Using PayPal with ColdFusion

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- What is PayPal Express Checkout
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What is PayPal Express Checkout

PayPal Express Checkout, allows your customers to pay through PayPal, saving them time by completing their transaction in fewer steps, and eliminating the need for them to enter their credit card information over the web (which is one of the biggest fears of the casual user to date).

After your customer makes their purchase, they will log into their PayPal account where their credit card information is stored, or where they can create an account on the fly. When they have completed reviewing their order on PayPal, they are returned to your website to complete their order and the transaction.

By offering PayPal, the customer feels safer, because their information is not submitted over the internet. With this sense of security, they will tend to purchase more from a website that offers PayPal.

PayPal allows for the customer to use all major credit cards, debit cards, bank transfers, and PayPal balance payments (credit balances they may have with PayPal).

How does PayPal work on the ecommerce site

PayPal can be fully integrated with as little as two steps, and a maximum of three steps. It is only on the last step that the transaction is completed and funds are transferred to your Merchant bank account.

Once the customer has finished shopping, and reaches their cart to checkout, they would click on the PayPal icon. Here is where you would implement the first call to PayPal, using the SET method. This call has primarily 3 purposes that have any real significance.

a) receive a Token that is used to track the transaction for this customer;
b) indicate the ReturnURL to return to when the customer completes their login with PayPal;
c) indicate the CancelURL to return to when the customer is either not approved, or chooses not to use PayPal, and clicks on the link to return to your website.

Assuming the customer is approved, that is they have an account with PayPal (not necessarily have available funds to cover this purchase), they are returned to your website where they can add items, make changes, or complete their order.

Once the customer completes their order on your website, the last step is submitted to PayPal, using the DO method. The primary purpose of this method is to submit the final purchase amount, and if there are sufficient funds available in their account chosen, the transaction is finalized and the funds are automatically [1] placed into the Merchant account.

[1] Depending on the type of transaction (Authorized vs Sale)

Who can use PayPal on their ecommerce website

PayPal is available for use on any[2] ecommerce website, after setting up two accounts.

The first account is setting up the bank account where the funds from each transaction will eventually be deposited.

The second account is established directly with PayPal. Remember, they do receive a percentage of each transaction, and that comes off the top before any funds are deposited into your Merchant account.

[2] Not sure of the legal jargon, but let's assume any legal site for this discussion.

Basic steps to integrate PayPal on an ecommerce website

1. Placing the PayPal Express Checkout buttons on your Cart page, and as a payment option, on the billing page.

“When you offer PayPal Express Checkout to your customers, you are required to display it in two forms, for your customers’ best buying experience.”

PayPal has a pretty good set of guide lines as to where they would like their buttons and icons placed, but here is a sample in simple terms.

- ü Place the PayPal Acceptance Mark graphic on the home page along with other credit card logos, if applicable.
- ü Place the PayPal Checkout button on your Cart page, along with any other checkout buttons.
- ü Place the Acceptance Mark on the Billing page along with the other credit card logos accepted - OR -
- ü Add PayPal as a selection to a pulldown select list.

PayPal is displayed first in any of the above cases.

2. Creating your custom code to perform the 2-3 method calls to PayPal, and to massage the results accordingly.

Create your custom code for each of the three PayPal actions SET, GET, DO.

Again, the SET gets a tracking token and the customer logs into their PayPal account. The GET obtains additional shipping information from PayPal that you may use in your transaction. The DO finalizes the transaction and transfers the funds (Hooray).

The following parameters are required for all requests:

TRXTYPE	A (S=Sale; A=Authorization)
TENDER	P (this indicates this is a PayPal transaction[3])
PARTNER	VeriSign[3]
VENDOR	merchantName
USER	merchantUserID
PWD	merchantPassword
HOSTADDRESS	payflow.verisign.com[3, 4]

[3] For this presentation, we are using VeriSign PayFloPro which is written in CF, has a custom tag available, and runs under all previous versions back to and including 5. You can also use the Payflow software development kit (SDK) which is available either as a standalone client that you can integrate with your web store using CGI scripts or as a set of APIs for direct integration with your application.

[4] For testing in the sandbox, precede with 'test-'.

SET:

ACTION	S	(for Set Express Checkout)
AMT	$	(aprox. amt of sale on this order [5])
RETURNURL		(the final review page on your website)
CANCELURL		(the page on your website where the customer can select a different method of payment)

```
<!--- // the SET to initiate the transaction and obtain the TOKEN // --->
<CFX_PAYFLOWPRO QUERY="PPRESULTS"
HOSTADDRESS="#HOSTADDRESS#"
HOSTPORT="443"
TIMEOUT="90"
TRXTYPE="A"
ACTION="S"
TENDER="#TENDER#"
PARTNER="#PARTNER#"
USER="#USER#"
VENDOR="#VENDOR#"
PWD="#PWD#"
AMT="#AMT#"
RETURNURL="#ReturnTemplate#?ppdo=1&AnyOtherVariablesYouNeed"
CANCELURL="#CartCheckOut.cfm?ppdo=0&AnyOtherVariablesYouNeed">
```

```
<!--- // typical SET response // --->
RESULT=0&RESPMSG=Approved&TOKEN=EC-17C76533PL706494P
```

```
<!--- // now send customer to PayPal to login // --->
<cflocation url="https://www.#sandBox#paypal.com/cgi-
bin/webscr?cmd=_express-checkout&token=#PPRESULTS.TOKEN#">
```

[5] PayPal pads this to account for Taxes & Shipping.

GET:

ACTION G (for Get Express Checkout Details)

TOKEN TOKEN (obtained in SET RESULT)

```
<!--- // the GET to obtain delivery details for shipping // --->
<CFX_PAYFLOWPRO QUERY="PPRESULTG"
HOSTADDRESS="#HOSTADDRESS#"
HOSTPORT="443"
TIMEOUT="90"
TRXTYPE="A"
ACTION="G"
TENDER="#TENDER#"
PARTNER="#PARTNER#"
USER="#USER#"
VENDOR="#VENDOR#"
PWD="#PWD#"
AMT="#AMT#"
COMMENT1="#CustomCommentsThisOrder#"
COMMENT2="#CustomCommentsThisOrder#">
```

```
<!--- // typical GET response // --->
RESULT=0&RESPMSG=Approved&AVSADDR=Y&TOKEN=EC-
17C76533PL706494P&PAYERID=FHY4JXY7CV9PG&EMAIL=buyer_name@aol.com&PAYERSTATU
S=verified&CUSTOM=TRVV14459&FIRSTNAME=Chris&LASTNAME=Alexander&BUSINESS=Monr
oe Creek Regional Interiors&SHIPTOSTREET=5262 Green Street #8&SHIPTOCITY=San
Jose&SHIPTOSTATE=CA&SHIPTOZIP=95148&SHIPTOCOUNTRY=US
```

DO:

ACTION	D	(for Do Express Checkout Payment)
TOKEN	TOKEN	(obtained in SET RESULT)
PAYERID	PAYERID	(obtained in GET RESULT)
AMT	$	(final amount of order to be charges)

```
<!--- // the GET to obtain delivery details for shipping // --->
<CFX_PAYFLOWPRO QUERY="PPRESULTG"
HOSTADDRESS="#HOSTADDRESS#"
HOSTPORT="443"
TIMEOUT="90"
TRXTYPE="A"
ACTION="D"
TENDER="#TENDER#"
PARTNER="#PARTNER#"
USER="#USER#"
VENDOR="#VENDOR#"
PWD="#PWD#"
AMT="#FinalTotalOfSale#"
COMMENT1="#CustomCommentsThisOrder#"
COMMENT2="#CustomCommentsThisOrder#">
```

```
<!--- // typical DO response // --->
RESULT=0&
PNREF=EFHP0CDBF5C7&
RESPMSG=Approved&
AVSADDR=Y&
TOKEN=EC-17C76533PL706494P&
PAYERID=FHY4JXY7CV9PG&
PPREF=2P599077L3553652G&
PAYMENTTYPE=instant
```

The response returns a 12-character PNREF (PayPal Manager Transaction ID) that is used by PayPal to identify this transaction in PayPal Manager reports. The PPREF value (maximum of 17-characters) is used by PayPal only to identify this transaction.

Testing your PayPal integration

To test your integration and code, you need to create your Business (Merchant) and Personal (Buyer) accounts in the PayPal Sandbox. Go to https://developer.paypal.com/ to create both of these accounts.

There is an extensive set of code numbers that can be used to test your application for every imaginable scenario under normal circumstances. However, you cannot count out there being problems with PayPal itself.

For testing purposes, redirect each VeriSign call to the following:
test-Payflow.verisign.com
and when you go live to:
payflow.verisign.com

What is obtainable from a PayPal transaction

In addition to the results above, there is other data that gets returned that may be of use. Below are the fields and values that will be returned in the GET call to PayPal, which you then can use for your shipping and contact information.

AVSADDR	Y
AVSZIP	Y
CORRELATION	8c453df3a4766
EMAIL	upinadam@hotmail.com
FIRSTNAME	Adam
LASTNAME	Skowronski
PARMLIST	ACTION[1]=G&COMMENT1[0]=& COMMENT2[0]=& PARTNER[8]=VeriSign& PWD[9]=CoPassword& TENDER[1]=P& TOKEN[20]=EC-8XD503355Y957742K& TRXTYPE[1]=A& USER[14]=CoUserName& VENDOR[14]=CoVendorName
PAYERID	A99AAA9999A99
PAYESTATUS	Verified
RESPMSG	Approved
RESULT	0
RESULTSTR	RESULT=0&RESPMSG=Approved& AVSADDR=Y&AVSZIP=Y&TOKEN=EC-8XD503355Y957742K& PAYERID=A99AAA9999A99& CORRELATIONID=8c453df3a4766& EMAIL=upinadam@hotmail.com& PAYERSTATUS=verified& FIRSTNAME=Adam& LASTNAME=Skowronski&SHIPTOSTREET=10310 SW 207th Street&SHIPTOCITY=Miami& SHIPTOSTATE=FL&SHIPTOZIP=33189& SHIPTOCOUNTRY=US&
SHIPTOCITY	Miami
SHIPTOCOUNTRY	US
SHIPTOSTATE	FL
SHIPTOSTREET	10310 SW 207th Street
SHIPTOZIP	33189
TOKEN	EC-8XD503355Y957742K
VERSION	J305

Note the integers in square braces in the PARMLIST. This indicates the number of characters for that value (including spaces, the ampersand, and others).

PayPal Process Flow

PayPal Sample Button Placement

PayPal Button:

PayPal Acceptance Mark:

PayPal as a Checkout Choice and as a Payment Method.

PayPal as a Payment Method.

Payment Method: Horizontal Design

Payment Method: Pulldown SELECT list.