# **PayPal**<sup>™</sup>

# Express Checkout for Payflow Pro

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# **Preface**

#### **Intended Audience**

This guide assumes that its readers:

- Are experienced web or application developers
- Have a background in payments services
- Are developing payment services applications that are integrating Express Checkout to process transactions to be sent over the Payflow gateway

#### **Related Documentation**

For additional information on Payflow documentation and the Payflow SDK, go to <a href="http://www.paypal.com/developer">http://www.paypal.com/developer</a>, select **Documentation** from the **Library** tab, and click the Payflow Pro link.

# **How to Contact Customer Support**

For problems with transaction processing or your connection to the server, contact Customer Support by opening a ticket on the under Contact Support tab at <a href="http://www.paypal.com/mts">http://www.paypal.com/mts</a>.

# **Document History**

TABLE 3.1 Document history

Date	Description
April 2012	Updated references to Website Payments Pro to PayPal Payments Pro.
October 2009	Updated currency codes.

TABLE 3.1 Document history

Date	Description
August 2009	Revised and updated.
	Added reference transactions and RecurringPayments billing
	type.
	Revised billing agreements.
	Removed PayPal Button Placement.
	Added "Eliminating Your Order Review Page" to Chapter 1, "Express
	Checkout Processing Flow."
June 2009	Added SHIPTONAME parameter.
May 2009	Updated to correct for technical inaccuracies.
April 2009	Added creating billing agreements for setting up Recurring Payments
	through Express Checkout.
	Added order line-item details parameters.
	Updated with PHONENUM parameter in Set Express Checkout request.

# 1

# **Express Checkout Processing Flow**

This chapter describes Express Checkout processing:

- "What Is Express Checkout?" on page 9
- "How Express Checkout Works" on page 9
- "Express Checkout Flow" on page 11
- "Express Checkout Sale Transaction Example" on page 12
- "Other Express Checkout Concepts" on page 16

# What Is Express Checkout?

Express Checkout is PayPal's method of payment. It offers your buyers an easy, convenient checkout experience by letting them use shipping and billing information stored securely at PayPal to check out, so they don't have to re-enter it on your website.

Like other Payflow transactions, Express Checkout transaction requests send data as name-value pair parameters, and include this basic set of required parameters:

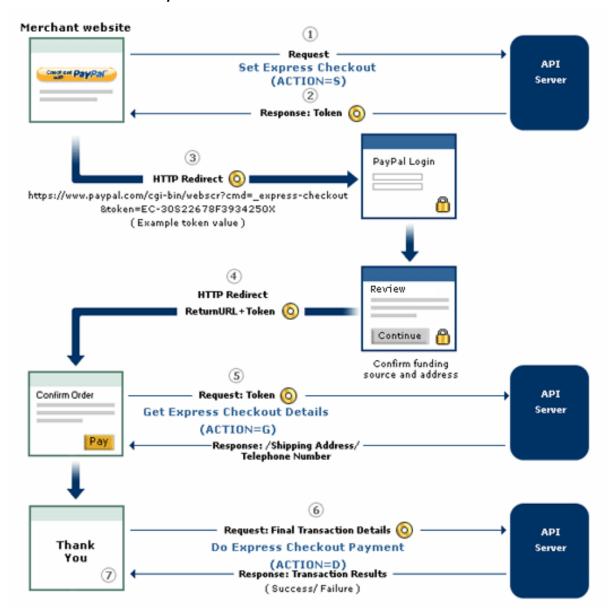
- Connection parameters
- User parameters
- Transaction type (TRXTYPE) such as Sale (TRXTYPE=S), Authorization (TRXTYPE=A), or Order (TRXTYPE=0)
- Tender type, which is always PayPal (TENDER=P)

# **How Express Checkout Works**

The figure below summarizes the Express Checkout flow.

How Express Checkout Works

FIGURE 1.1 Express Checkout flow



The figure shows a typical set of web pages representing a merchant's website. (The web page layout may differ somewhat from your own web design.) The buyer uses the PayPal logo to choose PayPal as their method of payment. Express Checkout gives you the flexibility to place the PayPal logo at two points in the checkout flow:

- On your Shopping Cart page at the start of checkout, as shown
- On your Payment Methods page with other billing options

The numbered callouts in the figure correspond to the numbered events described below.

- 1. On your website, your buyer checks out either by clicking the **Check out with PayPal** button from your Shopping Cart page (as shown in the figure layout) or by selecting PayPal from your Payment Methods page. This buyer action triggers the call to the Set Express Checkout request.
- **2.** The server responds to the request by returning a *token* or string value to your website. In the figure above, the token is represented by an orange "donut." The token keeps track of your buyer throughout the checkout process.
- **3.** You direct your buyer to the PayPal site, where they log in, select a funding source, and confirm contact and shipping information. Express Checkout includes parameters that you can use to customize the PayPal pages so they match characteristics of your own website. For example, you can provide your own logo and colors.
- **4.** When your buyer clicks the **Continue** button, PayPal sends the buyer back to your site at the return URL you specified in the Set Express Checkout request. The token is appended to the URL to identify the buyer.
- **5.** Optionally you can send the Get Express Checkout Details request to obtain details about your buyer such as the buyer's telephone number and shipping address. You send the token to identify the buyer. The server returns the requested information.
- **6.** When your buyer clicks the **Pay** button, you send the Do Express Checkout Payment request to perform the actual payment transaction.
- 7. The server returns the transaction result.

# **Express Checkout Flow**

Through a set of name-value pair parameters, you provide Express Checkout transaction data to the server. The server responds with RESULT and RESPMSG values, along with other response parameter data about the transaction.

Unlike most Payflow Pro transactions, which consist of a single request call, Express Checkout is a three-step process where the second step is optional:

- 1. Set Express Checkout sets up the data about the transaction and controls what is displayed to the buyer on the PayPal site when the buyer chooses PayPal at checkout.
- 2. Get Express Checkout Details is an optional request enabling you to obtain information about the transaction for display on your own website.
- **3.** Do Express Checkout Payment performs the actual money transfer.

This guide refers to this request sequence and the resulting buyer experience as the *Express Checkout flow*.

#### **Express Checkout ACTION Values**

To identify each request in the Express Checkout flow, you pass the appropriate ACTION parameter. The table below shows the value of ACTION for each Express Checkout request.

TABLE 1.1 ACTION values for Express Checkout

Request	ACTION value
Set Express Checkout	ACTION=S
Get Express Checkout Details	ACTION=G
Do Express Checkout Payment	ACTION=D

#### **Express Checkout Token**

The TOKEN value returned in the response to Set Express Checkout associates the buyer with this particular Express Checkout flow. You pass it back to the server in these Express Checkout requests:

- In the HTTP request to redirect the buyer's browser to the PayPal web site
- In the Get Express Checkout Details request to obtain the buyer's shipping information
- In the Do Express Checkout Payment request to carry out the transaction

# **Express Checkout Sale Transaction Example**

This section describes the Express Checkout flow in greater detail using a Sale transaction as the example. See Appendix A, "Express Checkout Parameter Reference," for detailed descriptions of all required and optional Express Checkout transaction parameters.

- Set Express Checkout (ACTION=S)
- Redirecting the Buyer to PayPal
- Get Express Checkout Details (ACTION=G)
- Redirecting the Buyer to Your Website
- Do Express Checkout Payment (ACTION=D)

## **Set Express Checkout (ACTION=S)**

The Set Express Checkout request passes the transaction details from your website to PayPal when a buyer chooses to pay with PayPal.

Set Express Checkout requires that you pass data for the following parameters.

- ACTION
- AMT

- RETURNURL
- CANCELURL

This is an example Set Express Checkout request for a Sale transaction:

```
TRXTYPE=S
&ACTION=S
AMT=35.00
&CANCELURL=http://www.order_page.com
&CUSTOM=TRVV14459
&EMAIL=buyer_name@abc.com
&PARTNER=partner
&PWD=password
&RETURNURL=http://www.confirmation_page.com
&TENDER=P
&USER=user
&VENDOR=vendor
```

NOTE: It is strongly recommended that RETURNURL be the URL of the final review page on your website where the buyer confirms the order and payment. Likewise, CANCELURL should be the URL of the original page on your website where the buyer initially chose to use PayPal.

This is a response to the request:

```
RESULT=0
&RESPMSG=Approved
&TOKEN=EC-17C76533PL706494P
```

RESULT and RESPONSE values are returned with all transactions. In a successful response, the value of RESULT is 0. For details on the set of response parameters generally passed back in transactions, see Chapter 4, "Transaction Responses." The TOKEN value returned associates this buyer with this particular Express Checkout flow.

# Redirecting the Buyer to PayPal

After your buyer clicks the PayPal button and you submit the Set Express Checkout request, you will want to automatically direct your buyer to the PayPal website. The redirect URL for this is:

```
https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<TOKEN>
TOKEN is the value returned in the Set Express Checkout response.
```

**Note:** Express Checkout has a variation on this redirect URL (called useraction) that allows you to bypass the call to Get Express Checkout Details and to change the text of the button displayed on the PayPal website from "Continue" to "Pay Now." For more information, see "Eliminating Your Order Review Page" on page 17.

PayPal recommends that you use the HTTPS response 302 "Object Moved" with your URL as the value of the Location header in the HTTPS response. Alternately, you can generate a web page for your buyer that includes a META REFRESH tag in the header. An example is shown

Express Checkout Sale Transaction Example

below. Remember to replace <TOKEN> with the token value that you received in the Set Express Checkout response.

The following example uses the META REFRESH tag.

#### Get Express Checkout Details (ACTION=G)

The Get Express Checkout Details request enables you to retrieve the buyer's billing information, such as the shipping address and email address. If you use Get Express Checkout Details, you need to pass data for these parameters.

- ACTION
- TOKEN

The following is an example Get Express Checkout Details request:

```
TRXTYPE=S &VENDOR=vendor &USER=user &PWD=pwd &TENDER=P &PARTNER=partner &ACTION=G &TOKEN=EC-17C76533PL706494P
```

The following is the Get Express Checkout Details response:

RESULT=0 &RESPMSG=Approved &AVSADDR=Y &TOKEN=EC-17C76533PL706494P &PAYERID=FHY4JXY7CV9PG &EMAIL=buyer name@aol.com &PAYERSTATUS=verified &FIRSTNAME=J &LASTNAME=Smith &CUSTOM=TRVV14459 &BUSINESS=Monroe Creek Regional Interiors &SHIPTONAME=J Smith &SHIPTOSTREET=5262 Green Street #8 &SHIPTOCITY=San Jose &SHIPTOSTATE=CA &SHIPTOZIP=95148 &SHIPTOCOUNTRY=US

#### Redirecting the Buyer to Your Website

PayPal redirects the buyer back to your website at the location you specified in the RETURNURL parameter to Get Express Checkout request. To the URL string, PayPal appends the TOKEN and PAYERID name-value pairs, as shown below:

http://[RETURNURL]/?token=<TOKEN>&PayerID=<PAYERID>

You need to pass the PAYERID in the Do Express Checkout Payment request.

#### Do Express Checkout Payment (ACTION=D)

The Do Express Checkout Payment request performs the actual money transfer of the Sale transaction.

Do Express Checkout Payment requires that you pass data for these parameters.

- ACTION
- TOKEN
- PAYERID
- AMT

The following is an example Do Express Checkout Payment request:

Other Express Checkout Concepts

TRXTYPE=S
&VENDOR=vendor
&USER=user
&PWD=pwd
&TENDER=P
PARTNER=partner
&ACTION=D
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&AMT=35.00

#### The following is an example response:

RESULT=0
&PNREF=EFHP0CDBF5C7
&RESPMSG=Approved
&AVSADDR=Y
&TOKEN=EC-17C76533PL706494P
&PAYERID=FHY4JXY7CV9PG
&PPREF=2P599077L3553652G
&PAYMENTTYPE=instantonly

The response returns a 12-character PNREF (Payflow Transaction ID) that is used to identify this transaction in PayPal reports.

# **Other Express Checkout Concepts**

The following topics are related to processing Express Checkout transactions.

- "Obtaining the Buyer's Telephone Number During Checkout" on page 16
- "Pending Responses" on page 17
- "Eliminating Your Order Review Page" on page 17

## **Obtaining the Buyer's Telephone Number During Checkout**

You have three options regarding the buyer's contact telephone number. You can choose to:

- Not request the contact telephone number (default)
- Request the contact telephone number as an optional field
- Require that the buyer enter their contact telephone number to proceed.

If you choose to require the buyer provide a telephone number, a telephone number displays in the Contact Information on the PayPal Review page during checkout. Help text tells the buyer how to change the number displayed to their own number.

To choose one of the three preceding options:

1. Log in to your PayPal account.

- **2.** From the Profile tab, click Website Payments Preferences.
- **3.** Choose from the three options for handling the contact telephone number at the bottom of the page.

#### **Eliminating Your Order Review Page**

You can make checkout appear to complete on the PayPal website rather than on your own and, therefore, eliminate the need for an Order Review page on your site. (Of course, when the buyer returns from PayPal, you still call the Do Express Checkout Payment request to complete the transaction.) In this situation, you would want the button text on the PayPal Review page to appear as "Pay Now" rather than "Continue."

You control the button text through the value of the useraction variable. You set this variable on the PayPal URL to which you redirect the buyer after calling Set Express Checkout.

**Note:** As a best practice, you should incorporate the "Pay Now" button text in the Express Checkout flow that redirects the buyer to PayPal from your shopping cart at the start of checkout.

Values and resulting button text are described below:

- If you do not set useraction or you set useraction to continue, PayPal displays the button text "Continue."
- If you set useraction to commit, PayPal displays the button text "Pay Now."

To display the "Pay Now" button text, for example, append &useraction=commit to the redirect URL string as shown below where *tokenvalue* is the token value returned in the Set Express Checkout response.

```
"https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=tokenvalue&useraction=commit"
```

# **Pending Responses**

If the Do Express Checkout Payment PENDINGREASON response is a value other than none or completed, the payment is pending. Typically, this means the buyer has paid with an eCheck. In such a case, funds are not guaranteed, and you should not ship or deliver items or services until the payment has successfully completed.

**Note:** PayPal recommends that you block eChecks as a payment method in your PayPal account profile if you are unable to handle pending state payments.

To find out the status of a pending payment, you can:

- Submit an Inquiry transaction.
- Check the status from the PayPal User Interface. See PayPal online help for details.

# Express Checkout Processing Flow

Other Express Checkout Concepts

2

# **Billing Agreements and Reference Transactions**

This chapter describes how you can automatically bill a buyer's PayPal account based on buyer information you obtained in a previous transaction. To perform this type of transaction you first must obtain a billing agreement between you and the buyer.

- "About Reference Transactions" on page 19
- "About Billing Agreements" on page 20
- "Ways To Obtain a BAID" on page 20
- "Obtaining the BAID With Express Checkout Purchase" on page 21
- "Obtaining the BAID Without Express Checkout Purchase" on page 25
- "Updating a Billing Agreement" on page 29
- "Using Reference Transactions" on page 30

**IMPORTANT:** You must be enabled by PayPal to use reference transactions. Contact PayPal for details.

#### **About Reference Transactions**

A *reference transaction* takes existing billing information already gathered from a previously authorized transaction and reuses it to charge the buyer in a subsequent transaction.

Before you can use a reference transaction, you must set up a billing agreement with the buyer. (See About Billing Agreements.) When you obtain the billing agreement, you can withdraw funds from the buyer's PayPal account without manual intervention using a reference transaction. You can only use reference transactions with Authorization or Sale transactions (TRXTYPE is A or S).

To enable line-item support in reference transactions, which includes the parameters below, you must contact Merchant Technical Support at <a href="http://www.paypal.com/mts">http://www.paypal.com/mts</a>:

- L NAMEn
- L\_DESCn
- L COSTn
- L TAXAMTn
- L QTYn

# **About Billing Agreements**

A *billing agreement* allows PayPal to withdraw funds from the buyer's PayPal account without requiring the buyer to log in to PayPal. Billing agreements are maintained by PayPal.

You must establish a billing agreement with a buyer if, for example, you and the buyer agree that you will bill that buyer on a regularly scheduled basis such as monthly for a magazine subscription. Before a billing agreement can take effect, the buyer must log in to PayPal once to consent to it. With buyer consent, PayPal creates a *billing agreement ID* (BAID) to represent the agreement. You pass the BAID in subsequent requests to bill the buyer. PayPal withdraws funds without requiring the buyer to log in. A billing agreement is good until you or the buyer cancels it.

A buyer may have multiple magazine subscriptions, each with a separate billing agreement. In such cases, be sure to associate each transaction with the correct billing agreement.

# **About Billing Types**

To specify how the buyer will be billed, you set the billing type in the call to Set Express Checkout. Table 2.1describes the values of this parameter:

TABLE 2.1 Billing type values

Value	Description
MerchantInitiatedBilling	Use to obtain a BAID in the Express Checkout flow. To initiate billing the buyer one or more times, call Do Express Checkout Payment outside the Express Checkout flow and pass the BAID to bill the buyer.
RecurringBilling	Use to obtain a BAID for creating a recurring billing profile to bill the buyer on a recurring basis. See the <i>Payflow Pro Recurring Billing Service User's Guide</i> for details on using the BAID to create a recurring billing profile.
RecurringPayments	Use to obtain a TOKEN for creating a recurring payments profile to bill the buyer on a recurring basis.
	Note: This billing type does not create a BAID. See PayPal Payments Pro Payflow Edition - Recurring Payments Developer's Guide for details on using this billing type value to create a Recurring Payments profile.

# Ways To Obtain a BAID

You can obtain a BAID whether or not the buyer logs in to PayPal to make a purchase. The following sections describe how.

• When the buyer is making a purchase

Say that you have implemented Express Checkout on your website. The buyer logs in to purchase an item of merchandise and chooses PayPal to pay for it. In the normal Express Checkout flow, the buyer is then redirected to PayPal to log in to verify their billing information. If the buyer approves payment on the PayPal Review page, you receive the billing agreement as part of the transaction. You can use that billing agreement later to bill the buyer a set amount on a recurring basis, such as once-a-month, for future purchases. The buyer doesn't need to log into PayPal each time to make a payment.

• When the buyer is not making a purchase

Typically, the buyer chooses a billing agreement without making a purchase when they subscribe for merchandise they will pay for on a recurring schedule. If, for example, the buyer logs in to your website to order a magazine subscription, you set up an agreement to bill the buyer on a scheduled basis—say, once a month. In the billing agreement flow without purchase, the buyer is redirected to PayPal to log in. On the PayPal site, they consent to the billing agreement. Next month, when you send the buyer the first magazine issue, the billing agreement authorizes you to start charging the buyer's PayPal account on the agreed upon recurring basis without having the buyer log in to PayPal.

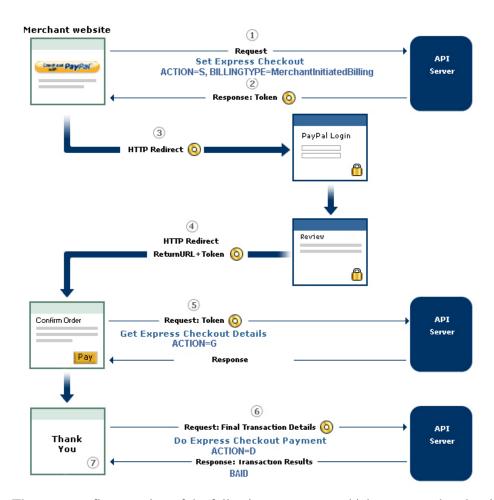
The following pages describe ways to obtain a BAID:

- "Obtaining the BAID With Express Checkout Purchase" on page 21
- "Obtaining the BAID Without Express Checkout Purchase" on page 25

# **Obtaining the BAID With Express Checkout Purchase**

To set up the billing agreement and obtain the BAID when the buyer makes an Express Checkout purchase from your website, you need only provide additional parameters and values in the Express Checkout calls. Figure 2.1 summarizes the flow.

FIGURE 2.1 Obtaining the BAID with Express Checkout purchase



The message flow consists of the following comments, which correspond to the circled numbers in Figure 2.1. The comments pertain specifically to setting up a billing agreement and obtaining a BAID.

- **1.** When the buyer chooses to set up a billing agreement, call the Set Express Checkout request (ACTION=S) and pass the following information about the agreement:
  - The billing type (required)
  - A description of the goods or services associated with the agreement (optional)
  - The type of PayPal payment you require (optional)
  - A string for your use in any way (optional)
- 2. PayPal returns a TOKEN that you use in subsequent steps.
- **3.** After the buyer clicks the PayPal button and you submit the Set Express Checkout request, you will want to automatically direct your buyer to the PayPal website to log in or set up a

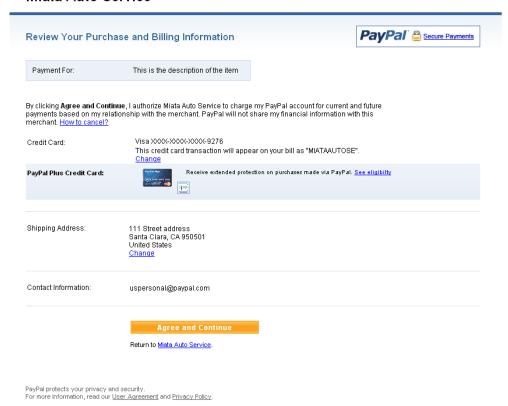
PayPal account. The redirect URL for this is shown below. TOKEN is the value returned in the Set Express Checkout response.

https://www.paypal.com/cgi-bin/webscr?cmd=\_expresscheckout&token=<TOKEN>

When the buyer logs in, the buyer is presented with a PayPal Review page, such as the example page shown in Figure 2.2.

#### FIGURE 2.2 PayPal Review page

#### Miata Auto Service



- **4.** PayPal redirects the buyer's browser to your return page.
- 5. Call the Get Express Checkout Details request (ACTION=G) to obtain information about the buyer and the buyer's checkout status. PayPal returns checkout details, including whether the billing agreement was accepted.
- **6.** Call the Do Express Checkout Payment request (ACTION=D) to complete the purchase.
- 7. PayPal returns information about the purchase. If the required billing agreement information was passed, PayPal returns a BAID. Save the BAID to implement Payflow reference transactions.

Obtaining the BAID With Express Checkout Purchase

#### **Example of Obtaining the BAID With Express Checkout Purchase**

This section provides an example of Express Checkout Authorization request and response name-value pair strings, illustrating the billing agreement parameters. Billing agreement parameters are shown in boldface.

#### Set Express Checkout Request (ACTION=S)

The following is an example of a Set Express Checkout request:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=S
&TENDER=P
&RETURNURL=http://return.com
&CANCELURL=http://cancel.com&AMT=10.00
&BA_DESC=purchase Time Magazine
&BILLINGTYPE=MerchantInitiatedBilling
&BA_CUSTOM=add magazine subscription
&PAYMENTTYPE=any
```

#### **Set Express Checkout Response**

```
RESULT=0
&RESPMSG=Approved
&CORRELATIONID=ec093d08c9f39
&TOKEN=EC-36X58962RS656712N
```

#### Get Express Checkout Details Request (ACTION=G)

The following request contains no new parameters:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=G
&TENDER=P
&TOKEN=EC-36X58962RS656712N
```

#### **Get Express Checkout Details Response**

RESULT=0

&RESPMSG=Approved

&TOKEN=EC-F3BQJQG7UGVDL754

&CORRELATIONID=9c3706997455e

&EMAIL=jsmith@paypal.com

&PAYERSTATUS=verified

&FIRSTNAME=Joe

&LASTNAME=Smith

&SHIPTONAME=Joe Smith

&SHIPTOSTREET=111 Main St

&SHIPTOCITY=San Jose

&SHIPTOSTATE=CA

&SHIPTOZIP=95100

&SHIPTOCOUNTRY=US

#### Do Express Checkout Payment Request (ACTION=D)

PARTNER=partner

&VENDOR=vendor

&PWD=password

&USER=user

&TRXTYPE=A

&ACTION=D

&TENDER=P

&AMT=10.00

&TOKEN=EC-36X58962RS656712N

&PAYERID=J5MSNK7FP5KA8

#### **Do Express Checkout Payment Response**

#### The response returns the BAID:

RESULT=0

&PNREF=E24P0A03B013

&RESPMSG=Approved

&TOKEN=EC-11X52562RT656789N

&PPREF=4400000000180903

&CORRELATIONID=3a3204997455r

#### &BAID=B-12345678901234567

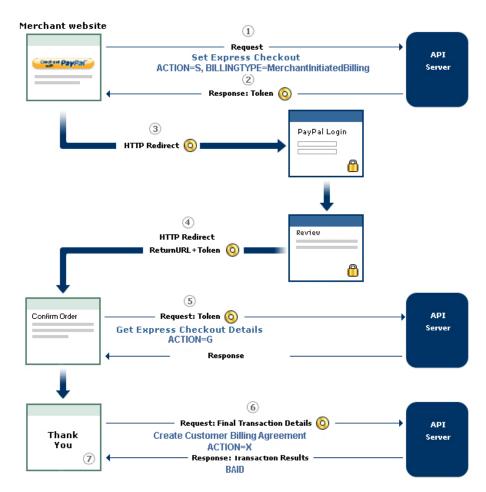
&PAYMENTTYPE=any

&PENDINGREASON=authorization

# **Obtaining the BAID Without Express Checkout Purchase**

To set up the billing agreement and obtain the BAID without the buyer making an Express Checkout purchase from your website, you add one new request to create the billing agreement to your current Express Checkout integration. Figure 2.3 summarizes the flow.

FIGURE 2.3 Obtaining the BAID without Express Checkout purchase



The message flow consists of the following comments, which correspond to the circled numbers in Figure 2.1. The comments pertain specifically to setting up a billing agreement and obtaining a BAID.

- **1.** When the buyer chooses to set up a billing agreement, call the Set Express Checkout request (ACTION=S) and pass information about the agreement:
  - The billing type (required)
  - A description of the goods or services associated with the agreement (optional)
  - The type of PayPal payment you require (optional)
  - A string for your use in any way (optional)

**NOTE:** Even though the buyer is not making a purchase in this flow, provide a value for AMT, for example, AMT=0.00.

2. PayPal returns a TOKEN that you use in subsequent steps.

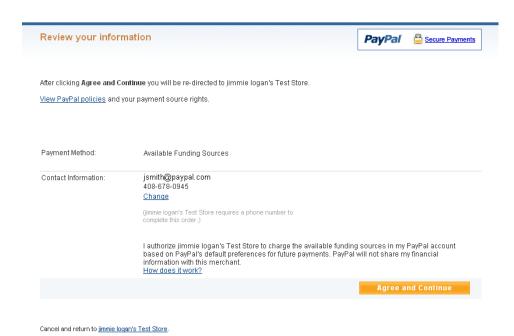
3. Redirect the buyer's browser to PayPal to allow the buyer to log in to PayPal or set up a PayPal account. After the buyer clicks the PayPal button and you submit the Set Express Checkout request, you will want to automatically direct your buyer to the PayPal website. The redirect URL for this is shown below. TOKEN is the value returned in the Set Express Checkout response.

https://www.paypal.com/cgi-bin/webscr?cmd=\_expresscheckout&token=<TOKEN>

The buyer is presented with a PayPal Review page, such as the example page shown in Figure 2.4. The buyer *must* click **Agree and Continue** for steps 5 through 8 below to occur.

#### FIGURE 2.4 PayPal Review page

#### jimmie logan's Test Store



- **4.** PayPal redirects the buyer's browser to your return page.
- **5.** Call the Get Express Checkout Details request (ACTION=G) to obtain information about the buyer. PayPal returns the buyer information, including whether the billing agreement was accepted.
- **6.** Call the Create buyer Billing Agreement request (ACTION=X) to obtain the BAID.
- **7.** PayPal returns a BAID. Save the BAID to implement Payflow reference transactions.

Obtaining the BAID Without Express Checkout Purchase

#### **Example of Obtaining the BAID Without Express Checkout Purchase**

This section provides an example of obtaining the BAID. The billing agreement parameters (and AMT, which must be 0) are shown in boldface.

#### Set Express Checkout Request (ACTION=S)

The following is an example of a Set Express Checkout request that passes billing agreement parameters:

**IMPORTANT:** Even though no payment is sent, the value of **TRXTYPE** must be **A** in the request strings.

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=S
&TENDER=P
&RETURNURL=http://return.com
&CANCELURL=http://cancel.com
&AMT=0.00
&BA_DESC=purchase Time magazine
&BILLINGTYPE=MerchantInitiatedBilling
&PAYMENTTYPE=any
&BA_CUSTOM=magazine subscription
```

#### **Set Express Checkout Response**

```
RESULT=0
&RESPMSG=Approved
&TOKEN=EC-36X58962RS656712N
&CORRELATIONID=a398b1f35ebfa
```

#### Create Customer Billing Agreement Request (ACTION=X)

The Create Customer Billing Agreement request passes the TOKEN returned in the Set Express Checkout response:

```
PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=X
&TENDER=P
&TOKEN=EC-36X58962RS656712N
```

#### **Create Customer Billing Agreement Response**

The response returns the BAID:

RESULT=0
&PNREF=E24P0A03B013
&RESPMSG=Approved
&TOKEN=EC-36X58962RS656712N
&PPREF=4400000000180903
&CORRELATIONID=3a3204997455r
&BAID=B-12345678901234567

## **Updating a Billing Agreement**

You can use the Update Billing Agreement request to cancel the billing agreement or update the billing agreement description.

Some points to note:

- *Do not* pass TRXTYPE with this transaction.
- BAID is the only required parameter (ACTION=U).
- The only value you can pass for BA\_STATUS is cancel to change the billing agreement status.
- You can change the billing agreement description by entering a different string value for BA DESC.
- The response does not return a PNREF.

PayPal responds with the BAID and other information about the buyer whose agreement was updated.

Although a buyer can log in to PayPal to manage agreements, the Update Billing Agreement request enables the buyer to cancel an agreement from your website without logging in to PayPal. You can provide your own page for maintaining agreements with the buyer.

## **Example of Updating a Billing Agreement**

The following is an example of updating a billing agreement description. Billing agreement parameters are shown in boldface:

#### Request

PARTNER=partner
&VENDOR=vendor
&PWD=password
&TENDER=P
&USER=user
&ACTION=U
&BA\_DESC=Description
&BAID=B-92K90916NV400134C
&BA\_STATUS=cancel

Using Reference Transactions

#### Response

RESULT=0 &RESPMSG=Approved &PPREF=68W3371331353001F &CORRELATIONID=6d348905b0d59 &BAID=B-92K90916NV400134C

# **Using Reference Transactions**

This section provides examples of reference transactions that bill PayPal accounts. The examples illustrate two parameter options. In the reference transaction request, you can pass either of the following name-value pair parameters returned in either the response to Create Customer Billing Agreement (ACTION=X) or the response to Do Express Checkout Payment (ACTION=D):

- PNREF passed as value of ORIGID
- BAID

The examples below are based on Do Express Checkout Payment (ACTION=D) and illustrate passing the ORIGID and the BAID. The reference transaction request does not pass the Express Checkout TOKEN or PAYERID as described in "Express Checkout Processing Flow" on page 9.

## **Reference Transaction Request Passing the BAID**

#### Request

PARTNER=partner
&VENDOR=vendor
&PWD=password
&USER=user
&TRXTYPE=A
&ACTION=D
&TENDER=P

&AMT=1&BAID=B-12345678901234567

#### Response

RESULT=0 &PNREF=E24P0A03B014 &RESPMSG=Approved &PPREF=4400000000180905 &CORRELATIONID=dr093d08c9f01 &FEEAMT=0.33

&BAID=B-12345678901234567

&PAYMENTTYPE=instant &PENDINGREASON=authorization

## Reference Transaction Request Passing the PNREF Value as ORIGID

#### Request

In this example, the BAID is not required because the ORIGID is being passed:

PARTNER=partner &VENDOR=vendor &PWD=password &USER=user &TRXTYPE=A &ACTION=D &TENDER=P

**&AMT=1** 

&ORIGID=E24P0A03B013

#### Response

RESULT=0
&PNREF=E24P0A03B015
&RESPMSG=Approved
&PPREF=4400000000180907
&CORRELATIONID=dr093d08c9f01
&BAID=B-12345678901234567
&PAYMENTTYPE=instant
&PENDINGREASON=authorization

Using Reference Transactions

3

# **Express Checkout Transaction Types**

The Payflow gateway supports transaction types (TRXTYPE) for obtaining payment during the Express Checkout flow as well as for managing the capture of payments after the Express Checkout flow.

- Honor Period and Authorization Period
- Payment Transaction Types
- Sale
- Authorization
- Order
- Do Reauthorization
- Do Authorization
- Delayed Capture
- Void
- Credit

#### **Honor Period and Authorization Period**

Your business may not be able to provide immediate fulfillment of a product or service. An item, for example, may not be immediately available to ship because it is temporarily out of stock. Under these circumstances, you can have the buyer approve of placing a 29-day hold or *authorization period* on their balance for the amount of the authorization to ensure funds are available for capture.

After a successful authorization, PayPal honors the authorized funds for a three-day *honor period*. You can extend the honor period once with a Do Reauthorization or multiple times with a Do Authorization.

# **Payment Transaction Types**

During the Express Checkout flow, the following transaction types are supported:

- Sale (TRXTYPE=S)
- Authorization (TRXTYPE=A)
- Order (TRXTYPE=0)

After the Express Checkout flow, you can manage the capture of payment using the following transaction types:

- Do Reauthorization (TRXTYPE=A)
- Do Authorization (TRXTYPE=A)
- Delayed Capture (TRXTYPE=D)
- Void (TRXTYPE=V)
- Credit (TRXTYPE=C)

#### Sale

A Sale transaction charges the specified amount against the account, and marks the transaction for immediate fund transfer.

Use a Sale transaction when you can fulfill an order immediately and you know the final amount of the payment at the time you send the Do Express Checkout Payment Details request. A Sale is appropriate, for example, if you have the items in stock for immediate shipment.

To set up a Sale, set these parameters in the Set Express Checkout, Get Express Checkout Details, and Do Express Checkout Payment requests:

- Set Express Checkout request: TRXTYPE=S, ACTION=S
- Get Express Checkout Details request (optional): TRXTYPE=S, ACTION=G
- Do Express Checkout Payment request: TRXTYPE=S, ACTION=D

After you send the Do Express Checkout Payment request for a Sale transaction, which returns a RESULT value of 0 (success), the payment is complete and no further action is necessary. You cannot capture a further payment or void any part of the payment.

For a detailed example of a Sale transaction, see Express Checkout Sale Transaction Example.

#### **Authorization**

An Authorization transaction represents an agreement to pay. It places the buyer's funds on hold for a three-day honor period is valid for 29 days. It does not transfer funds.

If your business does not provide immediate fulfillment of products or services, an Authorization enables you to capture funds with a Delayed Capture transaction when back-ordered merchandise, for example, does become available. You can capture up to the authorized amount specified in the original Authorization transaction.

If you are still not able to complete the Authorization and Delayed Capture within the 29-day period, you can perform a one-time extension of the Authorization using a Do Reauthorization. Merchants get around these limitations by choosing to perform an Order

transaction instead of an Authorization. Orders provide greater flexibility with fewer time constraints when handling products or services that not immediately available.

An Authorization uses the same parameters as a Sale transaction except that TRXTYPE is A. See Express Checkout Sale Transaction Example for details.

To set up an Authorization, set these parameters in the Set Express Checkout, Get Express Checkout Details, and Do Express Checkout Payment requests:

- Set Express Checkout request: TRXTYPE=A, ACTION=S
- Get Express Checkout Details request (optional): TRXTYPE=A, ACTION=G
- Do Express Checkout Payment request: TRXTYPE=A, ACTION=D

Note the value of PNREF in the Do Express Checkout Payment response, for example:

RESULT=0 &PNREF=EFHP0CDBF5C7 &RESPMSG=Approved &TOKEN=EC-17C76533PL706494P &PAYERID=FHY4JXY7CV9PG &PPREF=2P599077L3553652G

To capture authorized funds, you use the PNREF to reference the original Authorization transaction. See Delayed Capture for details.

#### Order

An Order transaction represents an agreement to pay one or more authorized amounts up to the specified total over a maximum of 29 days.

Orders provide you with greater flexibility in delivering merchandise than Authorizations. You should use an Order when a Sale or an Authorization with a single Do Reauthorization do not meet your needs. Situations in which Orders are appropriate include the handling of the following:

- Back orders, in which you send available merchandise immediately and the remaining merchandise, as it is available
- Split orders, in which you send merchandise in more than one shipment—perhaps to different addresses—and you want to collect a payment for each shipment
- Drop shipments, or shipments from other vendors, for which you accept the payment

To create multiple authorizations of the Order over the 29-day period, use the Do Authorization transaction. Each Do Authorization places the buyer's funds on hold for up to three days. If the three-day honor period or the valid authorization period expires, simply create another Do Authorization.

To set up an Order,

1. Set TRXTYPE=O in the Set Express Checkout, Get Express Checkout Details, and Do Express Checkout Payment requests in your Express Checkout flow.

#### Do Reauthorization

- Set Express Checkout request: TRXTYPE=O, ACTION=S
- Get Express Checkout Details request (optional): TRXTYPE=0, ACTION=G
- Do Express Checkout Payment request: TRXTYPE=O, ACTION=D
- 2. Note the value of PNREF in the Do Express Checkout Payment response, for example:

RESULT=0 &PNREF=**EFHP0CDBF5C7** &RESPMSG=Approved &TOKEN=EC-17C76533PL706494P &PAYERID=FHY4JXY7CV9PG &PPREF=2P599077L3553652G

To capture an Order, you must first authorize it.

**1.** To authorize the Order, set ORIGID=PNREF (PNREF value returned in original Order response) and TRXTYPE=A in a Do Authorization transaction request, for example:

#### TRXTYPE=A

&TENDER=P &PARTNER=partner &USER=user &VENDOR=vendor &PWD=pwd &ORIGID=EFHP0CDBF5C7

This is the Do Authorization response:

RESULT=0

&PNREF=EFHP0CDCG6C8

&RESPMSG=Approved

&PPREF=3Q600078M3553652G

**2.** To capture the Do Authorization, set ORIGID=PNREF (PNREF returned in the Do Authorization response) and TRXTYPE=D, for example:

 $\label{thm:continuity:equali$ 

#### Do Reauthorization

To reauthorize an Authorization for an additional three-day honor period, you can use a Do Reauthorization transaction. A Do Reauthorization can be used *at most once* during the 29-day authorization period.

To set up a Do Reauthorization, you must pass the following parameters in the request string:

- Set ORIGID=PNREF (PNREF returned in the original Authorization response)
- Set TRXTYPE=A
- Set DoReauthorization=1

This is an example Do Reauthorization request with required parameters:

#### TRXTYPE=A

&TENDER=P &PARTNER=partner &USER=user &VENDOR=vendor &PWD=pwd &ORIGID=EFHP0CDBF5C7 &DOREAUTHORIZATION=1

#### Do Authorization

A Do Authorization transaction represents an agreement to pay and places the buyer's funds from the original Order transaction on hold for up to three days. It does not transfer funds.

**Note:** You can only use Do Authorization if the original transaction in the Express Checkout flow is an Order. You cannot use Do Reauthorization against a Do Authorization.

To set up a Do Authorization, you must pass the following parameters in the request string:

• Set ORIGID=PNREF (PNREF value returned in the original Order transaction response only)

**NOTE:** Do not pass the PPREF returned from the original Order transaction in place of the PNREF.

Set TRXTYPE=A

In this example, the PNREF returned in the original Order response is EFHP0CDBF7D9. This is the Do Authorization request string:

#### TRXTYPE=A

&TENDER=P &PARTNER=partner &USER=user &VENDOR=vendor &PWD=pwd &ORIGID=EFHP0CDBF7D9

## **Delayed Capture**

A Delayed Capture transaction captures authorized funds and transfers them to PayPal. Once a capture is approved, you will see the funds in your PayPal account.

You can capture up to the amount specified in the original Authorization.

Delayed Capture

#### **Complete Capture**

To set up a capture of the total amount in the original Authorization, you must pass the following parameters in the Delayed Capture request string:

- Set ORIGID=PNREF (PNREF value returned in the original Authorization, Do Authorization, or Do Reauthorization transaction response)
- Set TRXTYPE=D

This is an example Delayed Capture request with required parameters.

#### TRXTYPE=D

&TENDER=P &PARTNER=partner &USER=user &VENDOR=vendor &PWD=pwd &ORIGID=EFHP0CDBF5C7

#### **Partial Capture**

To set up a partial capture of authorized funds, pass the following parameters in the Delayed Capture request string:

- Set ORIGID=PNREF (PNREF value returned in the original Authorization, Do Authorization, or Do Reauthorization transaction response)
- Set TRXTYPE=D
- Set the value for AMT
- Set CAPTURECOMPLETE=N to perform a partial capture; set CAPTURECOMPLETE=Y to void any remaining amount of the original authorized transaction

This example is based on an initial Authorization for \$100. You charge \$66 for the first partial shipment using a Delayed Capture transaction. You charge the \$34 for the final part of the shipment using a second Delayed Capture transaction.

1. Capture the authorized funds for a partial shipment of \$66.

#### TRXTYPE=D

&TENDER=C &PWD=SuperUserPassword &PARTNER=PayPal VENDOR=SuperMerchant USER=SuperMerchant &CAPTURECOMPLETE=N &ORIGID=EFHP0D426A51 &AMT=66.00

2. Once you have shipped the remainder of the merchandise, capture the \$34 balance.

**TRXTYPE=D**&TENDER=C&PWD=SuperUserPassword&PARTNER=PayPal&VENDOR=SuperMerc hant&USER=SuperMerchant&CAPTURECOMPLETE=Y&ORIGID=EFHP0D426A51&AMT=34.00

#### Void

A Void transaction voids any of the following transaction types:

- Order
- Authorizations (Authorization, Do Authorization, or Do Reauthorization)

**Note:** You can use a Void transaction only on transactions that have not yet settled. To refund a buyer's money for a settled transaction, you must use a Credit transaction.

If you void an unsettled transaction, the full authorized amount of the original transaction becomes void and can no longer be captured.

**Note:** As part of its internal process, PayPal makes reasonable effort to process authorization reversals for void transactions for debit and credit cards. However, there is no guarantee authorization reversal requests will be honored.

To set up a Void transaction, you must pass the following parameters in the request string:

- Set ORIGID=PNREF (PNREF value returned in the response to the original Authorization or Order)
- Set TRXTYPE=V

This is an example Void transaction request with the required parameters set.

#### TRXTYPE=V

&TENDER=P &PARTNER=partner &USER=user &VENDOR=vendor &PWD=pwd &ORIGID=EFHP0CDBF5C7

#### Credit

A Credit transaction refunds the buyer for a settled transaction. Credit transactions are permitted only against existing Sale and Delayed Capture transactions.

To set up a Credit transaction request, you must pass the following parameters in the request string:

- Set ORIGID=PNREF (PNREF value returned in the response to the original Sale or Delayed Capture)
- Set TRXTYPE=C
- Set the value for AMT if the amount of the credit differs from the original Sale or Delayed Capture transaction

This is an example Credit request with the required parameters set:

Credit

#### TRXTYPE=C

&TENDER=P
PARTNER=partner
VENDOR=vendor
&USER=user
&PWD=password
&ORIGID=EFHP0D426A62
&AMT=45.00

Say, for example, a buyer purchases merchandise from a particular merchant using the buyer's PayPal account. The merchant can send a Memo Post Sale (above transaction) to Paymentech so Paymentech can include that Sale information in the merchant's Paymentech account. The advantage to the merchant is that the merchant can view PayPal Sale activities in their Paymentech reports.

The merchant uses a Memo Post Credit to send the buyer's Credit transaction information to Paymentech so the merchant can see the buyer's Credit information in their Paymentech reports.

# **Transaction Responses**

Transaction response parameters indicate the status of the transaction and return requested information.

- Response Parameters
- Address Verification Service Responses From PayPal
- Card Security Code Results
- PNREF Value
- RESULT Values and RESPMSG Text

#### **Response Parameters**

When a transaction finishes, the server returns a response made up of name-value pairs. For example, this is a response to a Sale transaction request:

RESULT=0
&PNREF=EFHP0D426A53
&RESPMSG=APPROVED
&AUTHCODE=25TEST
&AVSADDR=Y
&AVSZIP=N
&CVV2MATCH=Y
&PPREF=68W3371331353001F
&CORRELATIONID=2dc60e253495e

Express Checkout transaction responses include the response parameters described below as well as parameters returned by the specific transaction type (TRXTYPE) and ACTION.

TABLE 4.1 General response parameters

Parameter	Description
RESULT	The outcome of the attempted transaction. A result of 0 (zero) indicates the transaction was approved. Any other number indicates a decline or error.
	<b>Note:</b> The PayPal processor may also return a warning message in the RESPMSG string when RESULT=0. For more information on corrective actions, see the PayPal developer documentation on Developer Central.
	Limitations: Numeric.
PNREF	Payflow Transaction ID, a unique 12-character alphanumeric string that identifies the transaction.

Address Verification Service Responses From PayPal

TABLE 4.1 General response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID of the payment.
	If the request ACTION was A (Authorization), you should store the value of PPREF if you need to research a specific transaction with PayPal.
	Limitations: 17-character string.
RESPMSG	The response message returned with the transaction result. Exact wording varies. Sometimes a colon appears after the initial RESPMSG followed by more detailed information.
	Note: The PayPal processor may also return a warning message in the RESPMSG string when RESULT=0. For more information on corrective actions, see the PayPal developer documentation on Developer Central.
	Limitations: Alphanumeric.
CORRELATIONID	Value used for tracking.
	Limitations: 13-character alphanumeric string.

## **Address Verification Service Responses From PayPal**

The table below compares the detailed response returned by the PayPal processor for address verification to the normalized response value (Y, N, or X) returned in the AVSADDR and AVSZIP response parameters. If you want to obtain the PayPal processor value, set the VERBOSITY parameter to MEDIUM. With this setting, the processor value is returned in the PROCAVS response parameter.

TABLE 4.2 Address Verification Service response value mapping

PayPal Processor Address Verification Service Code	Meaning	AVSADDR	AVSZIP
A	Address	Y	N
В	International "A"	Y	N
С	International "N"	N	N
D	International "X"	Y	Y
Е	Not allowed for MOTO (Internet/Phone) transactions	X	X
F	UK-specific "X"	Y	Y
G	Global Unavailable	X	X
I	International Unavailable	X	X

TABLE 4.2 Address Verification Service response value mapping

PayPal Processor Address Verification			
Service Code	Meaning	AVSADDR	AVSZIP
N	No	N	N
P	Postal (International "Z")	N	Y
R	Retry	X	X
S	Service not Supported	X	X
U	Unavailable	X	X
W	Whole Zip	N	Y
X	Exact Match	Y	Y
Y	Yes	Y	Y
Z	Zip	N	Y
All other		X	X

## **Card Security Code Results**

The CVV2MATCH parameter returns Y, N, or X.

The CVV2MATCH parameter returns Y, N, X, or a processor-specific response.

#### **Normalized Results**

If you submit the transaction request parameter for card security code (that is, the CVV2 parameter), the cardholder's bank returns a normalized Yes/No response in the CVV2MATCH response parameter, as described in the table below.

TABLE 4.3 CVV2MATCH response values

CVV2MATCH Value	Description
Y	The submitted value matches the data on file for the card
N	The submitted value does not match the data on file for the card.
X	The cardholder's bank does not support this service.

#### PayPal Card Security Code Results

The table below shows the detailed results returned by the PayPal processor for card security codes. If you want to obtain the PayPal processor value, set the VERBOSITY parameter to MEDIUM. The processor value is returned in the PROCCVV2 response parameter.

TABLE 4.4 Card security code response code mapping

PayPal Processor CVV2 Code	PayPal Processor Code Description	PROCVV2MATCH
M	Match	Y
N	No Match	N
P	Not Processed	X
S	Service Not Supported	X
U	Unavailable	X
X	No Response	X
All other		X

#### **PNREF Value**

The PNREF is a unique transaction identification number issued by PayPal that identifies the transaction for billing, reporting, and transaction data purposes. The PNREF value appears in the Transaction ID column in PayPal Manager reports.

- The PNREF value is used as the ORIGID value (original transaction ID) in Delayed Capture transactions (TRXTYPE=D), Credits (TRXTYPE=C), Inquiries (TRXTYPE=I), and Voids (TRXTYPE=V).
- The PNREF value is used as the ORIGID value (original transaction ID) value in reference transactions for Authorization (TRXTYPE=A) and Sale (TRXTYPE=S).

**Note:** The PNREF is also referred to as the Transaction ID in PayPal Manager.

#### **PNREF Format**

The PNREF is a 12-character string of printable characters, for example:

- VADE0B248932
- ACRAF23DB3C4

**Note:** Printable characters also include symbols other than letters and numbers such as the question mark (?). A PNREF typically contains letters and numbers only.

The PNREF in a transaction response tells you that your transaction is connecting to PayPal.

#### **RESULT Values and RESPMSG Text**

The RESULT parameter and value is the first name-value pair returned in the response string. The value of RESULT indicates the overall status of the transaction attempt:

- A value of 0 (zero) indicates that no errors occurred and the transaction was approved.
- A value less than zero indicates that a communication error occurred. In this case, no transaction is attempted.
- A value greater than zero indicates a decline or error (except in the case of RESULT 104. See the table below).

The response message (RESPMSG) provides a brief description for decline or error results.

#### **RESULT Values for Transaction Declines or Errors**

For non-zero RESULT values, the response string includes a RESPMSG name-value pair. The exact wording of the RESPMSG (shown in **bold**) may vary. Sometimes a colon appears after the initial RESPMSG followed by more detailed information.

When interpreting RESULT values for the PayPal processor, note the following:

- When RESULT=0, warning information may be returned that is useful to the request application. See the PayPal API documentation on Developer Central for detailed information on corrective actions.
- When RESULT=104, you must log in to the PayPal website to determine if the transaction actually went through. If the transaction does not appear in the History section, you should retry it.

## **Source Responses**

TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation
0	Approved
1	<ul> <li>User authentication failed. Error is caused by one or more of the following:</li> <li>Login information is incorrect. Verify that USER, VENDOR, PARTNER, and PASSWORD have been entered correctly. VENDOR is your merchant ID and USER is the same as VENDOR unless you created a Payflow Pro user. All fields are case sensitive.</li> <li>Invalid Processor information entered. Contact merchant bank to verify.</li> <li>"Allowed IP Address" security feature implemented. The transaction is coming from an unknown IP address. See PayPal Manager online help for details on how to use Manager to update the allowed IP addresses.</li> <li>You are using a test (not active) account to submit a transaction to the live PayPal servers. Change the host address from the test server URL to the live server URL</li> </ul>

TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation	
2	<b>Invalid tender type.</b> Your merchant bank account does not support the following credit card type that was submitted.	
3	<b>Invalid transaction type.</b> Transaction type is not appropriate for this transaction For example, you cannot credit an authorization-only transaction	
4	Invalid amount format. Use the format: "#####.##" Do not include currency symbols or commas.	
5	<b>Invalid merchant information.</b> Processor does not recognize your merchant account information. Contact your bank account acquirer to resolve this problem.	
6	Invalid or unsupported currency code	
7	Field format error. Invalid information entered. See RESPMSG	
8	Not a transaction server	
9	Too many parameters or invalid stream	
10	Too many line items	
11	Client time-out waiting for response	
12	<b>Declined.</b> Check the credit card number, expiration date, and transaction information to make sure they were entered correctly. If this does not resolve the problem, have the customer call their card issuing bank to resolve.	
13	<b>Referral.</b> Transaction cannot be approved electronically but can be approved with a verbal authorization. Contact your merchant bank to obtain an authorization and submit a manual Voice Authorization transaction.	
19	<b>Original transaction ID not found.</b> The transaction ID you entered for this transaction is not valid. See RESPMSG	
20	Cannot find the customer reference number	
22	Invalid ABA number	
23	Invalid account number. Check credit card number and re-submit.	
24	Invalid expiration date. Check and re-submit.	
25	<ul> <li>Invalid Host Mapping. You are trying to process a tender type such as Discover Card, but you are not set up with your merchant bank to accept this card type.</li> <li>You are trying to process a tender type such as Discover Card, but you are not set up with your merchant bank to accept this card type.</li> <li>You are trying to process an Express Checkout transaction when your account not set up to do so. Contact your account holder to have Express Checkout added to your account.</li> </ul>	

TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation	
26	<b>Invalid vendor account.</b> Login information is incorrect. Verify that USER, VENDOR, PARTNER, and PASSWORD have been entered correctly. VENDOR is your merchant ID and USER is the same as VENDOR unless you created a Payflow Pro user. All fields are case sensitive.	
27	Insufficient partner permissions	
28	Insufficient user permissions	
29	<b>Invalid XML document.</b> This could be caused by an unrecognized XML tag or a bad XML format that cannot be parsed by the system.	
30	Duplicate transaction	
31	Error in adding the recurring profile	
32	Error in modifying the recurring profile	
33	Error in canceling the recurring profile	
34	Error in forcing the recurring profile	
35	Error in reactivating the recurring profile	
36	OLTP Transaction failed	
37	Invalid recurring profile ID	
50	Insufficient funds available in account	
51	Exceeds per transaction limit	
99	General error. See RESPMSG.	
100	Transaction type not supported by host	
101	Time-out value too small	
102	Processor not available	
103	Error reading response from host	
104	Timeout waiting for processor response. Try your transaction again.	
105	<b>Credit error.</b> Make sure you have not already credited this transaction, or that this transaction ID is for a creditable transaction. (For example, you cannot credit an authorization.)	
106	Host not available	
107	Duplicate suppression time-out	

TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation	
108	<b>Void error.</b> See RESPMSG. Make sure the transaction ID entered has not already been voided. If not, then look at the Transaction Detail screen for this transaction to see if it has settled. (The Batch field is set to a number greater than zero if the transaction has been settled). If the transaction has already settled, your only recourse is a reversal (credit a payment or submit a payment for a credit)	
109	Time-out waiting for host response	
110	Referenced auth (against order) Error	
111	<b>Capture error.</b> Either an attempt to capture a transaction that is not an authorization transaction type, or an attempt to capture an authorization transaction that has already been captured.	
112	<b>Failed AVS check.</b> Address and ZIP code do not match. An authorization may still exist on the cardholder's account.	
113	Merchant sale total will exceed the sales cap with current transaction. ACH transactions only.	
114	Card Security Code (CSC) Mismatch. An authorization may still exist on the cardholder's account.	
115	System busy, try again later	
116	VPS Internal error. Failed to lock terminal number	
117	Failed merchant rule check. One or more of the following three failures occurred: An attempt was made to submit a transaction that failed to meet the security settings specified on the PayPal Manager <i>Security Settings</i> page. If the transaction exceeded the Maximum Amount security setting, then no values are returned for AVS or CSC.  AVS validation foiled. The AVS return value should appear in the RESPINSC.	
	AVS validation failed. The AVS return value should appear in the RESPMSG.  CSC validation failed. The CSC return value should appear in the RESPMSG	
118	Invalid keywords found in string fields	
120	Attempt to reference a failed transaction	
121	Not enabled for feature	
122	Merchant sale total will exceed the credit cap with current transaction. ACH transactions only.	
125	Fraud Protection Services Filter — Declined by filters	

TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation	
126	Fraud Protection Services Filter — Flagged for review by filters	
	IMPORTANT: RESULT value 126 indicates that a transaction triggered a fraud filter. This is not an error, but a notice that the transaction is in a review status. The transaction has been authorized but requires you to review and to manually accept the transaction before it will be allowed to settle.	
	RESULT value 126 is intended to give you an idea of the kind of transaction that is considered suspicious to enable you to evaluate whether you can benefit from using the Fraud Protection Services.	
	To eliminate RESULT 126, turn the filters off.	
	For more information, see the fraud documentation for your payments solution.	
127	Fraud Protection Services Filter — Not processed by filters	
128	Fraud Protection Services Filter — Declined by merchant after being flagged for review by filters	
132	Card has not been submitted for update	
133	Data mismatch in HTTP retry request	
150	Issuing bank timed out	
151	Issuing bank unavailable	
200	Reauth error	
201	Order error	
600	Cybercash Batch Error	
601	Cybercash Query Error	
1000	<b>Generic host error.</b> This is a generic message returned by your credit card processor. The RESPMSG will contain more information describing the error.	
1001	Buyer Authentication Service unavailable	
1002	Buyer Authentication Service — Transaction timeout	
1003	Buyer Authentication Service — Invalid client version	
1004	Buyer Authentication Service — Invalid timeout value	
1011	Buyer Authentication Service unavailable	
1012	Buyer Authentication Service unavailable	
1013	Buyer Authentication Service unavailable	
1014	Buyer Authentication Service — Merchant is not enrolled for Buyer Authentication Service (3-D Secure)	

TABLE 4.5 Payflow Transaction RESULT Values and RESPMSG Text

RESULT	RESPMSG and Explanation
1016	<b>Buyer Authentication Service</b> — <b>3-D Secure error response received.</b> Instead of receiving a PARes response to a Validate Authentication transaction, an error response was received.
1017	<b>Buyer Authentication Service</b> — <b>3-D Secure error response is invalid.</b> An error response is received and the response is not well formed for a Validate Authentication transaction.
1021	Buyer Authentication Service — Invalid card type
1022	Buyer Authentication Service — Invalid or missing currency code
1023	Buyer Authentication Service — merchant status for 3D secure is invalid
1041	Buyer Authentication Service — Validate Authentication failed: missing or invalid PARES
1042	Buyer Authentication Service — Validate Authentication failed: PARES format is invalid
1043	Buyer Authentication Service — Validate Authentication failed: Cannot find successful Verify Enrollment
1044	Buyer Authentication Service — Validate Authentication failed: Signature validation failed for PARES
1045	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid amount in PARES
1046	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid acquirer in PARES
1047	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid Merchant ID in PARES
1048	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid card number in PARES
1049	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid currency code in PARES
1050	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid XID in PARES
1051	Buyer Authentication Service — Validate Authentication failed: Mismatched or invalid order date in PARES
1052	Buyer Authentication Service — Validate Authentication failed: This PARES was already validated for a previous Validate Authentication transaction

# 5

# **Express Checkout Testing**

You can set up the testing of your integration using two methods.

- Testing Your Integration Using the Sandbox
- Testing Your Integration Using the PayPal Simulator

### Testing Your Integration Using the Sandbox

To set up the testing of your integration using the Sandbox:

- Create A Business Account
- Create a Payflow Test Account
- Link Your Payflow Pro Account to the Sandbox

#### **Create A Business Account**

If you do not already have a Payflow account, follow the procedure below to create one. If your account is already set up, proceed to "Create a Payflow Test Account" on page 52

- **1.** Sign up for a Payflow Pro test account. Go to the following URL and click **Continue**: https://registration.paypal.com/productSelectionInit.do
- **2.** Either log in with your existing PayPal account or create a new account by clicking Sign Up.
- **3.** PayPal Manager account information:
  - Merchant Login: (Enter all lowercase characters, for example, yourcompanynametest.)
  - Password: (The password is case sensitive. Choose a password you can remember. If you enter it incorrectly too many times, you will be locked out.)
- **4.** Complete the information in the Business Information section.
- **5.** Complete the information in the Business Owner Contact Information section, and click **Continue**.
- **6.** On the Internet Merchant Account application, click **Save and Exit**.
- 7. To test your login, go to https://manager.paypal.com/ and enter the following:
  - Partner Name: PayPal
  - Merchant login: yourcompanynametest

Testing Your Integration Using the Sandbox

Password: (your password)

Your account should show the following status message: Your account is currently in TEST status. You can run only test transactions.

8. Click Log Out.

#### **Create a Payflow Test Account**

To create Payflow test account, follow the procedure below:

- 1. If you have an existing Sandbox account, log in to the Sandbox. Otherwise, click **Sign Up Now** and create a Sandbox Seller account.
- 2. Once you are logged into the PayPal Sandbox Test environment, click **Test Accounts**.
- 3. Click Create Test Account.
- **4.** For Country, select United States. For Account Type, select Seller.
- **5.** Note the Seller's login email address and password.
- 6. Click Show Advanced Options.
- 7. Add a balance of 500 to the Seller account.

#### Link Your Payflow Pro Account to the Sandbox

To link your Payflow Pro account to the Sandbox, follow the procedure below:

- 1. Click the Contact Support tab.
- 2. Enter the Subject as: Link Payflow Pro to Sandbox
- **3.** Provide the following:
  - Your Payflow Pro Merchant account login email address
  - The login email address and password of the Seller account you created in the Sandbox Test Environment
- 4. Submit the ticket.

Your Merchant ID and Sandbox Seller account will be linked within 72 hours, allowing you to redirect Express Checkout transactions through the Sandbox environment. Be sure to:

- Send all test transaction requests as POSTs to the Payflow host address: https://pilot-payflowpro.paypal.com
- Send Express Checkout redirects to: https://www.sandbox.paypal.com/cgibin/webscr?cmd=\_express-checkout&token=<ec-token>

**Note:** You must be logged into the Sandbox before redirecting.

You should also create a Buyer account in the Sandbox to make test Express Checkout purchases against your Seller account. Be sure to add a positive balance to the Buyer account at the time of creation.

## **Testing Your Integration Using the PayPal Simulator**

To test your integration using the simulator, direct all test transactions to the Payflow host address for testing: https://pilot-payflowpro.paypal.com

Transactions are processed through PayPal's simulated payment network, enabling you to test the configuration and operation of your application or storefront—with no money changing hands.

**NOTE:** You must activate your account and configure your application for live transactions in PayPal Manager before accepting real orders.

Testing Your Integration Using the PayPal Simulator



# **Express Checkout Parameter Reference**

This reference describes all parameters that can be used with the Express Checkout payment solution.

- "Connection Parameter Descriptions" on page 55
- "User Parameter Descriptions" on page 56
- "Express Checkout Parameter Descriptions" on page 57
- "Do Reauthorization Parameter Descriptions" on page 75
- "Do Authorization Parameter Descriptions" on page 74
- "Void Parameter Descriptions" on page 75
- "Credit Parameter Descriptions" on page 76
- "Delayed Capture Parameter Descriptions" on page 77
- "Billing Agreement Parameter Descriptions" on page 78
- "Reference Transaction Parameter Descriptions" on page 81

## **Connection Parameter Descriptions**

Pass the connection parameters in the format and syntax required by the Payflow gateway and programming language that you are using. See your integration documentation for details.

TABLE A.1 Connection request parameters

Parameter	Description
HOSTADDRESS	(Required) Payflow host name
HOSTPORT	(Required) Use port 443.
PARMLIST	( <i>Required</i> ) List of parameters that specify the payment information for the transaction. The quotation marks "" at the beginning and end are required. The following is an example:
	"TRXTYPE=S&TENDER=C&PARTNER=Partner&VENDOR=vendor&USER=user&PWD=password&ACCT=55555555555554444&EXPDATE=0308&AMT=123.00"
	The content of the PARMLIST varies by the type of transaction being processed. For example, a Void transaction requires a different set of parameters than a Sale.
PROXYADDRESS	( <i>Optional</i> ) Proxy server address. Use the PROXY parameters for servers behind a firewall. Your network administrator can provide the values.
PROXYPORT	(Optional) Proxy server port.

User Parameter Descriptions

TABLE A.1 Connection request parameters

Parameter	Description
PROXYLOGON	(Optional) Proxy server logon ID.
PROXYPASSWORD	(Optional) Proxy server logon password.

## **User Parameter Descriptions**

All Payflow transaction requests require the user parameters described below.

TABLE A.2 User request parameters

Parameter	Description
USER	( <i>Required</i> ) If you set up one or more additional users on the account, this value is the ID of the user authorized to process transactions. If, however, you have not set up additional users on the account, USER has the same value as VENDOR.
	Limitations: 64 alphanumeric, case-sensitive characters.Limitations: 64 alphanumeric, case-sensitive characters.
VENDOR	(Required) Your merchant login ID that you created when you registered for the account.
	Limitations: 64 alphanumeric, case-sensitive characters.Limitations: 64 alphanumeric, case-sensitive characters.
PARTNER	(Required) The ID provided to you by the authorized PayPal Reseller who registered you for the Payflow Pro service.
	Limitations: 12 alphanumeric, case-sensitive characters.
PWD	(Required) The password that you defined while registering for the account.
	Limitations: Six- to thirty-two alphanumeric, case-sensitive characters.

# **Express Checkout Parameter Descriptions**

## **Set Express Checkout Request Parameter Descriptions**

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
TRXTYPE	<ul> <li>(Required) How you want to obtain payment:</li> <li>A indicates that this payment is an Authorization subject to settlement with the Delayed Capture request</li> <li>O indicates that this payment is an Order subject to settlement with the Delayed Capture request</li> <li>S indicates that this is a final Sale for which you are requesting payment</li> </ul>
	<b>NOTE:</b> You cannot set this value to S in the Set Express Checkout request and then change this value to A on the final Do Express Checkout Payment request.
	Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.
ACTION	( <i>Required</i> ) Is S to indicate this is a Set Express Checkout request. Limitations: One alpha character.
AMT	(Required) Amount (US Dollars) U.S. based currency.
	<b>Note:</b> You must set CURRENCY to one of the currency codes for any of the supported PayPal currencies.
	Set AMT=0.00 when passing the billing type value MerchantInitiatedBilling to use the TOKEN returned by the Set Express Checkout response as a parameter in a request to create a billing agreement.
	Limitations: Must not exceed \$10,000 USD in any currency. Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
	Nine numeric characters plus decimal.
CURRENCY	( <i>Required</i> ) One of the supported currency codes. See "Currency Codes" on page 87."
RETURNURL	( <i>Required</i> ) URL to which the buyer's browser is returned after choosing to pay.  Limitations: Character string with no maximum length.

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
CANCELURL	(Required) URL to which the buyer is returned if the buyer cancels the order.
	Limitations: Character string with no maximum length.
TOKEN	( <i>Optional</i> ) Include this parameter to modify an existing Sale or Authorization request. The value is returned in a previous Set Express Checkout response.
	Limitations: 20-character alphanumeric string.
L_BILLINGTYPE <i>n</i>	(Optional) Describes the billing type for a PayPal account that will be billed with Recurring Payments. Set to Recurring Payments to use the TOKEN returned in the Set Express Checkout response to create a Recurring Payments profile.
	Either L_BILLINGTYPE <i>n</i> or BILLINGTYPE must be passed to create a Recurring Payments profile. If you pass L_BILLINGTYPE <i>n</i> and BILLINGTYPE, BILLINGTYPE will be ignored.
	Each L_BILLINGTYPE <i>n</i> must have a corresponding description string (L_BILLINGAGREEMENTDESCRIPTION <i>n</i> ).
	See <i>PayPal Payments Pro Payflow Edition - Recurring Payments Developer's Guide</i> for details on creating Recurring Payments profiles. Character length and limitations: A string. <i>n</i> is a value in the range 0-9.
L_BILLINGAGREEMEN TDESCRIPTIONn	( <i>Optional</i> ) Describes the billing type for a PayPal account that will be billed with Recurring Payments. See L_BILLINGTYPEn.
	Character length and limitations: A string. $n$ is a value in the range 0-9.
BILLINGTYPE	(Optional) Describes the billing type for a PayPal account.
	The possible values are:
	MerchantInitiatedBilling     MerchantInitiatedBilling
	Use this value to obtain a BAID in the Set Express Checkout flow.
	<ul> <li>RecurringPayments</li> <li>Use this value to use the TOKEN returned in the Set Express Checkout response to create a Recurring Payments profile. See PayPal Payments Pro Payflow Edition - Recurring Payments Developer's Guide for details on creating Recurring Payments profiles.</li> </ul>
	Character length and limitations: A string. $n$ is a value in the range 0-9.
BA_DESC	(Optional) Describes the billing agreement for a PayPal account.
	If BILLINGTYPE is RecurringPayments, BA DESC is required.
	Limitations: 255-character string.
BA_CUSTOM	(Optional) Custom annotation field for your exclusive use with billing agreements.
	Limitations: 255-character string

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
PAYMENTTYPE	<ul> <li>(Optional) Is one of the following values:</li> <li>instantonly - The payment is made with no delay.</li> <li>any - The payment may be made with no delay or the payment is pending.</li> <li>Limitations: 11 characters.</li> </ul>
L_NAME <i>n</i>	(Optional) Line-item name.  Character length and limitations: 36 alphanumeric characters.
L_DESCn	( <i>Optional</i> ) Line-item description for each different item purchased such as hiking boots or cooking utensils.
	Note: You can view line item information in the Transaction Details report in your PayPal merchant account.
	Limitations: 35-character string.
L_COSTn	( <i>Required</i> if $\bot$ _QTY <i>n</i> is supplied) Cost of the line item. The line-item unit price can be a positive or a negative value but not 0.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
	Nine numeric characters plus decimal.
L_TAXAMT <i>n</i>	(Optional) Line-item tax amount.  Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
L_QTYn	(Required if L_COSTn is supplied) Line-item unit quantity. Limitations: 10-character integer.
ITEMAMT	( <i>Required</i> if L_COST <i>n</i> is specified) Sum of cost of all items in this order. Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
TAXAMT	(Required if L_TAXAMTn is specified) Sum of tax for all items in this order.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
FREIGHTAMT	(Optional) Total shipping cost for this order.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
HANDLINGAMT	(Optional) Total handling cost for this order.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
DISCOUNT	(Optional) Shipping discount for this order. Specify the discount as a positive amount.
	Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
INSURANCEAMT	( <i>Optional</i> ) Total shipping insurance cost for this order.  Limitations: Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
ALLOWNOTE	( <i>Optional</i> ) Is 1 or 0 (default). If 1, the buyer may enter a note in the Express Checkout flow to be returned by the responses to Get Express Checkout Details and Do Express Checkout Payment. Limitations: Numeric.

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
MAXAMT	( <i>Optional</i> ) The expected maximum total amount of the complete order, including shipping and tax charges.  Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
ORDERDESC	( <i>Optional</i> ) Description of items the buyer is purchasing. Limitations: 127-character alphanumeric string.
CUSTOM	( <i>Optional</i> ) Free-form field for your own use such as a tracking number or other value you want PayPal to return in the Get Express Checkout Details response.  Limitations: 256-character alphanumeric string.
INVNUM	( <i>Optional</i> ) Merchant invoice number. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted. Limitations: Nine-character alphanumeric string.
PHONENUM	Account holder's telephone number.  Limitations: 20-character string. The field mask is:  xxx-xxx-xxxx (US numbers)  +xxxxxxxxxxxx (international numbers)
REQBILLINGADDRESS	( <i>Optional</i> ) Is 1 or 0. The value 1 indicates that you require that the buyer's shipping address on file with PayPal be a confirmed address. Setting this element overrides the setting you have specified in your Merchant Account Profile.  Limitations: One character.
REQCONFIRMSHIPPIN G	(Optional) Is 1 or 0. The value 1 indicates that you require that the buyer's shipping address on file with PayPal be a confirmed address. Setting this element overrides the setting you have specified in your Merchant Account Profile Limitations: One character.
NOSHIPPING	(Optional) Is 1 or 0. The value 1 indicates that on the PayPal pages, no shipping address fields should be displayed whatsoever.  Limitations: Four-character string.
ADDROVERRIDE	( <i>Optional</i> ) Is 1 or 0. The value 1 indicates that the PayPal pages should display the shipping address set by you in the shipping address (SHIPTO* parameters) passed to this Set Express Checkout request, not the shipping address on file with PayPal for this buyer.  Limitations: Four-character string.

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
LOCALECODE	(Optional) Locale of pages displayed by PayPal during Express Checkout
	Limitations: Two-character string.
	AT
	AU
	BE
	CA
	СН
	CN
	DE
	ES
	FR
	GB
	IT
	JP
	NL
	PL
	US
PAGESTYLE	( <i>Optional</i> ) 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.
	Limitations: 30-character alpha string.
HDRIMG	( <i>Optional</i> ) 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. PayPal recommends that you provide an image that is stored on a secure (https) server.  Limitations: 127-character string.
HDRBORDERCOLOR	( <i>Optional</i> ) Sets the border color around the header of the payment page. The border is a two-pixel perimeter around the header space, which is 750 pixels wide by 90 pixels high.  Limitations: Six-character HTML hexadecimal color code in ASCII.
HDRBACKCOLOR	( <i>Optional</i> ) Sets the background color for the header of the payment page. Limitations: Six-character HTML hexadecimal color code in ASCII.
PAYFLOWCOLOR	( <i>Optional</i> ) Sets the background color for the payment page. Limitations: Six-character HTML hexadecimal color code in ASCII.

TABLE A.3 Set Express Checkout request parameters

Parameter	Description
EMAIL	( <i>Optional</i> ) Email address of the buyer as entered during checkout. PayPal uses this to fill out the PayPal membership sign-up portion of the PayPal login page.
	Limitations: 127-character alphanumeric string.
SHIPTONAME	(Optional) Ship-to name.
	Limitations: 32-character string.
SHIPTOSTREET	(Optional) Ship-to street address.
	Limitations: 30-character string.
SHIPTOSTREET2	(Optional) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3.
	Limitations: 30-character string.
SHIPTOCITY	(Optional) Ship-to city.
	Limitations: 40-character string.
SHIPTOSTATE	(Optional) Ship-to state.
	Limitations: 40-character string.
SHIPTOZIP	(Optional) Ship-to postal code.
	Limitations: 16-character string.
SHIPTOCOUNTRY	(Optional) Ship-to country.
	Limitations: Two-character country code.

## **Set Express Checkout Response Parameter Descriptions**

TABLE A.4 Set Express Checkout response parameters

Parameter	Description
TOKEN	A time-stamped token by which you identify to PayPal that you are processing this payment with Express Checkout. The token expires after three hours.
	If you set TOKEN in the Set Express Checkout request, the value of TOKEN in the response is identical to the value in the request.
	Limitations: 20-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Get Express Checkout Details Request Parameter Descriptions**

TABLE A.5 Get Express Checkout Details request parameters

Parameter	Description
TRXTYPE	<ul> <li>(Required) How you want to obtain payment:</li> <li>A indicates that this payment is an Authorization subject to settlement with the Delayed Capture request</li> <li>O indicates that this payment is an Order subject to settlement with the Delayed Capture request</li> <li>S indicates that this is a final Sale for which you are requesting payment</li> </ul>
	Note: You cannot set this value to S in the Set Express Checkout request and then change this value to A on the final Do Express Checkout Payment request.  Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.
ACTION	( <i>Required</i> ) Is G to indicate this is a Get Express Checkout Details request. Limitations: One alpha character.
TOKEN	( <i>Required</i> ) A time-stamped token, the value of which was returned in the Set Express Checkout response.  Limitations: 20-character alphanumeric string.

## **Get Express Checkout Details Response Parameter Descriptions**

TABLE A.6 Get Express Checkout Details response parameters

Parameter	Description
TOKEN	The time-stamped token value that was returned in the Set Express Checkout response.
	Limitations: 20-character alphanumeric string.
EMAIL	Email address of the buyer as entered during checkout.
	Limitations: 127-character alphanumeric string.
PAYERID	Unique PayPal buyer account identification number.
	Limitations: 13-character string.

TABLE A.6 Get Express Checkout Details response parameters

Parameter	Description
PAYERSTATUS	Status of buyer. Values are:  • verified  • unverified
	Limitations: 10-character string.
DISCOUNT	Shipping discount for this order. Specify the discount as a positive amount.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
INSURANCEAMT	Total shipping insurance cost for this order.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
NOTE	Is 0 (default) or 1. If ALLOWNOTE is set to 1 in the Set Express Checkout request, NOTE will contain the text entered by the buyer in the Express Checkout flow.  Limitations: 255-character string.
ADJUSTMENTAMT	A discount or gift certificate offered by PayPal to the buyer. This amount will be represented by a negative amount. If the buyer has a negative PayPal account balance, PayPal adds the negative balance to the transaction amount, which is represented as a positive value. The negative amount is returned for Payflow merchants.
	NOTE: To test this value as a negative amount agaist the simulator, send the amount as 1250 in the Set Express Checkout request and use the returned TOKEN in the Get Express Checkout Details request to see the ADJUSTMENTAMT response as a negative value.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
FIRSTNAME	Buyer's first name. Limitations: 25-character string.
T A CTNIAME	Buyer's last name.
LASTNAME	Duyer 8 last hame.

TABLE A.6 Get Express Checkout Details response parameters

Parameter	Description
SHIPTONAME	Ship-to name.  If you include a shipping address and provide a value for the AddressOverride (ADDROVERRIDE) parameter, PayPal returns this same address in the Get Express Checkout Details response.
	Limitations: 32-character string.
SHIPTOSTREET	Ship-to street address
	If you include a shipping address and provide a value for the AddressOverride (ADDROVERRIDE) parameter, PayPal returns this same address in the Get Express Checkout Details response.
	Limitations: 30-character string.
SHIPTOSTREET2	Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	Ship-to city.
	Limitations: 40-character string.
SHIPTOSTATE	Ship-to state.
	Limitations: 40-character string.
SHIPTOZIP	Ship-to postal code.
	Limitations: 16-character string.
SHIPTOCOUNTRY	Ship-to country.
	Limitations: Two-character country code.
SHIPTOBUSINESS	Buyer's business name.
	Limitations: 127-character string.
CUSTOM	Free-form field for your own use as set by you in the Set Express Checkout request.
	Limitations: 256-character alphanumeric string.
INVNUM	Merchant invoice number. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted.
	Limitations: Nine-character alphanumeric string.
PHONENUM	Account holder's telephone number.
	Limitations: 20-character string. The field mask is:
	xxx-xxx-xxxx (US numbers)
	+xxxxxxxxxx (international numbers)

TABLE A.6 Get Express Checkout Details response parameters

Parameter	Description
BILLTONAME	Bill-to name.
	<b>NOTE:</b> The bill-to address details are returned returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: 32 alphanumeric characters.
STREET	Bill-to street.
	<b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: 100 alphanumeric characters.
STREET2	Second bill-to street address.
	NOTE: The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: 100 alphanumeric characters.
CITY	Bill-to city address.
	NOTE: The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: 45 alphanumeric characters.
STATE	Bill-to state address.
	<b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: 45 alphanumeric characters.
ZIP	U.S. zip code or other country-specific postal code.
	<b>NOTE:</b> The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: 10 alphanumeric characters.
COUNTRYCODE	Bill-to country code.
	NOTE: The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: Four alphanumeric characters.

TABLE A.6 Get Express Checkout Details response parameters

Parameter	Description
ADDRESSSTATUS	Status of the bill-to address on file with PayPal. The values are:  • Y = confirmed  • N = unconfirmed
	The bill-to address details are returned only if REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: One alpha character.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Do Express Checkout Payment Request Parameter Descriptions**

TABLE A.7 Do Express Checkout Payment request parameters

Parameter	Description
TRXTYPE	<ul> <li>(Required) How you want to obtain payment:</li> <li>A indicates that this payment is an Authorization subject to settlement with the Delayed Capture request</li> <li>O indicates that this payment is an Order subject to settlement with the Delayed Capture request</li> <li>S indicates that this is a final Sale for which you are requesting payment</li> </ul>
	NOTE: You cannot set this value to S in the Set Express Checkout request and then change this value to A on the final Do Express Checkout Payment request.
	Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.
TOKEN	( <i>Required</i> ) The timestamped token that was returned in the Set Express Checkout response.  Limitations: 20-character string.
ACTION	( <i>Required</i> ) Is D to indicate this is a Set Express Checkout request. Limitations: One alpha character.
PAYERID	( <i>Required</i> ) Unique PayPal buyer account identification number, as returned by Get Express Checkout Details response. This value is returned in the URL when the buyer is redirected to your website. Limitations: 13-character string.

TABLE A.7 Do Express Checkout Payment request parameters

Parameter	Description
AMT	( <i>Required</i> ) Amount.  Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
ORDERURL	( <i>Optional</i> ) Your URL for displaying information about this transaction, such as receipt, shipment tracking, or order details.  Limitations: 127-character alphanumeric string.
ORDERDESC	( <i>Optional</i> ) Description of items the buyer is purchasing. Limitations: 127-character alphanumeric string.
CUSTOM	( <i>Optional</i> ) Free-form field for your own use. Limitations: 256-character alphanumeric string.
INVNUM	( <i>Optional</i> ) Merchant invoice number. The merchant invoice number is used for authorizations and settlements and, depending on your merchant bank, will appear on your buyer's credit card statement and your bank reconciliation report. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted.  Limitations: Nine alphanumeric characters.
BUTTONSOURCE	( <i>Optional</i> ) Identification code for use by third-party applications to identify transactions.  Limitations: 32 alphanumeric characters.
NOTIFYURL	( <i>Optional</i> ) Your URL for receiving Instant Payment Notification (IPN) about this transaction.
	NOTE: If you do not specify NotifyURL in the request, the notification URL from your Merchant Profile is used, if one exists.  Limitations: 2048 alphanumeric characters.
L_NAMEn	(Optional) Line-item name.  Character length and limitations: 36 alphanumeric characters.
L_DESC <i>n</i>	( <i>Optional</i> ) Line-item description for each different item purchased such as hiking boots or cooking utensils.
	Note: You can view line item information in the Transaction Details report in your PayPal merchant account.
	Limitations: 35-character string.

TABLE A.7 Do Express Checkout Payment request parameters

Parameter	Description
L_COSTn	( <i>Required</i> if $\mathbb{L}_{QTY}n$ is supplied) Cost of the line item. The line-item unit price can be a positive or a negative value but not 0.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
	Nine numeric characters plus decimal.
L_TAXAMT <i>n</i>	(Optional) Line-item tax amount.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
L_QTYn	( <i>Required</i> if L_COST <i>n</i> is supplied) Line-item unit quantity. Limitations: 10-character integer.
ITEMAMT	( <i>Required</i> if L_COSTn is specified) Sum of cost of all items in this order. Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
TAXAMT	( $Required$ if L_TAXAMT $n$ is specified) Sum of tax for all items in this order.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
FREIGHTAMT	(Optional) Total shipping cost for this order.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

TABLE A.7 Do Express Checkout Payment request parameters

Parameter	Description
HANDLINGAMT	(Optional) Total handling cost for this order.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
DISCOUNT	(Optional) Shipping discount for this order. Specify the discount as a positive amount.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
INSURANCEAMT	(Optional) Total shipping insurance cost for this order.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
SHIPTONAME	( <i>Optional</i> ) Ship-to name. Limitations: 32-character string.
SHIPTOSTREET	(Optional) Ship-to street address.
	If you include a shipping address and provide a value for the ADDROVERRIDE parameter, PayPal returns this same address in the Get Express Checkout Details response.  Limitations: 30-character string.
SHIPTOSTREET2	( <i>Optional</i> ) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	(Optional) Ship-to city.
	If SHIPTOCITY is passed, you also must pass SHIPTOSTREET, SHIPTOSTATE, SHIPTOZIP, and SHIPTOCOUNTRY.  Limitations: 40-character string.
SHIPTOSTATE	(Optional) Ship-to state.  If SHIPTOSTATE is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOZIP, and SHIPTOCOUNTRY.

TABLE A.7 Do Express Checkout Payment request parameters

Parameter	Description
SHIPTOZIP	(Optional) Ship-to postal code.
	If SHIPTOZIP is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOSTATE, and SHIPTOCOUNTRY.
	Limitations: 16-character string.
SHIPTOCOUNTRY	(Optional) Ship-to country.
	If SHIPTOCOUNTRY is passed, you also must pass SHIPTOSTREET, SHIPTOCITY, SHIPTOSTATE, and SHIPTOZIP.
	Limitations: Two-character country code.
PHONENUM	(Optional) Account holder's telephone number.
	Limitations: 20-character string. The field mask is:
	xxx-xxx (US numbers)
	+xxxxxxxxxx (international numbers)

## **Do Express Checkout Payment Response Parameter Descriptions**

TABLE A.8 Do Express Checkout Payment response parameters

Description
The timestamped token that was returned in the Set Express Checkout response.
Limitations: 20-character string.
Unique PayPal transaction ID.
If the request ACTION was A (Authorization), you should store the value of PPREF if you need to research a specific transaction with PayPal. Limitations: 17-character string.
The billing agreement ID is returned if BILLINGTYPE is passed in the Set Express Checkout request to set up a billing agreement.
Limitations: 19-character string.
<ul> <li>Returns one of the following values:</li> <li>instantonly - The payment is made with no delay.</li> <li>any - The payment may be made with no delay or the payment is pending (see PENDINGSTATUS).</li> <li>Limitations: 11 characters.</li> </ul>

TABLE A.8 Do Express Checkout Payment response parameters

Parameter	Description
TAXAMT	Sum of tax for all items in this order.  Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
FEEAMT	Processor charge for the transaction.  Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
NOTE	Is 0 (default) or 1. If ALLOWNOTE is set to 1 in the Set Express Checkout request, NOTE will contain the text entered by the buyer in the Express Checkout flow.  Limitations: 255-character string.
PENDINGREASON	<ul> <li>The reason the payment is pending. Values are:</li> <li>none = No pending reason.</li> <li>address = The payment is pending because your buyer 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.</li> <li>echeck = The payment is pending because it was made by an eCheck that has not yet cleared.</li> <li>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.</li> <li>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.</li> <li>verify = The payment is pending because you are not yet verified. You must verify your account before you can accept this payment.</li> <li>completed = The payment has been completed, and the funds have been added successfully to your account balance.</li> <li>other = The payment is pending for a reason other than those listed above. For more information, contact PayPal Customer Service.</li> </ul>
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Do Authorization Parameter Descriptions**

TABLE A.9 Do Authorization request parameters

Parameter	Description
TRXTYPE	(Required) The type of transaction to perform. For a Do Authorization, the value is A.
	Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.
ORIGID	( <i>Required</i> ) Payflow transaction ID. To authorize an Order, set this parameter to the value of the PNREF returned in the Do Express Checkout Payment response when Do Express Checkout Payment request was submitted with TRXTYPE=O.
	Limitations: 12 case-sensitive alphanumeric characters.
AMT	( <i>Optional</i> ) Amount. If you do not pass a value for AMT, the amount of the original transaction is sent in the Do Authorization request.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

#### TABLE A. 10 Do Authorization response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Do Reauthorization Parameter Descriptions**

TABLE A.11 Do Reauthorization request parameters

Parameter	Description
TRXTYPE	( <i>Required</i> ) How you want to obtain payment. Is A, which indicates that this payment is an Authorization or a Do Authorization subject to settlement with the Delayed Capture request.  Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.
ORIGID	(Required) Payflow transaction ID, which is the value returned in the PNREF in the response to the original transaction when:  TRXTYPE=A or TRXTYPE=O.  Limitations: 12 case-sensitive alphanumeric characters.
DOREAUTHORIZATION	( <i>Required</i> ) Indicates whether this transaction is a Do Reauthorization. The value is 1.

TABLE A.12 Do Reauthorization response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Void Parameter Descriptions**

TABLE A.13 Void request parameters

Parameter	Description
TRXTYPE	( <i>Required</i> ) Type of transaction to perform. The value is V. Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.

Credit Parameter Descriptions

TABLE A.13 Void request parameters

Parameter	Description
ORIGID	(Required) Payflow transaction ID. Set this parameter to the value of the PNREF returned in the original transaction response when Do Express Checkout Payment request was submitted with TRXTYPE=O. Limitations: 12 case-sensitive alphanumeric characters.
NOTE	(Optional) An informal note about this settlement that is displayed to the buyer in email and in the buyer's transaction history Limitations: 255-character string.

#### TABLE A.14 Void response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID. Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Credit Parameter Descriptions**

TABLE A. 15 Credit request parameters

Description
(Required) Type of transaction to perform. The value is C.
Limitations: One alpha character.
(Required) The tender type (method of payment). It is always P.
Limitations: One alpha character.
(Required) Payflow transaction ID. Set this parameter to the value of the
PNREF returned in the original Authorization or Order Do Express Checkout Payment transaction response.
Limitations: 12 case-sensitive alphanumeric characters.
(Optional) Required if the amount to credit differs from the original Sale or Delayed Capture amount.
Limitations:Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

TABLE A.15 Credit request parameters

Parameter	Description
MEMO	( <i>Optional</i> ) Custom memo about the credit. Limitations: 255 alphanumeric characers.

#### TABLE A. 16 Credit response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID.
	Limitations: 17-character string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Delayed Capture Parameter Descriptions**

TABLE A.17 Delayed Capture request parameters

Parameter	Description
TRXTYPE	(Required) Type of transaction to perform. The value is D.
	Limitations: One alpha character.
TENDER	(Required) The tender type (method of payment). It is always P.
	Limitations: One alpha character.
ORIGID	( <i>Required</i> ) Payflow transaction ID. Set this parameter to the value of the PNREF returned in the original Authorization or Order Do Express Checkout Payment transaction response.
	Limitations: 12 case-sensitive alphanumeric characters.
AMT	(Optional) Required if the capture amount differs from the original Authorization amount.
	Limitations:Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
NOTE	(Optional) An informal note about this settlement that is displayed to the buyer in email and in the buyer's transaction history
	Limitations: 255-character string.

TABLE A.17 Delayed Capture request parameters

Parameter	Description
CAPTURECOMPLETE	<ul> <li>(Optional) Indicates if this Delayed Capture transaction is the last capture you intend to make. The values are:</li> <li>Y (default)</li> <li>N</li> </ul>
	If CAPTURECOMPLETE is Y, any remaining amount of the original reauthorized transaction is automatically voided.  Limitations: 12-character alphanumeric string.

TABLE A. 18 Delayed Capture response parameters

Parameter	Description
PPREF	Unique PayPal transaction ID.
	Limitations: 17-character string.
PAYMENTTYPE	Type of payment. Values are:
	• instantonly - The payment is made with no delay.
	• any - The payment may be made with no delay or the payment is
	pending.
	Limitations: 11 characters.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

## **Billing Agreement Parameter Descriptions**

#### **Create Customer Billing Agreement Request Parameters**

TABLE A. 19 Create Customer Billing Agreement request parameters

Parameter	Description
ACTION	(Required) Is X to indicate this is a Create Customer Billing Agreement without purchase request.
	Limitations: One alpha character.
TOKEN	( <i>Required</i> ) A time-stamped token, the value of which was returned in the Set Customer Billing Agreement response.
	Limitations: 20-character alphanumeric string.
TRXTYPE	(Required) Must be A.

TABLE A. 19 Create Customer Billing Agreement request parameters

Parameter	Description
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.

#### **Create Customer Billing Agreement Response Parameters**

TABLE A.20 Create Customer Billing Agreement response parameters

Parameter	Description
BAID	The billing agreement ID. Limitations: 19-character string.
TOKEN	A time-stamped token, the value of which was returned in the Set Customer Billing Agreement response.  Limitations: 20-character alphanumeric string.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

### **Update Customer Billing Agreement Request Parameters**

TABLE A.21 Update Customer Billing Agreement request parameters

Parameter	Description
ACTION	( <i>Required</i> ) Is U to indicate this is an Update Billing Agreement request. Limitations: One alpha character.
TENDER	( <i>Required</i> ) The tender type (method of payment). It is always P. Limitations: One alpha character.
BAID	(Required) The billing agreement ID. Limitations: 19-character string.
BA_CUSTOM	( <i>Optional</i> ) Custom annotation field for your exclusive use. Limitations: 255-character string.
BA_DESC	( <i>Optional</i> ) Description of goods or services associated with the billing agreement.  Limitations: 255-character string.
BA_STATUS	(Optional) The status of the billing agreement. The only value is cancel.

#### **Update Customer Billing Agreement Response Parameters**

TABLE A.22 Update Customer Billing Agreement response parameters

Parameter	Description
BAID	The billing agreement ID. Limitations: 19-character string.
BA_CUSTOM	Custom annotation field for your exclusive use. Limitations: 255-character string.
BA_DESC	Description of goods or services associated with the billing agreement. Limitations: 255-character string.
EMAIL	Email address of the buyer as entered during checkout.  Limitations: 127-character alphanumeric string.
PAYERSTATUS	Status of buyer. Values are:  • verified  • unverified  Limitations: 10-character string.
PHONENUM	Account holder's telephone number.  Limitations: 20-character string. The field mask is:  xxx-xxx-xxxx (US numbers)  +xxxxxxxxxxxxxxxxxxx (international numbers)
FIRSTNAME	Buyer's first name. Limitations: 25-character string.
LASTNAME	Buyer's last name. Limitations: 25-character string.
SHIPTOBUSINESS	Buyer's business name. Limitations: 127-character string.
SHIPTOSTREET	( <i>Optional</i> ) Ship-to street address.  If SHIPTOSTREET is passed, you also must pass SHIPTOCITY, SHIPTOSTATE, SHIPTOZIP, and SHIPTOCOUNTRY.  Limitations: 30-character string.
SHIPTOSTREET2	( <i>Optional</i> ) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3. Limitations: 30-character string.
SHIPTOCITY	(Optional) Ship-to city.  If SHIPTOCITY is passed, you also must pass SHIPTOSTREET, SHIPTOSTATE, SHIPTOZIP, and SHIPTOCOUNTRY.  Limitations: 40-character string.

TABLE A.22 Update Customer Billing Agreement response parameters

Parameter	Description
SHIPTOSTATE	(Optional) Ship-to state.
	If SHIPTOSTATE is passed, you also must pass SHIPTOSTREET,
	SHIPTOCITY, SHIPTOZIP, and SHIPTOCOUNTRY.
	Limitations: 40-character string.
SHIPTOZIP	(Optional) Ship-to postal code.
	If SHIPTOZIP is passed, you also must pass SHIPTOSTREET,
	SHIPTOCITY, SHIPTOSTATE, and SHIPTOCOUNTRY.
	Limitations: 16-character string.
SHIPTOCOUNTRY	(Optional) Ship-to country.
	If SHIPTOCOUNTRY is passed, you also must pass SHIPTOSTREET,
	SHIPTOCITY, SHIPTOSTATE, and SHIPTOZIP.
	Limitations: Two-character country code.
RESULT	Response value for the request.
RESPMSG	Response message in case if any error occurs.

# Reference Transaction Parameter Descriptions

#### **Reference Transaction Request Parameters**

TABLE A.23 Reference Transaction Request Parameters

Parameter	Description
ACTION	(Required) Is the value D.
TRXTYPE	(Required) Is A (Authorization) or S (Sale).
BAID	(Required, PayPal and Paymentech Salem processors) BAID returned from Create Customer Billing Agreement. If you pass BAID, do not pass ORIGID.
ORIGID	(Required, other Payflow processors) PNREF returned from Create Customer Billing. If you pass ORIGID, do not pass BAID.
CUSTIP	(Optional) IP address of payer's browser as recorded in its HTTP request to your website.
	<b>NOTE:</b> PayPal records this IP address as a means to detect possible fraud.
	Limitations: 15-character string in dotted quad format: xxx.xxx.xxx.xxx.

TABLE A.23 Reference Transaction Request Parameters

Parameter	Description
PAYMENTTYPE	<ul> <li>(Optional) Is one of the following values:</li> <li>instantonly - The payment is made with no delay.</li> <li>any - The payment may be made with no delay or the payment is pending.</li> <li>Limitations: 11 characters.</li> </ul>
REQCONFIRMSHIPPING	(Optional) Is 1 or 0. The value 1 indicates that you require that the buyer's shipping address on file with PayPal be a confirmed address. Setting this element overrides the setting you have specified in your Merchant Account Profile.  Limitations: One character.
CURRENCY	(Required) One of the supported currency codes. See Appendix , "Currency Codes."
ORDERDESC	( <i>Optional</i> ) Description of items the buyer is purchasing Limitations: 127-character alphanumeric string.
CUSTOM	( <i>Optional</i> ) Free-form field for your own use such as a tracking number or other value you want PayPal to return in the Get Express Checkout Details response.  Limitations: 256-character alphanumeric string.
INVNUM	( <i>Optional</i> ) Merchant invoice number. If you do not provide an invoice number, the transaction ID (PNREF) will be submitted. Limitations: Nine-character alphanumeric string.
BUTTONSOURCE	( <i>Optional</i> ) Identification code for use by third-party applications to identify transactions.  Limitations: 32 alphanumeric characters.
NOTIFYURL	<ul> <li>(Optional) Your URL for receiving Instant Payment Notification (IPN) about this transaction.</li> <li>NOTE: If you do not specify NotifyURL in the request, the notification URL from your Merchant Profile is used, if one exists.</li> <li>Limitations: 2048 alphanumeric characters.</li> </ul>
L_NAME <i>n</i>	(Optional) Line-item name. Character length and limitations: 36 alphanumeric characters.
L_DESCn	( <i>Optional</i> ) Line-item description for each different item purchased such as hiking boots or cooking utensils.  Limitations: 35-character string.

TABLE A.23 Reference Transaction Request Parameters

Parameter	Description
L_COSTn	( <i>Optional</i> ) Line-item unit price. The line-item unit price can be a positive or a negative value but not 0. You may provide a negative value to reflect a discount on an order, for example.  Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
L_TAXAMTn	( <i>Optional</i> ) Line-item tax amount.  Limitations: Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95. No currency symbol.  Limitations: Six-character currency.
L_QTYn	( <i>Optional</i> ) Line-item unit quantity. Limitations: 10-character integer.
AMT	(Required) Amount (US Dollars) U.S. based currency.  AMT=ITEMAMT + TAXAMT + FREIGHTAMT + HANDLINGAMT + INSURANCEAMT - DISCOUNT
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.
	Limitations: Must not exceed \$10,000 USD in any currency. Nine numeric characters plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95. Nine numeric characters plus decimal.
ITEMAMT	(Required if L_COSTn is specified) Sum of cost of all items in this order.  ITEMAMT = L_QTY0*LCOST0 +  L_QTY1*LCOST1L_QTYn*L_COSTn
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.

TABLE A.23 Reference Transaction Request Parameters

Parameter	Description
TAXAMT	(Required if L_TAXAMTn is specified) Sum of tax for all items in this order.  TAXAMT=L QTY0*L TAXAMT0 + L QTY1*L TAXAMT1 +L QTYn
	*L_TAXAMT <i>n</i>
	NOTE: You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.  Nine numeric characters plus decimal.
	•
FREIGHTAMT	(Optional) Total shipping cost for this order.
	<b>NOTE:</b> You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
HANDLINGAMT	(Optional) Total handling cost for this order.
	NOTE: You must set CURRENCY to one of the three-character currency codes for any of the supported PayPal currencies. See CURRENCY in this table for details.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
DISCOUNT	(Optional) Shipping discount for this order. Specify the discount as a positive amount.
	Limitations: Nine numeric characers plus decimal (.) character. No currency symbol. Specify the exact amount to the cent using a decimal point—use 34.00, not 34. Do not include comma separators—use 1199.95 not 1,199.95.
SHIPTONAME	(Optional) Ship-to name.
	Limitations: 32-character string.
SHIPTOSTREET	(Optional) Ship-to street address.
	Limitations: 30-character string.

TABLE A.23 Reference Transaction Request Parameters

Parameter	Description
SHIPTOSTREET2	( <i>Optional</i> ) Extended Ship-to street address. Example: Bldg. 6, Mail Stop 3.
	Limitations: 30-character string.
SHIPTOCITY	(Optional) Ship-to city.
	Limitations: 40-character string.
SHIPTOSTATE	(Optional) Ship-to state.
	Limitations: 40-character string.
SHIPTOZIP	(Optional) Ship-to postal code.
	Limitations: 16-character string.
COUNTRYCODE	(Optional) Bill-to country code.
	NOTE: The bill-to address details are returned only if
	REQBILLINGADDRESS is set to 1 in the call to Set Express Checkout.
	Limitations: Four alphanumeric characters.

#### **Reference Transaction Response Parameters**

TABLE A.24 Reference Transaction Response Parameters

Parameter	Description
BAID	BAID returned from Create Customer Billing Agreement. Limitations: 19-character string.
PAYMENTTYPE	<ul> <li>Returns one of the following values:</li> <li>instantonly - The payment is made with no delay.</li> <li>any - The payment may be made with no delay or the payment is pending.</li> <li>Limitations: 11 characters.</li> </ul>

## Express Checkout Parameter Reference

Reference Transaction Parameter Descriptions



# **Currency Codes**

The following currencies are supported for use in transactions.

TABLE B.1 Currencies and Currency Codes

Code	Currency
AUD	Australian Dollar
BRL	Brazilian Real
	<b>NOTE:</b> Supported as a payment currency and a currency balance for in-country PayPal accounts only.
CAD	Canadian Dollar
CZK	Czech Koruna
DKK	Danish Krone
EUR	Euro
HKD	Hong Kong Dollar
HUF	Hungarian Forint
ILS	Israeli New Sheqel
JPY	Japanese Yen
MYR	Malaysian Ringgit
	<b>NOTE:</b> Supported as a payment currency and a currency balance for in-country PayPal accounts only.
MXN	Mexican Peso
NOK	Norwegian Krone
NZD	New Zealand Dollar
РНР	Phillippine Peso
PLN	Polish Zloty
GBP	Pound Sterling
SGD	Singapore Dollar
SEK	Swedish Krona
CHF	Swiss Franc
TWD	Taiwan New Dollar

TABLE B. 1 Currencies and Currency Codes

Code	Currency
THB	Thai Baht
USD	U.S. Dollar



**NOTE:** This table lists country codes defined by ISO 3166-1.

**Table 1: Country Codes** 

Country	Code
AFGHANISTAN	AF
ÅLAND ISLANDS	AX
ALBANIA	AL
ALGERIA	DZ
AMERICAN SAMOA	AS
ANDORRA	AD
ANGOLA	AO
ANGUILLA	AI
ANTARCTICA	AQ
ANTIGUA AND BAR- BUDA	AG
ARGENTINA	AR
ARMENIA	AM
ARUBA	AW
AUSTRALIA	AU
AUSTRIA	AT
AZERBAIJAN	AZ
BAHAMAS	BS
BAHRAIN	ВН
BANGLADESH	BD
BARBADOS	BB

Country	Code
BELARUS	BY
BELGIUM	BE
BELIZE	BZ
BENIN	BJ
BERMUDA	BM
BHUTAN	BT
BOLIVIA	ВО
BOSNIA AND HERZE- GOVINA	BA
BOTSWANA	BW
BOUVET ISLAND	BV
BRAZIL	BR
BRITISH INDIAN OCEAN TERRITORY	Ю
BRUNEI DARUSSALAM	BN
BULGARIA	BG
BURKINA FASO	BF
BURUNDI	BI
CAMBODIA	KH
CAMEROON	CM
CANADA	CA
CAPE VERDE	CV
CAYMAN ISLANDS	KY

Country	Code	Country	Code
CENTRAL AFRICAN	CF	EQUATORIAL GUINEA	GQ
REPUBLIC		ERITREA	ER
CHAD	TD	ESTONIA	EE
CHILE	CL	ETHIOPIA	ET
CHINA	CN	FALKLAND ISLANDS	FK
CHRISTMAS ISLAND	CX	(MALVINAS)	
COCOS (KEELING)	CC	FAROE ISLANDS	FO
ISLANDS		FIJI	FJ
COLOMBIA	CO	FINLAND	FI
COMOROS	KM	FRANCE	FR
CONGO	CG	FRENCH GUIANA	GF
CONGO, THE DEMO- CRATIC REPUBLIC OF	CD	FRENCH POLYNESIA	PF
THE		FRENCH SOUTHERN	TF
COOK ISLANDS	CK	TERRITORIES	
COSTA RICA	CR	GABON	GA
COTE D'IVOIRE	CI	GAMBIA	GM
CROATIA	HR	GEORGIA	GE
CUBA	CU	GERMANY	DE
CYPRUS	CY	GHANA	GH
CZECH REPUBLIC	CZ	GIBRALTAR	GI
DENMARK	DK	GREECE	GR
DJIBOUTI	DJ	GREENLAND	GL
DOMINICA	DM	GRENADA	GD
DOMINICAN REPUBLIC	DO	GUADELOUPE	GP
ECUADOR	EC	GUAM	GU
EGYPT	EG	GUATEMALA	GT
EL SALVADOR	SV	GUERNSEY	GG

Country  KOREA, REPUBLIC OF  KUWAIT
,
KUWAIT
KYRGYZSTAN
LAO PEOPLE'S DEMO-
CRATIC REPUBLIC
LIECHTENSTEIN
LITHUANIA
LUXEMBOURG
MACAO
MACEDONIA, THE
FORMER YUGOSLAV
MALI
MALTA
MARSHALL ISLANDS
MARTINIQUE
MAURITANIA
MAURITIUS
MAYOTTE
MEXICO
LITHUANIA LUXEMBOURG MACAO MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF MADAGASCAR MALAWI MALAYSIA MALDIVES MALI MALTA MARSHALL ISLANDS MARTINIQUE MAURITANIA MAURITIUS

Country	Code	Country	С
MICRONESIA, FEDER-	FM	PALAU	P
ATED STATES OF MOLDOVA, REPUBLIC	MD	PALESTINIAN TERRI- TORY, OCCUPIED	P
OF		PANAMA	P
MONACO	MC	PAPUA NEW GUINEA	P
MONGOLIA	MN	PARAGUAY	P
MONTSERRAT	MS	PERU	P
MOROCCO	MA	PHILIPPINES	F
MOZAMBIQUE	MZ	PITCAIRN	F
MYANMAR	MM	POLAND	F
NAMIBIA	NA	PORTUGAL	F
NAURU	NR	PUERTO RICO	F
NEPAL	NP	QATAR	(
NETHERLANDS	NL	REUNION	F
NETHERLANDS ANTI- LLES	AN	ROMANIA	F
NEW CALEDONIA	NC	RUSSIAN FEDERATION	F
NEW ZEALAND	NZ	RWANDA	F
NICARAGUA	NI	SAINT HELENA	S
NIGER	NE	SAINT KITTS AND NEVIS	ŀ
NIGERIA	NG	SAINT LUCIA	Ι
NIUE	NU	SAINT PIERRE AND	F
NORFOLK ISLAND	NF	MIQUELON	r
NORTHERN MARIANA ISLANDS	MP	SAINT VINCENT AND THE GRENADINES	7
NORWAY	NO	SAMOA	V
OMAN	OM	SAN MARINO	S
PAKISTAN	PK		

Country	Code
SAO TOME AND PRINC-IPE	ST
SAUDI ARABIA	SA
SENEGAL	SN
SERBIA AND MON-	CS
TENEGRO	g.c.
SEYCHELLES	SC
SIERRA LEONE	SL
SINGAPORE	SG
SLOVAKIA	SK
SLOVENIA	SI
SOLOMON ISLANDS	SB
SOMALIA	SO
SOUTH AFRICA	ZA
SOUTH GEORGIA AND THE SOUTH SANDWICH	GS
ISLANDS	
SPAIN	ES
SRI LANKA	LK
SUDAN	SD
SURINAME	SR
SVALBARD AND JAN MAYEN	SJ
SWAZILAND	SZ
SWEDEN	SE
SWITZERLAND	СН
SYRIAN ARAB REPUB-	SY
LIC	
TAIWAN, PROVINCE OF CHINA	TW
TAJIKISTAN	TJ

## **Country Codes**

Country	Code
VIRGIN ISLANDS, U.S.	VI
WALLIS AND FUTUNA	WF
WESTERN SAHARA	EH
YEMEN	YE
ZAMBIA	ZM
ZIMBABWE	ZW

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