



Payflow Pro – Express Checkout and Direct Payment Simulator Guide

For Professional Use Only
Currently only available in English.

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

Express Checkout and Direct Payment Simulator Guide

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Contents

Preface	5
About this Document	5
Audience	5
Conventions Used in this Guide	5
Where to Go for More Information	5
How to Contact Customer Service	6
Revision History	6
Chapter 1 Test Environment	7
Chapter 2 Testing Direct Payment	9
Overview	9
In this Chapter	9
Setting the Host Address.	9
Setting Verbosity	9
Transaction Response Parameters	10
AVSCode Return Values.	10
CVV2 Code Return Values	11
Void, Delayed Capture, and Credit Transaction Parameters.	11
Chapter 3 Testing Express Checkout.	13
Overview	13
In this Chapter	13
Changing HOSTADDRESS for Testing	13
Redirecting the Buyer to the PayPal <i>Login</i> Page	14
Selecting a Predefined Buyer for Testing	14
Buyer 1.	15
Buyer 2.	15
Buyer 10	16
Buyer 11	17
Setting Up the Test PayPal Login Page	18
Reviewing the Test Funding and Shipping Page	19

Express Checkout Parameters	19
Set Express Checkout Parameters	19
Get Express Checkout Details Parameters	20
Do Express Checkout Payment Parameters.	20
Void, Delayed Capture, and Credit Transaction Parameters.	21

Chapter 4 Testing Void, Delayed Capture, and Credit Transactions . . 23

Overview	23
In this Chapter	23
Void Parameters	23
Delayed Capture Parameters	23
Credit Parameters	24



Preface

About this Document

This document provides guidelines for testing your implementation of Express Checkout and Direct Payment and for interpreting the results.

For complete information on the function calls and parameters referred to in this document, see the *Payflow Pro Developer's Guide*.

For specific details on how to implement Website Payments Pro Payflow Edition through the Payflow Software Developer's Kit (SDK), see the documentation provided with the Payflow SDK. Implement the function calls as described, and then modify your application to point to the test environment to conduct testing.

Audience

This guide assumes that its users:

- Are experienced Web or application developers
- Have a background in payments services

The user should also be familiar with *Payflow Pro Developer's Guide*. That document, along with this guide, are the primary sources of information on developing payments applications using the Payflow SDK.

Conventions Used in this Guide

In this guide, *you* refers to the merchant and *buyer* refers to a customer of the merchant.

Where to Go for More Information

For more information, see the *Payflow Pro Developer's Guide*.

For answers to specific questions about Payflow products, search PayPal's Knowledge Base at the following URL: <http://knowledge.paypal.com/>.

How to Contact Customer Service

You may contact Customer Service at payflow-support@paypal.com.

Revision History

Revision history for *Express Checkout and Direct Payment Simulator Guide*.

TABLE P.1 Revision History

Date	Description
July 2006	Revision history started.
August 2006	Added section titled “Setting Verbosity” on page 9. Updated note in “Selecting a Predefined Buyer for Testing” on page 14.

1

Test Environment

The test environment allows you to easily test your integration without having to create a Website Payments Pro Payflow Edition merchant account or PayPal buyer accounts. The test environment allows you to test Express Checkout Transaction Processing and Direct Payment Credit Card Processing.

In the production environment, you must create and configure a Website Payments Pro Payflow Edition merchant account. Additionally, for Express Checkout, each of your customers would have a PayPal buyer account to use as the source of funds in a transaction. The test environment sets up “test” versions of these standard accounts for you in advance so you can start testing right away.

For complete information on the function calls and parameters referred to in this document, see the *Payflow Pro Developer's Guide*.

For specific details on how to implement Website Payments Pro Payflow Edition through the Payflow SDK, see the documentation provided with the Payflow SDK. Implement the function calls as described, then modify your application to point to the test environment to begin testing.

2

Testing Direct Payment

Overview

The test environment allows you to test Direct Payment Credit Card transactions.

NOTE: Direct Payment Credit Card transactions require that you set the parameters as described in the *Payflow Pro Developer's Guide*.

In this Chapter

- “Setting the Host Address” on page 9
- “Setting Verbosity” on page 9
- “Transaction Response Parameters” on page 10
- “Void, Delayed Capture, and Credit Transaction Parameters” on page 11

Setting the Host Address

To test your integration, simply change the host address to point to the test environment in your website application.

- To test transactions in the test environment, use the following URL:
`test-payflow.verisign.com`
- To send transactions to live servers in the production environment, use the following URL:
`payflow.verisign.com`

Setting Verbosity

You must set the VERBOSITY parameter to MEDIUM to get return values for PROCAVS and PROCCVV2.

Transaction Response Parameters

The following table shows parameter values returned in a transaction response in the test environment.

TABLE 2.1 Transaction Response Return Parameter Values

Parameter	Test Environment Behavior
PPREF	Unique ID is generated
PROCAVS	See “AVSCode Return Values” on page 10
PROCCVV2	See “CVV2 Code Return Values” on page 11

AVSCode Return Values

The following table lists the PayPal Processor AVSCode returned based on the values of address and zip code.

NOTE: For more information on PROCAVS and the meaning of the PayPal Processor AVSCode, see the *Payflow Pro Developer’s Guide*.

TABLE 2.2 AVSCode Returned Based on Address and Zip Code

Address Range	Zip Range	PayPal Processor AVSCode
000-333	50001-99999	A
000-333	00101-00200	B
000-333	00201-00300	C
000-333	00301-00400	D
667-999	00000-09999	E
667-999	10000-19999	G
667-999	20000-29999	I
667-999	30000-39999	R
667-999	40000-49999	S
667-999	50000-59999	U
000-333	00501-01000	F
000-333	01001-01500	X

TABLE 2.2 AVSCode Returned Based on Address and Zip Code (Continued)

Address Range	Zip Range	PayPal Processor AVSCode
000-333	01501-02000	Y
334-666	50001-99999	N
334-666	00000-10000	P
334-666	10001-20000	W
334-666	20001-50000	Z
All other		

CVV2 Code Return Values

The following table lists the PayPal Processor CVV2 codes returned based on the value of CVV2.

NOTE: For more information on CVV2 and the meaning of the PayPal Processor CVV2 Code, see the *Payflow Pro Developer's Guide*.

TABLE 2.3 CVV2 Code Returned Based on CVV2 Range

CVV2 Range	PayPal Processor CVV2 Code
0-300	M
301-600	N
601-700	P
701-800	S
801-900	U
901-999	X
All other	

Void, Delayed Capture, and Credit Transaction Parameters

For information on Void, Delayed Capture, and Credit Transaction parameters, see [Chapter 4, "Testing Void, Delayed Capture, and Credit Transactions."](#)

3

Testing Express Checkout

Overview

The test environment allows you to test the entire flow of your Express Checkout integration, including the redirect to PayPal and the return back to your website.

In the test environment for Express Checkout, you can select a predefined buyer, customize the simulated PayPal buyer login page, and redirect the buyer to that login page. The buyer can log in and enter shipping information.

The test environment provides simulations of the following PayPal website pages:

- *Login page*
- *Review Your PayPal Information page*

The test environment also includes simulated buyer accounts that are set up in advance.

After logging in and confirming funding and shipping information, the buyer is redirected back to your website to the RETURNURL (or CANCELURL) value that you declared in the call to Set Express Checkout.

Because the test environment is set up in advance for you – and because you do not have a true Website Payments Pro Payflow Edition merchant account – standard responses are returned regardless of the input parameters or PayPal merchant profile configuration values you may have set in the production environment.

NOTE: Express Checkout requires that you set parameters as described in the *Payflow Pro Developer's Guide*.

In this Chapter

- [“Changing HOSTADDRESS for Testing” on page 13](#)
- [“Redirecting the Buyer to the PayPal Login Page” on page 14](#)
- [“Selecting a Predefined Buyer for Testing” on page 14](#)
- [“Setting Up the Test PayPal Login Page” on page 18](#)
- [“Express Checkout Parameters” on page 19](#)

Changing HOSTADDRESS for Testing

To test your integration, simply change the host address to point to the test environment in your website application.

- To test transactions in the test environment, use the following URL:
test-payflow.verisign.com
- To send transactions to the live servers in the production environment, use the following URL:
payflow.verisign.com

Redirecting the Buyer to the PayPal *Login* Page

Once you have completed the call to Set Express Checkout, redirect the buyer to PayPal to allow the buyer to log in to their account and select the shipping and billing information on the *Review Your PayPal Information* page. When selections are complete, the buyer is redirected back to your merchant website at the location indicated by RETURNURL or CANCELURL in the call to Set Express Checkout.

In this test environment, you redirect the buyer to a simulated PayPal *Login* page exactly as you would to the real PayPal *Login* page in production. Use the following URLs for the PayPal *Login* page:

- To redirect the buyer to the simulated PayPal *Login* page in the test environment, use the following URL, where *value* is the token value returned by Set Express Checkout:
https://test-expresscheckout.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<value>
- To redirect the buyer to the actual PayPal *Login* page in the production environment, use the following URL, where *value* is the token value returned by Set Express Checkout:
https://www.paypal.com/cgi-bin/webscr?cmd=_express-checkout&token=<value>

The Set Express Checkout response returns the token value. If a token value is not returned or is not valid, the browser is redirected to the documentation page at the following URL:

<https://test-expresscheckout.paypal.com/documentation/>

In the production environment, an error page appears.

Selecting a Predefined Buyer for Testing

As part of the test environment, predefined buyers are provided. These buyers have different default attributes to allow you to test different scenarios.

NOTE: In the test environment, the EMAIL parameter is used to specify one of the four predefined buyer profiles. The default is Buyer1. For more information, see “Set Express Checkout Parameters” on page 19.

The predefined buyers are:

- Buyer 1 (U.S. default) as described in Table 3.1, “Buyer 1 Profile U.S.”
- Buyer 2 (U.S.) as described in Table 3.2, “Buyer 2 Profile U.S.”

- Buyer 10 (UK default) as described in [Table 3.3, “Buyer 10 Profile UK”](#)
- Buyer 11 (UK) as described in [Table 3.4, “Buyer 11 Profile UK”](#)

Buyer 1

[Table 3.1, “Buyer 1 Profile U.S.”](#) shows the details of the default U.S. buyer.

Buyer 2

TABLE 3.1 Buyer 1 Profile U.S.

Attribute	Value in Test Environment
ContactPhone	800-555-1111
PayerEmail	Buyer1@paypal.com
PayerID	12345678901234567
PayerStatus	verified
Payer	FirstName: Joe LastName: Smith
PayerCountry	US
PayerBusiness	Online Auction
Address	AddressStatus: confirmed Name: Joe Smith Street1: 111 Main St. Street2: CityName: San Jose StateorProvince: CA PostalCode: 95100 Country: US

[Table 3.2, “Buyer 2 Profile U.S.”](#) shows the details of the Buyer 2 profile.

TABLE 3.2 Buyer 2 Profile U.S.

Attribute	Value in Test Environment
ContactPhone	800-555-2222
PayerEmail	Buyer2@paypal.com
PayerID	234567890
PayerStatus	verified

TABLE 3.2 Buyer 2 Profile U.S. (Continued)

Attribute	Value in Test Environment
Payer	FirstName: Bob LastName: Johnson
PayerCountry	US
PayerBusiness	Software Consulting
Address	AddressStatus: confirmed Name: Bob Johnson Street1: 211 Elm St. Street2: CityName: San Jose StateorProvince: CA PostalCode: 95100 Country: US
Address	AddressStatus: unconfirmed Name: Sally Johnson Street1: 222 Maple St. Street2: CityName: San Jose StateorProvince: CA PostalCode: 95100 Country: US

Buyer 10

Table 3.3, “Buyer 10 Profile UK,” shows the details of the default UK buyer.

TABLE 3.3 Buyer 10 Profile UK

Attribute	Value in Test Environment
ContactPhone	0207 665 8888
PayerEmail	Buyer10@paypal.com
PayerID	104567890
PayerStatus	verified
Payer	FirstName: Kent LastName: Jones
PayerCountry	UK

TABLE 3.3 Buyer 10 Profile UK (Continued)

Attribute	Value in Test Environment
PayerBusiness	Car Sales
Address	AddressStatus: confirmed Name: Kent Jones Street1: 311 Market St. Street2: CityName: London StateOrProvince: London PostalCode: TW9 1EJ Country: UK
Address	AddressStatus: unconfirmed Name: Amanda Jones Street1: 102 Cooper Lane Street2: Apt. 100 CityName: Berkshire StateOrProvince: Berkshire PostalCode: KT3 3UG Country: UK

Buyer 11

Table 3.4, “Buyer 11 Profile UK,” shows the details of the Buyer 11 profile.

TABLE 3.4 Buyer 11 Profile UK

Attribute	Value in Test Environment
ContactPhone	0208 974 8641
PayerEmail	Buyer11@paypal.com
PayerID	114567890
PayerStatus	unverified
Payer	FirstName: Paul LastName: Casey
PayerCountry	UK
PayerBusiness	Advertising

TABLE 3.4 Buyer 11 Profile UK (Continued)

Attribute	Value in Test Environment
Address	AddressStatus: confirmed Name: Paul Casey Street1: 114 Mason Street Street2: CityName: Westminster StateOrProvince: London PostalCode: WC3 1AF Country: UK
Address	AddressStatus: confirmed Name: Donna Clarke Street1: 118 Steeplechase Lane Street2: Apt. 11 CityName: Derbyshire StateOrProvince: Derbyshire PostalCode: SW 15 2LJ Country: UK

Setting Up the Test PayPal Login Page

When you redirect the buyer to the test URL, a simulation of the PayPal *Login* page appears. The buyer username appears in the username field. Colors in the page are set as follows:

- The default page style is used regardless of the `PAGESTYLE` setting. The testing environment creates a default style (`testStyle`) for the page. The colors and image for `testStyle` are as described for the `PAGESTYLE` parameter in Table 3.5, “Set Express Checkout Parameters in the Test Environment.” Normally, in production, you would create one or more page styles as part of your merchant profile and send one of those as a parameter in the call to Set Express Checkout. In the test environment, `testStyle` is the only page style available.
- If you set a specific color for the background, header background, or header border, these colors will override the default colors. When setting specific colors, do not set `PAGESTYLE`.
- If the page style is not set, and no individual colors or image is set, a standard set of colors are used.

The *Login* page looks similar to the production *Login* page, but many links are non-operational since they are not needed to test the integration. The **Login** and **Cancel** buttons are operational and function as normal. When selecting the *Login* page, it is not necessary to enter a password. The **Cancel** button returns the browser to the `CANCELURL`, as defined in the call to Set Express Checkout. If the `RETURNURL` or the `CANCELURL` value is not set, the browser is redirected to <http://www.paypal.com/> as a default.

Reviewing the Test Funding and Shipping Page

If the buyer clicks **Login** from the *Login* page, they go to the *Review Your PayPal Information* page. This page allows the buyer to select a source of funds and enter shipping information. Only the shipping information settings can be modified. The source of funds does not impact your integration. The **Continue Checkout** and **Cancel** buttons operate normally to return the buyer to the location defined by RETURNURL or CANCELURL, respectively.

Express Checkout Parameters

This section describes the differences between the behavior of Express Checkout parameters in Website Payments Pro Payflow Edition calls made in the test environment and calls made in the production environment.

NOTE: See the *Payflow Pro Developer's Guide* for details on Express Checkout parameters.

Set Express Checkout Parameters

In the test environment, Set Express Checkout parameters are accepted and stored normally, but many are inaccessible since the PayPal reporting services are not part of the test environment. In these cases, the test environment does not enforce all the parameter constraints that would be enforced in production.

Table 3.5, “Set Express Checkout Parameters in the Test Environment,” describes differences in parameter behavior in the test environment. Parameters that are not listed have the same behavior.

TABLE 3.5 Set Express Checkout Parameters in the Test Environment

Parameter	Test Environment Behavior
MAXAMT	Not enforced.
RETURNURL	Same as production environment. However, set the URL to your test environment when using the test environment.
CANCELURL	Same as production environment. However, set the URL to your test environment when using the test environment.
REQCONFIRMSHIPPING	Same as production environment. This is enforced when the buyer is redirected to the test environment <i>Review Your PayPal Information</i> page.
NOSHIPPING	Same as production environment. This is enforced when the buyer is redirected to the test environment <i>Review Your PayPal Information</i> page.

TABLE 3.5 Set Express Checkout Parameters in the Test Environment (Continued)

Parameter	Test Environment Behavior
ADDROVERRIDE	Same as production environment. This is enforced when the buyer is redirected to the test environment <i>Review Your PayPal Information</i> page.
LOCALECODE	Ignored.
PAGESTYLE	If any value is passed in, a default page style with the following characteristics is used: <ul style="list-style-type: none"> • Header Image – an eBay logo • Header Border Color – Orange • Header Background Color – White • Background Color – Yellow
EMAIL	Same as production environment. Select one of the predefined buyers. (See “Selecting a Predefined Buyer for Testing” on page 14.) Otherwise the default buyer is used.

Get Express Checkout Details Parameters

The Get Express Checkout Details call requires that you pass in the TOKEN value returned in the response to Set Express Checkout. The values returned are based on the parameter values sent in Set Express Checkout, primarily to select the buyer, and then by the buyer’s selection of shipping address on the *Review Your PayPal Information* page.

NOTE: See the *Payflow Pro Developer’s Guide* for details on Get Express Checkout Details parameters.

Do Express Checkout Payment Parameters

The Do Express Checkout Payment call requires that you pass in the TOKEN returned in Set Express Checkout, the payment ACTION, the PAYERID (as set for one of the test buyers) and the payment details described in [Table 3.7, “Payment Information.”](#)

[Table 3.6, “Do Express Checkout Payment Response Parameters,”](#) describes the behavior of the Do Express Checkout Payment parameters returned.

TABLE 3.6 Do Express Checkout Payment Response Parameters

Attribute	Test Environment Behavior
See Table 3.7, “Payment Information.”	As defined in the default test payment information.

Test Payment Information

The following payment information is defined in the test environment.

TABLE 3.7 *Payment Information*

Attribute	Test Environment Behavior
PPREF	Unique ID is generated
PAYMENTTYPE	None
FEEAMT	0.5, where currency is USD
PAYMENTSTATUS	Completed
TAXAMT	0.5, where currency is USD
PENDINGREASON	Verify

Void, Delayed Capture, and Credit Transaction Parameters

For information on Void, Delayed Capture, and Credit Transaction parameters, see [Chapter 4](#), “Testing Void, Delayed Capture, and Credit Transactions.”

4

Testing Void, Delayed Capture, and Credit Transactions

Overview

The test environment allows you to test Void, Delayed Capture, and Credit transactions for Express Checkout and Direct Payment.

These transactions require that you pass in the PNREF returned in the Do Express Checkout Payment response or transaction response from Direct Payment.

In this Chapter

- [“Void Parameters” on page 23](#)
- [“Delayed Capture Parameters” on page 23](#)
- [“Credit Parameters” on page 24](#)

Void Parameters

Table 4.1, “Void Response Parameters,” describes the Void transaction response parameters.

TABLE 4.1 *Void Response Parameters*

Attribute	Test Environment Behavior
PPREF	Same as PPREF value passed in the Delayed Capture request

Delayed Capture Parameters

Table 4.2, “Delayed Capture Response Parameters,” describes the Delayed Capture transaction response parameters.

TABLE 4.2 *Delayed Capture Response Parameters*

Attribute	Test Environment Behavior
PPREF	Same as PPREF value passed in the Delayed Capture request
See Table 3.7, “Payment Information.”	As defined in the default test payment information.

Credit Parameters

Table 4.3, “Credit Response Parameters,” describes the Credit transaction response parameters.

TABLE 4.3 *Credit Response Parameters*

Attribute	Test Environment Behavior
PPREF	Unique ID is generated
FEEAMT	0.5, where currency is USD