payment Methods as Drop-Down SELECT List

Treatment When PayPal Is Selected

When your customer selects PayPal, you should:

1. Use JavaScript to hide or disable credit card fields and billing address fields. Customers will be confused if they are asked to enter this information after selecting PayPal.

2. If other fields such as coupon code or gift certificate are on the page, still display them so your customer may fill them out before being redirected to PayPal.

3. Change the function of the "Continue Checkout" button to send the customer to PayPal according to the instructions in "Step 1b: Integration Point 1" on page 25.

4. Near the "Continue" button or hyperlink, put an explanatory message such as the following to inform your customer what will occur when the "Continue" button or hyperlink is clicked. The text *Your Company Name* is the name of your business.

   Clicking "Continue" will transfer you to PayPal. After you approve the use of PayPal, you will be returned to *Your Company Name* to complete your purchase.

Figure 3.6, "Example of Billing Information Page with PayPal Selected" on page 47 shows what your billing page might look like after the customer selects PayPal.

FIGURE 3.6 Example of Billing Information Page with PayPal Selected

Sending Shipping Address Information to PayPal

If you have already collected shipping address information from your customer, on the PayPal pages the customer should be able to see this shipping address information but not be able to change it. Follow these usage notes to send the shipping address to PayPal with `SetExpressCheckoutRequest`.

For complete details about `SetExpressCheckoutRequest`, see "SetExpressCheckoutRequest" on page 57.

TABLE 3.1 *SetExpressCheckoutRequest Usage Notes: Shipping Address*

Element	Notes
Address	Customer's street address for shipping.
	Your sending the customer-entered shipping `Address` to PayPal allows PayPal to return the address confirmation status in the `AddressStatus` element of `GetExpressCheckoutDetailsResponse`. Be sure to include the `Country` element as part of `Address`.
	NOTE: The address entered by the customer on your website must exactly match the customer's confirmed PayPal address in order for PayPal to verify that the shipping address is confirmed. Your use of a `Confirmed` address is one of the requirements for you to be protected by PayPal's Seller Protection Policy (SPP). For more information about the Seller Protection Policy, see the following: https://www.paypal.com/spp
Address Override	If you set `AddressOverride`, the `Address` sent on `SetExpressCheckoutRequest` overrides the customer's stored address. The customer is shown the passed-in address but cannot edit it.
	NOTE: If the `Address` is not valid (such as missing required fields, including `Country`) or not included `SetExpressCheckoutRequest`, PayPal does not display any address to the customer.

Best Practices for Edit Shipping

"Example of Edit Shipping Button Treatment" on page 49 shows the recommended way to implement an "Edit Shipping" button with Express Checkout.

FIGURE 3.7 *Example of Edit Shipping Button Treatment*

If your customer selected a shipping address from his PayPal account, PayPal recommends that you create an "Edit Shipping" button or hyperlink to return your customer to PayPal to change that shipping address information. This button or hyperlink allows the customer to quickly select a different address already on file with PayPal or to enter a new address. An "Edit Shipping" button or hyperlink also ensures that PayPal can provide you with the updated `AddressStatus` about the new, edited shipping address. For details about `AddressStatus`, see "GetExpressCheckoutDetailsResponse" on page 64.

The "Edit Shipping" button or hyperlink follows the same integration instructions as Integration Point 1 "Step 1b: Integration Point 1" on page 25:

● The customer clicks the "Edit Shipping" button or hyperlink on your order review page.

● You send `SetExpressCheckoutRequest` to PayPal.

● PayPal returns `SetExpressCheckoutResponse`.

● You redirect your customer's browser to PayPal.

> **NOTE:** Your customers are not asked to log in again if they have logged in to PayPal within the last five minutes.

The following are special considerations about implementing "Edit Shipping" function. For complete details about `SetExpressCheckoutRequest`, see "SetExpressCheckoutRequest" on page 57.

TABLE 3.2   SetExpressCheckoutRequest Usage Notes for "Edit Shipping"

Element	Required or Optional?	Notes
Token	Optional	To identify this request as part of the same checkout session, use the `Token` value PayPal originally returned in `SetExpressCheckoutResponse` after your first invocation of `SetExpressCheckoutRequest`.
OrderTotal	Required	The total estimated cost of the order to the customer. Because your program should know the shipping and tax charges at this point, be sure to send an updated `OrderTotal` that includes those charges.
MaxAmount	Optional	The expected maximum total amount of the complete order, including shipping and tax charges. You should set `MaxAmount` at least equal to the updated `OrderTotal`.
ReturnURL	Required	URL to which the customer's browser is returned after approving use of PayPal. Set `ReturnURL` to your order review page or the page on which the customer clicked the "Edit Shipping" button or hyperlink.
CancelURL	Required	URL to which the customer is returned if he decides not to use PayPal. Set `CancelURL` to your order review page or the page on which the customer clicked the "Edit Shipping" button or hyperlink. It is likely that at this point if the customer clicks **Cancel** on PayPal, the customer is trying to cancel the editing of the shipping address, not the approval of the use of PayPal.

Best Practices: Reapproving PayPal at Integration Point 3

Integration Point 3 is when the customer clicks "Order Product" or "Complete Order" on your website after and you send `DoExpressCheckoutPaymentRequest` to PayPal. `DoExpressCheckoutPaymentResponse` returns error code 10422 (see page 80) if the customer-selected funding sources are no longer applicable, which is likely if the final `OrderTotal` is significantly higher than the original `OrderTotal` on `SetExpressCheckoutRequest`.

If you receive this error message, PayPal recommends that you return your customer to PayPal to review and approve new, valid funding sources. Although this error is rare, you should consider trapping the error to display a message to the customer describing what happened, along with a button or hyperlink to return to PayPal.

"Example Message for Reapproving PayPal" on page 51 is an example error page you should consider displaying in this case.

FIGURE 3.8 Example Message for Reapproving PayPal
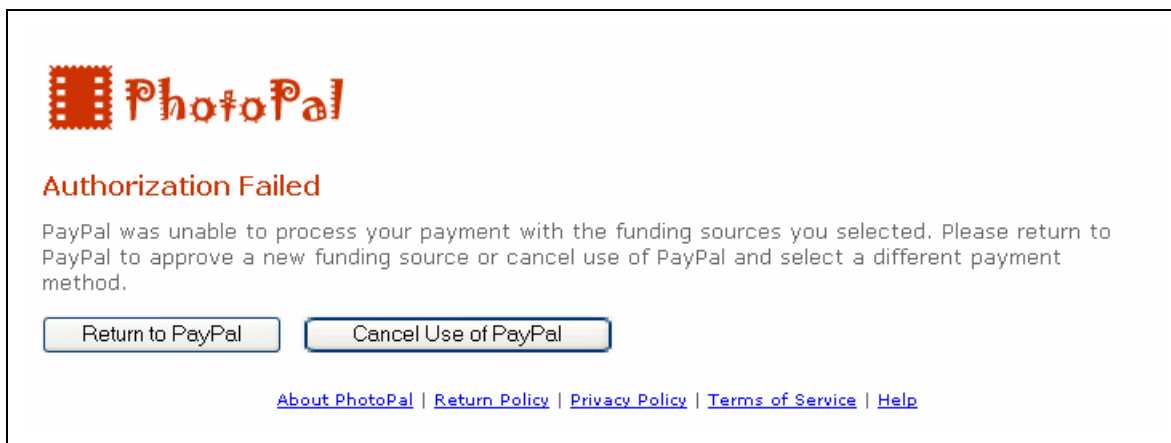
For the **Return to PayPal** button or hyperlink, the programming is the same as for Integration Point 1:

- Your customer clicks the "Return to PayPal" button on your error page.
- You send `SetExpressCheckoutRequest` to PayPal.
- PayPal returns the `SetExpressCheckoutResponse`.
- You redirect the customer 's browser to PayPal.

    NOTE: If this redirection occurs within five minutes of the customer's last login to PayPal, the customer is not asked to log in again.

Special considerations for the **Return to PayPal** function are the same as for "Best Practices for Edit Shipping" on page 49.

If your customer clicks on 'Cancel use of PayPal' redirect the customer's browser to a page where he can select a new payment method.

Overarching Principle: The Best Customer Checkout Experience

One of the benefits of Express Checkout is that it allows a customer to save time by skipping several checkout steps using the shipping and billing information stored on PayPal. You might have to adjust your checkout flow to avoid redundant information gathering from the customer, to make sure you gather other important information from the customer that PayPal does not supply, and to prevent "circular" pages.

Move Important Fields to End of Checkout

The pages your customer skips might ask for important information such as shipping method, delivery date, or coupon codes. In this case, PayPal recommends that you collect this information from your customer after the return to your website after Express Checkout Integration Point 2. For instance, if you ask for shipping method on your shipping address page, consider moving the fields to gather this information to your "Order Review" page. See Figure 3.9, "Example of Optimal Order Review Page after Return from PayPal" and Figure 3.11, "Example of Optimal Billing Page" on page 54."

FIGURE 3.9 Example of Optimal Order Review Page after Return from PayPal

Use the Information Returned by PayPal

If you prefer not to change your checkout flow as described in the previous section, PayPal recommends that you return your customer to the original page where your important information fields appear. Be sure to disable or hide your own shipping address, billing address, and payment method fields, and display the information that PayPal supplies you.
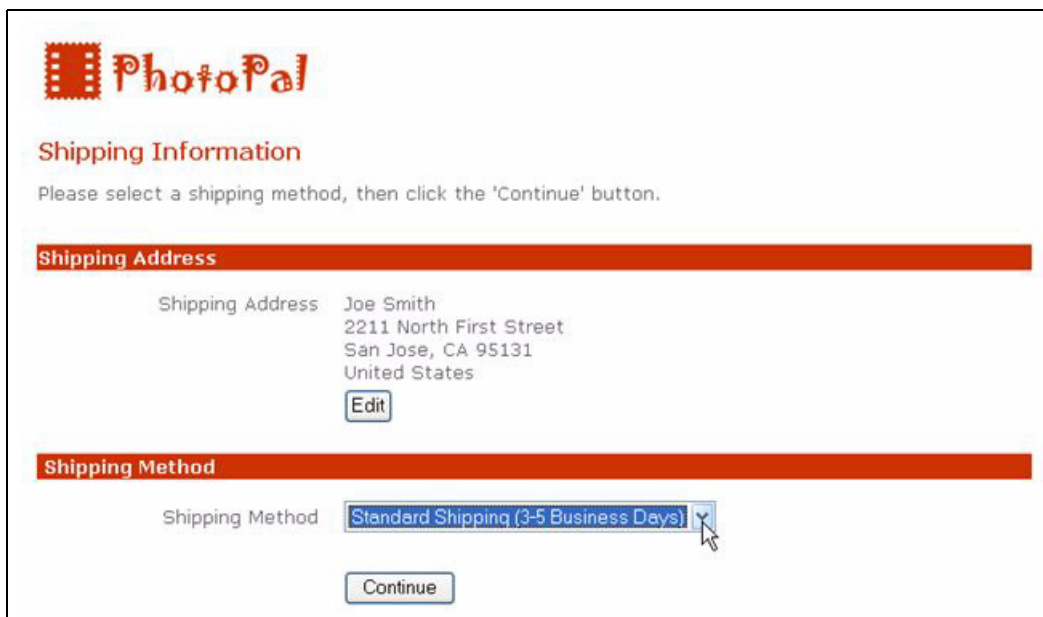
Example of Optimal Customer Experience

The following is a detailed example.

If you position the PayPal button at the top of your shipping address page, after the customer has clicked **Continue Checkout** on PayPal, return the customer to your shipping address page (this URL is the value of `ReturnURL`.).

On your shipping address page, display the shipping address PayPal has provided in `GetExpressCheckoutDetailsResponse` and display your shipping method input fields or `SELECT` list so your customer can select the method. See Figure 3.10, "Example of Optimal Shipping Method Page."

*FIGURE 3.10*Example of Optimal Shipping Method Page

When your customer clicks "Continue," display your billing page. Show the payment method as PayPal, and ask your customer to enter additional information, such as coupon codes. Do not ask the customer for billing address at this point because he has indicated he is using PayPal.

FIGURE 3.11Example of Optimal Billing Page

4   Express Checkout API

The Express Checkout API consists of three distinct SOAP requests that you make at the three integration points during a customer checkout:

1. `SetExpressCheckout`

2. `GetExpressCheckoutDetails`

3. `DoExpressCheckoutPayment`

PayPal-supported Currencies

The following currencies are supported by PayPal.

TABLE 4.1   *PayPal-supported Currencies and Currency Codes*

Code	Currency
AUD	Australian Dollar
CAD	Canadian Dollar
EUR	Euro
GBP	Pound Sterling
JPY	Japanese Yen
USD	US Dollar

IMPORTANT: *All currency amount elements in the three Express Checkout APIs require that the* `currencyID` *attribute be set to one of the supported currency codes. For any one particular buyer's checkout session, do not mix currencies either in any single SOAP request or across SOAP requests. For example, do not set* `currencyID` *to USD in one request and then to GBP in a later request for the same buyer.*

SetExpressCheckout

`SetExpressCheckout` indicates to PayPal that you are using Express Checkout to obtain payment from your customer.

Diagram of Set ExpressCheckout Types

The following diagram represents the composition of the `SetExpressCheckoutRequestType` and `SetExpressCheckoutResponseType` elements. Elements required in the request are indicated with an asterisk.

F**IGURE **4.1 SetExpressCheckout Types

Request

SetExpressCheckoutRequestDetailsType

* OrderTotal
* ReturnURL
* CancelURL
Token
MaxAmount
OrderDescription
Custom
InvoiceID
ReqConfirmShipping
NoShipping
AddressOverride
LocaleCode
PageStyle
cpp-header-image
cpp-header-border-color
cpp-header-back-color
cpp-payflow-color
Address
PaymentAction
BuyerEmail

PaymentActionCodeType
Authorization
Sale

AddressType
Name
* Street1
Street2
* CityName
* StateOrProvince
* PostalCode
* Country

Response

SetExpressCheckoutResponseType

Token

SetExpressCheckoutRequest

Request to use PayPal Express Checkout to obtain payment.

Elements/Objects

TABLE 4.2   SetExpressCheckoutRequest Elements/Objects

Element	Description	Data Type	Allowable Values	Required?
Token	On your first invocation of `SetExpressCheckoutRequest`, the value of this token is returned by `SetExpressCheckoutResponse`. **IMPORTANT:** *Include this element and its value only if you want to modify an existing checkout session with another invocation of* `SetExpressCheckoutRequest`*; for example, if you want the customer to edit his shipping address on PayPal.* Character length and limitations: 20 single-byte characters	xs:string	See the description of "Token" on page 62.	No
OrderTotal	The total cost of the order to the customer. If shipping cost and tax charges are known, include them in `OrderTotal`; if not, `OrderTotal` should be the current sub-total of the order. **NOTE:** You must set the `currencyID` attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	cc:BasicAmount Type	See description.	Yes
MaxAmount	The expected maximum total amount of the complete order, including shipping cost and tax charges. **NOTE:** You must set the `currencyID` attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	cc:BasicAmount Type	See description.	No
Order Description	Description of items the customer is purchasing. Character length and limitations: 127 single-byte alphanumeric characters	xs:string	See description.	No

T ABLE 4.2 ***SetExpressCheckoutRequest Elements/Objects***

Element	Description	Data Type	Allowable Values	Required?
Custom	A free-form field for your own use, such as a tracking number or other value you want PayPal to return on `GetExpressCheckoutDetailsResponse` and `DoExpressCheckoutPaymentReResponse` .. Character length and limitations: 256 single-byte alphanumeric characters	xs:string	See description.	No
InvoiceID	Your own unique invoice or tracking number. PayPal returns this value to you on `DoExpressCheckoutPaymentReResponse` . Character length and limitations: 127 single-byte alphanumeric characters	xs:string	See description.	No
ReturnURL	URL to which the customer's browser is returned after choosing to pay with PayPal. **N OTE:** PayPal recommends that the value of `ReturnURL` be the final review page on which the customer confirms the order and payment. Character length and limitations: no limit. Must be URL-encoded.	xs:string	See description.	Yes
CancelURL	URL to which the customer is returned if he does not approve the use of PayPal to pay you. **N OTE:** PayPal recommends that the value of `CancelURL` be the original page on which the customer chose to pay with PayPal. Character length and limitations: no limit	xs:string	See description.	Yes
Address	Customer's shipping address. **N OTE:** If you include a shipping address and set the `AddressOverride` element on the request, PayPal returns this same address in `GetExpressCheckoutDetailsResp onse`.	ebl:AddressType	See Table 4.3 on page 61.	No

TABLE 4.2 ***SetExpressCheckoutRequest Elements/Objects***

Element	Description	Data Type	Allowable Values	Required?
`ReqConfirm Shipping`	The value `1` indicates that you require that the customer's shipping address on file with PayPal be a confirmed address. **NOTE:** Setting this element overrides the setting you have specified in your Merchant Account Profile. Character length and limitations: One single-byte numeric character.	`xs:string`	`0` `1`	No
`NoShipping`	The value `1` indicates that on the PayPal pages, no shipping address fields should be displayed whatsoever. Character length and limitations: Four single-byte numeric character.	`xs:string`	`0` `1`	No
`Address Override`	The value `1` indicates that the PayPal pages should display the shipping address set by you in the `Address` element on this `SetExpressCheckoutRequest`, not the shipping address on file with PayPal for this customer. **NOTE:** Displaying the PayPal street address on file does not allow the customer to edit that address. Character length and limitations: Four single-byte numeric character.	`xs:string`	`0` `1`	No
`LocaleCode`	Locale of pages displayed by PayPal during Express Checkout. Character length and limitations: Five single-byte alphabetic characters, upper- or lowercase.	`xs:string`	AU or `en_AU` DE or `de_DE` FR or `fr_FR` GB or `en_GB` IT or `it_IT` JP or `ja_JP` US or `en_US`	No
`PageStyle`	Sets the Custom Payment Page Style for payment pages associated with this button/link. `PageStyle` corresponds to the HTML variable `page_style` for customizing payment pages. The value is the same as the Page Style Name you chose when adding or editing the page style from the **Profile** subtab of the **My Account** tab of your PayPal account. Character length and limitations: 30 single-byte alphabetic characters.	`xs:string`	See description.	No

TABLE 4.2 *SetExpressCheckoutRequest Elements/Objects*

Element	Description	Data Type	Allowable Values	Required?
cpp-header-image	A URL for the image you want to appear at the top left of the payment page. The image has a maximum size of 750 pixels wide by 90 pixels high. Value must be URL-encoded. PayPal recommends that you provide an image that is stored on a secure (https) server. Character length and limitations: 127	xs:string	See description.	No
cpp-header-border-color	Sets the border color around the header of the payment page. The border is a 2-pixel perimeter around the header space, which is 750 pixels wide by 90 pixels high. Character length and limitations: Six character HTML hexadecimal color code in ASCII	xs:string	See description.	No
cpp-header-back-color	Sets the background color for the header of the payment page. Character length and limitation: Six character HTML hexadecimal color code in ASCII	xs:string	See description.	No
cpp-payflow-color	Sets the background color for the payment page. Character length and limitation: Six character HTML hexadecimal color code in ASCII	xs:string	See description.	No
PaymentAction	How you want to obtain payment: • Authorization indicates that this payment is subject to settlement with PayPal PayPal Authorization & Capture. • Sale indicates that this is a final sale for which you are requesting payment. Character length and limit: Up to nine single-byte alphabetic characters	ebl:PaymentAction CodeType xs:token	Default: The transaction resulting from DoExpress Checkout Payment Request will be a final sale. Authorization Sale	No
BuyerEmail	Email address of the buyer as entered during checkout. PayPal uses this value to pre-fill the PayPal membership sign-up portion of the PayPal login page. Character length and limit: 127 single-byte alphanumeric characters	ebl:EmailAddress Type	See description.	No

NOTE: The `AddressType` elements are required only if you include the `Address` element in the SOAP request.

TABLE 4.3   *Address (Shipping Address): AddressType Elements*

Element	Descriptions	Data Type	Allowable Values	Required?
Name	Person's name associated with this shipping address. Character length and limitations: 32 single-byte characters	xs:string	See description.	No
Street1	First street address. Character length and limitations: 100 single-byte characters	xs:string	See description.	Yes
Street2	Second street address. Character length and limitations: 100 single-byte characters	xs:string	See description.	No
CityName	Name of city. Character length and limitations: 40 single-byte characters	xs:string	See description.	Yes
StateOr Province	State or province Character length and limitations: 40 single-byte characters	xs:string	See description.	Yes
PostalCode	U.S. Zip code or other country-specific postal code Character length and limitations: 20 single-byte characters	xs:string	See description.	Yes
Country	Country code. Character limit: Two single-byte characters.	ebl:CountryCode Type xs:string	See Appendix B.	Yes

SetExpressCheckoutResponse

Response to `SetExpressCheckoutRequest`.

Elements/Objects

T*ABLE *4.4 *SetExpressCheckoutResponse Elements/Objects*

Element	Description	Data Type	Value
Token	A timestamped token by which you identify to PayPal that you are processing this payment with Express Checkout. **NOTE:** The token expires after three hours. If you set `Token` in the `SetExpressCheckoutRequest`, the value of `Token` in the response is identical to the value in the request. Character length and limitations: 20 single-byte characters	xs:string	See description.

GetExpressCheckoutDetails

`GetExpressCheckoutDetails` returns information about the customer, including name and address on file with PayPal.

Diagram of GetExpressCheckoutDetails Types

The following diagram represents the composition of the `GetExpressCheckoutDetailsRequest`Type and `GetExpressCheckoutDetailsResponse`Type elements.

Elements required in the request are indicated with an asterisk.

FIGURE 4.2 GetExpressCheckout Types

Request

GetExpressCheckoutDetailsRequestType

* Token

Response

GetExpressCheckoutDetailsResponseDetailsType

Token
PayerInfo
Custom
InvoiceID
ContactPhone

PayerInfoType
Payer
PayerID
PayerStatus
PayerName
PayerCountry
PayerBusiness
Address

PayerNameType
FirstName
LastName

AddressType
AddressStatus
Name
Street1
Street2
CityName
StateOrProvince
PostalCode
Country

GetExpressCheckoutDetailsRequest

Obtain details about a payment to be processed by PayPal Express Checkout.

Elements/Objects

TABLE 4.5   GetExpressCheckoutDetailsRequest Elements/Objects

Element	Description	Data Type	Allowable Values	Required?
Token	A timestamped token, the value of which was returned by `SetExpressCheckoutResponse`. Character length and limitations: 20 single-byte characters	xs:string	An unexpired token	Yes

GetExpressCheckoutDetailsResponse

Response to `GetExpressCheckoutDetailsRequest`.

Elements/Objects

TABLE 4.6   GetExpressCheckoutDetailsResponse Elements/Objects

Element	Description	Data Type	Possible Values
Token	The timestamped token value that was returned by `SetExpressCheckoutResponse` and passed on `GetExpressCheckoutDetailsRequest`. Character length and limitations: 20 single-byte characters	xs:string	See the description of "Token" on page 62.
PayerInfo	Information about the payer.	ebl:PayerInfoType	See Table 4.7 on page 65.
Custom	A free-form field for your own use, as set by you in the `Custom` element of `SetExpressCheckoutRequest`. Character length and limitations: 256 single-byte alphanumeric characters	xs:string	See description.
InvoiceID	Your own invoice or tracking number, as set by you in the `InvoiceID` element of `SetExpressCheckoutRequest`. Character length and limitations: 127 single-byte alphanumeric characters	xs:string	See description.
ContactPhone	Payer's contact telephone number. **NOTE:** PayPal returns a contact telephone number only if your Merchant account profile settings require that the buyer enter one.	xs:string	See description.

NOTE: Empty elements are returned if there is representative data for the customer. For example, if the customer does not represent a business (and therefore has no business name on file with PayPal), the returned element has no value, like this: `<PayerBusiness/>`.

TABLE 4.7   Response: PayerInfoType Elements

Element	Description	DataType	Possible Values
Payer	Email address of payer.	ebl:EmailAddress Type	See description.
PayerID	Unique encrypted PayPal customer account number. Character length and limitations:17 single-byte characters maximum.	ebl:UserIDType	See description.
PayerStatus	Status of payer. Character length and limitations: 10 single-byte alphabetic characters.	ebl:PayPalUser StatusCodeType	`verified` `unverified`
PayerName	First and last name of payer	ebl:PayerNameType	See Table 4.8 on page 65.
PayerCountry	Payer's country of residence in the form of ISO standard 3166 two-character country codes. Character length and limitations: Two single-byte characters	ebl:CountryCode Type	See Appendix B.
PayerBusiness	Payer's business name.	xs:string	See description.
Address	Payer's shipping address address information.	xs:string	See Table 4.9 on page 66.

.

TABLE 4.8   Response: PayerName Elements

Element	Description	DataType	Possible Values
FirstName	Payer's first name. Character length and limitations: 25 single-byte characters	ebl:PersonNameType	See description.
LastName	Payer's last name. Character length and limitations: 25 single-byte characters	ebl:PersonNameType	See description.

TABLE 4.9   Response: AddressType Elements/Objects

Element	Descriptions	Data Type	Possible Values
AddressStatus	Status of street address on file with PayPal	ebl:AddressStatus TypeCode	none Confirmed Unconfirmed
Name	Person's name associated with this address. Character length and limitations: 32 single-byte characters	xs:string	See description.
Street1	First street address. Character length and limitations: 100 single-byte characters	xs:string	See description.
Street2	Second street address. Character length and limitations: 100 single-byte characters	xs:string	See description.
CityName	Name of city. Character length and limitations: 40 single-byte characters	xs:string	See description.
StateOr Province	State or province Character length and limitations: 40 single-byte characters	xs:string	See description.
PostalCode	U.S. Zip code or other country-specific postal code Character length and limitations: 20 single-byte characters	xs:string	See description.
Country	Country code. Character limit: Two single-byte characters.	ebl:CountryCode Type xs:string	See Appendix B.

DoExpressCheckoutPayment

With DoExpressCheckoutPayment, you either obtain payment through Express Checkout for a final sale or request authorization for later capture of payment.

Diagram of DoExpressCheckoutPayment Types

The following diagram represents the composition of the `DoExpressCheckoutPaymentRequestType` and `DoExpressCheckoutPaymentReResponseType` elements. Elements required in the request are indicated with an asterisk.

FIGURE 4.3 DoExpressCheckoutPayment Types

Request

DoExpressCheckoutPaymentRequestDetailsType
* Token
* PaymentAction
* PayerID
* PaymentDetails

PaymentActionCodeType
Authorization
Sale

PaymentDetailsType
* OrderTotal
ItemTotal
ShippingTotal
HandlingTotal
TaxTotal
OrderDescription
Custom
InvoiceID
ShipToAddress
PaymentItem

AddressType
Name
Street1
Street2
CityName
StateOr
Province
Country
PostalCode

PaymentItemInfoType
Name
Amount
Number
Quantity
SalesTax

Response

DoExpressCheckoutPaymentResponseDetailsType
Token
PaymentInfo

PaymentInfoType
TransactionID
TransactionType
PaymentType
PaymentDate
GrossAmount
FeeAmount
SettleAmount
TaxAmount
ExchangeRate
PaymentStatus
PendingReason

DoExpressCheckoutPaymentRequest

Request to obtain payment with PayPal Express Checkout.

IMPORTANT: PayPal requires that a merchant using Express Checkout display to the customer the same exact amount that the merchant sends to PayPal in the `OrderTotal` element with the `DoExpressCheckoutPaymentRequest` API.

Elements/Objects

TABLE 4.10 DoExpressCheckoutPaymentRequest Elements/Objects

Element	Description	Data Type	Allowable Values	Required?
Token	The timestamped token value that was returned by `SetExpressCheckoutResponse` and passed on `GetExpressCheckoutDetailsRequest`. Character length and limitations: 20 single-byte characters	xs:string	See description.	Yes
PaymentAction	How you want to obtain payment: ● `Authorization` indicates that this payment is subject to settlement with PayPal Authorization & Capture. ● `Sale` indicates that this is a final sale for which you are requesting payment. Character length and limit: Up to nine single-byte alphabetic characters	ebl:PaymentAction CodeType	Authorization Sale	Yes
PayerID	Encrypted PayPal customer account identification number as returned by `GetExpressCheckoutDetailsResponse`. Character length and limitations: 127 single-byte characters.	ebl:UserIDType	See description.	Yes
PaymentDetails	Information about the payment	ebl:PaymentDetails Type	See Table 4.11 on page 69.	Yes

TABLE 4.11 Request: PaymentDetailsType Elements/Objects

Element	Description	Data Type	Allowable Values	Required?
OrderTotal	Total of order, including shipping, handling, and tax. **NOTE:** You must set the currencyID attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	ebl:BasicAmount Type	See description.	Yes
ItemTotal	Sum of cost of all items in this order. Character length and limitations: 127 single-byte characters	ebl:BasicAmount Type	See description.	No
ShippingTotal	Total shipping costs for this order. **NOTE:** You must set the currencyID attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	ebl:BasicAmount Type	See description.	No
HandlingTotal	Total handling costs for this order. **NOTE:** You must set the currencyID attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	ebl:BasicAmount Type	See description.	No
TaxTotal	Sum of tax for all items in this order. **NOTE:** You must set the currencyID attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	ebl:BasicAmount Type	See description.	No

***TABLE 4.11** Request: PaymentDetailsType Elements/Objects*

Element	Description	Data Type	Allowable Values	Required?
Order Description	Description of items the customer is purchasing. Character length and limitations: 127 single-byte alphanumeric characters	xs:string	See description.	No
Custom	A free-form field for your own use, as set by you in the Custom element of SetExpressCheckoutRequest. Character length and limitations: 256 single-byte alphanumeric characters	xs:string	See description.	No
InvoiceID	Your own invoice or tracking number, as set by you in the InvoiceID element of SetExpressCheckoutRequest. Character length and limitations: 127 single-byte alphanumeric characters	xs:string	See description.	No
PaymentItem	Details about each individual item included in the order	ebl:PaymentItem Type	See Table 4.12 on page 70.	No
ShipToAddress	Address the order will be shipped to.	ebl:AddressType	See Table 4.13 on page 71.	No

***TABLE 4.12** Request: PaymentItemType Elements/Objects*

Element	Description	Data Type	Allowable Values	Required?
Name	Item name. Character length and limitations: 127 single-byte characters	xs:string	See description.	No
Amount	Cost of item **NOTE:** You must set the currencyID attribute to one of the three-character currency codes for any of the supported PayPal currencies. Limitations: Must not exceed $10,000 USD in any currency. No currency symbol. Decimal separator must be a period (.), and the thousands separator must be a comma (,).	ebl:BasicAmount Type	See description.	No
Number	Item number. Character length and limitations: 127 single-byte characters	xs:string	See description.	No
Quantity	Item quantity. Character length and limitations: Any positive integer	xs:string	See description.	No

TABLE 4.12 Request: PaymentItemType Elements/Objects

Element	Description	Data Type	Allowable Values	Required?
SalesTax	Item sales tax. Character length and limitations: any valid currency amount; currency code is set the same as for `OrderTotal`.	xs:string	See description.	No

TABLE 4.13 Request: ShipToAddress: AddressType Elements/Objects

Element	Descriptions	Data Type	Allowable Values	Required?
Name	Person's name associated with this address. Character length and limitations: 32 single-byte characters	xs:string	See description.	Yes
Street1	First street address. Character length and limitations: 100 single-byte characters	xs:string	See description.	Yes
Street2	Second street address. Character length and limitations: 100 single-byte characters	xs:string	See description.	No
CityName	Name of city. Character length and limitations: 40 single-byte characters	xs:string	See description.	Yes
StateOr Province	State or province. Character length and limitations: 40 single-byte characters	xs:string	See description.	No
PostalCode	U.S. ZIP code or other country-specific postal code. Character length and limitations: 20 single-byte characters	xs:string	See description.	No
Country	Country code. Character limit: Two single-byte characters	ebl:CountryCode Type xs:string	See Appendix B.	Yes

DoExpressCheckoutPaymentResponse

Response to `DoExpressCheckoutPaymentRequest`.

Elements/Objects

TABLE 4.14 DoExpressCheckoutPaymentResponse Elements/Objects

Element	Description	Data Type	Possible Values
Token	The timestamped token value that was returned by `SetExpressCheckoutResponse` and passed on `GetExpressCheckoutDetailsRequest`. Character length and limitations:20 single-byte characters	xs:string	See the description of "Token" on page 62.
PaymentInfo	Information about the payment.	ebl:PaymentInfo Type	See Table 4.15 on page 72.

TABLE 4.15 Response: PaymentInfoType Elements

Element	Description	Data Type	Possible Values
TransactionID	Unique transaction ID of the payment. **NOTE:** If the `PaymentAction` of the request was `Authorization`, you will need the value of `TransactionID` for use with PayPal Authorization & Capture. Character length and limitations:17 single-byte characters	xs:string	Transaction-specific
TransactionType	The type of transaction Character length and limitations:15 single-byte characters	ns:Payment TransactionCode Type	cart express-checkout
PaymentType	Indicates whether the payment is instant or delayed. Character length and limitations: Seven single-byte characters	ebl:PaymentCode Type xs:string	none echeck instant
PaymentDate	Time/date stamp of payment	xs:dateTime	Transaction-specific
GrossAmount	The final amount charged, including any shipping and taxes from your Merchant Profile.	ebl:BasicAmount Type	Transaction-specific
FeeAmount	PayPal fee amount charged for the transaction	ebl:BasicAmount Type	Transaction-specific

***TABLE 4.15** Response: PaymentInfoType Elements*

Element	Description	Data Type	Possible Values
SettleAmount	Amount deposited in your PayPal account after a currency conversion.	ebl:BasicAmount Type	Transaction-specific
TaxAmount	Tax charged on the transaction.	ebl:BasicAmount Type xs:string	Transaction-specific
ExchangeRate	Exchange rate if a currency conversion occurred. Relevant only if your are billing in their non-primary currency. If the customer chooses to pay with a currency other than the non-primary currency, the conversion occurs in the customer's account. Character length and limitations: a decimal multiplier	xs:string	Transaction-specific
PaymentStatus	Status of the payment. The status of the payment: None: No status Canceled-Reversal: This means a reversal has been canceled. For example, you won a dispute with the customer, and the funds for the transaction that was reversed have been returned to you. Completed: The payment has been completed, and the funds have been added successfully to your account balance. Denied: You denied the payment. This happens only if the payment was previously pending because of possible reasons described for the PendingReason element. Failed: The payment has failed. This happens only if the payment was made from your customer's bank account. Pending: The payment is pending. See the PendingReason element for more information. Refunded: You refunded the payment. Reversed: A payment was reversed due to a chargeback or other type of reversal. The funds have been removed from your account balance and returned to the buyer. The reason for the reversal is specified in the ReasonCode element. Processed: A payment has been accepted.	ebl:PaymentStatus CodeType xs:token	None Canceled- Reversal Completed Denied Failed Pending Refunded Reversed Processed

TABLE 4.15 Response: PaymentInfoType Elements

Element	Description	Data Type	Possible Values
PendingReason	The reason the payment is pending: none: No pending reason address: The payment is pending because your customer did not include a confirmed shipping address and your Payment Receiving Preferences is set such that you want to manually accept or deny each of these payments. To change your preference, go to the **Preferences** section of your **Profile**. echeck: The payment is pending because it was made by an eCheck that has not yet cleared. intl: The payment is pending because you hold a non-U.S. account and do not have a withdrawal mechanism. You must manually accept or deny this payment from your **Account Overview**. multi-currency: You do not have a balance in the currency sent, and you do not have your **Payment Receiving Preferences** set to automatically convert and accept this payment. You must manually accept or deny this payment. verify: The payment is pending because you are not yet verified. You must verify your account before you can accept this payment. other: The payment is pending for a reason other than those listed above. For more information, contact PayPal customer service.	ebl:PendingStatus CodeType xs:token	none address echeck intl multi-currency verify other

5 Testing Express Checkout

You can test your implementation of Express Checkout in the PayPal Sandbox.

For more information about the Sandbox, see the *PayPal Sandbox User Guide*.

Sandbox SOAP Service Endpoints

The Sandbox has several SOAP service communications endpoints, which are defined in the `PayPalSvc.wsdl` configuration file.

The Sandbox SOAP service endpoint for the https://api.sandbox.paypal.com/2.0/

6 Answers to Frequently Asked Questions About Express Checkout

This chapter answers some questions about implementing PayPal Express Checkout.

Why should the PayPal Express Checkout button go at the beginning of the checkout?

One of the primary advantages of PayPal Express Checkout is that it allows your customer to skip several steps of the checkout process on your website. Instead of having to enter in a shipping address, billing address, and credit card information, your customer simply clicks the Express Checkout button, logs into his PayPal account, reviews his personal information, and then returns to your website to complete the purchase.

This will increase impulse purchases, repeat purchases, and purchases from shoppers who prefer to pay online using PayPal.

What if my customer needs to enter a new shipping address or edit shipping information?

On your first use of `SetExpressCheckoutRequest`, if your customer selected a shipping address stored in his PayPal account, PayPal recommends that you redirect the customer's browser back to PayPal to edit the shipping address. To redirect the browser a second time, use `SetExpressCheckoutRequest` again *but also include the `Token` element and value you received on `SetExpressCheckoutResponse` the first time*. (On the second `SetExpressCheckoutRequest`, you need to include `ReturnURL`, `CancelURL`, and other required elements only if their values are different from the values you included on the first `SetExpressCheckoutRequest`. These values will most likely be different on the second request.)

NOTE: Make sure to update the values of `OrderTotal` and `MaxAmount` to reflect any new costs.

For more details, see "Best Practices for Edit Shipping" on page 49.

For more information about Token, see "Token" on page 57.

What's maximum difference between the estimated OrderTotal and the final OrderTotal?

Question. What is the maximum difference PayPal allows between the estimated `OrderTotal` sent with `SetExpressCheckoutRequest` at Integration Point 1 and the final `OrderTotal` sent with `DoExpressCheckoutPaymentRequest` at Integration Point 3?

Answer. There is no maximum allowable difference. However, at Integration Point 3 PayPal checks that the final `OrderTotal` still passes the PayPal risk model for the funding source the customer originally selected at Integration Point 1. If the originally selected payment methods are no longer acceptable (for example, if the customer's PayPal balance is insufficient to cover the final order amount), `DoExpressCheckoutPaymentResponse` returns error code 10422

to indicate that you must return the customer's browser back to PayPal to select and approve a new funding source.

PayPal expects such a condition to rarely occur, because at Integration Point 1, Express Checkout estimates a possible increase between the estimated `OrderTotal` and the final `OrderTotal`. This estimated difference is factored into the PayPal risk model but is not displayed to the customer.

What if I send my customer to PayPal but he changes his mind?

The customer sees a **Cancel** button prominently displayed on all Express Checkout pages. The hyperlink of the **Cancel** button is the value of the `CancelURL` element you send with `SetExpressCheckoutRequest`. If the customer changes his mind about using PayPal, a click of the **Cancel** button returns the browser to the URL you provide for this purpose. The Express Checkout token is appended to the value of your `CancelURL`, as described in "ReturnURL, CancelURL, and the Express Checkout Token" on page 32. Similarly, if the customer is unable to pay with PayPal (for example, if his PayPal balance is insufficient), all PayPal error pages display a button that returns the customer to your `CancelURL`.

IMPORTANT: *After approving use of PayPal and returning from PayPal to your website, if the customer changes his mind about using PayPal to pay you (for example, if the customer decides to pay on your website instead of with PayPal), do not use the final DoExpressCheckoutPayment API. A transaction through PayPal occurs only when you successfully invoke* `DoExpressCheckoutPaymentRequest`.

What if my customer approves use of PayPal but does not purchase my product?

PayPal does not create a payment transaction until you send `DoExpressCheckoutPaymentRequest` at Integration Point 3 and receive a successful response. Therefore, if the buyer does not purchase a product on your site, there is no transaction.

At Integration Point 2, am I guaranteed that the payment will be successful?

Question. After the customer approves use of PayPal and returns to my website at Integration Point 2, am I guaranteed that the payment will be successful?

Answer. No. PayPal does not authorize the payment or place the customer's funds on hold until you send `DoExpressCheckoutPaymentRequest` at Integration Point 3. The reasons are that you might alter the final `OrderTotal` or the customer might decide not to complete the purchase.

Can I simply add PayPal's username and password fields to my website?

No. A customer's PayPal username and password are sensitive information belonging to the customer and safeguarded by PayPal. Many customers use PayPal because they do not feel comfortable entering credit card information directly on merchants' websites. Although your site is secure and trustworthy, PayPal must prompt customers for usernames and passwords on a PayPal-hosted page to assure them that PayPal is safeguarding their personal financial information.

A Express Checkout API Error Codes, Short Message, and Long Messages

Express Checkout API Errors

TABLE A.1   Express Checkout API Errors

Error Code	Short Message	Long Message
10400	Invalid argument	Order total is missing.
10401	Invalid argument	Order total is invalid.
10402	Authorization only is not allowed for merchant.	This merchant account is not permitted to set PaymentAction to Authorization. Please contact Customer Service.
10403	Invalid argument	Maximum amount (MaxAmount) is invalid
10404	Invalid argument	ReturnURL is missing.
10405	Invalid argument	CancelURL is missing.
10406	Invalid argument	The PayerID value is invalid.
10407	Invalid argument	Invalid buyer email address (BuyerEmail).
10408	Express Checkout token is missing.	Express Checkout token is missing.
10409	You are not authorized to access this info.	Express Checkout token was issued for a merchant account other than yours.
10410	Invalid token	Invalid token.

TABLE A.1 ***Express Checkout API Errors***

Error Code	Short Message	Long Message
10411	This Express Checkout session has expired.	This Express Checkout session has expired. Token value is no longer valid.
10412	Duplicate invoice	Payment has already been made for this InvoiceID.
10413	Invalid argument	The totals of the cart item amounts do not match order amounts.
10414	Invalid argument	The amount exceeds the maximum amount for a single transaction.
10415	Invalid argument	A successful transaction has already been completed for this token.
10416	Invalid argument	You have exceeded the maximum number of payment attempts for this token.
10417	Transaction cannot complete.	The transaction cannot complete successfully. Instruct the customer to use an alternative payment method.
10418	Invalid argument	The currencies of the shopping cart amounts must be the same.
10419	Express checkout PayerID is missing.	Express Checkout PayerID is missing.
10420	Invalid argument	Express Checkout PaymentAction is missing.
10421	This express checkout session belongs to a different customer.	This Express Checkout session belongs to a different customer. Token value mismatch.
10422	Customer must choose new funding sources.	The customer must return to PayPal to select new funding sources.
10423	Invalid argument	This transaction cannot be completed with PaymentAction of Authorization.

TABLE A.1 **Express Checkout API Errors**

Error Code	Short Message	Long Message
10424	Invalid argument	Shipping address is invalid.
10425	Express Checkout has been disabled for this merchant.	Express Checkout has been disabled for this merchant. Please contact Customer Service.
10426	Invalid argument	Item total is invalid.
10427	Invalid argument	Shipping total is invalid.
10428	Invalid argument	Handling total is invalid.
10429	Invalid argument	Tax total is invalid.
10430	Invalid argument	Item amount is missing.
10431	Invalid argument	Item amount is invalid.
10432	Invalid argument	Invoice ID value exceeds maximum allowable length.
10433	Invalid argument	Value of OrderDescription element has been truncated.
10434	Invalid argument	Value of Custom element has been truncated.
10435	Invalid argument	The customer has not yet confirmed payment for this Express Checkout session.
10436	Invalid argument	PageStyle value exceeds maximum allowable length.
10437	Invalid argument	cpp-header-image value exceeds maximum allowable length.
10438	Invalid argument	cpp-header-border-color value exceeds maximum allowable length.
10439	Invalid argument	cpp-header-back-color value exceeds maximum allowable length.

TABLE A.1 ***Express Checkout API Errors***

Error Code	Short Message	Long Message
10440	Invalid argument	cpp-payflow-color value exceeds maximum allowable length.

Instructions for Handling Certain Express Checkout Errors

10411 – This Express Checkout session has expired (token expired)

The token returned by `SetExpressCheckoutResponse` expires after three hours. If you attempt to send the `DoExpressCheckoutPaymentRequest` after that time, you will receive error code 10411 in `DoExpressCheckoutPaymentResponse`.

Handling this error. If you receive this error, you must return your customer to PayPal to approve the use of PayPal again. Display an error message to inform the customer that the transaction expired, and provide a button to return to PayPal. In this situation, you are effectively restarting the entire checkout process. (Do not reuse the expired token value on `SetExpressCheckoutRequest`.) However, because you already know the final `OrderTotal`, be sure to update the value for that element if appropriate. You might also want to update the values for `ReturnURL` and `CancelURL`, if necessary.

10412 – Payment has already been made for this invoice.

PayPal checks that `InvoiceID` values are unique for any particular merchant. If you send an `InvoiceID` value already associated with another transaction in the PayPal system, PayPal returns error code 10412.

Handling this error. You might not be able to correct this error during an actual checkout. If you get this error, research why might occur and modify your implementation of Express Checkout to ensure that you generate unique invoice identification numbers.

10412 – The total of the cart item amounts do not match order amounts.

If you include any of the following element values with `DoExpressCheckoutPaymentRequest`, the sum of their values must equal the value of `OrderTotal`.

- `ItemTotal`
- `ShippingTotal`
- `HandlingTotal`
- `TaxTotal`

Handling this error. If you get this error, research why it might have occurred and modify your implementation of Express Checkout to ensure proper addition of the values. For the rules of this calculation, see Table 2.7, "DoExpressCheckoutPaymentRequest Usage Notes," on page 37 in the *PayPal Express Checkout Integration Guide*.

10414 – A successful transaction has already been completed for this token.

PayPal allows a token only once for a successful transaction.

Handling this error. If you determine that your customers are clicking your "Place Order" button twice, PayPal recommends that you disable the button after your customer has clicked it.

10414 – You have exceeded the maximum number of payment attempts for this token.

You can send a maximum of 10 `DoExpressCheckoutPaymentRequest` SOAP requests for any single token value, after which the token becomes invalid.

Handling this error. See "10411 – This Express Checkout session has expired (token expired)" on page 82.

10417 – The transaction will not be able to complete successfully. Please use an alternative payment method.

It is possible that the payment method the customer chooses on PayPal might not succeed when you send `DoExpressCheckoutPaymentRequest`. The most likely cause is that the customer's credit card failed bank authorization. Another possible, though rare, cause is that the final `OrderTotal` is significantly higher than the original estimated `OrderTotal` you sent with `SetExpressCheckoutRequest` at Integration Point 1, and the final `OrderTotal` does not pass PayPal's risk model analysis.

If the customer has no other PayPal funding source that is likely to succeed, `DoExpressCheckoutPaymentResponse` returns error code 10417.

Handling this error. Instruct the customer that PayPal is unable to process the payment and redisplay alternative payment methods with which the customer can pay.

10421 – This Express Checkout session belongs to a different user

When your customer logs into PayPal, the PayPal `PayerID` is associated with the Express Checkout token. This error is caused by mixing tokens for two different `PayerID`s. The `Token` and `PayerID` returned for any particular customer by `GetExpressCheckoutDetailsResponse` must be the same ones you send with `DoExpressCheckoutPaymentRequest`.

Handling this error. Verify that your programs are properly associating the `Token`s and `PayerID`s.

10422 – The buyer must return to PayPal to select new funding sources.

It is possible that the payment method the customer chooses on PayPal might not succeed when you send `DoExpressCheckoutPaymentRequest`. If the customer has a different PayPal funding source that is likely to succeed, `DoExpressCheckoutPaymentResponse` returns error code 10422 so you can redirect the customer back to PayPal.

Handling this error. If you receive this error message, PayPal recommends that you return your customer to PayPal to review and approve new valid funding sources. Although this error

is rare, you should consider trapping the error to display a message to the customer describing what happened, along with a button or hyperlink to return to PayPal. For the rules of this calculation, see "Best Practices: Reapproving PayPal at Integration Point 3" on page 51 of the *PayPal Express Checkout Integration Guide*.

10423 – This payment cannot be completed using the Authorization payment action.

This error occurs if at Integration Point 1, you set `PaymentAction` to `Sale` with `SetExpressCheckoutRequest` but at Integration Point 3, you set `PaymentAction` to `Authorization` with `DoExpressCheckoutPaymentRequest`.

PayPal does not allow this switch from `Sale` to `Authorization` in a single checkout session.

PayPal does allow the reverse, however. You can set `PaymentAction` to `Authorization` with `SetExpressCheckoutRequest` at Integration Point 1 and switch `PaymentAction` to `Sale` with `DoExpressCheckoutPaymentRequest` at Integration Point 3.

B Country Codes

ISO 3166 Standard Country Codes

PayPal relies on two-character country codes defined by International Standards Organization (ISO) 3166.

TABLE B.1 *ISO 3166 Two-Character Country Codes*

Country	Code
Anguilla	AI
Argentina	AR
Australia	AU
Austria	AT
Belgium	BE
Brazil	BR
Canada	CA
Chile	CL
China	CN
Costa Rica	CR
Denmark	DK
Dominican Republic	DO
Ecuador	EC
Finland	FI
France	FR
Germany	DE
Greece	GR
Hong Kong	HK
Iceland	IS
India	IN
Ireland	IE

TABLE B.1 **ISO 3166 Two-Character Country Codes**

Country	Code
Israel	IL
Italy	IT
Jamaica	JM
Japan	JP
Luxembourg	LU
Malaysia	MY
Mexico	MX
Monaco	MC
Netherlands	NL
New Zealand	NZ
Norway	NO
Portugal	PT
Singapore	SG
South Korea	KR
Spain	ES
Sweden	SE
Switzerland	CH
Thailand	TH
Taiwan	TW
Turkey	TR
United Kingdom	GB
United States	US
Uruguay	UY
Venezuela	VE

Glossary

AVS

Address Verification System. A U.S. banking industry standard for confirming the postal address or telephone number associated with a credit card.

auth

Short for "authorization." In U.S. banking industry terminology, to electronically check the validity of a credit card number.

With PayPal Authorization & Capture, an auth is your means to verify that a PayPal member has sufficient funds to meet a payment obligation.

capture

The request for settlement.

checkout

The process that takes place on your website in which a buyer selects a method of payment for an order.

PayPal Standard Checkout refers to all PayPal products for use during buyer checkout except for PayPal Express Checkout.

CVV2

Card Verification Value, version 2. In U.S. credit card industry terminology, a three-digit code printed on the back of a credit card to enhance fraud protection when the credit card number is used over the Internet or telephone.

order

An end result of a checkout. An accounting description of the purchase of one or more items the buyer has agreed to pay for.

reauth

An initially authorized transaction amount must be *reauthorized* if the amount of the transaction increases more than 115% of the original authorization.

settle

Short for "settlement." Strictly defined, the settlement is the actual movement of funds from the buyer's account to the merchant's account.

void

> In the context of payment processing with PayPal Authorization & Capture, to cancel a prior reauthorization of a settlement amount.