



Certification Test Plan For Partners

PayPal Confidential & Proprietary

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1. Introduction

1.1 Purpose of this document

This document is intended to provide guidelines for PayPal partners who have integrated PayPal products and want to be certified to participate in the PayPal Partner Program.

1.2 Sandbox and Testing

To test your integration, PayPal provides a simulation environment called the PayPal Sandbox. All test accounts, email addresses, and funding sources (such as bank accounts, credit cards, and balances) are fictitious. Transactions are simulated, and no real money moves.

Follow the steps below to sign up to access PayPal's Sandbox test environment and create your test accounts. You will have to create one test buyer account and one test merchant account to make purchases.

1. Create a PayPal Sandbox login and password by signing up at:
<https://developer.paypal.com>.
 You will need to supply a valid (real) email address when you sign up. Keep both the login and password in safe place, because PayPal Sandbox cannot resend or recover passwords.
2. Create one test buyer account and one test merchant account. We request that you not use real financial account information when creating your test accounts.
 - a. Login to the PayPal Sandbox.
 - b. Go to the **Sandbox** tab and click the **Create Account** link. This selection will launch a window that takes you through a simulation of the PayPal account creation flow.
 - **Test buyer account:** It is sufficient to create a PayPal personal test account. Be sure to confirm the email address for the account as part of the setup. Look on the PayPal Sandbox **Email** tab for the simulated account activation email that you will need to complete the email address confirmation. You will also want to add a credit card to the test customer account as a funding source so the account can make purchases – the account creation flow will pre-populate a fictitious card number for you to use.
 - **Test merchant account:** You will need to add and confirm a bank account and also confirm the email address to be able to get API credentials for doing API calls with the test merchant account. Go to the test merchant account's Profile tab/API Access link to get API credentials.

Be sure to login first to the PayPal Sandbox when you test redirecting the customer to PayPal. To connect to the Sandbox use the following endpoint with your API calls:

NVP API = <https://api.sandbox.paypal.com/nvp/>
 SOAP API = <https://api.sandbox.paypal.com/2.0/>

1.3 Certification Submission

When you are finished with your certification testing, please provide the following documents to your PayPal contact.

1. **API Logs:** Logs you get when performing API requests and responses.
2. **Testing URL:** When applicable, please provide the URL where the testing is done so the PayPal Certification team can perform additional testing, if necessary.

Sample SOAP API Log:

```
<SOAP-ENV:Envelope .....>
  <SOAP-ENV:Header>..... </SOAP-ENV:Header>
  <SOAP-ENV:Body>
    <SetExpressCheckoutReq xmlns="urn:ebay:api:PayPalAPI">
      <SetExpressCheckoutRequest>
        <Version xmlns="urn:ebay:apis:eBLBaseComponents">1.00</Version>
        <SetExpressCheckoutRequestDetails>
          .....
        </SetExpressCheckoutRequestDetails>
      </SetExpressCheckoutRequest>
    </SetExpressCheckoutReq>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Sample NVP API Log:

```
METHOD=SetExpressCheckout&PAYMENTACTION=.....&RETURNURL=.....&CANCELURL=.....&LOCALECODE=.....&CURRENCYCODE=.....&AMT=.....&ADDROVERRIDE=1&SHIPTONAME=.....&SHIPTOSTREET=.....&SHIPTOSTREET2=.....&SHIPTOCITY=.....&SHIPTOSTATE=.....&SHIPTOCOUNTRYCODE=.....&SHIPTOZIP=.....&PHONENUM=...
```

2. Website Payments Standard

If you integrate with PayPal's Website Payments Standard, please perform the test cases described in sections 2.1 – 2.6 and submit certification deliverables, as described.

2.1 Website Payments Standard – Buy Now

Description:

Merchant uses **Buy Now** button to sell individual items on a website.

Prerequisite:

- **Buy Now** button code is correctly generated by the merchant on the solution provider's site.

Test Case Flow:

1. Buyer selects item to purchase by clicking on the **Buy Now** button.
2. Buyer is redirected to the PayPal website and logs into PayPal account or pays by credit card.
3. Buyer confirms shipping address and funding source, and makes adjustments, if necessary.
4. Buyer clicks the **Pay** button on PayPal site, and
 - If Buyer pays with PayPal account, Buyer is redirected to the Merchant site.
 - Alternately, if paying by credit card, Buyer should be able to click on a **Return to Merchant** link on PayPal to go back to Merchant site.
5. Buyer is presented with order confirmation info on Merchant site.

Certification Deliverables:

- HTML code for the button and BN Code.
- URL to the testing site.

Notes:

- BN Code must be included in the HTML values sent to PayPal (`<input type="hidden" name="bn" value="your_bn_code">`).
- A single **Buy Now** button can only sell one or more copies of the same item. Different items require separate **Buy Now** buttons for each item.

2.2 Website Payments Standard – Add to Cart (Hosting Providers Only)

Description:

Merchant uses **Add to Cart** buttons to sell items on a website. Buyers can buy several items at once to the PayPal shopping cart by clicking on **Add to Cart** for each item.

Prerequisites:

1. **Add to Cart** button code is correctly generated by the Merchant on the solution provider's site.
2. An **Add to Cart** button is generated for each item.
3. **View Cart** button is displayed at the top of each page.

Test Case Flow:

1. Buyer selects item to purchase by clicking on the **Add to Cart** button. PayPal cart page appears.
2. Buyer clicks on **Continue Checkout** on PayPal cart page. Buyer is redirected to the PayPal website and logs into PayPal account or pays by credit card.
3. Buyer confirms shipping address and funding source and makes adjustments, if necessary.
4. Buyer clicks the **Pay** button on PayPal site, and
 - If Buyer pays with PayPal account, Buyer is redirected to the Merchant site.
 - Alternatively, if paying by credit card, Buyer should be able to click on a **Return to Merchant** link on PayPal to go back to Merchant site.
5. Buyer is presented with order confirmation info on Merchant site.

Certification Deliverables:

- HTML code for the button and BN Code.
- URL to the testing site.

Notes:

- BN Code must be included in the html values sent to PayPal (`<input type="hidden" name="bn" value="your_bn_code">`).

2.3 Website Payments Standard – Third Party Shopping Cart

Description:

Merchant uses third-party hosted shopping cart on its website so that Buyer can add multiple items to a purchase.

Prerequisite:

- Merchant provides third-party shopping cart for Buyers at its website. The cart will upload the contents of the buyers shopping cart to PayPal once the buyer decides to checkout.

Test Case Flow:

1. Buyer selects an item to purchase by clicking on the **Add to Cart** button provided by the cart.
2. Buyer is redirected to the PayPal website, and logs into PayPal account or pays by credit card.
3. Buyer confirms shipping address and funding source and makes adjustments, if necessary.
4. Buyer clicks the **Pay** button on PayPal site, and
 - If Buyer pays with PayPal account, Buyer is redirected to the Merchant site.
 - Alternatively, if paying by credit card, Buyer should be able to click on a **Return to Merchant** link on PayPal to go back to Merchant site.
5. Buyer is presented with order confirmation info on Merchant site.

Certification Deliverables:

- HTML code for the button and BN Code.
- URL to the testing site.

Notes:

- BN Code must be included in the html values sent to PayPal (`<input type="hidden" name="bn" value="your_bn_code">`).

2.4 Website Payments Standard – Authorization and Capture

Description:

Merchant accepts a PayPal payment. Merchant requests authorization for the transaction, then requests capture for the authorized transaction amount.

Prerequisite:

- There are two ways to do Authorization and Capture, via the PayPal website or by using the API. This test case assumes that the API is used.

Test Case Flow:

1. Buyer selects items to purchase then goes through the Merchant checkout process, as required.
2. Once Buyer reviews order and confirms purchase, Merchant sends transaction request to PayPal using the HTML variable `paymentaction` with a value of authorization.
3. Merchant requests payment using `DoCapture` after order is shipped.

Certification Deliverables:

- HTML code for the button and BN Code.
- URL to the testing site.

Notes:

- BN Code must be included in the html values sent to PayPal (`<input type="hidden" name="bn" value="your_bn_code">`).

2.5 Website Payments Standard – IPN (optional)

Description:

Merchant/Cart implements Instant Payment Notification (IPN) to receive PayPal notifications such as an echeck clearing and a chargeback.

Prerequisite:

- Merchant activates IPN before using it. By default it is disabled.

Test Case Flow:

1. Buyer selects items to purchase and completes payment process.
2. PayPal posts a notification to Merchant server at a URL Merchant/Cart specified earlier.
3. When Merchant receives the notification, Merchant must post the entire message back to PayPal at a secure URL.
4. PayPal then sends confirmation back to Merchant server with a single word, “VERIFIED” or “INVALID”.
5. Merchant IPN script should then post back a “200 OK” response to prevent additional attempts by PayPal to post your transaction data.
6. If Merchant receives an `INVALID` notification, it should be treated as suspicious and should be investigated.
7. If Merchant receives a `VERIFIED` response, Merchant should perform the following checks before fulfilling the order:
 - Confirm that the payment status is `Completed`, since IPNs are also sent for other results such as `Pending` or `Failed`.
 - Check that the `txn_id` is unique, to prevent a fraudster from reusing an old, completed transaction.
 - Validate that `receiver_email` is an email address registered in your PayPal account to prevent the payment from being sent to a fraudster's account.
 - Check other transaction details, such as the item number and price, to confirm that the price has not been changed.

Certification Deliverables:

- IPN logs.

2.6 Website Payments Standard – Admin Tool

Description:

Partner provides integration guide to merchants to ease the process of integration.

Prerequisite:

- Merchant agrees to use Partner as Shopping Cart Solution Provider.

Test Case Flow:

1. Partner presents messaging that describes Website Payments Standard to your merchants in the payment provider selection section of your admin tool.
2. Allow Merchant to configure Website Payments Standard. Minimum requirements include:
 - Provide a field for the email address where Merchant will receive payments from customers.
 - Provide a **More** link to the additional benefits information about Website Payments Standard, as described in page 15 of Integration Requirements For Partners.
 - Provide a **See demo** link to the Website Payments Standard demo. URL to the demo is <http://www.paypal-marketing.com/html/partner/portal/standard.html>.

Certification Deliverables:

- Access to a fully functioning site similar to those offered to merchants.
- URL, username, and password to the site's administration tool that allows configuration of components of the site.

Notes:

- Partner will need 3rd party API permissions if they allow Merchant to perform authorization from admin tool.

3. Express Checkout

If you integrate with PayPal's Express Checkout, please perform test cases 3.1 – 3.6 and submit certification deliverables, as described.

3.1 Express Checkout – Shortcut Flow

Description:

Buyer makes PayPal Express Checkout Shortcut purchase at Merchant site.

Prerequisites:

- Merchant provides an **Express Checkout Shortcut** button for Buyers at its website on cart page.
- APIs to implement: `SetExpressCheckout`, `GetExpressCheckoutDetails`, and `DoExpressCheckoutPayment` with line item details passed in both `Set` and `Do` calls.

Test Case Flow:

1. Buyer selects items to purchase.
2. Buyer selects PayPal **Express Checkout** button and is redirected to PayPal website.
3. Buyer logs into PayPal account, confirms line item details, shipping address, and funding source, and makes adjustment if necessary.
4. Buyer agrees to allow Merchant to deduct payment from funding source, clicks **Continue** to go back to Merchant site.
5. Buyer is presented with final total with an opportunity to finalize purchase and order confirmation info on Merchant site.
6. Buyer confirms the transaction on Merchant site.

Certification Deliverables:

- API logs.
- URL to the testing site.

Notes:

- BN Code must be included in the `DoExpressCheckoutPayment` call (`ButtonSource = BN_Code`), and it needs to be included in the `DoExpressCheckoutPayment` call only.

3.2 Express Checkout – Instant Update (optional)

Description:

Merchant implements Instant Update to provide a better checkout experience by reducing the checkout flow length.

Prerequisites:

- Merchant sets up a secure, fast web service to accept HTTP requests from PayPal. On the live site, it needs to be secured by means of SSL.
- Merchant provides order line item details.
- APIs to implement: `SetExpressCheckout`, `GetExpressCheckoutDetails`, `Callback`, and `DoExpressCheckoutPayment`.

Test Case Flow:

1. Buyer selects items to purchase.
2. Buyer selects PayPal **Express Checkout** button and is redirected to PayPal website. In the meanwhile, callback URL, shipping, insurance, and tax information are sent to PayPal in `SetExpressCheckout` call.
3. When the Buyer logs in to the PayPal site, PayPal obtains the Buyer's shipping address and sends it in the callback request to Merchant's callback server at the specified URL.
4. Buyer changes his shipping address on the PayPal Review page. PayPal will make subsequent calls to the callback request.
5. Merchant responds to the callback with the shipping option rates based on Buyer's shipping address. Merchant can also adjust the tax amount and send insurance options.
6. PayPal updates the Review Page to show the options and rates based on Merchant's response.
7. Buyer agrees to allow Merchant to deduct payment from funding source. Buyer clicks **Pay Now** to finalize the purchase and go back to Merchant's site.
8. Merchant calls `GetExpressCheckoutDetails` to obtain the Buyer's final choices for shipping and insurance.
9. Merchant calls `DoExpressCheckoutPayment` with the Buyer's final selections.
10. Buyer is presented with thank you note and receipt.

Certification Deliverables:

- API logs.
- URL to the testing site.

Notes:

- If the callback does not return within the timeout period, PayPal displays the flat-rate shipping options you specified in the call to `SetExpressCheckout`.

- Adhere to well-formed variable names and syntax rules in the callback response to PayPal. If any errors occur in the response, PayPal will use the flat-rate shipping options.
- The callback request will always be in NVP format, even if you use SOAP.

3.3 Express Checkout – Mark Flow

Description:

Merchant accepts a PayPal payment initiated from payment page of checkout flow. PayPal highly recommends that you implement Address Override to prevent buyers from overwriting the shipping address that is passed from Merchant website.

Prerequisites:

- Merchant implements customization and branding to support PayPal Express Checkout Mark payment option at its website.
- APIs to implement: `SetExpressCheckout` (optional `ADDROVERRIDE=1` with shipping address fields passed), `GetExpressCheckoutDetails`, and `DoExpressCheckoutPayment`.

Test Case Flow:

1. Buyer selects items to purchase then proceeds to checkout.
2. Buyer selects PayPal as the payment option, and is redirected to PayPal website.
3. Buyer logs into PayPal account, confirms line item details, shipping address, makes adjustment to funding source, if necessary.
4. Buyer agrees to allow Merchant to deduct payment from funding source, and clicks **Continue** to go back to Merchant site.
5. Buyer is presented with final total, an opportunity to finalize purchase, and order confirmation info on Merchant site.
6. Buyer confirms the transaction on Merchant site.

Certification Deliverables:

- API logs.
- URL to the testing.

Notes:

- BN Code must be included in the `DoExpressCheckoutPayment` call (`ButtonSource = BN_Code`), and it needs to be included in the `DoExpressCheckoutPayment` call only.

3.4 Express Checkout – Order/Authorization/Capture

Description:

Buyer makes PayPal Express Checkout purchase at Merchant site. Merchant uses API calls to authorize and capture the order.

Prerequisite:

- APIs to implement: `SetExpressCheckout`, `GetExpressCheckoutDetails`, `DoExpressCheckoutPayment`, `DoAuthorization`, `DoCapture`, and `DoVoid`.

Test Case Flow:

1. Buyer selects items to purchase.
2. Merchant uses `SetExpressCheckout` to request order (`PaymentAction = Order`).
3. Buyer is redirected to the PayPal website and logs into PayPal account.
4. Buyer agrees to allow Merchant to deduct payment from funding sources and clicks **Continue** to go back to Merchant site.
5. Buyer is presented with final total, an opportunity to finalize purchase, and order confirmation info on Merchant site.
6. Buyer confirms the transaction on Merchant site, `DoExpressCheckoutPayment` is called.
7. Merchant requests authorization using `DoAuthorization`.
8. Merchant requests payment using `DoCapture`.
9. Merchant calls `DoVoid` when all captures or authorizations are completed to void the original order to avoid any future confusion.

Certification Deliverables:

- API logs.

3.5 Express Checkout – Accelerated Boarding (3rd Party API Model Only)

Description:

Buyer makes PayPal Express Checkout purchase at Merchant site before Merchant board at PayPal.

Prerequisite:

- Partner sets up this feature by turning on Express Checkout as the default payment method in admin configuration page.
- APIs to implement: `SetExpressCheckout`, `GetExpressCheckoutDetails`, and `DoExpressCheckoutPayment` (`PaymentAction=Sale`).

Test Case Flow:

1. Merchant chooses Partner to host their online store and sets up Merchant's online store at Partner site.
2. Merchant uses a credit card processor other than PayPal, selects Express Checkout as payment option, and provides an email address to be used for accepting Express Checkout payments.
3. Partner adds **PayPal Express Checkout** button to the Merchant's online store.
4. After Buyer pays with PayPal Express Checkout in the usual manner, PayPal notifies the Merchant by email.
5. To claim the payment, Merchant signs up or upgrades to a PayPal Business account, and is taken to a guided flow to grant Partner API permissions with Partner API account name pre-filled out for them.
6. Merchant can withdraw funds from PayPal only after Merchant verifies the PayPal account with a funding instrument.

Certification Deliverables:

- API logs.

Notes:

- Accelerated Boarding results in no change to Buyer's experience using Express Checkout. What does change is the Merchant's experience.
- A payment expires if it is not claimed after 30 calendar days. It will be returned to Buyer's PayPal account. Buyer can also cancel the payment before the Merchant claims it.
- Accelerated Boarding does not work with Website Payments Pro, which requires application and approval.

3.6 Express Checkout – Admin Tool

Description:

Partner provides integration guide to merchants to ease the process of integration.

Prerequisite:

- Merchant agrees to use Partner as Shopping Cart Solution Provider.

Test Case Flow:

1. Partner presents messaging that describes Express Checkout to Merchant in the payment provider selection section of your admin tool.
2. Allow Merchant to configure Express Checkout. Minimum requirements include:
 - Present Express Checkout as a selection on the processor configuration page.
 - Provide a **More** link to the additional benefits information about Express Checkout as described in page 42 of *Integration Requirements For Partners*.
 - Provide a **See demo** link to the Express Checkout demo. The URL to the demo is http://www.paypal.com/en_US/m/demo/18077_ec.html.

Certification Deliverables:

- Access to a fully functioning site similar to those offered to merchants.
- URL, username, and password to the site's administration tool that allows configuration of components of the site.